

# Fed. Circ. Patent Decisions In 2024: An Empirical Review

By **Dan Bagatell** (January 8, 2025)

This eighth [annual article](#) provides a statistical review of the [U.S. Court of Appeals for the Federal Circuit's](#) decisions in patent cases during calendar year 2024.[1]

The Federal Circuit issued fewer patent decisions in 2024 despite its ever-increasing backlog of argument-ready cases. U.S. [Patent Trial and Appeal Board](#) cases still predominated, but to a lesser degree as the bubble of [Arthrex](#) remands dissipated and the post-COVID-19 renaissance of district court cases worked its way through the system.



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Affirmance rates remained high — over 80% overall and over 86% in PTAB cases — but it was another bad year for patent owners and patent applicants.

Overall, patent owners and applicants fully prevailed less than 20% of the time, and they lost on all claims nearly 70% of the time. Their record when appealing from adverse judgments was even more dismal; they won outright less than 10% of the time. Patent owners fared especially poorly in patent eligibility cases, winning just twice in 40 tries.

Patent challengers enjoyed greater success, even when they were appellants and even when they were appealing from losses at the PTAB. As a result, the Federal Circuit's patent-friendliness index in 2024 reached its lowest level since I began calculating it in 2018.

Mandamus petitions out of the [U.S. District Court for the Western District of Texas](#) were less common in 2024, and the Federal Circuit granted mandamus in only one patent case all year. Dissents were again rare in 2024, as U.S. Circuit Judge Pauline Newman, historically the court's most prolific dissenter, remained suspended.

## Methodology and Scope

This year's study covers all patent cases decided by the Federal Circuit in 2024, whether by precedential opinion, nonprecedential opinion or summary affirmance. It includes merits decisions and rulings on writ petitions, but it excludes denials of leave to appeal, dismissals for lack of finality, stipulated dismissals and remands, and dismissals for mootness.

The study includes appeals and writ petitions from judgments and orders by district courts, the PTAB, the International Trade Commission and the Court of Federal Claims, but only cases in which the Federal Circuit decided at least one patent law issue.

The study takes decisions as the Federal Circuit decides them. If the court resolves companion cases separately, the decisions are counted separately. If the court decides multiple appeals in a single opinion, all are counted as one decision, regardless of whether the matters were formally consolidated.

Cross appeals count when, but only when, the Federal Circuit decides them. When the Federal Circuit grants rehearing and vacates an opinion, the study disregards the retracted opinion and counts only the replacement decision.

## Caseload and Case Origins

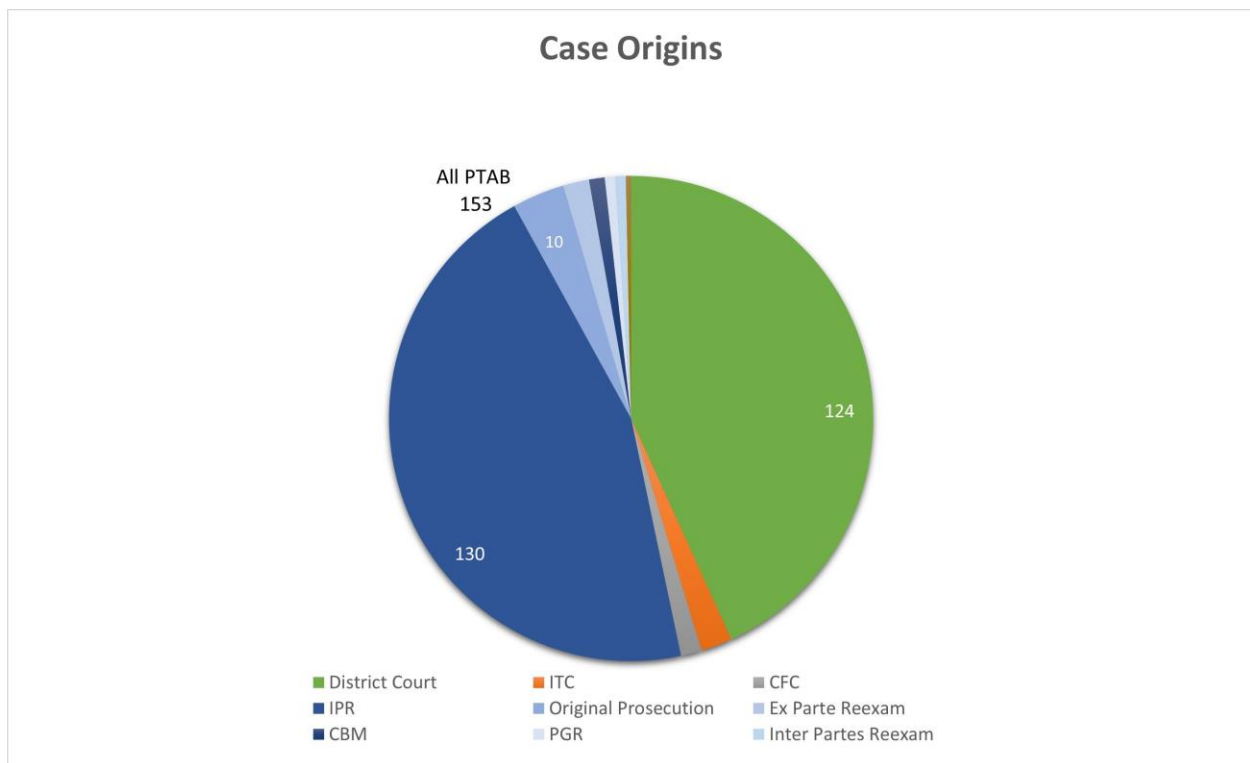
The Federal Circuit decided 288 patent cases in 2024, down from 306 in 2023 and well below the 388 in 2021 and the prepandemic norm of 430 to 450 decisions per year.

Decisions in PTAB cases decreased from 181 to 153, and they accounted for only 53% of all patent decisions, down from 59% in 2023. Inter partes reviews constituted 45% of the Federal Circuit's patent decisions in 2024, down slightly from 47% in 2022.

The rest of the Federal Circuit's PTAB docket included 10 original-prosecution cases, five ex parte reexamination cases, three covered-business-method cases, two non-CBM post-grant review cases, two inter partes reexaminations and one interference.

Decisions in appeals from district courts increased slightly to 124 in 2024 from 116 in 2023, and they accounted for 43% of the Federal Circuit's patent decisions in 2024, up from 38% in 2023. The Federal Circuit decided only 18 mandamus petitions in 2024, and it granted writ relief only once, back in January.

Apart from PTAB and district court appeals, the Federal Circuit's patent decisions in 2024 addressed appeals from six ITC investigations and four cases from the Court of Federal Claims.



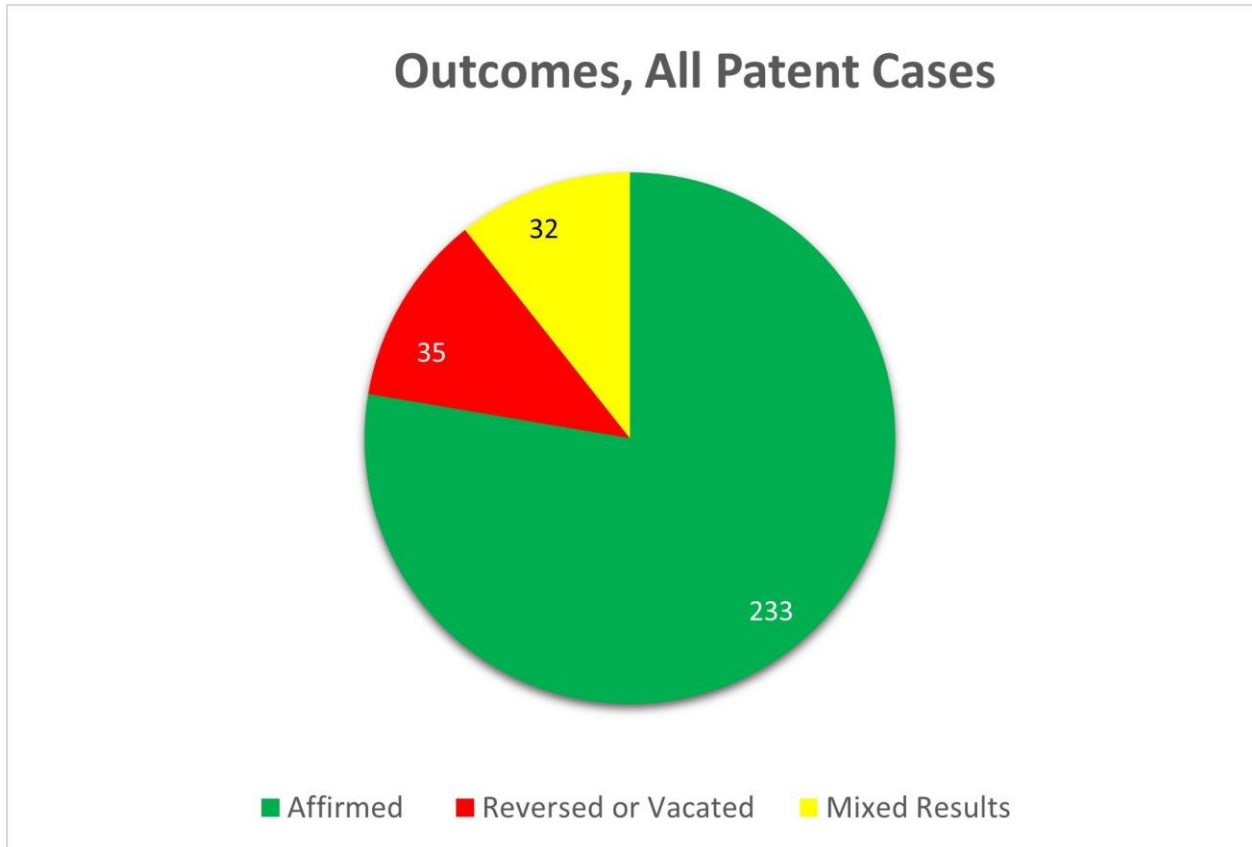
## Affirmance Rates

The Federal Circuit fully upheld the lower court or agency — affirmed or dismissed on all issues or denied all relief in mandamus cases — 81% of the time in 2024, close to the 82% in 2023 and well above the unusually low 69% level in 2022. Appellants and mandamus petitioners prevailed outright in 12% of their outings (close to the 11% rate in 2023), and

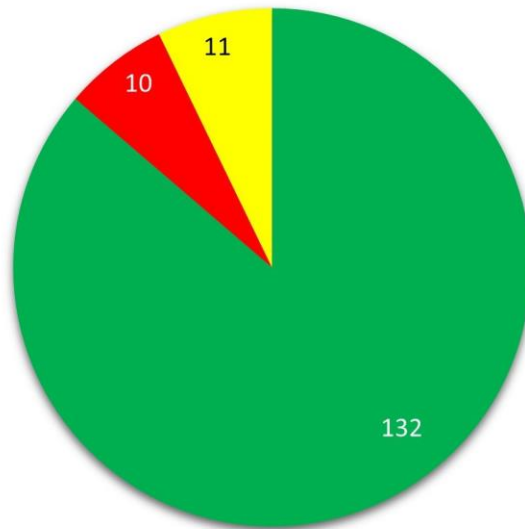
the remaining 7% of cases produced mixed results, with each side prevailing in part.

The Federal Circuit's affirmance rate in PTAB appeals remained at 86% in 2024. The affirmance rate in IPR appeals was almost identical. Appellants were fully victorious in less than 7% of PTAB and IPR appeals, down from 9% in 2023.

The Federal Circuit fully affirmed in 73% of its decisions in district court appeals in 2024, down somewhat from 76% in 2023 but well above the stunningly low 57% rate in 2022. The court fully reversed or vacated in 20% of its district court cases in 2024, up from 15% in 2023 but still down from the 29% level reached in 2022.

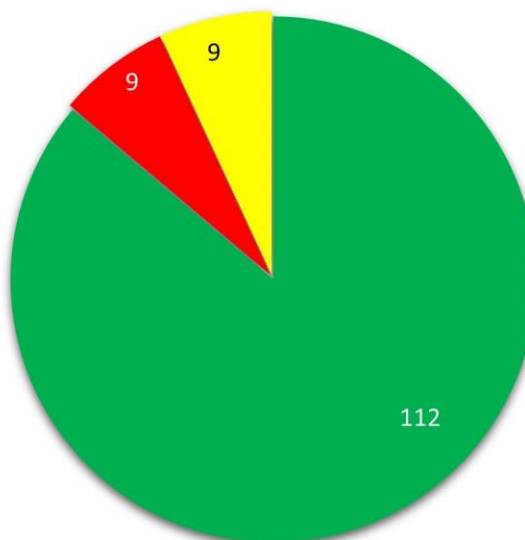


## Outcomes, PTAB Appeals



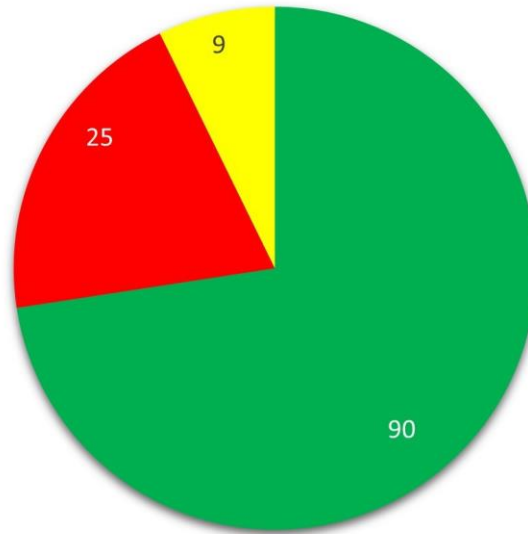
■ Affirmed/Dismissed   ■ Reversed/Vacated   ■ Mixed Results

## Outcomes, IPR Appeals



■ Affirmed/Dismissed   ■ Reversed/Vacated   ■ Mixed Results

## Outcomes, District Court Appeals



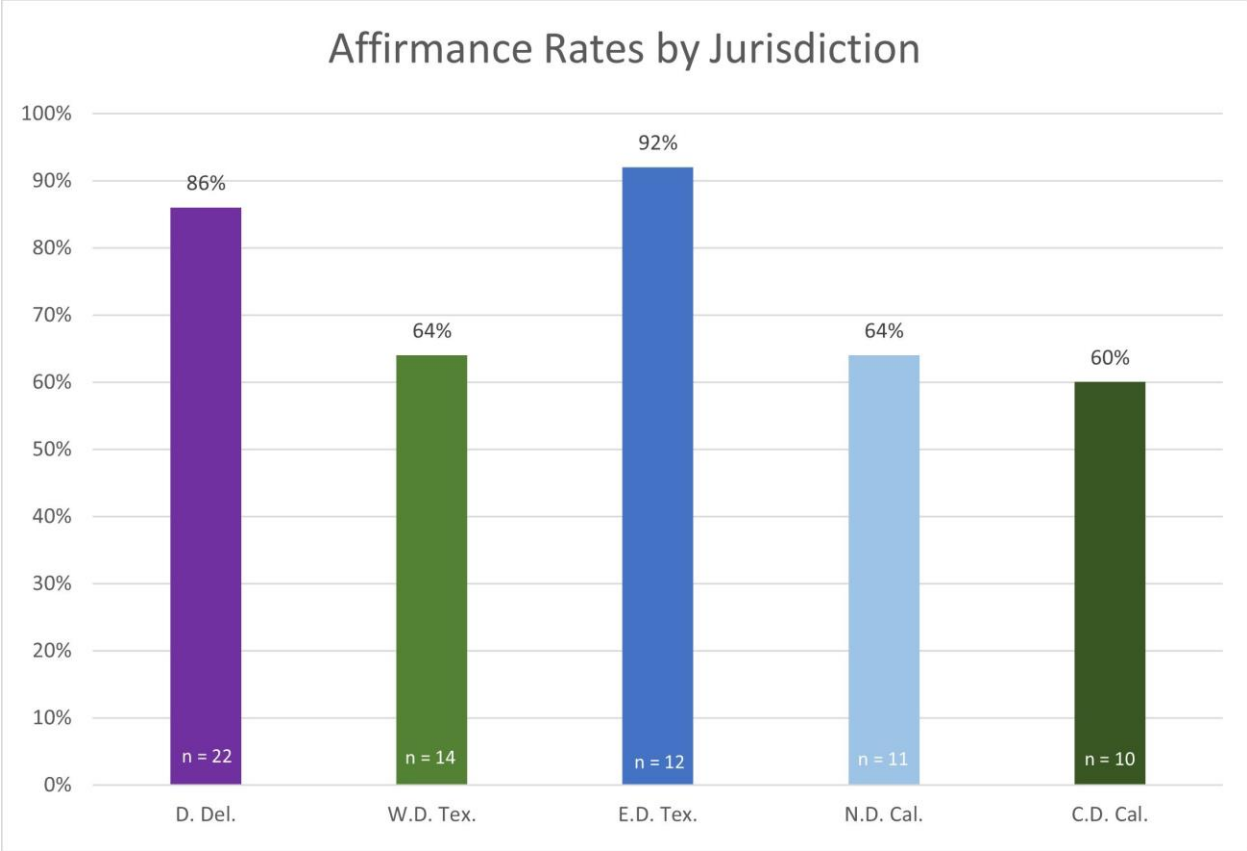
■ Affirmed/Writ Denied ■ Reversed/Vacated/Writ Granted ■ Mixed Results

Cases from the U. S. District Court for the District of Delaware (22), the U.S. District Court for the Western District of Texas (14), the U.S. District Court for the Eastern District of Texas (12), the U.S. District Court for the Northern District of California (11), and the U.S. District Court for the Central District of California (10) dominated the district court docket, but the number of Western District of Texas cases dropped precipitously from 26 to 14.

Of the Western District of Texas cases, eight involved mandamus petitions, and the Federal Circuit granted mandamus in only one of those eight cases. The Western District of Texas fared worse in its six regular appeals: The Federal Circuit affirmed twice and reversed four times. Notably, however, three of the reversals overturned Western District rulings for the defendant.

The District of Delaware had a good year, with affirmances in 19 of its 22 decisions, or 86%. The Eastern District of Texas had an even better year, with affirmances in 11 of its 12 decisions, or 92%. The Northern and Central Districts of California had rougher years, with the Northern District having a record of seven affirmances, three reversals or vacaturs, and one mixed result, and the Central District having a record of 6-2-2.

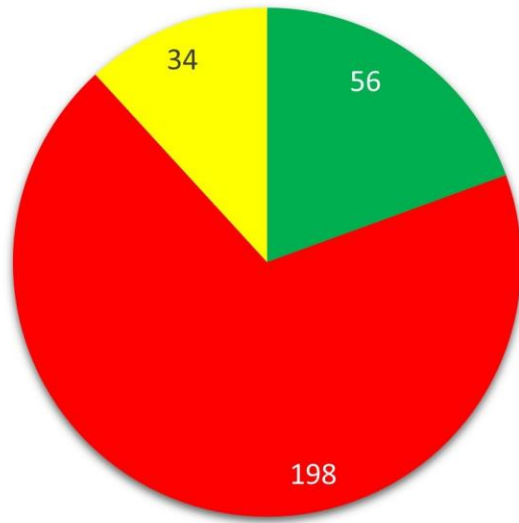
The ITC had another strong year, winning outright in all six decisions involving its cases.



**Success Rates for Patent Owners or Applicants vs. Patent Challengers**

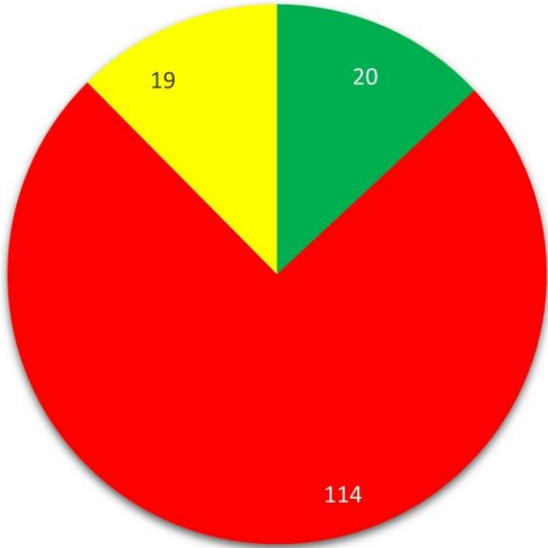
Patent owners and patent applicants fully prevailed in just 19% of the patent appeals decided in 2024, down from 23% in 2023 and 25% in 2002. They lost outright 69% of the time and achieved mixed results in the remainder. Patent owners and applicants continued to do better in district court cases (27% complete wins, 62% complete losses) than in PTAB cases (13% complete wins, 75% complete losses).

## Patent Owner/Applicant Success, All Cases



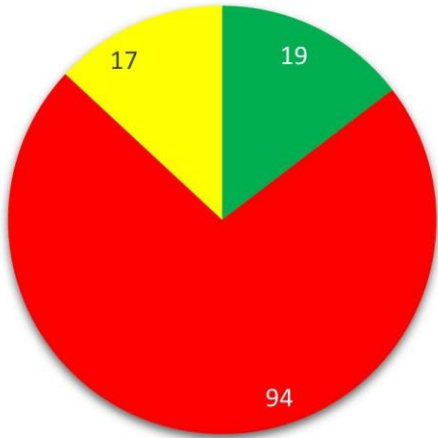
■ Wins ■ Losses ■ Mixed Results

### Patent Owner/Applicant Success, PTAB Appeals



■ Wins ■ Losses ■ Mixed Results

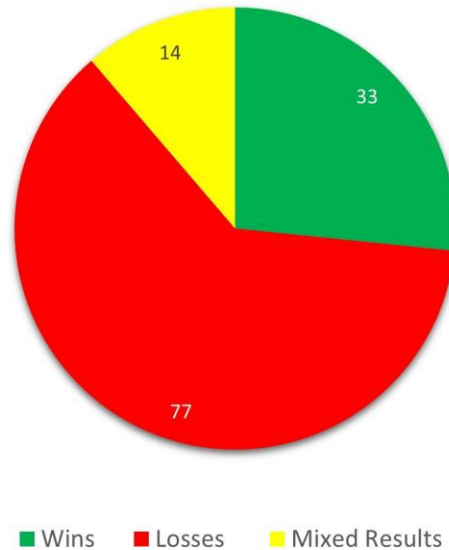
### Patent Owner Success, IPR Appeals



■ Wins ■ Losses ■ Mixed Results



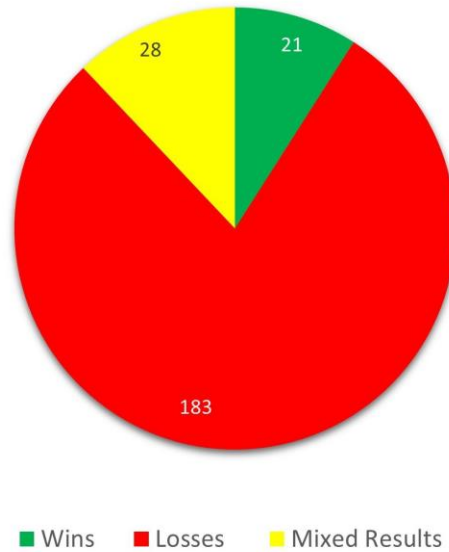
## Patent Owner/Applicant Success, District Court Appeals



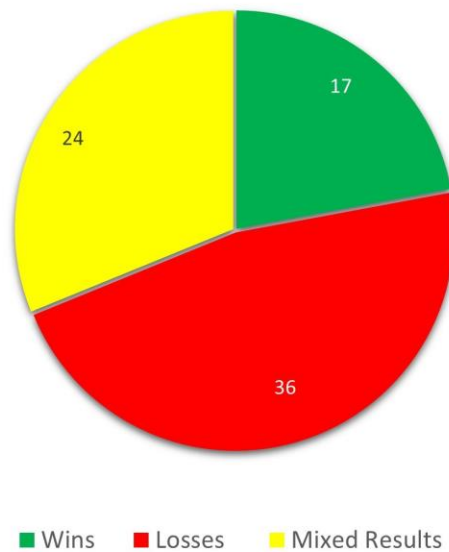
Patent applicants or owners were appellants in 232 cases decided in 2024. In those cases, they prevailed outright just 9% of the time and lost outright nearly 79% of the time — a record slightly better than in 2023 but much worse than in 2022.

For their part, patent challengers were appellants in 77 cases decided in 2023.[2] They fared better in 2024 than in 2023, fully prevailing 22% of the time and losing outright just 47% of the time, with mixed results in the remaining 31%.

### Patent Owner/Applicant Success as Appellant, All Jurisdictions



### Patent Challenger Success as Appellant, All Jurisdictions

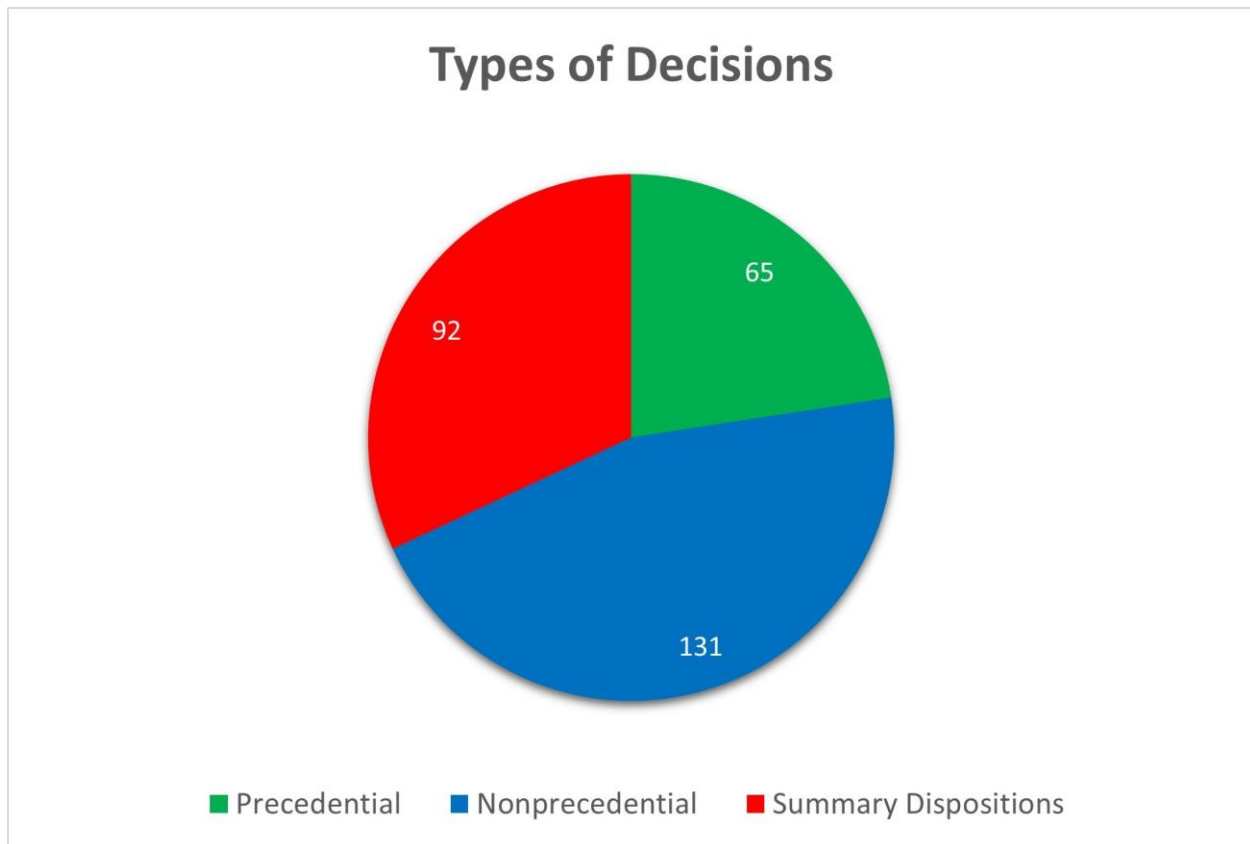


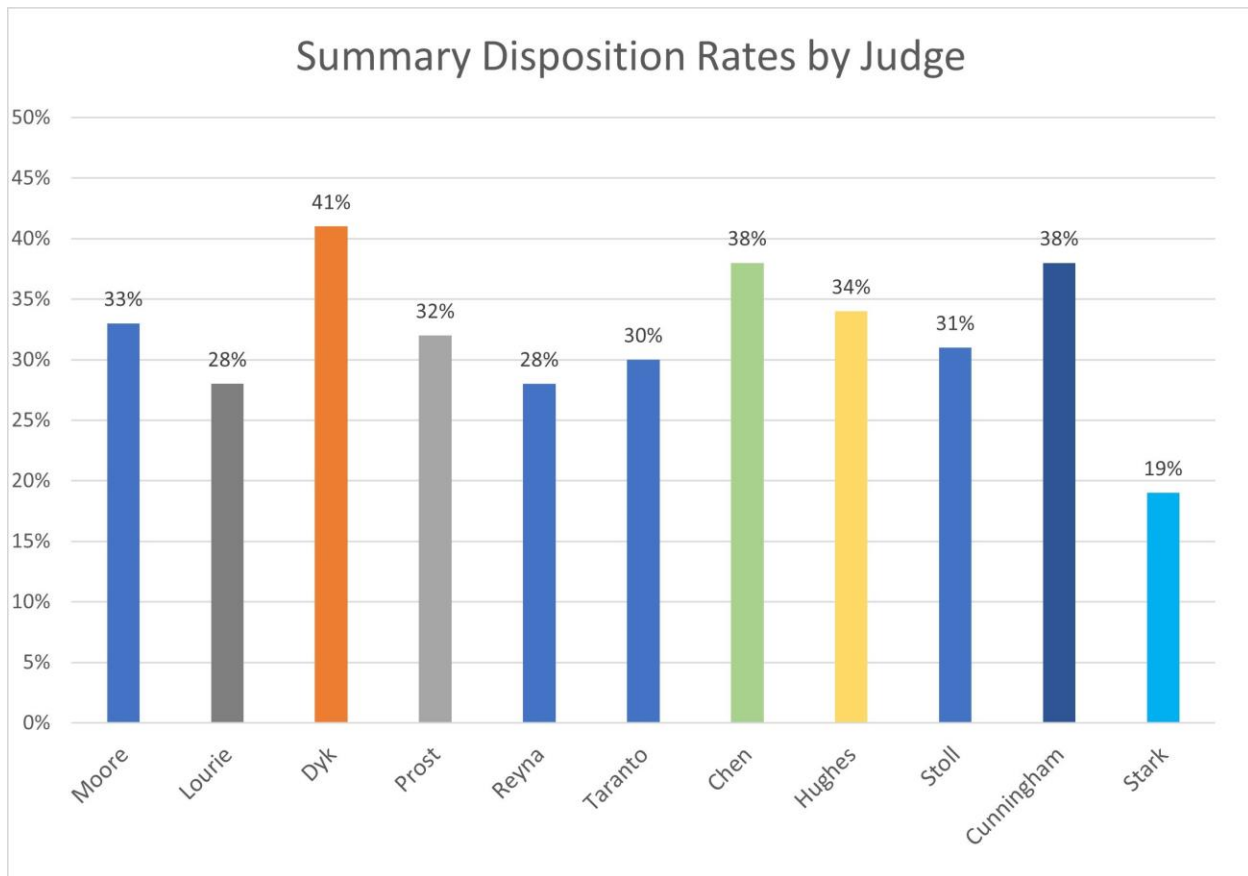
#### Types of Opinions

The Federal Circuit issued precedential opinions in 23% of its patent decisions in 2024, down slightly from 2023. The rate of nonprecedential opinions remained steady at 45% in 2024, and the rate of summary dispositions increased a bit to 32%.

The summary affirmance rate in IPR appeals was almost 45%, but only 15% in district court appeals — not surprising, as district court appeals tend to raise more complex and less routine issues.

Among the judges in regular service all year, U.S. Circuit Judge Timothy Dyk summarily affirmed most frequently (41%), while U.S. Circuit Judge Leonard Stark summarily affirmed least frequently (19%).[3]





## Productivity

The Federal Circuit's disposition speed slumped again in 2024.

For true patent appeals, as opposed to writ petitions, the median time from docketing to date of decision increased from 12.7 months in 2021, 13.8 months in 2022, and 16.8 months in 2023 to 19.5 months in 2024.

For the year, the median lag time from the ready date — in most cases, submission of a compliant joint appendix — to oral argument or submission on the papers was 9.3 months, much higher than the 6.4 months in 2023, 3.7 months in 2022 and 3.3 months in 2021.

The court has added a sixth day to its oral argument calendars from January to May 2025 in an effort to keep up during the serial renovations of its courtrooms, but the backlog continues to lengthen: For recently scheduled calendars, typical wait times to oral argument have reached 10 to 11 months.

The court's pace in producing decisions after argument also slipped slightly, even though Judge Newman, historically the court's slowest opinion-writer, has been sidelined.

Precedential panel opinions in patent cases took a median of 3.2 months from argument/submission in 2024 (compared to 3 months in 2023 and 2.6 months in 2022), and nonprecedential opinions other than summary affirmances took a median of 1.6 months in 2024 (compared to 1.1 months in the two previous years).

Among the active judges, the quickest writer was again U.S. Circuit Judge Richard Taranto, with medians of 1.5 months for precedential decisions and 0.7 months for nonprecedential decisions.

U.S. Circuit Judge Sharon Prost led the court in patent cases decided with 98, followed by U.S. Circuit Judge Alan Lourie, who had 82. U.S. Circuit Judge William Bryson topped the list of senior judges with 23 decisions.

Judge Lourie led the court in patent opinions authored, with 23 (five precedential and 18 nonprecedential). Judge Prost was next with 20 opinions (seven precedential and 13 nonprecedential). Judge Taranto authored the most precedential opinions (10).

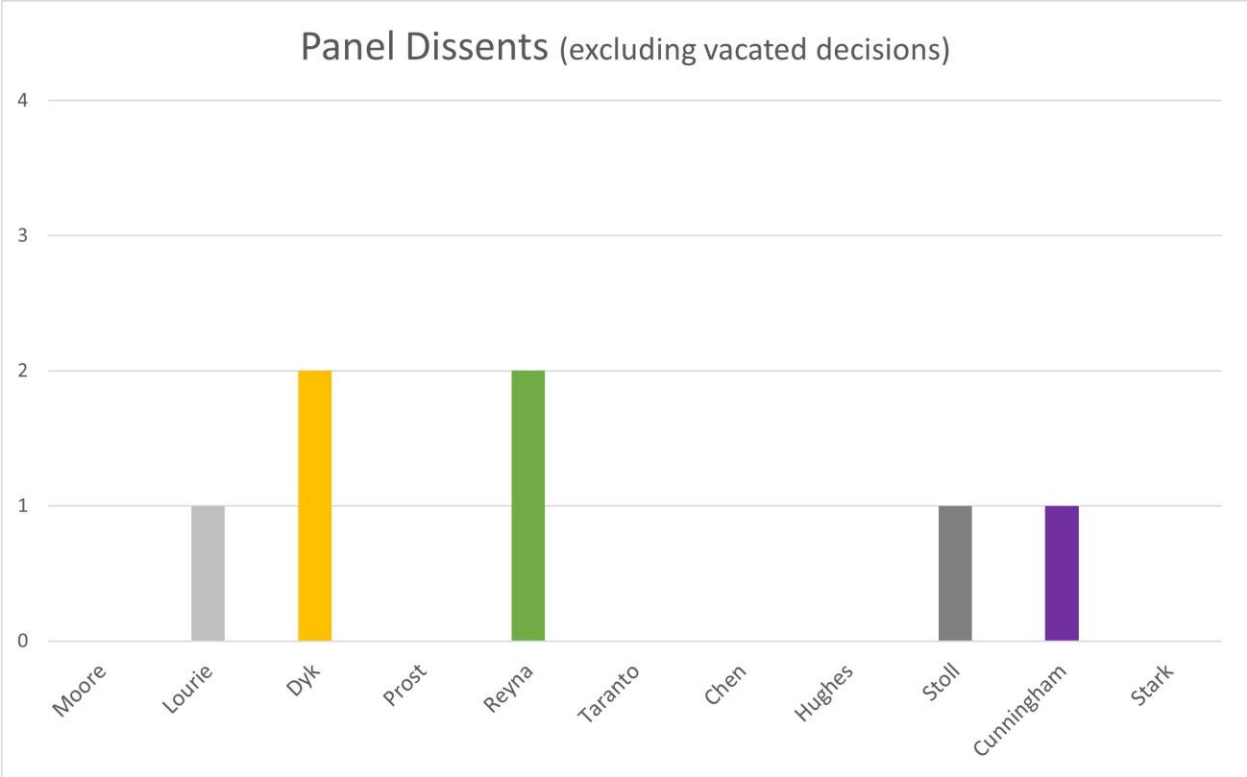
Apart from Judge Newman, the active judges who authored the fewest opinions in patent cases were U.S. Circuit Judge Tiffany Cunningham with six (one precedential, five nonprecedential) and U.S. Circuit Judge Todd Hughes with eight (three precedential and five nonprecedential).[4]

### **En Banc Cases and Dissents**

For the first time since 2018, the Federal Circuit decided a patent case en banc in 2024: *LKQ Corp. v. GM Global Technology Operations LLC*, a case involving the standard for determining whether design patent claims were obvious.[5] The court also granted rehearing en banc on a damages issue in *EcoFactor Inc. v. Google LLC*. That case is scheduled for oral argument in March.

The rate of panel dissents in patent cases remained low. Excluding the vacated panel opinion in *EcoFactor v. Google*, from which Judge Prost dissented, and a case in which a visiting district judge dissented in part, there were only 10 dissents in 288 cases, a rate of less than 3.5%.

U.S. Circuit Judges Timothy Dyk and Jimmie Reyna each dissented twice in patent cases, and no other judge dissented more than once from a panel decision in a patent case. Even the en-banc *LKQ* decision was nearly unanimous: All 10 participating judges agreed in the result, and nine joined U.S. Circuit Judge Kara Stoll's majority opinion.

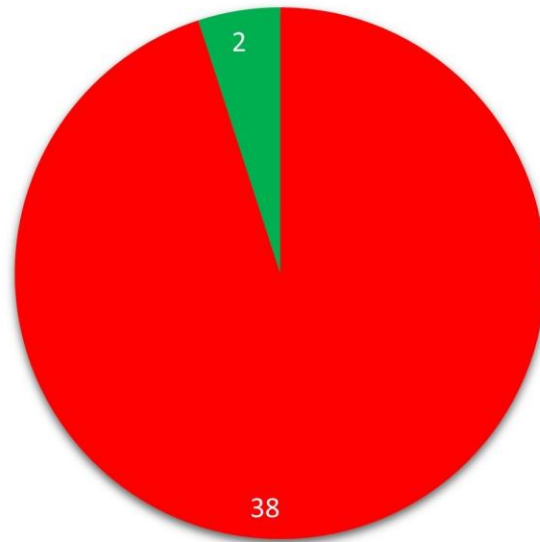


**Section 101 Cases**

The Federal Circuit decided 40 patent eligibility cases in 2024, more than double the number in 2023. All 40 cases involved appeals by patentees.

Patentees succeeded in overturning ineligibility rulings in only two of the cases, and one of those involved a sua sponte ineligibility ruling that the Federal Circuit reversed based on the party-presentation principle rather than on the merits.[6]

## Section 101 Appeals



■ Claims Invalidated    ■ Invalidity Ruling Overturned

### Patent-Friendliness Index

As in past years, I have calculated a patent-friendliness index for the court as a whole and for each judge.

The index is computed as 100 plus the percentage of decisions entirely favoring the patent owner or patent applicant less the percentage of decisions entirely against the patent owner or patent applicant. The calculation disregards mixed decisions and dissents from denials of rehearing en banc.

It is only a rough measure due to the random distribution of cases among the judges, the exclusion of cases producing mixed outcomes, and the equal weighting of all cases regardless of their significance and the issues raised.

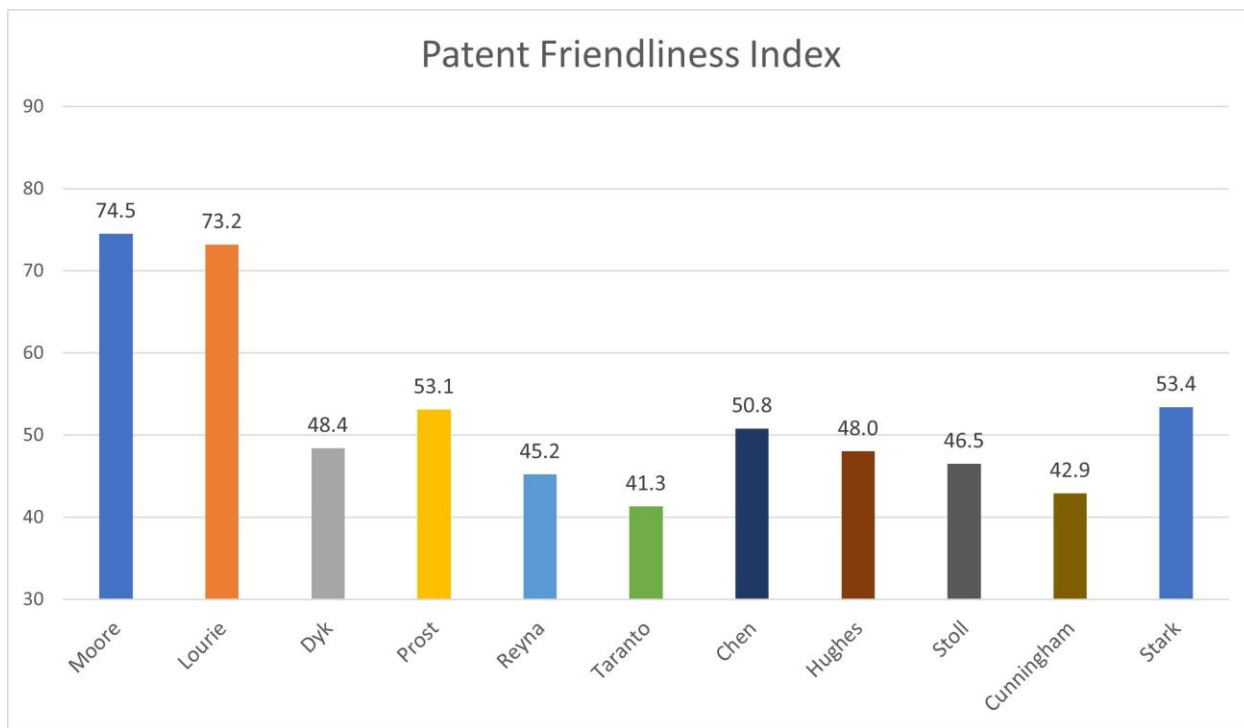
In 2024, the PFI for the entire Federal Circuit was just 50.7, down sharply from 55.6 in 2023 and 66.8, 62.9, 65.2, 62.8 and 65.3 in the five previous years.

As discussed above, patent owners and applicants prevailed in less than one of every five outings, and they lost outright in more than two of every three outings.

Only two judges had PFIs above 70: Chief Judge Kimberly Moore at 74.5 and Judge Lourie at 73.2. Judge Stark had the next highest PFI at 53.4 — a level that would have been on the patent-unfriendly side in years past.

The active judges with the least patent-friendly records in 2024 were Judge Taranto at 41.3

and Judge Cunningham at 42.9. Of course, the luck of the draw matters: Judge Lourie's PFI has been on the low end of the court in some years, and last year Judge Cunningham had the second-highest PFI. The more significant fact is that the court as a whole has been trending in a markedly less patent-friendly direction over the last two years.



We shall see whether these trends continue in 2025.

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[1] For the previous articles, see Dan Bagatell, Fed. Circ. Patent Decisions in 2023: An Empirical Review, Law360 (Jan. 4, 2024); Dan Bagatell, Fed. Circ. Patent Decisions in 2022: An Empirical Review, Law360 (Jan. 9, 2023); Dan Bagatell, Fed. Circ. Patent Decisions in 2021: An Empirical Review, Law360 (Jan. 6, 2022); Dan Bagatell, Fed. Circ. Patent Decisions in 2020: An Empirical Review, Law360 (Jan. 11, 2021); Dan Bagatell, Fed. Circ. Patent Decisions in 2019: An Empirical Review, Law360 (Jan. 9, 2020); Dan Bagatell, Fed. Circ. Patent Decisions in 2018: An Empirical Review, Law360 (Jan. 3, 2019); Dan Bagatell, Fed.Circ.'s 2017 Patent Decisions: A Statistical Analysis, Law360 (Jan. 5, 2018).

[2] In some cases both sides appealed, which explains why 231 + 77 exceeds the total of 287 patent decisions for the year. The statistics in this paragraph treat each side's appeal separately.



[3] Most summary dispositions are single-line decision orders under Federal Circuit Rule 36, but I also treat other decisions of one page or less as summary dispositions. Under Federal Circuit Internal Operating Procedure 10.6, panel may not issue a Rule 36 affirmance unless all three judges agree to do so.

[4] The authoring statistics include writ petitions but not unsigned per-curiam decisions.

[5] LKQ Corp. v. GM Global Technology Operations LLC, 102 F.4th 1280 (Fed. Cir. 2024).

[6] See Astellas Pharma, Inc. v. Sandoz Inc., 117 F.4th 1371 (Fed. Cir. 2024). The other reversal, in Contour IP Holding LLC v. GoPro Inc., 113 F.4th 1373 (Fed. Cir. 2024), addressed the patent-eligibility merits.