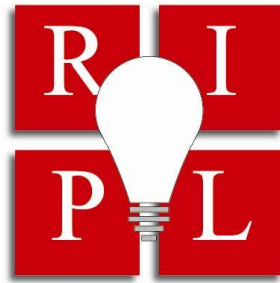


THE JOHN MARSHALL REVIEW OF INTELLECTUAL PROPERTY LAW



WHAT CLOSE CASES AND REVERSALS REVEAL ABOUT CLAIM CONSTRUCTION AT THE FEDERAL CIRCUIT

THOMAS W. KRAUSE & HEATHER F. AUYANG

ABSTRACT

Claim construction is central to patent litigation and has been the focus of a voluminous body of scholarship. Researchers have collected data from all aspects of claim construction cases, looking for answers to questions such as why the Federal Circuit reverses district courts' claim constructions so frequently, why Federal Circuit judges reach different conclusions from one another, and what methodologies these judges are utilizing. This paper takes a novel approach to analyze these questions. Rather than focus on all claim construction cases, this paper focuses only on cases where the Federal Circuit was divided and a dissent was written, and cases in which the Federal Circuit reversed the district courts' constructions. By looking at these two subsets of claim construction cases, we can glean insights from the data that are unapparent when looking at all cases. Specifically, we can observe trends in voting behavior, then compare those trends to different methodologies Federal Circuit judges utilize, whether expressly or impliedly. The data shows that, for reform to claim construction procedures to be meaningful, either the Federal Circuit or the Supreme Court must first address and definitively settle whether it is appropriate to determine "what the inventor actually invented" as a first step to claim construction. Once settled, ideas for reform can be debated. One such idea might involve applying an algorithm for construing claims, an example of which is provided in Appendix C.

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THOMAS W. KRAUSE & HEATHER F. AUYANG*

INTRODUCTION

Claim construction at the Federal Circuit remains one of the most studied and written-about issues in patent law. Most of the empirical research and writing focuses on the set of *all* claim construction cases;¹ however, this paper instead focuses on two subsets of the cases: “close cases” and “reversals.” As the data shows, focusing on “close cases” yields insights about result-affecting differences in approach among Federal Circuit judges,² and focusing on “reversals” yields insights about differences between district court and Federal Circuit judges.³ The goal of claim construction jurisprudence going forward should be to eliminate these differences. Without an acknowledgement and understanding of these differences, any proposal for reform will simply be a shot in the dark.

“Close cases” are defined in this study as post-*Markman*⁴ cases in which there is a dissent on a claim construction issue. By excluding unanimous cases, which are often simply correct as a matter of law, the focus on close cases brings differences between judges into sharp relief. A high-level glance at the close cases demonstrates that there are striking differences between the judges as to where they fall on the following spectra when conducting claim construction: (1) “narrowing” vs. “broadening” of a claim term, which generally tracks whether the judge is more or less likely to import a limitation from the specification (“more spec” and “less spec,” respectively); (2) “pro-affirm” vs. “pro-reverse” of the lower tribunal (with implications for proposals for deference); and (3) “pro-patent” vs. “anti-patent,” which indicate whether the claim construction favors the patentee or the alleged infringer, respectively.

“Reversals” are defined in this study as post-*Phillips*⁵ cases in which the Federal Circuit reversed the district court on a claim construction issue, excluding cases that

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¹ See, e.g., David L. Schwartz, *Practice Makes Perfect? An Empirical Study of Claim Construction Reversal Rates in Patent Cases*, 107 MICH. L. REV. 223, 238 (2008) (analyzing all “Federal Circuit cases in which the parties disputed the district court’s construction of a claim limitation” between “April 24, 1996 . . . and June 30, 2007”).

² See *infra* Part II.C.

³ See *infra* Parts III.A–B.

⁴ *Markman v. Westview Instruments*, 517 U.S. 370 (1996).

⁵ *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

turned on an interpretation of sections 35 U.S.C. §§ 112(b) & (f).⁶ Because reversals focus on the ways in which district courts get things wrong, this subset of cases is critically important for evaluating the question whether the Federal Circuit should give deference to district courts in claim construction cases. To this, the data says “no”—district courts have a systematic bias towards excessively narrow claim interpretations. If the Federal Circuit were required to defer to such interpretations, claim construction would almost certainly become even less predictable.⁷

I. CONTEXT

The context for this study is a regime of claim construction that, as yet, does not have sufficiently clear rules to ensure that all judges approach the matter the same way. From *Phillips*, it is clear that the specification is indispensable for interpreting claims, and that the claim language, the context of a claim term within the claim, and the prosecution history must also be considered before arriving at the final construction.⁸ However, the relatively high rates of dissents and reversals in claim construction cases suggest that additional guidance is needed.

Two theories have been advanced to explain the continued disharmony in claim construction cases. It might result from either (1) the Federal Circuit’s ruling in *Cybor Corp. v. FAS Technologies, Inc.*,⁹ which held that all aspects of claim construction are matters of law,¹⁰ or (2) a division on whether claim construction should be guided by an inquiry into what the inventor “actually invented.”¹¹ The Federal Circuit’s grant of en banc review on the *Cybor* question in *Lighting Ballast Control LLC v. Philips Electronics North American Corp.*,¹² and its denial of en banc review on the “actually invented” standard in *Retractable Technologies v. Becton, Dickinson & Co.*,¹³ could be read to suggest that the former is perceived to be a bigger problem than the latter. But, as shown below, the data suggests the opposite.

⁶ Formerly 35 U.S.C. §§ 112, ¶¶ 2 & 6, respectively. While such cases can be characterized as claim construction cases, they often involve different issues than typical claim construction cases. Including, for example, cases that turn on the proper interpretation of section 112(f), could distort the data because a broadening or narrowing result might have been driven by a judge’s approach toward section 112(f) as opposed to claim construction.

⁷ Although we have checked our data several times, we remain sensitive to the possibility of error—including the possibility that we overlooked, misclassified, or miscoded one or more cases. Accordingly, at the end of this paper, we present tables representing all of the “close cases” and “reversals” that we reviewed, as well as our coding of each case. See Appendices A & B. Additional materials—including expanded spreadsheets—are available upon request from the authors.

⁸ *Phillips*, 415 F.3d at 1314–19.

⁹ *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448 (Fed. Cir. 1998) (en banc).

¹⁰ *Id.* at 1455–56.

¹¹ See *infra* note 40–44 and accompanying text.

¹² *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, Nos. 2012-1014, 2012-1015, 2013 U.S. App. LEXIS 5185, at *1–2 (Fed. Cir. Mar. 15, 2013).

¹³ *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 659 F.3d 1369, 1370 (Fed. Cir. 2011).

II. CLOSE CASES: CHARTS AND OBSERVATIONS

For close cases, this study looked at all Federal Circuit claim construction cases since the Supreme Court's April 1996 *Markman*¹⁴ decision for which an active judge remains on the court. The following charts present the close cases data in several different ways.¹⁵ First, overview charts are presented showing judges' voting rates across the following spectra: (a) broad vs. narrow, (b) less spec vs. more spec, (c) pro-affirm vs. pro-reverse, and (d) pro-patent vs. anti-patent. Next, a series of judge-specific scatter charts are given that track the close-case "broad vs. narrow" votes of each active Federal Circuit judge over time, and include information on pro-patent vs. anti-patent and pro-affirm vs. pro-reverse.

A. Overview Charts

These overview charts show the voting tendencies of the individual judges in comparison with each other, across the specified spectra. The charts depict not only the direction in which the judge voted (broadening vs. narrowing, less spec vs. more spec, pro-affirm vs. pro-reverse, and pro-patent vs. anti-patent), but also whether the judge wrote the majority opinion, joined the majority or dissenting opinion, or wrote a dissenting opinion. A glance at any of the charts shows that there are vast differences between the judges; closer inspection of the charts, especially in conjunction with each other, yields additional insights.

Reading the overview charts that follow is relatively straightforward. Next to the judge's name is the number of close cases on which the judge sat. The different shades of red and blue bars have the significance indicated in the chart's key. The length of each bar corresponds to the percentage of the judge's cases in which the judge played the role indicated by the color of the bar. The number of cases corresponding to the percentage is indicated on each bar in white. For example, as shown in the first chart below, Chief Judge Rader sat on twenty-five close cases in which he wrote five dissents in a broadening direction (dark blue); wrote ten majority opinions in a broadening direction (medium blue); joined four majority opinions in a broadening direction (pale blue); joined three majority opinions in a narrowing direction (pink); wrote two majority opinions in a narrowing direction (medium red); and wrote one dissent in a narrowing direction (dark red). The colors were chosen (from bold to pale) to correspond to how strongly the judge likely felt about his or her position; accordingly, dissents are boldest; cases in which the judge merely joined without writing are palest.

¹⁴ *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996).

¹⁵ See Appendix A for the cases considered "close cases" and on which the charts are based.

FIGURE 1
CLOSE CASES: BROADER VS. NARROWER

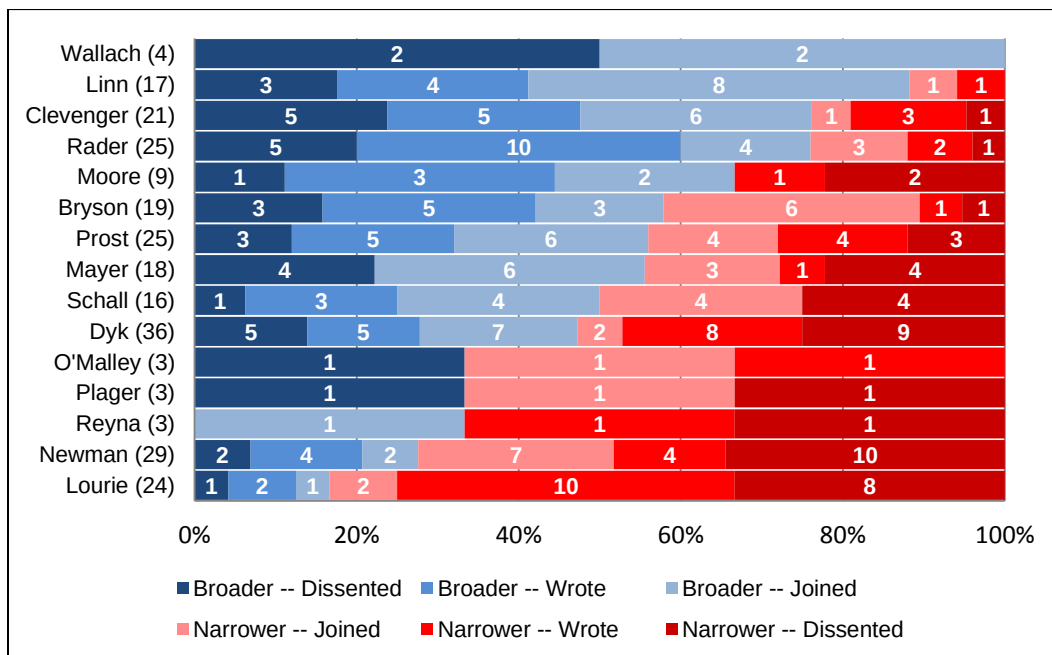


FIGURE 2
CLOSE CASES: LESS SPEC VS. MORE SPEC

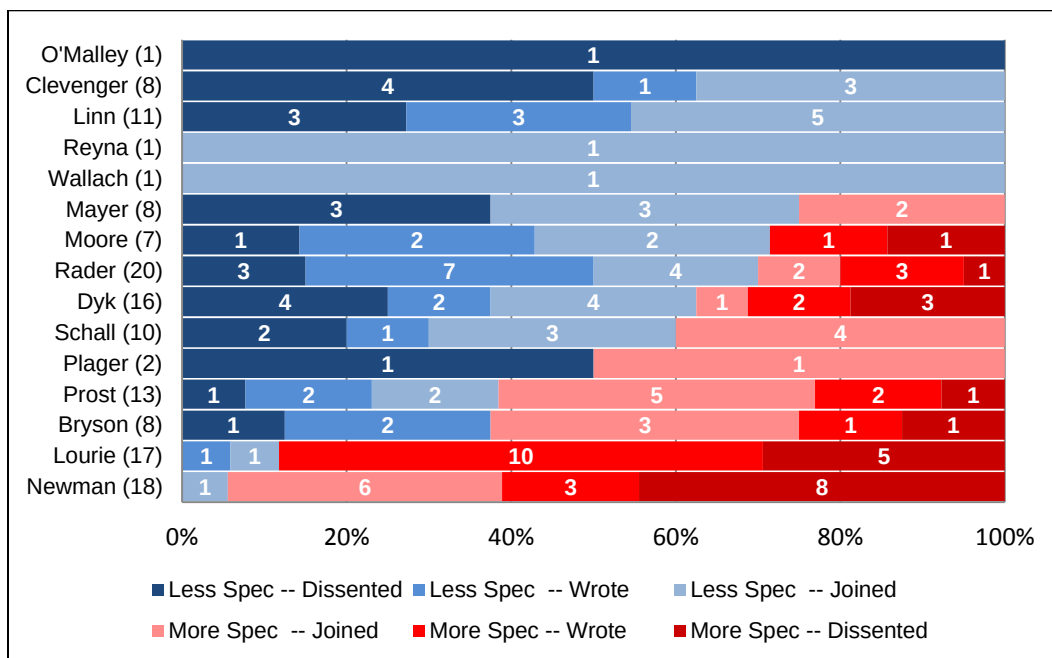


FIGURE 3
CLOSE CASES: PRO-AFFIRM VS. PRO-REVERSE

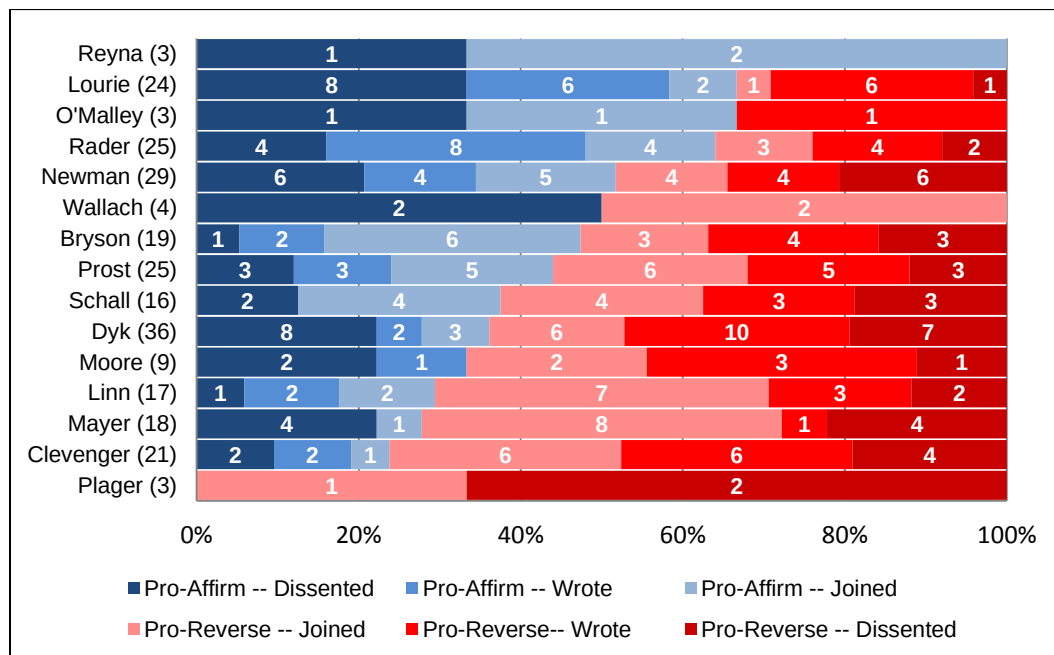
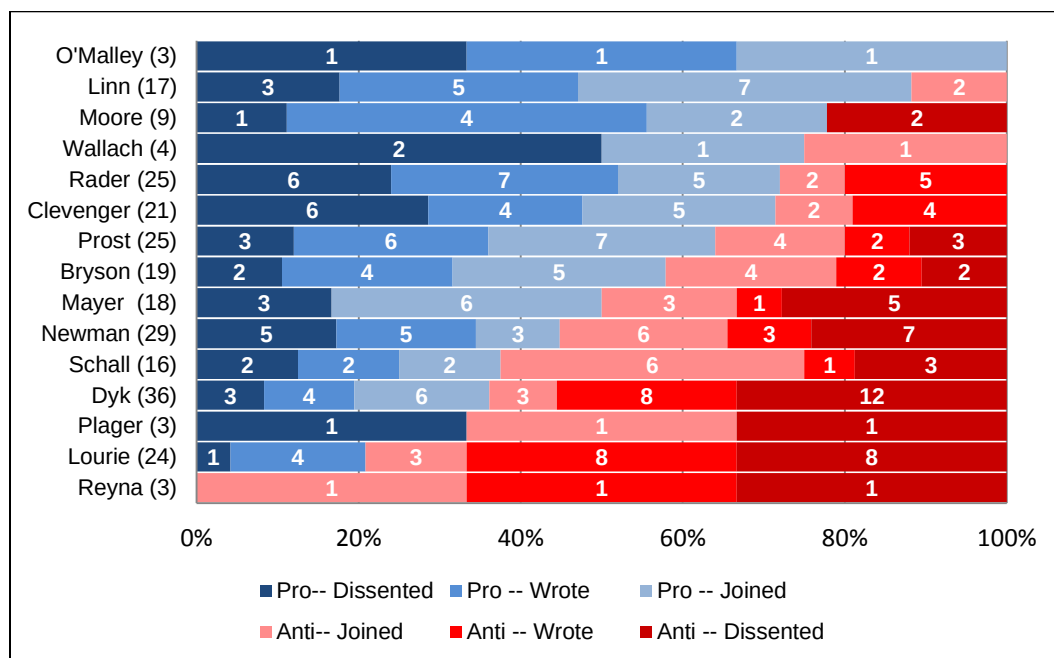


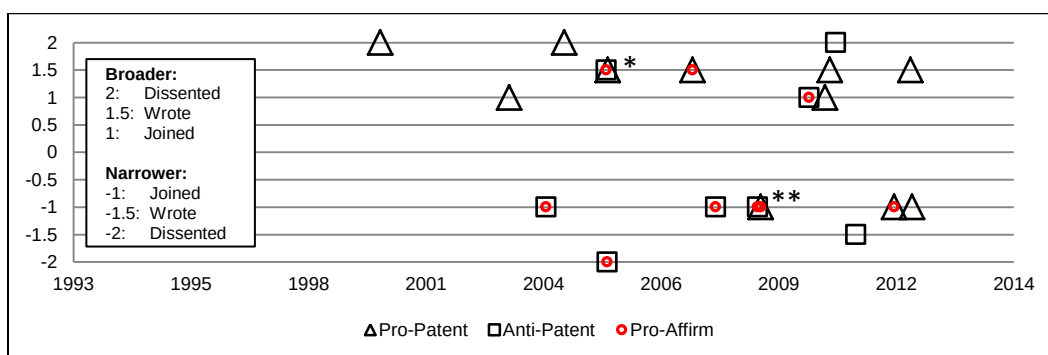
FIGURE 4
CLOSE CASES: PRO-PATENT VS. ANTI-PATENT



B. Judge-Specific Charts

The scatter charts that follow allow us to look at each judge's individual votes over time. As indicated on the legend, there is a lot of information packed into these charts; each data point tells us: (1) the approximate date of the case at issue (x-axis); (2) whether the judge voted in a broadening or narrowing direction and whether the judge wrote the majority opinion, joined the majority or dissented opinion, or wrote a dissenting opinion (y-axis); (3) whether the judge voted in a pro-patent or an anti-patent direction (triangle or square, respectively); and (4) whether the judge voted in a pro-affirm or pro-reverse direction (with pro-affirm indicated by the presence of red dot within the shape for the data point).¹⁶ A glance at these charts shows the same differences between judges seen in the overview charts, but also gives the opportunity to see how a judge's voting propensity might have changed—or not changed—over time.

FIGURE 5
CLOSE CASES: JUDGE BRYSON (19 CASES)



* Circle goes with square: One case is pro-patent, pro-reverse; the other is anti-patent, pro-affirm

** Two circles: One case is anti-patent, pro-affirm; the other is pro-patent, pro-affirm

¹⁶ For the majority of judges, and for the vast majority of data points, it is easy to tell exactly what happened at each data point. On the charts for Judges Bryson, Dyk, Lourie, Mayer, Prost, and Schall, however, there is an overlap between one or more data points that makes it impossible to tell which of the overlapping data points was a “pro-affirm” case, or if both data points are. See *infra* Figures 5, 7, 9, 10, 14, and 17. These overlaps are indicated with asterisks (*) or double asterisks (**) and explained immediately below each of the respective charts.

FIGURE 6
CLOSE CASES: JUDGE CLEVINGER (21 CASES)

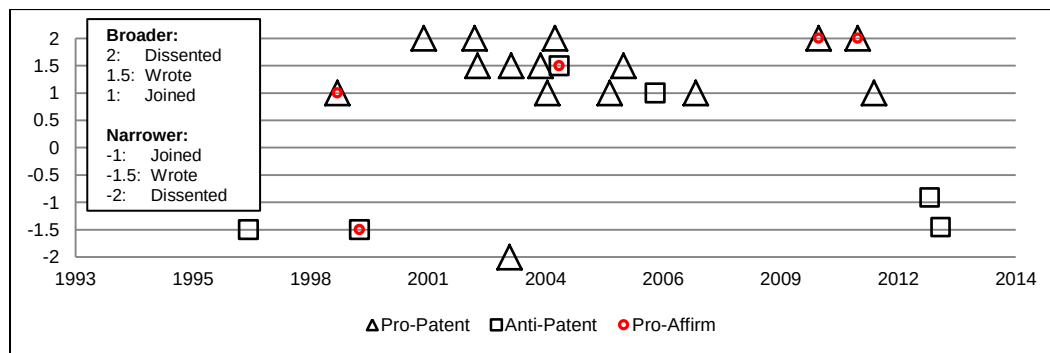
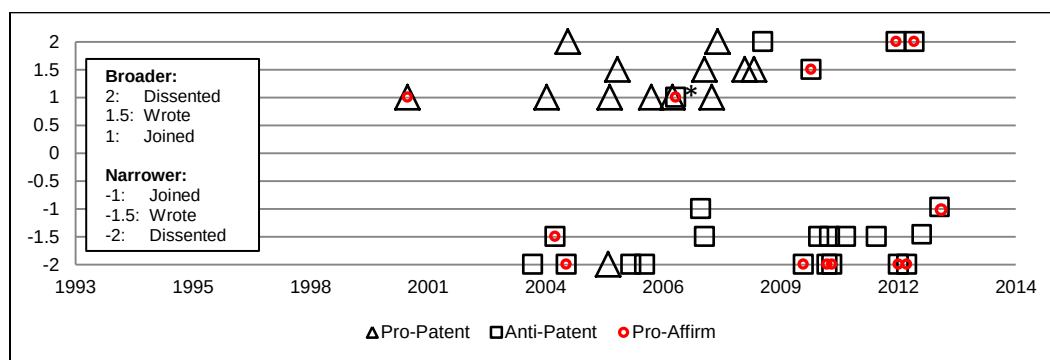


FIGURE 7
CLOSE CASES: JUDGE DYK (36 CASES)



* Circle goes with square: One case is pro-patent, pro-reverse; the other is anti-patent, pro-affirm

FIGURE 8
CLOSE CASES: JUDGE LINN (17 CASES)

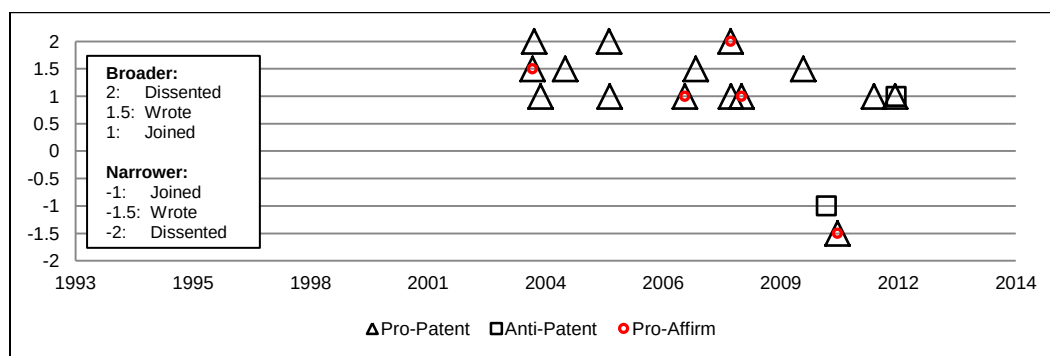


FIGURE 9
CLOSE CASES: JUDGE LOURIE (24 CASES)

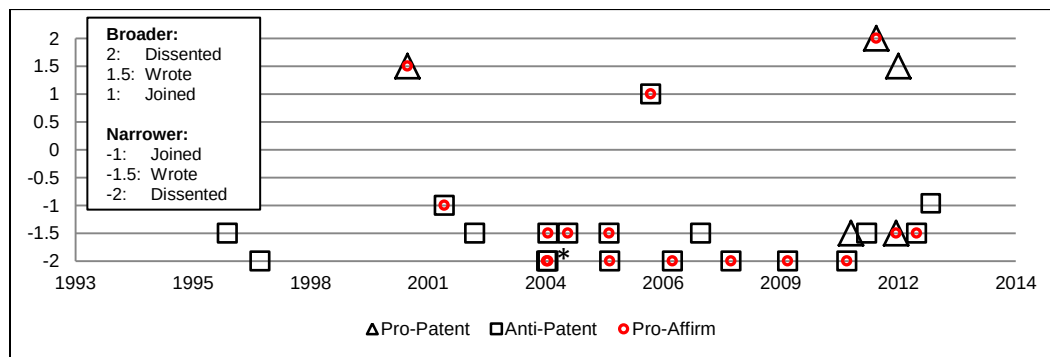


FIGURE 10
CLOSE CASES: JUDGE MAYER (18 CASES)

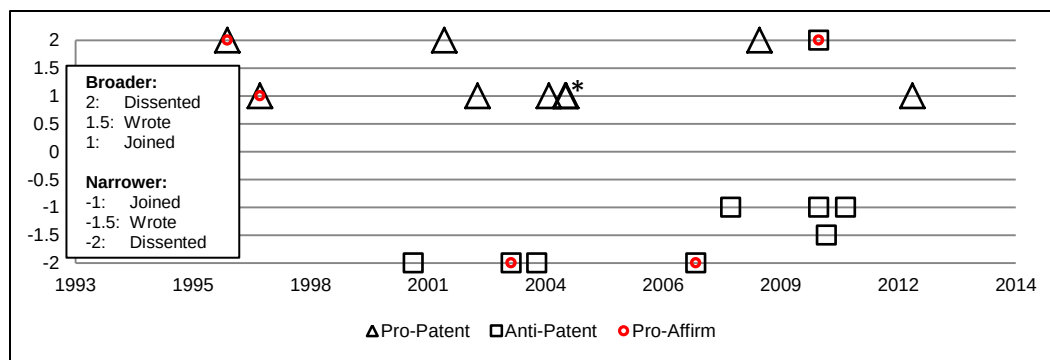


FIGURE 11
CLOSE CASES: JUDGE MOORE (9 CASES)

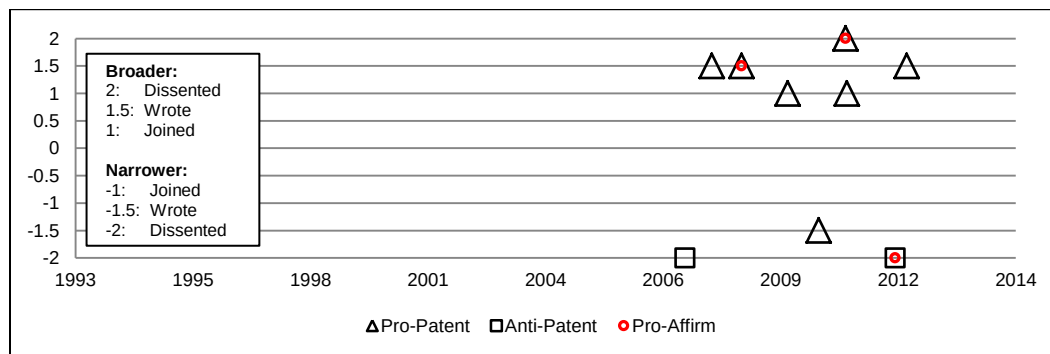


FIGURE 12
CLOSE CASES: JUDGE NEWMAN (29 CASES)

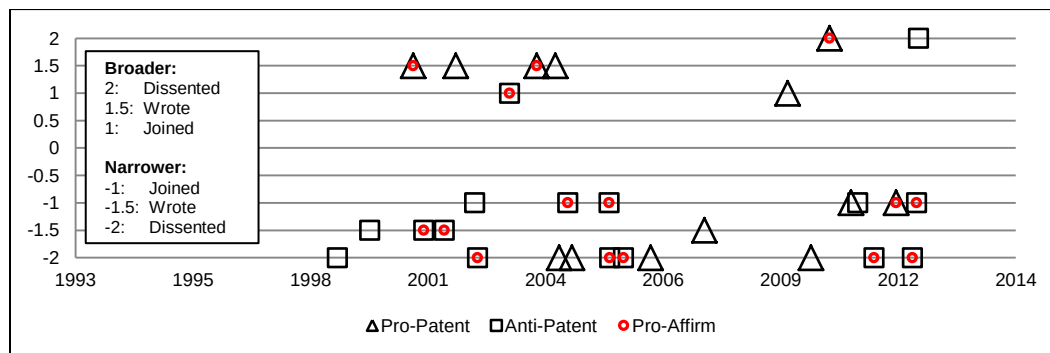


FIGURE 13
CLOSE CASES: JUDGE O'MALLEY (3 CASES)

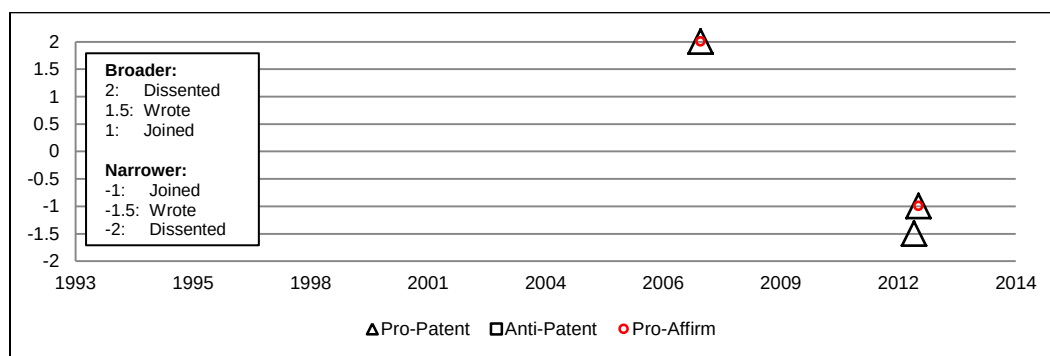


FIGURE 14
CLOSE CASES: JUDGE PLAGER (3 CASES)

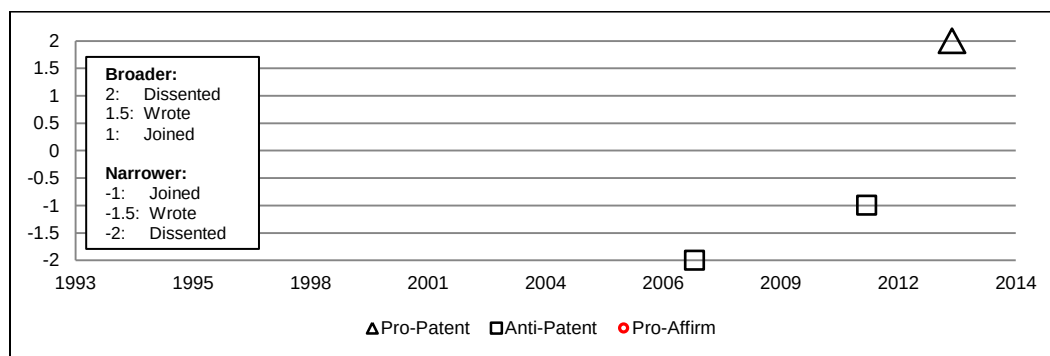


FIGURE 15
CLOSE CASES: JUDGE PROST (25 CASES)

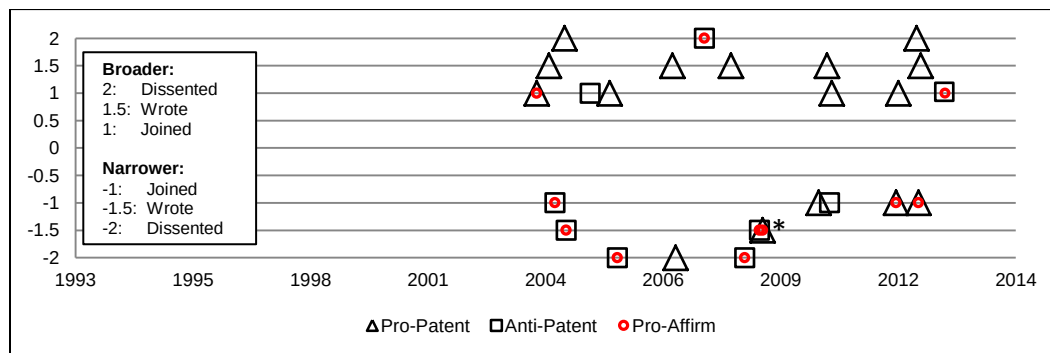


FIGURE 16
CLOSE CASES: CHIEF JUDGE RADER (25 CASES)

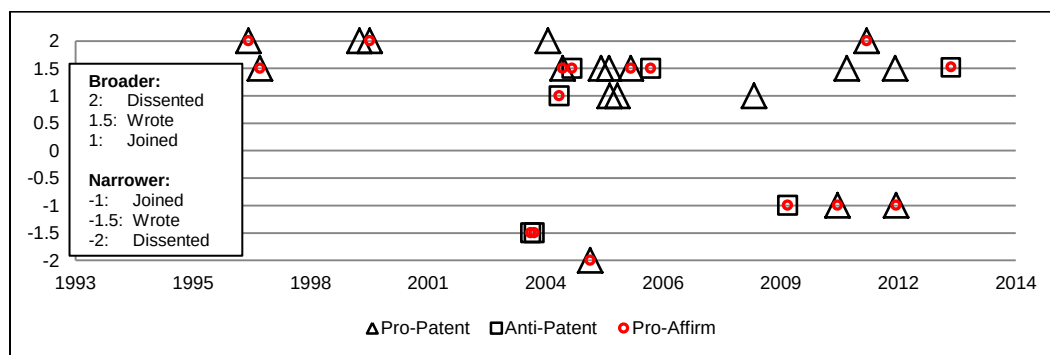


FIGURE 17
CLOSE CASES: JUDGE REYNA (3 CASES)

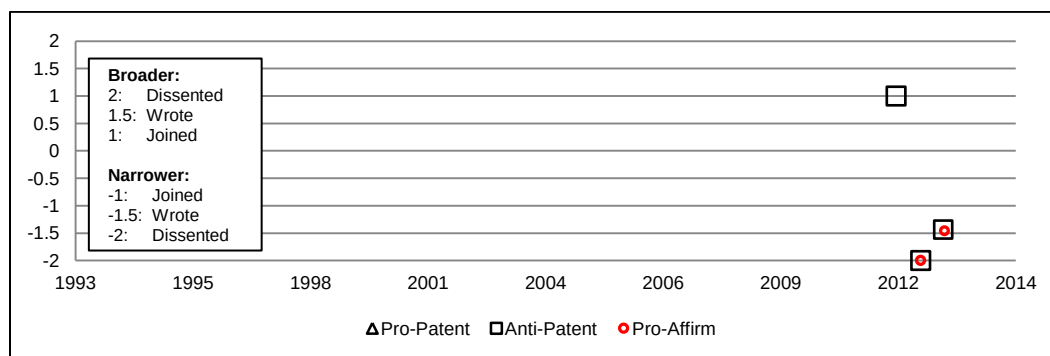


FIGURE 18
CLOSE CASES: JUDGE SCHALL (16 CASES)

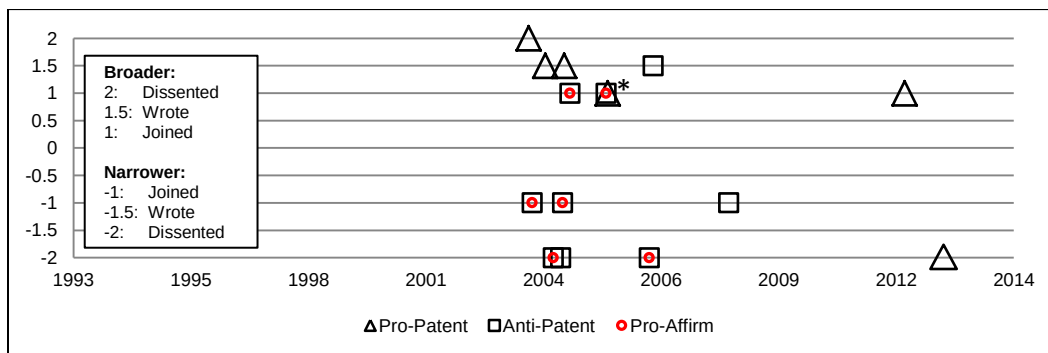
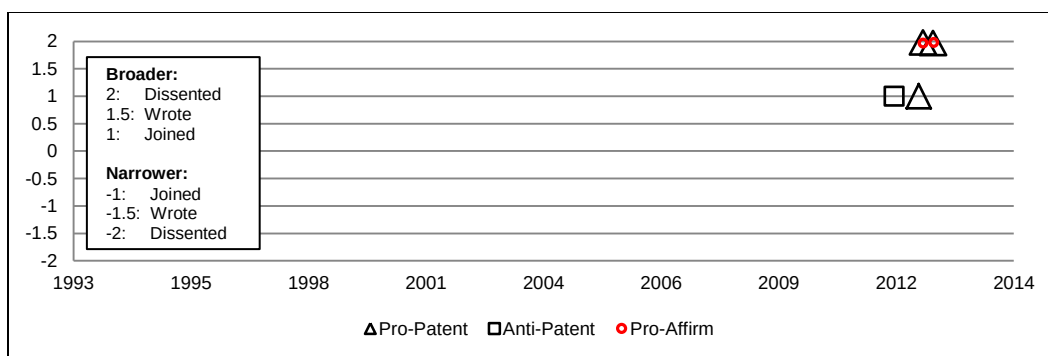


FIGURE 19
CLOSE CASES: JUDGE WALLACH (4 CASES)



C. Observations

1. Broader vs. Narrower and Less Spec vs. More Spec

Overall, the Federal Circuit decided about 58% of close cases in a broadening direction. Individual judges vary widely on the broad-narrow spectrum, with Judges Linn and Clevenger strongly on the “broad” side of the spectrum, and Judges Lourie and Newman strongly on the “narrow” side of the spectrum.

In about 52% of close cases, the case turned on a difference between less spec and more spec, where one side was less willing than the other to read a limitation from the specification into the claims.¹⁷ In these cases, the court as a whole split

¹⁷ See, e.g., *Marine Polymer Techs., Inc. v. HemCon, Inc.*, 672 F.3d 1350, 1369–70 (Fed. Cir. 2012) (Dyk, J., dissenting in part) (opposing the court’s interpretation of “a claim limitation based

evenly between less spec and more spec, while individual judges ranged from 11–0 in a less spec direction to 17–1 in a more spec direction. As one would expect, because less spec nearly always results in a broader interpretation, the judges who tend to vote in a broadening direction also tend to vote in a less spec direction.¹⁸ It is interesting to note, however, that even when the debate is not about whether or not a limitation should be imported from the specification into the claims, the judges at the ends of the spectrum tend to continue to vote predictably “broad” or “narrow.”

In close cases, Judges Linn and Clevenger vote overwhelmingly for the broadening and less spec interpretations.¹⁹ Similarly, Chief Judge Rader usually votes in a broadening and less spec manner, but his tendency is not as pronounced as those of Judges Linn and Clevenger. In contrast, Judges Lourie and Newman are at the opposite pole; they are more likely to import a limitation into the claims from the specification, and accordingly, are more likely to vote for a narrower claim construction.²⁰ The other judges are far less predictable in close cases.

The approaches that lead to the most consistency—“erring” on the side of a less spec and broadening interpretation, as do Judges Linn and Clevenger, or a more spec and narrowing interpretation, as do Judges Lourie and Newman, appear to have been rejected by the significant majority of active Federal Circuit judges. The result is that the judges in the middle appear to be applying essentially the same rules to reach different results from case to case. Until the rules are somehow clarified in a way that enables the Federal Circuit judges to reach unanimity more often, there will always be uncertainty.

Given that the difference in approach between more spec and less spec accounts for only 52% of the cases, there must be something else that causes some judges to gravitate to the broader interpretation and others to the narrower interpretation. Another divide, which overlaps with the more spec/less spec divide, is on the question whether it is appropriate to attempt to determine “what the inventor actually invented” and then limit the claims accordingly, even if the plain language of the claims might not contain a clear limitation. Judges Lourie, Newman, Plager, Prost, and possibly O’Malley have endorsed this approach,²¹ while Chief Judge Rader and Judge Moore have expressly rejected it.²²

solely on a single example from the specification”). The more spec/less spec percentages are calculated from the data in Appendix A.

¹⁸ See Appendix A. Judge Prost seems to be the exception; she voted 14-11 in a broadening direction, but 8-5 in a more spec direction. Judge Prost’s results are also interesting in that five of her eleven narrowing votes favored the patentee (whereas for other judges, a narrowing vote is typically a vote against the patentee),

¹⁹ See, e.g., *3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371–72 (Fed. Cir. 2003).

²⁰ See, e.g., *Kustom Signals, Inc. v. Applied Concepts, Inc.*, 264 F.3d 1326, 1331–32 (Fed. Cir. 2001).

²¹ See *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 632 F.3d 1246, 1258 (Fed. Cir. 2011) (Lourie, J., dissenting). Judge Lourie has articulated and justified the “actually invented” standard as follows:

The problem in claim interpretation is thus our focus on our muddy, conflicting, and overly formulaic rules when the real task of claim interpretation is to read the specification and determine what the inventors meant when they used the

2. *Pro-Patent vs. Anti-Patent*

The pro-patent vs. anti-patent data is interesting because it reveals result-affecting differences between judges who vote very similarly on the broad/narrow and less spec/more spec spectra. For example, while for most judges, pro-patent votes closely correlate to broader claim interpretations, Judges Dyk, Schall, and Newman are exceptions. Although Judges Dyk and Schall have broadening percentages of 47% and 50%, respectively, they have pro-patent percentages of only 36%²³ and 38%, respectively. And while Judge Newman has a broadening percentage of only 28%, her pro-patent percentage is 45%. The reader should keep in mind that this data only relates to claim construction cases—they do not establish the pro- or anti-patent proclivities of judges across all cases. For example, an anti-patent bent in claim construction cases might simply reflect a philosophy of construing a patent against the drafter.

3. *Pro-Affirm vs. Pro-Reverse*

The pro-affirm vs. pro-reverse data is important for what it says about proposals for deference. Here, Chief Judge Rader presents an interesting profile: While his overall tendency is to vote broader, less spec, and pro-patent—all of which are the opposite of the tendencies of district courts—he still managed to vote in a pro-affirm direction about 64% of the time. In fact, as shown in his scatter chart, in the only cases in which he went against his normal broadening tendency, his vote aligned with the position of the district court.²⁴ Chief Judge Rader's own votes thus seem to reflect a measure of deference to district court claim construction, consistent with his expressed views on the matter.²⁵

language they did. Obviously the claims define the scope of protection accorded the owners of a patent. But in construing the claims we should avail ourselves of the knowledge we glean from the patent specification to see what the inventors disclosed as their invention. The bottom line of claim construction should be that the claims should not mean more than what the specification indicates, in one way or another, the inventors invented.

Id. (internal citations omitted).

²² See, e.g., *Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1302 (Fed. Cir. 1999) (Rader, J., dissenting) (requiring that a limitation be explicit in the specification because “terms in a claim must be given their ordinary meaning unless it is apparent that the inventor used them differently in a patent”); see also *infra* note 41 (quoting Judge Moore's *Retractable Technologies* dissent, in which Chief Judge Rader joined).

²³ Since late 2008, Judge Dyk has voted against the patent-holder in all eighteen “close cases” that he has participated in.

²⁴ See *supra* Figure 15.

²⁵ See *Merck & Co. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1380–81 (Fed. Cir. 2005) (Rader, C.J., dissenting). Faced with a very close case of claim construction, “so close in fact that ultimately two federal judges . . . and the United States Patent and Trademark Office agreed with Merck & Co., and two federal judges agreed with Teva Pharmaceuticals,” Chief Judge Rader criticized the Federal Circuit for not affording any deference to the district court in such circumstances:

Although Judge Lourie is on the opposite end of the broad/narrow spectrum from Chief Judge Rader, his voting pattern can also be seen as giving a measure of deference to district courts. While his overall narrowing tendency is already aligned with the overall tendency of district courts, on three of the four occasions that he voted against his normal tendency and in a broadening direction, his votes aligned with the position of the district court.²⁶

Judge Dyk, on the other hand, votes more strongly against the district court than one might expect. Although his narrowing percentage is 53%, which might suggest a comparable pro-affirm percentage, he voted with the district court only about 36% of the time.

Judge Newman's close cases votes likewise show less deference than one might expect. Because her tendency is to vote narrower and more spec, the same tendency as district court judges, as well as of Judge Lourie, one might expect a pro-affirm rate higher than her 50%. By comparison, Judge Lourie's pro-affirm rate is 67%.

All told, the pro-affirm vs. pro-reverse data casts doubt on the notion that a rule of enhanced deference to district courts will help iron out the differences among Federal Circuit judges in claim construction cases. In fact, the data suggests that the strongly-felt differences that cause judges to disagree in close cases have little to do with a perceived need for more deference to district courts. Only four judges—Chief Judge Rader and Judges Lourie, along with newcomers Judges O'Malley and Reyna—would affirm at a rate greater than 50% in close cases. On the other side, five judges—Judges Dyk, Moore, Linn, Clevenger, and Mayer—all have pro-affirm rates of less than 40%. The fact that Judge Moore and Mayer have both expressly indicated that they believe more deference to district courts would be appropriate suggests that their differences with other panel members in close claim construction cases result from something other than a perceived need for more deference.²⁷

Despite the district court's superior tools and time to evaluate the complete record, to hear and inquire from expert and fact witnesses, to delve into countless related details, to probe the scientific and semantic context, and to entertain argument as long as necessary for clarity, this court with its reading three briefs before its half-hour hearing becomes enamored with its own analysis of a very close issue and reverses the district court. . . . In this case, this court eschews all deference, a particularly striking choice in the face of a very close case and a district court whose diligent and intelligent process and resolution earned more respect than it received.

Id. at 1381–82.

²⁶ See, e.g., *Agfa Corp. v. Creo Prods. Inc.*, 451 F.3d 1366, 1369 (Fed. Cir. 2006).

²⁷ See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1330–35 (Fed. Cir. 2005) (Mayer, J., dissenting) (calling for deference to district courts' findings of subsidiary facts in claim construction); *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 659 F.3d 1369, 1373 (Fed. Cir. 2011) (Moore, J., dissenting from denial of petition for rehearing en banc) (“[Claim construction] is clearly a mixed question of law and fact and deference should be given to the factual parts.”).

III. REVERSALS: CHARTS AND OBSERVATIONS

For reversals, this study looked at all Federal Circuit cases since the *Phillips* decision in July 2005 in which the district court’s construction of a claim term or terms was reversed.²⁸ At most, one reversal per case was counted; thus, a case in which the district court was found to have misconstrued multiple limitations or claims still only counted as one reversal. Likewise, the fact that a district court might have gotten several claim constructions right did not prevent the case from being counted as a reversal. The controlling factor was whether the district court got at least one construction wrong. As previously mentioned, cases where the question did not involve the usual exercise of determining the meaning of a claim based on the language of the claim, the specification, and the prosecution history were omitted from this study.²⁹

A. Overview Charts

The first two charts below show that most reversals come from cases in which the district court has granted summary judgment of non-infringement. In other words, in most cases that ended up being reversed, the district court had adopted a too-narrow claim construction, which had enabled it to dispose of the case on summary judgment.³⁰

²⁸ See Appendix B for the cases considered “reversals” and on which the charts are based. While the “SJ v. Trials” bar chart below includes data on reversals for all of 2005, which allows one to easily compare the bars, the other charts exclude cases decided before *Phillips* (i.e., before July 12, 2005). For the curious, the pre- vs. post-*Phillips* breakdown for 2005 is as follows:

Timeframe	SJ of NI	SJ of IN or INF	Trial
2005 Pre- <i>Phillips</i> Reversals	8	1	2
2005 Post- <i>Phillips</i> Reversals	9	2	3

²⁹ For example, “indefiniteness” cases were omitted, as were cases that turned on an interpretation of section 112(f) (formerly section 112, paragraph 6). These cases were omitted because questions regarding the proper interpretation of sections 112(b) and 112(f) are typically (even if not always) separate and distinct from the primary issue in claim construction—how to read a claim in light of the specification. See *supra* note 6 and accompanying text. This study also omits cases in which the Federal Circuit stated that it was “reversing” the district court’s claim construction, but upheld the district court on other grounds.

³⁰ In the charts, SJ refers to Summary Judgment, NI refers to Non-Infringement, IN refers to Invalidity, and INF refers to Infringement. Because a ruling on a preliminary injunction (PI) is immediately appealable, cases involving preliminary injunction rulings were also excluded from these charts. See 28 U.S.C. § 1292(a)(1) (2012).

FIGURE 20
CLAIM CONSTRUCTION REVERSALS POST-*PHILLIPS*: SJ VS. TRIALS

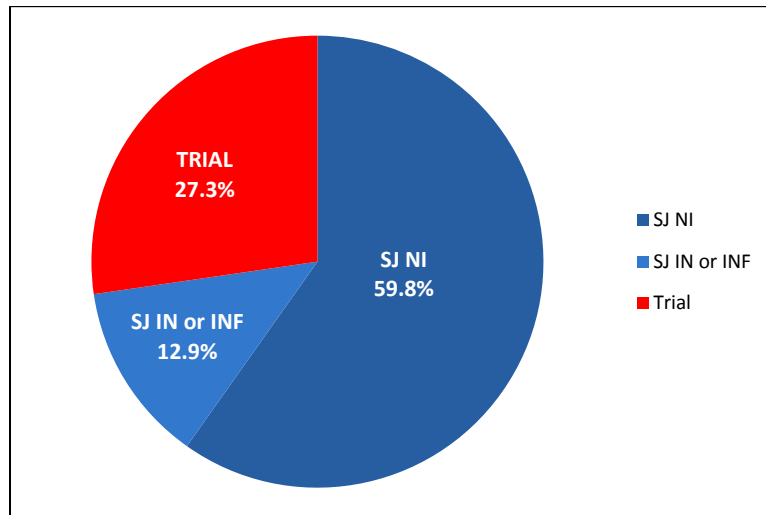
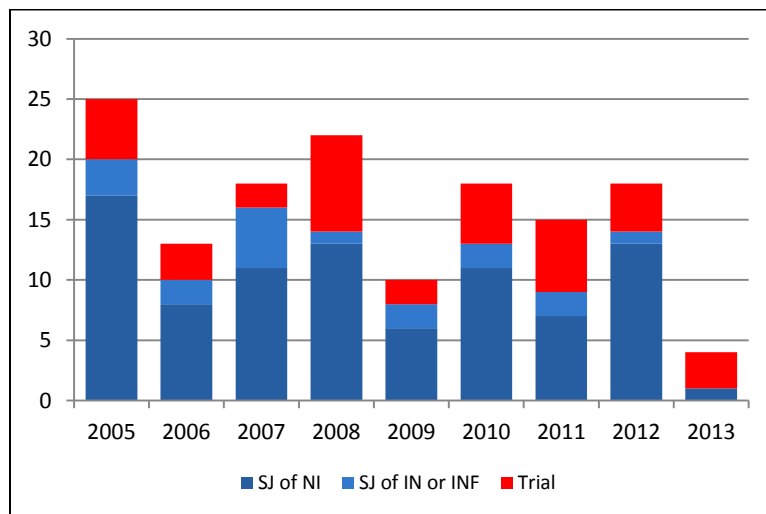


FIGURE 21
CLAIM CONSTRUCTION REVERSALS POST-*PHILLIPS*: SJ VS. TRIALS BY YEAR



The following two charts show that when district courts err construing claims in a way that will be reversed on appeal: (1) they tend to do so in a narrowing direction and (2) the decision to reverse tends to be unanimous.

FIGURE 22
CLAIM CONSTRUCTION REVERSALS POST-*PHILLIPS*: BROADENING VS. NARROWING

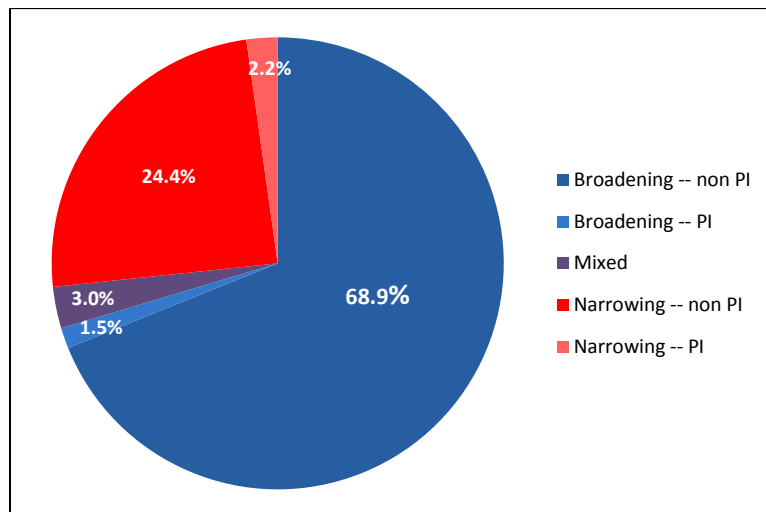
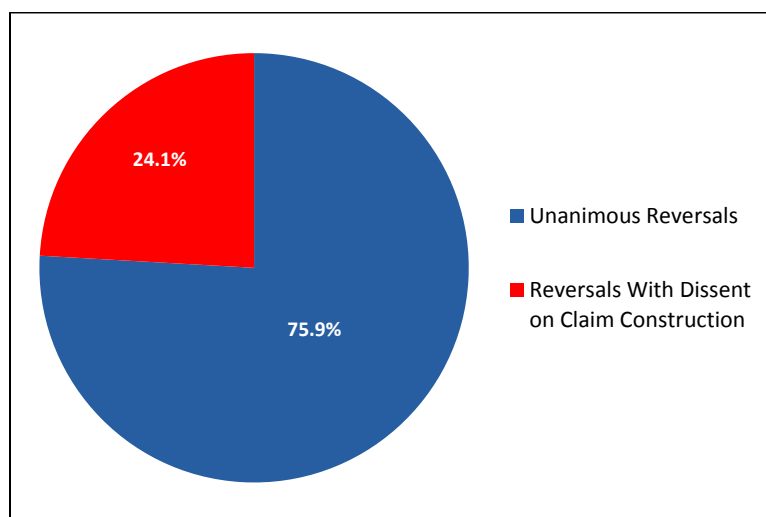


FIGURE 23
CLAIM CONSTRUCTION REVERSALS POST-*PHILLIPS*: UNANIMOUS VS. CLOSE



B. Observations

We can observe several things from this data. The fact that most of the reversals are unanimous suggests that according more deference to the district courts would do little to address the problems with claim construction. If all three Federal Circuit panel members agree that the district court erred as a matter of law, that suggests that the district court did, in fact, get it wrong under settled principles of claim construction.³¹ Although a strong legal case can be made that district courts *should* receive a measure of deference on subsidiary factual issues, it is very unclear that giving such deference to district courts would change the result in any given case. As already shown in connection with the close cases, a perceived need for more deference does not seem to be driving the differences between Federal Circuit judges in claim construction cases. Moreover, proponents of the “deference to district courts” approach have very few—if any—cases to offer in which a district court’s claim construction was based on a determination that the district court judge was better qualified to make than a panel of three Federal Circuit judges.

The fact that most of the reversals are in a broadening direction tells us something about the district courts’ biases. All things being equal, one would expect district courts to be as likely to err in a narrowing direction as a broadening one. But all things are not equal—when they err, district courts tend to read claims more narrowly than the Federal Circuit considers permissible.³² This might suggest that the “return-to-the-specification” focus in *Phillips*³³ has led district courts to over-emphasize the specification, to the extent of erring in favor of importing limitations from the specification into the claims.³⁴ It might also suggest that district courts’ exposure to testimony regarding the invention at issue leads them to apply something like an “actually invented” standard. But another possibility is that in a close case, a district court will tend to err in the direction that permits it to dispose of the case (or at least the troublesome issue of infringement) more readily. In fact, in about 73% of the reversals, that is exactly what happened—faced with a choice between two constructions, the district court picked the construction that resulted in a grantable motion for summary judgment. In these cases, if the district court had adopted the interpretation ultimately adopted by the Federal Circuit, summary judgment would typically not have been possible at that stage in the proceedings.

³¹ See, e.g., *Advanced Software Design Corp. v. Fiserv, Inc.*, 641 F.3d 1368, 1379 (Fed. Cir. 2011) (unanimous decision).

³² See *supra* Part III.A. It would be of some, but decidedly lesser, interest to consider the direction in which district courts tend to construe claims when they get it right. In those cases, the data would be skewed by the fact that in many cases the right answer was relatively easy to arrive at, as evidenced by the fact that both the district court and the Federal Circuit reached it. “Affirmance” data is beyond the scope of this article.

³³ *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc).

³⁴ See, e.g., *Laryngeal Mask Co. v. Ambu A/S*, 618 F.3d 1367, 1370–71 (Fed. Cir. 2010) (reversing the district court’s claim construction because it “improperly read a . . . limitation into the claims”).

IV. RECOMMENDATIONS AND PROPOSALS

A. Deference?

The data strongly suggests that deferring more to district courts on subsidiary factual issues will do very little to address the inconsistency in claim construction. Claim construction rarely turns on credibility or anything else in which generalist district court judges are particularly expert. In fact, a review of the cases shows that claim construction issues can, for the most part, be resolved by reference to the written record. The specification, the prosecution history, and the plain language of the claims are what matters;³⁵ extrinsic evidence regarding what a term might have meant to someone with skill in the art at a particular time is rarely if ever dispositive.

The problem is that district courts are getting claim construction wrong, as shown by the fact that most of the reversals are unanimous.³⁶ Likewise, the fact that district courts seem to be erring systematically in a direction that enables them to dispose of cases on summary judgment is a reason to be wary of any proposals for deference. Finally, a rule of deference would have little effect until the differences among Federal Circuit judges revealed by the close cases data³⁷ are ironed out.³⁸

B. Go En Banc (or to the Supreme Court) on the Question Whether “Determining What the Inventor Invented” Is an Appropriate First Step in Claim Construction?

As mentioned above,³⁹ a block of four, or possibly five judges, namely, Judges Lourie, Plager, Newman, Prost, and possibly O’Malley, has endorsed a rule that looks first for “what the inventor invented,” based on the specification, and then makes an effort to construe the claims as not going beyond what the inventor invented.⁴⁰

³⁵ See *Phillips*, 415 F.3d at 1315.

³⁶ See *supra* Figure 22.

³⁷ See *supra* Part II.C.

³⁸ As discussed immediately below, a major difference among Federal Circuit judges is whether claim construction should involve an inquiry into what the inventor “actually invented.” Any proposal for deference should also include a position on whether that is an appropriate question in claim construction, and whether the district court’s determination on that question should receive deference.

³⁹ *Supra* Part II.C.1.

⁴⁰ See *Arlington Indus. v. Bridgeport Fittings, Inc.*, 632 F.3d 1246, 1257 (Fed. Cir. 2011) (Lourie, J., dissenting) (“But, at bottom, we are reading a patent specification to see what the inventors invented, what they disclosed, and how they conveyed that information.”); *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1306 (Fed. Cir. 2011) (Lourie, J.) (“In reviewing the intrinsic record to construe the claims, we strive to capture the scope of the actual invention, rather than strictly limit the scope of claims to disclosed embodiments or allow the claim language to become divorced from what the specification conveys is the invention.”); *id.* at 1311 (Plager, J., concurring) (quoting and approving of Judge Lourie’s statement that “[i]n reviewing the intrinsic record to construe the claims, we strive to capture the scope of the actual invention”); *Housey Pharm. v. Astrazeneca UK Ltd.*, 366 F.3d 1348, 1356 (Fed. Cir. 2004) (Newman, J., dissenting) (“[A] claim is ‘inimical’ to any broader construction than the invention set forth in the

Although Chief Judge Rader and Judge Moore have expressly criticized this rule,⁴¹ and we can infer from their voting patterns that Judges Linn and Clevenger would disagree with it or at least disagree with how it should be applied,⁴² that leaves at least six judges who have not clearly endorsed or rejected it. Perhaps not coincidentally, these are judges who are either new to the court (Judges Reyna, Wallach, and possibly O'Malley), or whose votes fall in the middle of the “broad-narrow” spectrum (Judges Bryson, Dyk, Schall, and Mayer). One step toward reaching more uniform results might be for the court to determine, en banc, whether or not this is the rule, and if it is, to recite it and apply it in all claim construction cases. If the “actually invented” approach were expressly adopted, then perhaps Judges Linn and Clevenger would begin voting in a narrower direction; conversely, if the approach were rejected, then perhaps Judges Newman and Lourie would begin voting in a broader direction. Because this rule is not expressly discussed in the vast majority of cases, it is difficult to say how many close cases will be eliminated by adoption or rejection of this rule.⁴³

specification”); *Free Motion Fitness, Inc. v. Cybex Int'l, Inc.*, 423 F.3d 1343, 1355 (Fed. Cir. 2008) (Prost, J., dissenting) (“The majority’s approach, in my view, does not attempt to determine what the inventor actually invented, but rather takes the broadest available abstract meaning of a claim term that is not explicitly rejected by the specification. This approach allows the claim scope to extend beyond what the inventor’s written description and claims show to be his actual invention.”); see also *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 659 F.3d 1369, 1375–76 (Fed. Cir. 2011) (O'Malley, J., dissenting from denial of petition for rehearing en banc) (appearing to endorse the panel majority’s “actually invented” approach, while urging that district courts be given deference on that inquiry).

The “actually invented” rule goes somewhat farther than most judges have seemed willing to go. Thus, while all of the judges on the Federal Circuit agree that an inventor’s clear disavowal or disclaimer in the specification will reduce claim scope, the rule goes farther by conforming claim scope to what the specification as a whole indicates that the inventor actually invented.

⁴¹ *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 659 F.3d 1369, 1372 (Fed. Cir. 2011) (Moore, J., joined by Rader, C.J., dissenting from rehearing en banc) (“The error in *Retractable* is the majority’s attempt to rewrite the claims to better conform to what it discerns is the ‘invention’ of the patent instead of construing the language of the claim. Indeed, the majority candidly explained that its construction, limiting ‘body’ to a one-piece body, ‘is required to tether the claims to what the specifications indicate the inventor *actually* invented.’”). Interestingly, prior to her dissent on the *Retractable* en banc petition, Judge Moore appeared to endorse something akin to the “actually invented” rule. See *Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 815 (Fed. Cir. 2007) (Moore, J., dissenting) (“Patent scope should be coextensive with what the inventor invented as evidenced by what is disclosed in the patent specification.”).

⁴² Although Judge Clevenger wrote the unanimous decision in *Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243 (Fed. Cir. 1998), a case that appeared to endorse the “actually invented” standard, see *id.* at 1251 (“Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim.”), his voting pattern since then suggests that he has become more “claim-focused.” See *supra* Part II.B.

⁴³ Although this approach might run counter to the Federal Circuit’s oft-repeated statement that “the name of the game is the claim,” see Giles S. Rich, *The Extent of the Protection and Interpretation of Claims—American Perspectives*, 21 INT’L REV. INDUS. PROP. & COPYRIGHT L. 497, 499 (1990), it is consistent with recent and not-so-recent Supreme Court cases in which the Court has appeared to adopt an “invention-focused” rather than a “claim focused” approach. See *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1294 (2012) (seeking “inventive concept” in claims involving laws of nature); *Parker v. Flook*, 437 U.S. 584, 594 (1978) (same);

Logically, it would have made sense to resolve this dispute about a claim construction rule prior to resolving the ongoing dispute about whether deference to district courts is appropriate. This is because the question of “what the inventor actually invented” might well be the sort of “subsidiary fact” that a rule of deference would hand over to the district court.⁴⁴ By taking *Lighting Ballast* up en banc prior to resolving this issue, the Federal Circuit appears to have committed itself to deciding the “deference” question without a full appreciation of its ramifications.

A more extended discussion of the benefits and drawbacks of adopting the “actually invented” rule is left to others. But one clear benefit of adopting the rule would be to bring the Federal Circuit’s claim construction approach into better alignment with those of the district courts. As shown in the reversals data, district courts have a strong tendency to construe claims narrowly;⁴⁵ if the Federal Circuit adopts a rule of construction that results in narrower claims, it can be expected that the reversal rate will go down. In fact, district courts may be well-advised to justify their narrowing interpretations by expressly applying an “actually invented” standard. This might eventually cause the Federal Circuit to consider whether “actually invented” is an appropriate inquiry, and, if *Lighting Ballast* overrules *Cybor*, whether it is a factual issue.

C. Construct an Algorithm for Claim Construction?

As mentioned above, it would be a useful first step for the Federal Circuit to resolve the “actually invented” dispute, because that dispute clearly accounts for some of the differences between the judges. If differences in construction still persist after that dispute is resolved, the Federal Circuit should consider adopting an algorithm to be applied in all cases.

The idea of constructing an algorithm for claim construction is not new—Chief Judge Rader mentioned the possibility in his comments on the en banc order in *Phillips*.⁴⁶ While it is true, as Chief Judge Rader suggested, that the result of a case will not depend on the algorithm used, it might nevertheless be useful for the Federal Circuit to construct and start applying an algorithm, especially if other attempts at clarifying the law fail to lower the reversal rate in claim construction cases.

Appendix C contains an algorithm that would be consistent with current Federal Circuit case law, and which, if applied, would not necessarily change the result of any given case. This is just one possible algorithm; the purpose of providing it is to show

Quanta Computer, Inc. v. LG Elecs., Inc., 553 U.S. 617, 631–32 (2008) (focusing on “essential features” of invention).

⁴⁴ See, e.g., *Retractable Technologies*, 659 F.3d at 1375–76 (O’Malley, J., dissenting from denial of petition for rehearing en banc) (noting that “capturing the scope of the actual invention” sounds tellingly like a factual inquiry, not a legal one,” and contending that where “there is fair debate about the scope of the invention after application of *Phillips*’s principles, we should defer to reasoned district court choices”).

⁴⁵ See *supra* Part III.B and Appendix B.

⁴⁶ *Phillips v. AWH Corp.*, 376 F.3d 1382, 1384 (Fed. Cir. 2004) (Rader, C.J., concurring) (“[T]his court should receive commentary on the following question as well: Is claim construction amenable to resolution by resort to strictly algorithmic rules[?]”).

that an algorithm for claim construction can be constructed, once the appropriate rules have been agreed upon. If the Federal Circuit were to produce an algorithm and apply it in each case, it would become easier for the court to see where differences between individual judges exist, as well as to instruct district courts and the patent bar more clearly on how claim construction is supposed to proceed. With an algorithm, Federal Circuit panel decisions can become teaching opportunities that, in the aggregate, should result in more consistency in claim construction across the board.⁴⁷

CONCLUSION

The main goal of this paper has been to present data. As already mentioned, the data largely speaks for itself. It shows that there are real, result-affecting differences in the approaches that different Federal Circuit judges take to claim construction. It also shows that giving district courts more deference in claim construction cases will do little to address the underlying problem. What the data does not show, however, is exactly *what* the differences in approach among the Federal Circuit judges are. While the “actually invented” rule is one possible difference, it might not be the only one. Nevertheless, resolving the question of whether “actually invented” is a requirement for construing claims would be an important first step for ironing out the manifest differences in claim construction approach among the judges on the Federal Circuit and the district courts. After that is resolved, or in the course of its resolution, the court should consider providing an algorithm that could be applied in all cases so that district courts, the patent bar, and the Federal Circuit judges themselves could more readily see where disputes in claim construction arise.

⁴⁷ The algorithm in Appendix C is based on the assumption that *Cybor* is correct, and is neutral on the “actually invented” standard. If the law changes, the algorithm will have to change. Again, the purpose is to illustrate the feasibility of an algorithm as a teaching tool.

APPENDIX A: CLOSE CASES

Case (Close)	Date	Broader	Narrower	Less Spec	More Spec	Pro-Affirm	Pro-Reverse	Pro-Patent	Anti-Patent
General Am. Transportation Corp. v. Cryo-Trans, Inc.	8/14/96	Mayer [d]	Lourie [a], Schall	Mayer [d]	Lourie [a], Schall		X		X
J.T. Eaton & Co., Inc. v. Atlantic Paste & Glue Co.	2/11/97	Rader [d]	Clevenger [a], Rich	n/a	n/a		X		X
Eastman Kodak Co. v. Goodyear Tire Rubber Co.	5/20/97	Rader [a], Mayer	Lourie [d]	n/a	n/a	X		X	
Systemation, Inc. v. Engel Indus., Inc. [U]	3/10/99	Michel [a], Clevenger	Newman [d]	Michel [a], Clevenger	Newman [d]	X		X	
K-2 Corp. v. Salomon SA	9/13/99	Rader [d]	Clevenger [a], Gajarsa	n/a	n/a	X			X
Toro Co. v. White Consolidated Indus., Inc.	12/10/99	Rader [d]	Newman [a], Friedman	Rader [d]	Newman [a], Friedman		X		X
Zodiac Pool Care, Inc. v. Hoffinger Indus., Inc.	3/24/00	Bryson [d]	Skelton, Gajarsa [a]	n/a	n/a	X			X
Doyle v. Crain Indus., Inc. [U]	10/25/00	Lourie [a], Dyk	Friedman [d]	Lourie [a], Dyk	Friedman [d]	X		X	
Vanguard Products Corp. v. Parker Hannifin Corp.	12/14/00	Friedman, Newman [a]	Mayer [d]	n/a	n/a	X		X	
Netword, LLC v. Centraal Corp.	3/14/01	Clevenger [d]	Newman [a], Archer	Clevenger [d]	Newman [a], Archer	X			X
Kustom Signals, Inc. v. Applied Concepts, Inc.	9/5/01	Mayer [d]	Newman [a], Lourie	n/a	n/a	X			X
Smith & Nephew, Inc. v. Ethicon, Inc.	12/12/01	Newman [a], Gajarsa	Michel [d]	n/a	n/a		X	X	
Transclean Corp. v. Bridgewood Services, Inc.	5/21/02	Clevenger [d]	Newman, Lourie [a]	Clevenger [d]	Newman, Lourie [a]		X		X
Benetton USA, Inc. v. First Team USA, Inc. [U]	6/14/02	Mayer, Clevenger [a]	Newman [d]	n/a	n/a		X	X	

Case (Close)	Date	Broader	Narrower	Less Spec	More Spec	Pro-Affirm	Pro-Reverse	Pro-Patent	Anti-Patent
Lacks Indus. Inc. v. McKechnie Vehicle Components USA, Inc.	3/13/03	Newman, Michel [a]	Clevenger [d]	Clevenger [d]	Newman, Michel [a]	X			X
Bell Communications Research, Inc. v. Fore Systems, Inc. [U]	3/27/03	Clevenger [a], Bryson	Mayer [d]	n/a	n/a		X	X	
Alloc, Inc. AB v. ITC	9/10/03	Schall [d]	Rader [a], Michel	Schall [d]	Rader [a], Michel	X			X
Arlington Indus., Inc. v. Bridgeport Fittings, Inc.	9/25/03	Linn [a], Archer	Dyk [d]	n/a	n/a	X		X	
Genzyme Corp. v. Transkaryotic Therapies, Inc.	10/9/03	Linn [d]	Rader [a], Schall	Linn [d]	Rader [a], Schall	X			X
Merck & Co. v. Teva Pharmaceuticals USA, Inc.	10/30/03	Newman [a], Prost	Mayer [d]	Mayer [d]	Newman [a], Prost	X		X	
3M Innovative Properties Co. v. Avery Dennison Corp.	12/2/03	Clevenger [a], Linn	Michel [d]	n/a	n/a		X	X	
Liquid Dynamics Corp. v. Vaughan Co., Inc.	1/23/04	Gajarsa [a], Dyk	Lourie [d]	Gajarsa [a], Dyk	Lourie [d]		X	X	
Schwarz Pharma, Inc. v. Warner-Lambert Co., LLC [U]	1/29/04	Schall [a], Clevenger	Lourie [d]	n/a	n/a		X	X	
Microsoft Corp. v. Multi-Tech Systems, Inc.	2/3/04	Rader [d]	Lourie [a], Bryson	Rader [d]	Lourie [a], Bryson	X			X
Superguide v. DirectTV Enters., Inc.	2/12/04	Prost [a], Mayer	Michel	Prost [a], Mayer	Michel		X	X	
Novartis Pharma Corp. v. Eon Labs Mftg, Inc.	4/2/04	Clevenger [d]	Dyk [a], Prost	Clevenger [d]	Dyk [a], Prost	X			X
Norian Corp. v. Stryker Corp.	4/6/04	Newman [a], Friedman	Schall [d]	n/a	n/a		X	X	
Housey Pharms. v. Astrazeneca UK Ltd.	5/7/04	Clevenger [a], Rader	Newman [d]	Clevenger [a], Rader	Newman [d]	X			X
Metabolite Labs, Inc. v. Lab. Corp.	6/8/04	Rader [a], Friedman	Schall [d]	Schall [d]	Rader [a], Friedman	X		X	

Case (Close)	Date	Broader	Narrower	Less Spec	More Spec	Pro-Affirm	Pro-Reverse	Pro-Patent	Anti-Patent
Goldenberg v. Cytogen	6/23/04	Prost [d]	Schall, Gajarsa [a]	Prost [d]	Schall, Gajarsa [a]	X			X
Nystrom v. Trex Co., Inc.	6/28/04	Linn [a], Mayer	Gajarsa [d]	Linn [a], Mayer	Gajarsa [d]		X	X	
Wasinger v. Levi Strauss [U]	7/8/04	Mayer, Schall [a]	Dyk [d]	n/a	n/a		X	X	
Novartis Pharma Corp. v. Abbott Labs	7/8/04	Bryson [d]	Prost [a], Gajarsa	Bryson [d]	Prost [a], Gajarsa	X			X
Phillips v. AWH Corp.	7/21/04	Dyk [d]	Lourie [a], Newman	Dyk [d]	Lourie [a], Newman	X			X
In re Bigio	8/24/04	Rader [a], Schall	Newman [d]	Rader [a], Schall	Newman [d]	X			X
Merck & Co. v. Teva	1/28/05	Gajarsa [a], Prost	Rader [d]	Gajarsa [a], Prost	Rader [d]		X		X
Gillette Co. v. Energizer Holdings, Inc.	4/29/05	Michel, Rader [a]	Archer [d]	Michel, Rader [a]	Archer [d]		X	X	
Northpoint Tech. v. MDS Am., Inc.	6/28/05	Schall, Bryson [a]	Dyk [d]	n/a	n/a	X			X
Izumi Products v. Koninklijke Philips Electronics N.V. [U]	7/7/05	Linn [d]	Lourie [a], Newman	Linn [d]	Lourie [a], Newman	X			X
Salazar v. Procter & Gamble	7/8/05	Rader [a], Gajarsa	Bryson [d]	n/a	n/a		X	X	
Phillips v. AWH Corp.	7/12/05	Bryson [a], Michel, Clevenger, Rader, Schall, Gajarsa, Linn, Dyk, Prost	Lourie joined all but IV; Newman joined all but IV and VI	Bryson [a], Michel, Clevenger, Rader, Schall, Gajarsa, Linn, Dyk, Prost	Lourie joined all but IV; Newman joined all but IV and VI		X	X	
Free Motion Fitness, Inc. v. Cybex	9/16/05	Rader, Dyk [a]	Prost [d]	Rader, Dyk [a]	Prost [d]		X	X	

Case (Close)	Date	Broader	Narrower	Less Spec	More Spec	Pro-Affirm	Pro-Reverse	Pro-Patent	Anti-Patent
Dorel Juvenile Group v. Graco	11/7/05	Clevenger [a], Gajarsa	Newman [d]	n/a	n/a		X	X	
Ncube Corp. v. Seachange Intn'l	1/9/06	Rader [a], Friedman	Dyk [d]	Rader [a], Friedman	Dyk [d]	X		X	
Paymaster Techs. v. U.S.	5/4/06	Michel [a], Friedman	Dyk [d]	Michel [a], Friedman	Dyk [d]	X		X	
Agfa Corp. v. Creo Products	6/26/06	Lourie, Rader [a]	Newman [d]	Lourie, Rader [a]	Newman [d]	X			X
Momentum Golf Inc. v. Swingrite Golf Corp. [U]	6/30/06	Archer [a], Dyk	Schall [d]	n/a	n/a		X	X	
Amgen Inc. v. Hoechst Marion Roussel, Inc.	8/3/06	Clevenger, Schall [a]	Michel [d]	n/a	n/a		X		X
Ventana Medical Services, Inc. v. Biogenex Lab, Inc.	12/29/06	Dyk, Prost [a]	Lourie [d]	Dyk, Prost [a]	Lourie [d]		X	X	
Adrain v. Superchips, Inc.	1/25/07	Michel [a], Dyk	Prost [d]	n/a	n/a	X			X
Acumed LLC v. Stryker Corp.	4/12/07	Gajarsa [a], Linn	Moore [d]	n/a	n/a	X		X	
Honeywell Int'l, Inc. v. Universal Avionics Sys. Corp.	7/3/07	Bryson [a], Gajarsa	Plager [d]	Plager [d]	Bryson [a], Gajarsa	X		X	
Automed Techs., Inc. v. Microfil, LLC	7/16/07	Clevenger, Linn [a]	Mayer [d]	n/a	n/a		X	X	
Ormco Corp. v. Align Tech., Inc.	8/24/07	O'Malley [d]	Lourie [a], Dyk	O'Malley [d]	Lourie [a], Dyk		X		X
Verizon Servs. Corp. v. Vonage Holdings Corp.	9/26/07	Michel [d in part]	Dyk [a], Gajarsa	n/a	n/a		X		X
Verizon Servs. Corp. v. Vonage Holdings Corp.	9/26/07	Michel, Dyk [a]	Gajarsa [d in part]	n/a	n/a		X	X	
In Re Buszard	9/27/07	Prost [d]	Newman [a], Friedman	n/a	n/a		X	X	

Case (Close)	Date	Broader	Narrower	Less Spec	More Spec	Pro-Affirm	Pro-Reverse	Pro-Patent	Anti-Patent
Elbex Video, Ltd. v. Sensormatic Elecs. Corp.	11/28/07	Dyk, Moore [a]	Cote [d]	n/a	n/a		X	X	
Outside the Box Innovations, LLC v. Travel Caddy, Inc.	1/15/08	Dyk [d]	Bryson, Archer [a]	n/a	n/a	X			X
Decisioning.com, Inc. v. Federated Dep't Stores, Inc.	5/7/08	Linn [d-in part]	Mayer, Schall [per curiam]	Linn [d-in part]	Mayer, Schall [per curiam]		X		X
Lucent Techs., Inc. v. Gateway, Inc.	5/8/08	Linn, Prost [a]	Lourie [d]	n/a	n/a		X	X	
Uniloc USA, Inc. v. Microsoft Corp.	8/7/08	Linn, Moore [a]	Michel [d]	Linn, Moore [a]	Michel [d]	X		X	
Howmedica Osteonics Corp. v. Wright Med. Tech., Inc.	9/2/08	Dyk [a], Hochberg	Prost [d]	n/a	n/a		X	X	
Medegen MMS, Inc. v. ICU Med., Inc.	11/20/08	Rader, Dyk [a]	Walker [d]	Rader, Dyk [a]	Walker [d]		X	X	
Vehicle IP, LLC v. GMC	1/6/09	Mayer [d]	Bryson, Prost [a]	n/a	n/a	X			X
Kinetic Concepts, Inc. v. Blue Sky Med. Group, Inc.	2/2/09	Dyk [d]	Bryson, Prost [a]	Dyk [d]	Bryson, Prost [a]	X		X	
Martek Biosciences Corp. v. Nutrinova, Inc.	9/3/09	Newman, Gajarsa [a], Moore	Lourie [dissent in part], Rader [joins Lourie]	Newman, Gajarsa [a], Moore	Lourie [dissent in part], Rader [joins Lourie]		X	X	
Schindler Elevator Corp. v. Otis Elevator Co.	1/15/10	Linn [a], Friedman	Dyk [d]	n/a	n/a		X	X	
Marrin v. Griffin	3/22/10	Bryson, Dyk [a]	Newman [d]	n/a	n/a		X		X
Honeywell Int'l, Inc. v. United States	5/25/10	Mayer [d]	Prost, Moore [a]	Mayer [d]	Prost, Moore [a]		X	X	

Case (Close)	Date	Broader	Narrower	Less Spec	More Spec	Pro-Affirm	Pro-Reverse	Pro-Patent	Anti-Patent
Vizio, Inc. v. ITC	5/26/10	Clevenger [d]	Mayer, Dyk [a]	n/a	n/a		X		X
Becton, Dickinson & Co. v. Tyco Healthcare Group, LP	7/29/10	Gajarsa [d]	Linn, Mayer [a]	n/a	n/a		X		X
Intervet, Inc. v. Merial Ltd.	8/4/10	Bryson, Prost [a]	Dyk [d]	n/a	n/a		X	X	
General Protecht Group, Inc. v. ITC	8/27/10	Newman [d]	Dyk [a], Prost	n/a	n/a		X		X
Am. Med. Sys. v. Biolitec, Inc.	9/13/10	Bryson [a], Prost	Dyk [d]	n/a	n/a		X	X	
Astrazeneca LP & Astrazeneca AB v. Apotex, Inc.	11/1/10	Bryson [d]	Rader, Linn [a]	Rader, Linn [a]	Bryson [d]	X		X	
St. Clair Intellectual Prop. Consultants, Inc. v. Canon Inc.	1/10/11	Moore [d]	Dyk [a], Mayer	Moore [d]	Dyk [a], Mayer		X		X
Arlington Indus. v. Bridgeport Fittings, Inc.	1/20/11	Rader [a], Moore	Lourie [d]	Rader [a], Moore	Lourie [d]		X	X	
Hologic, Inc. v. Senorx, Inc.	2/24/11	Friedman [d]	Newman, Lourie [a]	Friedman [d]	Newman, Lourie [a]		X	X	
Creative Internet Adver. Corp. v. Yahoo! Inc. [U]	4/22/11	Clevenger [d]	Newman, Bryson [a]	n/a	n/a		X		X
Retractable Techs. v. Becton, Dickinson & Co.	7/8/11	Rader [d]	Plager, Lourie [a]	Rader [d]	Plager, Lourie [a]		X		X
Markem-Imaje Corp. v. Zipher Ltd.	9/9/11	Clevenger, Linn [per curiam]	Newman [d]	Clevenger, Linn [per curiam]	Newman [d]		X	X	
Marine Polymer Techs., Inc. v. HemCon, Inc.	9/26/11	Lourie [d]	Gajarsa, Dyk [a]	n/a	n/a		X		X
Digital-Vending Services Intern., LLC v. University of Phoenix, Inc.	3/7/12	Rader [a], Linn	Moore [d]	Rader [a], Linn	Moore [d]		X	X	

Case (Close)	Date	Broader	Narrower	Less Spec	More Spec	Pro-Affirm	Pro-Reverse	Pro-Patent	Anti-Patent
Marine Polymer Techs., Inc. v. HemCon, Inc.	3/15/12	Dyk [d-in-part] joined by Gajarsa, Reyna, Wallach, Linn	en banc, Lourie [a] joined by Rader, Newman, Bryson, Prost	Dyk [d-in-part] joined by Gajarsa, Reyna, Wallach, Linn	en banc, Lourie [a] joined by Rader, Newman, Bryson, Prost	X		X	
Advanced Fiber Techs (AFT) Trust v. J & L Fiber Services, Inc.	4/3/12	Lourie [a], Prost	Dyk [d]	Dyk [d]	Lourie [a], Prost		X	X	
Toshiba Corp. v. Imation Corp.	6/11/12	Schall, Moore [a]	Dyk [d]	Schall, Moore [a]	Dyk [d]		X	X	
InterDigital Communications, LLC v. International Trade Com'n	8/1/12	Mayer, Bryson [a]	Newman [d]	Mayer, Bryson [a]	Newman [d]		X	X	
Kinetic Concepts, Inc. v. Smith & Nephew, Inc.	8/13/12	Dyk [d]	Bryson, O'Malley [a]	n/a	n/a		X	X	
Mirror Worlds, LLC v. Apple Inc.	9/4/12	Prost [d]	Newman, Lourie [a]	n/a	n/a	X			X
Outside the Box Innovations, LLC v. Travel Caddy, Inc.	9/21/12	Newman [d]	Prost, O'Malley [per curiam]	n/a	n/a	X		X	
Sandisk Corporation v. Kingston Technology Co., Inc.	10/9/12	Prost [a], Wallach	Reyna [d]	n/a	n/a		X	X	
ArcelorMittal France v. AK Steel Corp.	11/20/12	Wallach [d]	Dyk [a], Clevenger	n/a	n/a		X		X
Harris Corp. v. Federal Express Corp.	1/17/13	Wallach [d]	Clevenger [a], Lourie	n/a	n/a		X		X
Biogen Idec, Inc. v. Glaxosmithkline LLC	4/16/13	Plager [d]	Dyk, Reyna [a]	n/a	n/a	X			X
Ceats v. Continental Airlines	4/26/13	Rader [a], Prost	Schall [d]	n/a	n/a	X			X

APPENDIX B: REVERSALS

Case (Reversals)	Date	Panel	Broader	Narrower	Procedural Posture	Dissent
Merck & Co. v. Teva	1/28/05	Rader, Gajarsa [a], Prost	X		V after T/INF after T	Rader
IEX Corp. v. Blue Pumpkin Software [U]	2/2/05	Newman, Clevenger [a], Bryson	X		SJ of NI	None
Iowa State Univ. Research v. Wiley Organics [U]	3/7/05	Lourie [a], Schall, Prost	X		StipJ of NI	None
Playtex Prods., Inc. v. Procter & Gamble	3/7/05	Lourie, Gajarsa [a], Linn	X		SJ of NI	None
hHowmedica Osteonics Corp. v. Tranquil	3/28/05	Rader [a], Dyk, Prost	X		SJ of NI	None
Outlast Techs., Inc. v. Frisby	3/30/05	Michel, Rader, Schall [a]	X		SJ of NI	None
Nellcor Puritan Bennett, Inc. v. Masimo	4/8/05	Newman, Bryson [a], Dyk	X		SJ of NI	None
Gillette Co. v. Energizer Holdings, Inc.	4/29/05	Michel, Archer, Rader [a]	X		Denial of PI	Archer
Mattox v. Infotopia [U]	5/23/05	Mayer, Clevenger [a], Schall	X		SJ of NI	Mayer
Prima Tek II, L.L.C. v. Polypap	6/22/05	Gajarsa [a], Plager, Dyk	X		V after T	None
Seachange Int'l, Inc. v. C-Cor	6/29/05	Bryson, Gajarsa, Linn [a]	X (2)	X (1)	StipJ of INF/Denial of JML of IN	None
Salazar v. Procter & Gamble	7/8/05	Rader [a], Bryson, Gajarsa	X		SJ of NI	Bryson
Phillips v. AWH Corp.	7/12/05	en banc, Bryson [a]	X		SJ of NI	Mayer, Newman
N. Am. Container, Inc. v. Plastipak	7/14/05	Lourie [a], Bryson, Linn	X		SJ of NI	None
Transonic Sys. v. Non-Invasive [U]	7/25/05	Schall, Gajarsa [a], Prost	X		SJ of NI	None

Case (Reversals)	Date	Panel	Broader	Narrower	Procedural Posture	Dissent
NTP, Inc. v. Research in Motion	8/2/05	Michel, Schall, Linn [a]		X	Denial of JML of NI	None
CollegeNet, Inc. v. ApplyYourself	8/2/05	Lourie, Rader [a], Schall	X		JML of NI	None
Research Plastics v. Fed. Packaging Co.	8/18/05	Newman, Bryson, Gajarsa [a]	X		SJ of NI	None
Ocean Innovations, Inc. v. Archer [U]	8/19/05	Michel, Schall [a], Linn		X	SJ of INF	None
Free Motion Fitness, Inc. v. Cybex	9/16/05	Rader, Dyk [a], Prost	X		SJ of NI	Prost
Cross Med. Prods., Inc. v. Medtronic	9/30/05	Schall, Gajarsa, Linn [a]	X		SJ of INF	None
Dane Indus. v. Ameritek Indus. [U]	10/26/05	Rader, Archer [a], Schall	X		SJ of NI	None
Callicrate v. Wadsworth	10/31/05	Newman, Rader [a], Prost	X (2)	X (1)	Denial of JML of INF	None
Dorel Juvenile Group v. Graco	11/7/05	Newman, Clevenger [a], Gajarsa	X		SJ of NI	Newman
Kapusta v. Gale Corp. [U]	11/15/05	Lourie [a], Linn, Prost	X		StipJ of NI	None
Cannon Rubber Ltd. v. First Years, Inc.	12/28/05	Newman, Lourie [a], Rader	X		SJ of NI	None
Varco v. Pason Systems USA Corp.	2/1/06	Clevenger, Rader [a], Dyk	X		Denial of PI	None
Curtiss-Wright Flow Cntr'l. v Velan, Inc.	2/15/06	Rader [a], Friedman, Dyk		X	Grant of PI	None
Aspex Eyewear v. Miracle Optics	3/2/06	Lourie, Archer [a], Gajarsa	X		SJ of NI	None
Fiber Optic Designs v. Seasonal Specialties	3/3/06	Mayer, Rader [a], Prost	X		Denial of PI	None
Wilson Sporting v. Hillerich&Bradsby Co.	3/23/06	Lourie, Rader [a], Bryson	X		StipJ of NI	None

Case (Reversals)	Date	Panel	Broader	Narrower	Procedural Posture	Dissent
On Demand Machine v. Ingram	3/31/06	Newman [a], Mayer, Bryson		X	INF after T	None
Lava Trading v. Sonic Trading	4/19/06	Mayer, Rader [a], Linn	X		StipJ of NI	None
Sun Coast Merchandise Corp. v. CCL Products Enterprises, Inc.	4/21/06	Michel, Linn, Prost [a]	X		SJ of NI	None
Momentum Golf Inc. v. Swingrite Golf Corp. [U]	6/30/06	Schall, Archer [a], Dyk	X		SJ of NI	Schall
LG Electronics, Inc. v. Bizcom Electronics, Inc.	7/7/06	Michel, Newman, Mayer [a]	X		SJ of NI	None
Amgen Inc. v. Hoechst Marion Roussel, Inc.	8/3/06	Michel, Clevenger, Schall [a]	X		V after T	Michel
Cook Biotech Inc. v. Acell Inc.	8/18/06	Newman, Lourie, Prost [a]		X	Denial of JML of NI	None
Ormco Corp. v. Align Tech., Inc.	8/30/06	Schall, Gajarsa, Dyk [a]	X (1)	X (2)	SJ of INF/SJ of V	None
SRAM Corp. v. AD-II Engineering, Inc.	10/2/06	Rader, Bryson, Linn [a]	X		Denial of SJ of IN/SJ of V/SJ of INF	None
Depuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.	11/20/06	Newman, Linn [a], Prost	X		SJ of NI/SJ of NI/Denial of JML of NI	None
Ventana Medical Services, Inc. v. Biogenex Lab, Inc.	12/29/06	Lourie, Dyk, Prost [a]	X		StipJ of NI	Lourie
DESA IP, LLC v. EML Techs., LLC [U]	1/4/07	Michel [a], Plager, Rader	X		StipJ of NI	None
MBO Labs., Inc. v. Becton, Dickinson & Co.	1/24/07	Bryson, Clevenger, Gajarsa [a]	X		SJ of NI	None
Andersen Corp. v. Fiber Composites, LLC	1/26/07	Bryson [a], Prost, Saris		X	SJ of INF/Denial of JML of IN	None

Case (Reversals)	Date	Panel	Broader	Narrower	Procedural Posture	Dissent
Time' N Temperature Co. v. Sensitech [U]	1/30/07	Mayer, Bryson, Dyk [per curiam]	X		SJ of INF/SJ of V/Grant of PermI	None
Franklin Elec. Co. v. Dover Corp. [U]	3/1/07	Mayer, Clevenger [a], Linn	X		SJ of NI	None
Cent. Admixture Pharm. Servs. v. Advanced Cardiac Solutions, P.C.	4/3/07	Schall, Gajarsa [a], Prost		X	SJ of V/SJ of INF	None
Intamin, Ltd. v. Magnetar Techs., Corp.	4/18/07	Rader [a], Plager, Prost	X		SJ of NI	None
Pods, Inc. v. Porta Stor, Inc.	4/27/07	Lourie, Dyk [a], O'Malley		X	JML of INF	None
Honeywell Int'l Inc. v. Universal Avionics Systems Corp.	5/25/07	Rader [a], Gajarsa, Dyk	X		SJ of NI/SJ of IN	None
NMT Med., Inc. v. Cardia, Inc.	6/6/07	Michel, Mayer, Gajarsa [a]	X		SJ of NI	None
Saunders Group, Inc. v. Comfortrac, Inc.	6/27/07	Michel, Bryson [a], Dyk	X		SJ of NI	None
Automed Techs., Inc. v. Microfil, LLC [U]	7/16/07	Mayer, Clevenger, Linn [a]	X		SJ of NI	Mayer
Cybersettle, Inc. v. Nat'l Arbitration Forum, Inc.	7/24/07	Michel, Lourie, Bryson [a]		X	SJ of INF	None
Ormco Corp. v. Align Tech., Inc.	8/24/07	Lourie [a], Dyk, O'Malley	X		SJ of NI/SJ of IN	None
Gillespie v. Dywidag Sys. Int'l, USA	9/6/07	Newman [a], Schall, Bryson		X	StipJ of INF	None
Verizon Servs. Corp. v. Vonage Holdings Corp.	9/26/07	Michel, Gajarsa, Dyk [a]		X	INF after T	Michel; Gajarsa
Elbex Video, Ltd. v. Sensormatic Elecs. Corp.	11/28/07	Dyk, Moore [a], Cote	X		SJ of NI	Cote
Hyperphrase Techs., LLC v. Google, Inc. [U]	12/26/07	Michel [a], Lourie, Gajarsa	X		SJ of NI	None

Case (Reversals)	Date	Panel	Broader	Narrower	Procedural Posture	Dissent
Black & Decker, Inc. v. Robert Bosch Tool Corp. [U]	1/7/08	Rader, Friedman, Prost [a]		X	INF after T	None
Baldwin Graphic Sys., Inc. v. Siebert, Inc.	1/15/08	Michel, Rader [a], Moore	X		SJ of NI	None
TriMed, Inc. v. Stryker Corp.	1/28/08	Linn, Dyk, Moore [a]	X		SJ of NI	None
Oatey Co. v. IPS Corp.	1/30/08	Newman [a], Schall, Linn	X		SJ of NI/StipJ of NI	None
TiVo, Inc. v. Echostar Communs. Corp.	1/31/08	Bryson [a], Plager, Keeley		X	Denial of JML of NI	None
Chamberlain Group, Inc. v. Lear Corp.	2/19/08	Rader [a], Clevenger, Dyk		X	Grant of PI	None
Regents of the Univ. of Cal. v. DakoCytomation Cal., Inc.	2/28/08	Mayer, Lourie [a], Prost	X		Denial of PI/SJ of NI	Prost
Symantec Corp. v. Computer Assocs. Int'l, Inc.	4/11/08	Gajarsa, Linn, Dyk [a]	X		SJ of NI	None
Finisar Corp. v. DirecTV Group, Inc.	4/18/08	Michel, Rader [a], Moore		X	Denial of JML of NI	None
Decisioning.com, Inc. v. Federated Dep't Stores, Inc.	5/7/08	Mayer, Schall, Linn [per curiam]	X		SJ of NI	Linn
Lucent Techs., Inc. v. Gateway, Inc.	5/8/08	Lourie, Linn, Prost [a]	X		SJ of NI	Lourie
Heuft Systemtechnik GmbH v. Indus. Dynamics Co. [U]	6/25/08	Michel, Newman, Linn [a]		X	Denial of JML of NI	None
Aspex Eyewear, Inc. v. Altair Eyewear, Inc. [U]	8/1/08	Michel [a], Linn, Zagel	X		SJ of NI	None
DSW, Inc. v. Shoe Pavilion, Inc.	8/19/08	Mayer [a], Schall, Linn	X		SJ of NI	None
Lexion Med., LLC v. Northgate Techs., Inc. [U]	8/28/08	Michel, Radar, Schall [a]	X (2)	X (1)	INF after T	None
800 Adept, Inc. v. Murex Sec., Ltd.	8/29/08	Gajarsa, Plager, Dyk [a]		X	Denial of JML of NI	None

Case (Reversals)	Date	Panel	Broader	Narrower	Procedural Posture	Dissent
Howmedica Osteonics Corp. v. Wright Med. Tech., Inc.	9/2/08	Dyk [a], Prost, Hochberg	X		StipJ of NI	Prost
Broadcom Corp. v. Qualcomm, Inc.	9/24/08	Linn [a], Friedman, Prost	X		Denial of JML of NI/Denial of JML of IN	None
Praxair, Inc. v. ATMI, Inc.	9/29/08	Lourie, Bryson, Dyk [a]		X	INF after T	None
Cohesive Techs., Inc. v. Waters Corp.	10/7/08	Mayer, Linn [a], Prost	X		SJ of NI	None
Predicate Logic, Inc. v. Distributive Software, Inc.	10/9/08	Newman, Lourie, Linn [a]		X	SJ of IN	None
Medegen MMS, Inc. v. ICU Med., Inc. [U]	11/20/08	Rader, Dyk [a], Walker	X		StipJ of NI	Walker
Respironics, Inc. v. Invacare Corp.	12/16/08	Schall, Clevenger, Linn [a]	X		SJ of NI	None
Ball Aerosol & Specialty Container, Inc. v. Ltd. Brands, Inc.	2/9/09	Lourie [a], Clevenger, Linn		X	SJ of INF	None
Paragon Solutions, LLC v. Timex Corp.	5/22/09	Bryon, Linn [a], Moore	X		StipJ of NI	None
Cartner v. Alamo Group, Inc. [U]	6/17/09	Newman, Mayer, Schall [a]	n/a	n/a	StipJ of IN	None
Orenshteyn v. Citrix Sys. [U]	7/24/09	Mayer, Lourie [a], Bryson	X		SJ of NI	None
Martek Biosciences Corp. v. Nutrinova, Inc.	9/3/09	Newman, Lourie, Rader, Gajarsa [a], Moore	X		StipJ of NI	Lourie, Rader
Sanofi-Aventis United States LLC v. Sandoz, Inc. [U]	9/10/09	Linn, Moore [a], Prost	X		SJ of NI	None
Vita-Mix Corp. v. Basic Holding, Inc.	9/16/09	Bryson, Gajarsa, Prost [a]	X		SJ of NI/SJ of V	None
Kara Tech. Inc. v. Stamps.com Inc.	9/24/09	Schall, Plager, Moore [a]	X		Denial of JML of INF	None

Case (Reversals)	Date	Panel	Broader	Narrower	Procedural Posture	Dissent
Smith & Nephew, Inc. v. Arthrex, Inc. [U]	12/2/09	Bryson, Clevenger, Dyk [per curiam]		X	Denial of JML of NI	None
Ultimax Cement Mfg. Corp. v. CTS Cement Mfg. Corp.	12/3/09	Lourie [a], Dyk, Prost	X (1)	X (1)	SJ of NI	None
Schindler Elevator Corp. v. Otis Elevator Co.	1/15/10	Linn [a], Friedman, Dyk	X		SJ of NI	Dyk
Pressure Prods. Med. Supplies, Inc. v. Greatbatch Ltd.	3/24/10	Newman, Lourie, Rader [a], Gajarsa, Moore		X	INF after T	Newman
ilight Techs., Inc. v. Fallon Luminous Prods. Corp. [U]	4/20/10	Mayer, Schall [a], Gajarsa		X	Denial of JML of NI	None
Bradford Co. v. Conteyor N. Am., Inc.	4/29/10	Lourie [a], Clevenger, Rader	X		SJ of NI	None
Randall May Int'l, Inc. v. DEG Music Prods., Inc. [U]	5/11/10	Michel [a], Newman, Lourie		X	SJ of INF/Denial of SJ of NI	
Southern Mills, Inc. v. Polartec, LLC [U]	5/14/10	Michel, Bryson [a], Dyk	X		StipJ of NI	None
Seiko Epson Corp. v. Coretronic Corp. [U]	5/20/10	Michel, Lourie, Bryson [per curiam]		X	SJ of IN	None
Haemonetics Corp. v. Baxter Healthcare Corp.	6/2/10	Lourie [a], Gajarsa, Moore	n/a	n/a	Denial of JML of IN	None
Silicon Graphics, Inc. v. ATI Techs., Inc.	6/4/10	Rader [a], Lourie, Prost	X		SJ of NI	None
Telcordia Techs., Inc. v. Cisco Sys.	7/6/10	Rader [a], Lourie, Prost	X		Denial of JML of IN	None
Becton, Dickinson & Co. v. Tyco Healthcare Group, LP	7/29/10	Gajarsa, Linn, Mayer [a]		X	Denial of JML of NI	Gajarsa
Intervet, Inc. v. Merial Ltd.	8/4/10	Bryson, Dyk, Prost [a]	X		SJ of NI	Dyk
Adams Respiratory Therapeutics, Inc. v. Perrigo Co.	8/5/10	Linn, Moore [a], Friedman	X		SJ of NI	None

Case (Reversals)	Date	Panel	Broader	Narrower	Procedural Posture	Dissent
Clearwater Sys. Corp. v. Evapco, Inc. [U]	8/30/10	Gajarsa [a], Mayer, Clevenger	X		SJ of NI	None
Am. Med. Sys. v. Biolitec, Inc.	9/13/10	Bryson [a], Dyk, Prost	X		SJ of NI	Dyk
Laryngeal Mask Co. v. Ambu A/S	9/21/10	Rader, Lourie, Moore [a]	X		SJ of NI/SJ of IN	None
Extreme Networks, Inc. v. Enterasys Networks, Inc. [U]	9/30/10	Rader [a], Lourie, Prost	X		SJ of NI	None
Lazare Kaplan Int'l, Inc. v. Photoscribe Techs., Inc.	12/22/10	Lourie, Friedman, Linn [a]	X		SJ of NI	None
St. Clair Intellectual Prop. Consultants, Inc. v. Canon Inc. [U]	1/10/11	Dyk [a], Mayer, Moore		X	Denial of JML of NI	Moore
Arlington Indus. v. Bridgeport Fittings, Inc.	1/20/11	Rader [a], Lourie, Moore	X		SJ of NI	Lourie
Alcohol Monitoring Sys. v. ActSoft, Inc. [U]	1/24/11	Lourie, Clevenger, Moore [a]	X		SJ of NI	None
Hologic, Inc. v. Senorx, Inc.	2/24/11	Newman, Friedman, Lourie [a]		X	SJ of IN/IN after T	Friedman
Am. Piledriving Equip., Inc. v. Geoquip, Inc.	3/21/11	Bryson, Gajarsa, Linn [a]	X		SJ of NI	None
Move, Inc. v. Real Estate Alliance Ltd. [U]	3/22/11	Gajarsa, Linn, Moore [a]	X		StipJ of NI	None
Sanders v. Mosaic Co. [U]	4/20/11	Prost, Schall, Moore [a]	X		StipJ of NI	None
Creative Internet Adver. Corp. v. Yahoo! Inc. [U]	4/22/11	Newman, Clevenger, Bryson [a]		X	Denial of JML of NI	Clevenger
Advanced Software Design Corp. v. Fiserv, Inc.	6/2/11	Bryson [a], Dyk, Prost	X		SJ of NI	None
Am. Calcar, Inc. v. Am. Honda Motor Co.	6/27/11	Lourie [a], Bryson, Gajarsa	X		Denial of JML of IN	None
Retractable Techs. v. Becton, Dickinson & Co.	7/8/11	Rader, Plager, Lourie [a]		X	Denial of JML of NI	Rader

Case (Reversals)	Date	Panel	Broader	Narrower	Procedural Posture	Dissent
Joovy LLC v. Target Corp. [U]	8/5/11	Rader, Linn [a], Prost	X		Denial of JML of IN	None
August Tech. Corp. v. Camtek Ltd.	8/22/11	Dyk, Moore [a], O'Malley		X	Denial of JML of NI	None
AIA Eng'g Ltd. v. Magotteaux Int'l S/A	8/31/11	Rader, Lourie [a], Bryson		X	SJ of IN	None
Markem-Imaje Corp. v. Zipher Ltd.	9/9/11	Newman, Clevenger, Linn [per curiam]	X		SJ of NI	Newman
Dealertrack, Inc. v. Huber	1/20/12	Linn [a], Plager, and Dyk	X		SJ of NI	None
Thorner v. Sony Computer Entertainment America LLC	2/1/12	Rader, Moore [a], Aiken	X		StipJ of NI	None
Digital-Vending Services Intern., LLC v. University of Phoenix, Inc.	3/7/2012	Rader [a], Linn, Moore	X		SJ of NI	Moore
Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.	3/14/12	Rader, Bryson [a], Reyna	X		SJ of Res Judicata	None
Advanced Fiber Technologies (AFT) Trust v. J & L Fiber Services, Inc.	4/3/12	Lourie [a], Dyk, Prost	X		SJ of NI	Dyk
Chicago Bd. Options Exchange, Inc. v. International Securities Exchange, LLC	5/7/12	Rader, Wallach [a], Fogel	X		SJ of NI	None
Toshiba Corp. v. Imation Corp.	6/11/12	Dyk, Schall, Moore [a]	X		SJ of NI	Dyk
Grober v. Mako Products, Inc.	7/30/12	Rader [a], Prost, Moore	X		SJ of NI	None
01 Communique Laboratory, Inc. v. LogMeIn, Inc.	7/31/12	Rader, Wallach, Fogel [a]	X		SJ of NI	None
Kinetic Concepts, Inc. v. Smith & Nephew, Inc.	8/13/12	Bryson, Dyk, O'Malley [a]		X	JML of IN	Dyk
Jang v. Boston Scientific Corp. [U]	8/22/12	Linn [a], Plager, Dyk	X		StipJ of NI	None

Case (Reversals)	Date	Panel	Broader	Narrower	Procedural Posture	Dissent
Textron Innovations Inc. v. American Eurocopter Corp. [U]	9/7/12	Newman, Clevenger, Bryson [a]	X		SJ of NI	None
Medtronic Inc. v. Boston Scientific Corp.	9/18/12	Lourie, Linn [a], Prost	X		V after T	None
HTC Corp. v. IPCOM GmbH & Co., KG	1/30/12	Bryson, Linn, O'Malley [a]	n/a	n/a	SJ of IN/StipJ of IN	None
Alcon Research, Ltd. v. Apotex Inc.	8/8/12	Prost, Moore [a], O'Malley	X		V after T	None
Sandisk Corporation v. Kingston Technology Co., Inc.	10/9/12	Prost [a], Wallach, Reyna	X		SJ of NI	Reyna
Apple Inc. v. Samsung Electronics Co., Ltd.	10/11/12	Prost [a], Moore, Reyna		X	Grant of PI	None
Technology Patents LLC v. T-Mobile (UK) Ltd.	10/17/12	Bryson [a], Prost, Reyna	X		SJ of NI	None
ArcelorMittal France v. AK Steel Corp.	11/30/12	Dyk [a], Clevenger, Wallach [d]	X		Denial of NT	Wallach
Deere & Co. v. Bush Hog LLC	12/4/12	Rader [a], Newman, Plager	X		SJ of NI	None
Smith & Nephew, Inc. et al. v. Arthrex, Inc.	1/16/13	Lourie [a], Clevenger, Wallach	X		JML of NI	None
Harris Corp. v. Federal Express Corp.	1/17/13	Clevenger [a], Lourie, Wallach [d]		X	Denial of JML of NI	Wallach
Accent Packaging, Inc. v. Leggett & Platt, Inc.	2/4/13	Rader, Prost [a], Reyna	X		SJ of NI	None
Saffran v. Johnson & Johnson	4/4/13	Lourie [a], Moore, O'Malley		X	Denial of JML of NI	None

APPENDIX C: ONE POSSIBLE ALGORITHM

Keeping in mind that the goal is to arrive at the interpretation that one with ordinary skill in the art would have applied at the time of the invention,¹ in the context of the specification, for each disputed term or phrase:

1. Check the specification for a clear definition or disclaimer of the disputed term or phrase. If the patentee has acted as his own lexicographer, or has clearly disclaimed a particular meaning, that is the end of the analysis.² If not, move on to step two.
2. Collect all definitions or phrasal interpretations proposed by the parties, or that seem reasonable.
3. Consider whether the disputed term or phrase is technical or non-technical. If it is difficult to tell, some combination of steps 4 and 5 might be warranted.

Non-Technical Term or Phrase

4. If the term or phrase is non-technical, check each proposed definition for consistency with “extrinsic definition evidence” including dictionaries, technical dictionaries, and testimony. In carrying out this step, expert testimony is considerably less valuable than dictionary definitions.
 - a. If the proposed definition is **not** supported by such extrinsic evidence, then go to the specification to see if the specification and other intrinsic evidence, such as the prosecution history, support using it in the way proposed.
 - 1) If the specification and prosecution history do not support such a use, discard it.
 - 2) If the specification and prosecution history do support such a use, albeit in a manner short of lexicography or clear “disclaimer,” keep the definition under consideration and off to the side.³
 - b. If the proposed definition is supported by the extrinsic evidence, then check to see if it is supported by the intrinsic evidence.

¹ Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005).

² Of course, the other side would not be contesting it if it were that clear, so chances are we must move on to the next step.

³ An example might be when one or more embodiments would be excluded from the scope of the claims under another definition. Many of the disagreements in the “close cases” and “reversals” arise at this step. See *supra* Parts II & III. There is disagreement on whether something short of lexicography or disavowal in a given case limits or fails to limit a claim.

- c. Check to see if any proposed definitions can be eliminated by properly applying the doctrine of claim differentiation.
- d. If, after repeating steps 4(a)–(c) for all non-technical terms or phrases, there is still more than one surviving definition, then apply the following rules:
 - 1) If the choice is between a broad definition that would cause the patent to be facially invalid for lack of enablement and a narrower definition that would preserve validity, pick the narrower definition (even if it is not supported by dictionary definitions or other extrinsic evidence, provided it is supported by the specification as in 4(a)(2), and there is some credible testimony or other evidence that this might have been what the applicant and examiner had in mind).
 - 2) If the choice is between a broad definition that would cause the patent to be facially invalid for anticipation and/or obviousness based on art that was considered by the examiner, pick the narrower definition (even if it is not supported by dictionary definitions or other extrinsic evidence, provided it is supported by the specification as in 4(a)(2), and there is some credible testimony or other evidence that this is what the applicant and examiner had in mind).
 - 3) If there is an “equal choice” between two alternatives, pick the narrower definition under the rule of *Athletic Alternatives, Inc. v. Prince Manufacturing, Inc.*,⁴ which requires that, for an applicant to clearly and distinctly point out the invention, the patent terms must be construed against the patent drafter, i.e. narrowly.
 - 4) If there is a choice between two definitions, where one of the definitions would yield a nonsensical result, pick the definition that does not yield a nonsensical result, but only if that definition is supported by dictionary and other extrinsic evidence.
 - 5) If there is a choice between two definitions, where one of the definitions would read an embodiment from the specification out of the claim, and there is no indication in the prosecution history that the patentee intended to exclude that embodiment, which is not covered by any other claims, and all other factors are equal, pick the definition that covers the embodiment.⁵

⁴ *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F. 3d 1573, 1581 (Fed. Cir. 1996).

⁵ This will often be a point of contention. There will be cases when the “definition” of the claim term required to avoid reading an embodiment out of the specification will clearly be a second-best

Technical Term or Phrase

5. If the term or phrase is technical, check each proposed definition for consistency with the specification and prosecution history.
 - a. If a proposed definition is not consistent with the specification or prosecution history, or can be eliminated by properly applying the doctrine of claim differentiation, discard it.
 - b. If more than one definition remains, and they are all supported by the specification, then consult extrinsic evidence, including dictionaries, technical dictionaries, treatises, and expert testimony.
 1. If a definition is supported by the extrinsic evidence, keep it.
 2. If a definition is not supported by the extrinsic evidence, keep the definition under consideration and off to the side.
 - c. Check to see if any proposed definitions can be eliminated by properly applying the doctrine of claim differentiation.
 - d. If, after repeating steps 5(a)–(c) for all technical terms, there is still more than one surviving definition, including those kept under consideration and off to the side, then apply the following rules:
 1. If the choice is between a broad definition that would cause the patent to be facially invalid for lack of enablement and a narrower definition that would preserve validity, pick the narrower definition (even if it's not supported by dictionary definitions or other extrinsic evidence, provided it is supported by the specification, and there is a reasonable argument that this might have been what the applicant and examiner had in mind).

definition. In such cases, it will be extremely difficult to balance the strength of the “plain meaning” against the principle that claims should generally be construed to cover disclosed embodiments.

A dispute along these lines occurred in the following “close cases”: *Advanced Fiber Techs. (AFT) Trust v. J & L Fiber Servs., Inc.*, 674 F.3d 1365, 1380–81 (Fed. Cir. 2012) (Dyk, J., dissenting) (contending that patent applicant had excluded disclosed embodiment during prosecution); *Outside the Box Innovations, LLC v. Travel Caddy, Inc.*, 695 F.3d 1285, 1310 (Fed. Cir. 2012) (Newman, J. dissenting) (contending that disclosed embodiment should not have been excluded); *Smith & Nephew, Inc. v. Ethicon, Inc.*, 276 F.3d 1304, 1310 (Fed. Cir. 2001) (Michel, J., dissenting) (contending that disclosed embodiment should have been excluded); *Energizer Holdings, Inc. v. ITC*, 275 F. App'x 969, 980 (Fed. Cir. 2008) (Newman, J., dissenting) (arguing that majority had improperly construed the claims to exclude the actual invention).

Use of an algorithm will make it easier to see, especially when looking at multiple cases, what the problems are. A Federal Circuit panel deciding a disputed claim construction issue should be able to readily see at which step in the algorithm the judges disagreed. At that point, a concerted effort should be made to determine whether the judges are, in fact, applying the same legal principles.

2. If the choice is between a broad definition that would cause the patent to be facially invalid for anticipation and/or obviousness based on art that was considered by the examiner, pick the narrower definition (even if it is not supported by dictionary definitions or other extrinsic evidence, provided it is supported by the specification, and there is some credible testimony or other evidence that this is what the applicant and examiner had in mind).
3. If there is an “equal choice” between two alternatives, pick the narrower definition under the rule of *Athletic Alternatives, Inc. v. Prince Manufacturing, Inc.*,⁶ which held that the notice function of claims is best served by adopting the narrower of two equally plausible interpretations.
4. If there is a choice between two definitions, where one of the definitions would yield a nonsensical result, pick the definition that does not yield a nonsensical result, but only if that definition is supported by dictionary and other extrinsic evidence.
5. If there is a choice between two definitions, where one of the definitions would read an embodiment from the specification out of the claim, and there is no indication in the prosecution history that the patentee intended to exclude that embodiment, which is not covered by any other claims, and all other factors are equal, pick the definition that covers the embodiment.
6. If there is still at least one remaining definition that has not been put off to the side, discard all the definitions kept under consideration and off to the side.

Wrapping Up

6. If there is still more than one remaining definition:
 - a. Go back to the specification and prosecution history with only these definitions in mind, and determine which one the applicant most likely meant.
 - b. Go back over all the evidence regarding ordinary and customary meaning.

⁶ *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996).

- c. If the evidence in (b) is relatively strong in favor of one definition, give the term that definition, unless the evidence in (a) is even stronger in favor of the other definition.