Lex Machina

Patent Litigation Report 2024

Written and edited by the Lex Machina Data Team

Elaine Chow, Esq., Patent Practice Area Lead

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Introduction

Lex Machina is excited to release its Patent Litigation Report 2024, which analyzes the latest trends and insights from patent litigation. Patent litigation comprises cases with one or more claims involving patent infringement, invalidity, or unenforceability brought under 35 USC § 271. False marking, inventorship, or contract cases are not included in the patent case type. For more details on the parameters of the patent litigation dataset, please see the section on Data and Methodology at the end of the report.

This report primarily focuses on comparing data across the three-year time period from the beginning of 2021 to the end of 2023. This report encompasses the 41,440 patent cases that were filed in the U.S. District Courts from 2014 to 2023 (see Figure 1), as well as the 4,116 patent cases that were appealed to the federal circuit courts from 2014 to 2023 (see Figure 4).

In the report, some of the data is broken down into categories based on Lex Machina's case filter system. Lex Machina allows users to filter cases by various claims and characteristics in order to make apples-to-apples comparisons and to see what types of cases are driving certain areas of litigation. This year's report looks at patent litigation trends in federal district courts, federal appellate courts, and the Patent Trial and Appeal Board (PTAB). The data is filtered to focus on general patent cases, patent cases excluding high-volume plaintiffs, ANDA cases, PTAB cases, and patent appellate cases. Lex Machina users can further apply tags in their own research.

This report includes data-driven insights into the behavior of courts, judges, parties, and law firms. Legal Analytics is used for planning, forecasting, and litigation strategy. From precise timing metrics that inform legal budgeting to trends among top law firms and leading judges, Legal Analytics provides customized insights that supplement traditional research and accumulated experience. The metrics in this report can help readers decide who to pursue as clients, whether to file a particular motion, or when to settle (and for how much). Leveraging this data gives firms and companies a competitive edge in litigation.

For more information, please see the Data and Methodology section at the end of this report.

Executive Summary

Federal Courts:

In 2023, 3,111 patent cases were filed, continuing a slight downward trend of patent case filings since 2021. This was the lowest number of patent cases filed in the federal district courts in any year over the past ten years. One possible explanation for this trend is the recent stark decrease in cases involving high-volume plaintiffs. Once high-volume plaintiffs are excluded, general patent cases have remained relatively stable since 2018. ANDA patent cases have remained relatively steady since 2020, and federal appellate patent cases have remained steady since 2019.

Over half of all patent cases continued to be funneled into the top three district courts (two of which were in Texas). However, the most active court, the Western District of Texas, experienced a significantly decreased number of cases filed in 2023. This may have been driven, at least in part, by the July 2022 standing order that randomly reassigned patent cases filed in the Waco Division. Similarly, although Judge Albright maintains his position as the most active district court judge over the last three years in total, he did not preside over the highest number of cases in 2023.

Companies who focus on the monetization of patent portfolios dominated the list of the most active plaintiffs, while technology and pharmaceutical companies comprised the bulk of the most active defendants. Over the last three years, Ramey was the most active law firm representing plaintiffs in patent cases, while Fish & Richardson was the most active law firm representing defendants.

The majority of patent cases were resolved on procedural grounds, but of those that were resolved on substantive grounds, claimants won twice as often as claim defendants, primarily on default judgment, consent judgment, and at trial. For patent cases that were appealed to a federal appellate court that terminated from 2021 to 2023 with a decision on the merits of the appeal, 34% were ultimately reversed.

From 2021 to 2023, $6 billion in total damages were awarded as Reasonable Royalty across 129 cases.

PTAB:

The number of filed PTAB petitions dropped in 2023. There was a slight increase in instituted trials compared with the data reported in the 2023 Patent Litigation Report (from 51% to 54%). In addition, 22% of federal PTAB appellate cases that terminated from 2021 to 2023 were ultimately reversed. Samsung was the most active petitioner in PTAB petitions filed during the three-year period from 2021 to 2023, and Fish & Richardson represented parties in the highest number of petitions filed during those three years.

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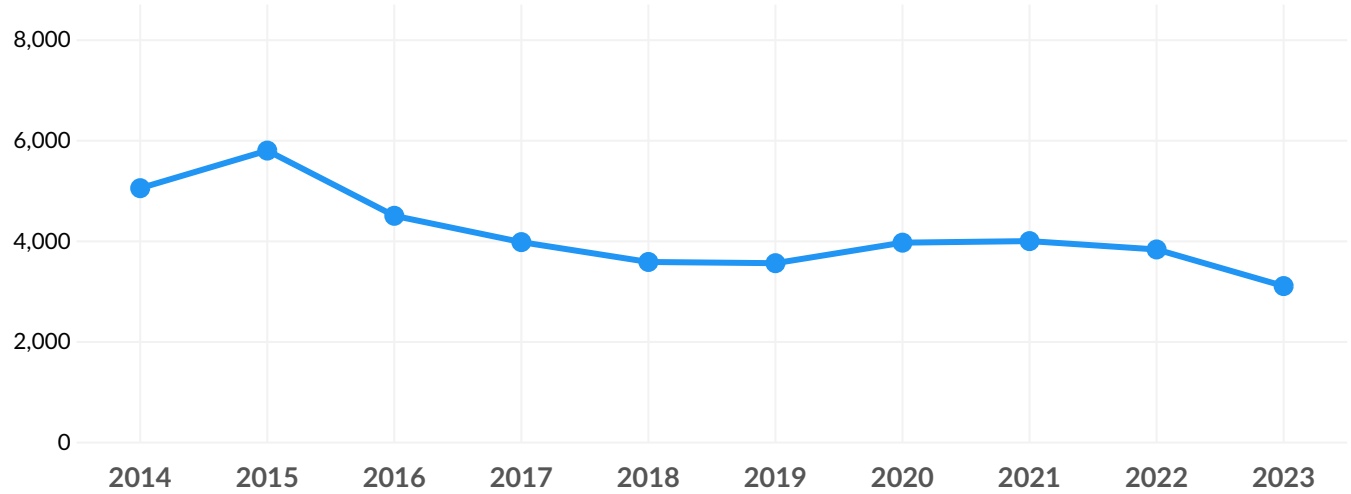
U.S. Federal Courts

Cases Filed

Over the past decade, the number of general patent cases filed in the federal district courts peaked in 2015 before decreasing steadily from 2015 to 2019. 2015 was likely a peak filing year for patent cases due, in part, to the high number of cases filed by "High-Volume Plaintiffs" (or "HVP"s). HVPs are plaintiffs that file at least 10 patent cases (excluding ANDA cases) within a 365-day period.

Patent case filings have demonstrated a gradual decrease from 2021 to 2023. There were only 3,111 patent cases filed in 2023, the lowest number of cases filed in any year during the ten-year period. It represented a 19% drop from the previous year in 2022 and a 46% drop from 2015 (the year with the highest number of patent case filings in any year over the last decade).

Figure 1: Patent Cases Filed from 2014 to 2023

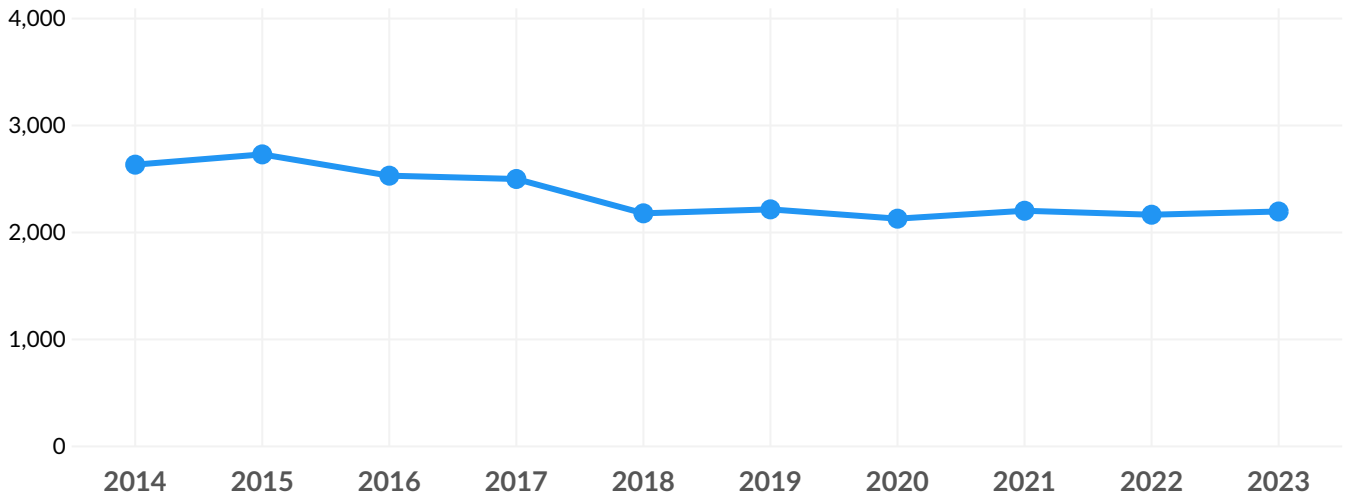


	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cases	5,057	5,805	4,508	3,985	3,590	3,566	3,974	4,005	3,839	3,111

When focusing on the subset of patent cases filed in which HVPs are excluded, the analytics reveals a more even, steady case filing trend over the past decade. The number of patent cases filed each year lands in the range between 2,100 and 2,800 cases per year. The number of cases filed each year over the past six years (from 2018 to 2023) remained especially steady year over year, with a delta of approximately 100 cases between the lowest number of cases filed (2,129 in 2020) and the highest number of cases filed (2,203 in 2021).

Note that once HVP cases were excluded, the number of patent cases filed in 2023 was no longer the lowest. The fact that excluding HVP cases resulted in a more even case filing trend over the ten-year period suggests that the overall decrease in patent cases filed over the past ten years was driven, at least in part, by a decrease in HVP cases. In fact, the number of HVP cases filed in 2023 dropped 45% compared to the previous year. The recent decrease in HVP cases may have been affected, at least in part, by two factors: (1) the decrease of cases filed before the Western District of Texas in general and in venues with caseloads assigned to Judge Albright in particular; and (2) Judge Connolly's order, in the District of Delaware, requiring third-party funding disclosures.

Figure 2: Patent Cases Filed from 2014 to 2023 (excluding High-Volume Plaintiffs)

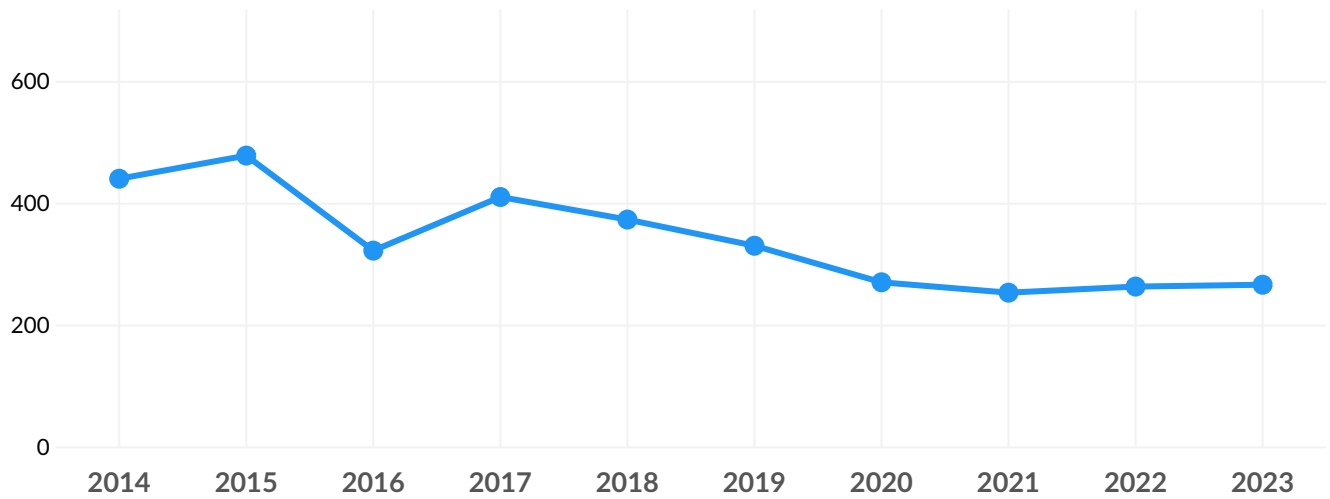


	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cases	2,634	2,730	2,531	2,500	2,179	2,216	2,129	2,203	2,166	2,196

By filtering to the subset of patent cases that involved ANDA, a different case filing trend emerged. The number of cases filed each year peaked in 2015 before declining until 2021, with a particularly pronounced drop in 2016. The number of ANDA patent cases remained generally steady from 2021 through 2023.

In an ANDA case, submitting an application to the Food and Drug Administration (FDA) to market a generic drug in the future constitutes an act of infringement. One potential factor driving the overall downard case filing trend may be a lower number of expiring drug patents. In addition, we may not be seeing the expiration of many "blockbuster" drug patents.

Figure 3: ANDA Patent Cases Filed from 2014 to 2023

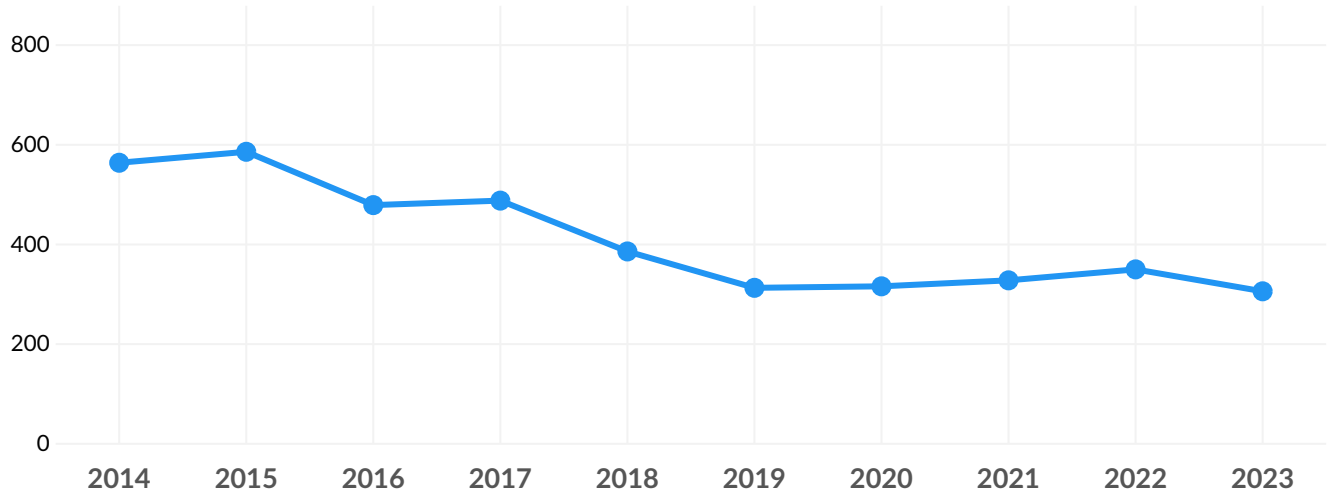


	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cases	441	479	323	411	374	331	271	254	264	267

By focusing on cases filed in the federal courts of appeals that originated from patent cases (though not necessarily appealed on a patent-specific issue) (the "Patent Appellate Cases"), the case filing trend shows that after peaking in 2015, Patent Appellate Cases generally declined until 2019.

From 2019 through 2023, Patent Appellate Cases remained relatively steady. In 2023, 306 Patent Appellate Cases docketed in the federal circuit courts, the lowest number in any year over the ten-year period.

Figure 4: Federal Patent Appellate Cases Docketed from 2014 to 2023



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cases	564	586	479	488	386	313	316	328	350	306

Most Active Districts

This section shows the most active districts with the highest numbers of patent litigation cases filed from 2021 to 2023. The columns set forth the breakdown by year, along with the total number of cases and the proportion of patent cases the particular district presided over in the three-year period.

The highest number of patent cases was filed in the Western District of Texas with 2,382 total cases (or 22% of the total proportion of patent cases filed during the three-year period of time). The second most active district was the District of Delaware with 1,978 cases. The third most active district was the Eastern District of Texas with 1,546 cases. In 2023, the Eastern District of Texas surpassed the Western District of Texas with 627 cases to 519, while the Northern District of Illinois leapt into place as the fourth most active district with 226 cases. Note that the top three most active district courts presided over a combined total of over 50% of all patent cases filed during the three-year period.

Figure 5: Most Active Districts by Cases Filed from 2021 to 2023

District	2021	2022	2023	Total	Percent
W.D.Tex.	984	879	519	**2,382**	21.7%
D.Del.	882	668	428	**1,978**	18.1%
E.D.Tex.	448	471	627	**1,546**	14.1%
C.D.Cal.	245	223	173	**641**	5.9%
N.D.Ill.	161	216	226	**603**	5.5%
N.D.Cal.	177	141	128	**446**	4.1%
D.N.J.	107	116	135	**358**	3.3%
S.D.N.Y.	105	119	84	**308**	2.8%
S.D.Fla.	73	79	62	**214**	2.0%
N.D.Tex.	60	87	65	**212**	1.9%

Most Active Judges

This section looks at the judges who presided over the highest number of patent cases filed in federal district court over the last three years.

Judge Albright from the Western District of Texas continued to occupy the position of the most active judge overall with 1,844 cases filed before him in the three-year period from 2021 to 2023. This amounted to nearly 17% of all patent cases filed during that time. Judge Albright heard more cases over the past three years than the next two district judges combined. However, it is important to note that in 2023, Judge Albright was not assigned to the highest number of patent cases – in fact, he had less than half the number of cases than Judge Gilstrap, who was the most active district court judge in 2023 and the second most active district court judge overall.

Judge Gilstrap from the Eastern District of Texas had 1,144 total cases filed before him (451 of which were filed in 2023). He presided over twice as many cases as the third most active district court judge, and over six times as many cases as the next most active district court judge in Texas (Judge Mazzant in eighth place). As mentioned above, in 2023, he surpassed Judge Albright with over twice as many cases (451 cases to 207).

The third, fourth, fifth, sixth, and seventh most active judges were from the District of Delaware. The last three judges on the list of the most active judges were all from Texas: Judge Mazzant from the Eastern District of Texas, Judge Pitman from the Western District of Texas, and Judge Schroeder from the Eastern District of Texas.

Figure 6: Most Active Judges by Cases Filed from 2021 to 2023

Judge	District	2021	2022	2023	Total	Percent
Alan D Albright	W.D.Tex.	937	700	207	**1,844**	16.8%
James Rodney Gilstrap	E.D.Tex.	328	365	451	**1,144**	10.4%
Richard Gibson Andrews	D.Del.	229	182	106	**517**	4.7%
Colm Felix Connolly	D.Del.	233	165	107	**505**	4.6%
Maryellen Noreika	D.Del.	238	150	113	**501**	4.6%
Gregory Brian Williams	D.Del.	39	123	89	**251**	2.3%
Leonard Philip Stark	D.Del.	219	31	0	**250**	2.3%
Amos Louis Mazzant III	E.D.Tex.	59	50	65	**174**	1.6%
Robert Lee Pitman	W.D.Tex.	16	58	80	**154**	1.4%
Robert William Schroeder III	E.D.Tex.	19	22	73	**114**	1.0%

Most Active Parties

The most active plaintiffs in patent litigation were dominated by entities who focus on the monetization of patent portfolios. Cedar Lane Technologies Inc. filed the most cases overall, with the highest number filed in 2022. (Note that it only filed 23 cases in 2023.) Bell Semiconductor, LLC was second, also with the bulk of its cases filed in 2022. In third was Patent Armory Inc. with all of its cases filed in 2023. Note that in 2023, Patent Armory Inc. was the most active plaintiff with the highest number of cases filed that year (87 cases).

Figure 7: Most Active Plaintiffs by Cases Filed from 2021 to 2023

Party	2021	2022	2023	Total	Districts
Cedar Lane Technologies Inc.	107	176	23	**306**	20
Bell Semiconductor, LLC	0	102	12	**114**	15
Patent Armory Inc.	0	0	87	**87**	8
mCom IP, LLC	24	16	31	**71**	11
AML IP, LLC	25	17	20	**62**	7
Social Positioning Input Systems, LLC	41	13	4	**58**	20
Deckers Outdoor Corporation	11	18	24	**53**	8
Linfo IP, LLC	9	25	13	**47**	5
PF Prism IMB B.V.	24	12	11	**47**	3
Pfizer, Inc.	19	13	14	**46**	5

Technology and pharmaceutical companies comprised the bulk of the most active defendants in patent litigation. Samsung Electronics America, Inc. defended against the highest number of patent cases filed over the last three years in 153 cases across 6 districts. Google LLC was second with 141 cases across 13 districts, followed by Samsung Electronics Co., Ltd. with 133 cases across 7 districts.

Figure 8: Most Active Defendants by Cases Filed from 2021 to 2023

Party	2021	2022	2023	Total	Districts
Samsung Electronics America, Inc.	58	51	44	**153**	6
Google LLC	46	50	45	**141**	13
Samsung Electronics Co., Ltd.	55	42	36	**133**	7
Apple Inc.	43	35	34	**112**	13
Amazon.com, Inc.	24	32	23	**79**	19
Lupin Ltd.	22	17	25	**64**	3
Teva Pharmaceuticals USA, Inc.	20	17	25	**62**	3
Walmart Inc.	22	20	19	**61**	19
Aurobindo Pharma Ltd.	23	18	16	**57**	2
LG Electronics, Inc.	26	19	11	**56**	10
Microsoft Corporation	18	23	15	**56**	9

Most Active Firms and Attorneys

Lex Machina extracts counsel data from raw sources and normalizes the information in order to collect analytics on law firms and individual attorneys. This section includes the most active law firms by plaintiffs' and defendants' firms, as well as the most active individual attorneys. Law firms and individual attorneys tend to have particular specialties in many practice areas. By tagging the various case types, Lex Machina users can find out what kind of experience their opposing counsel has with a particular claim. The tables below include a column for the percentage of cases over the past three years that were filed by HVPs.

Most Active Firms

Ramey represented plaintiffs in the highest number of patent cases from 2021 to 2023 (762 cases in 21 districts). Over half of these cases were filed on behalf of HVPs. Rabicoff Law was second with 578 cases in 25 districts. The Chong Law Firm was third with 571 cases in 11 districts. Note also that it only filed four cases in 2023. For both Rabicoff Law and The Chong Law Firm, over 80% of the cases each of them filed were on behalf of HVPs. Rabicoff Law filed all 87 of the cases brought by Patent Armory Inc. in 2023.

Figure 9: Most Active Law Firms Representing Plaintiffs by Cases Filed from 2021 to 2023

Firm	2021	2022	2023	Total	Districts	HVP
Ramey	170	332	260	**762**	21	57.74%
Rabicoff Law	159	164	255	**578**	25	88.93%
The Chong Law Firm	318	249	4	**571**	11	81.44%
Sand, Sebolt & Wernow	273	143	21	**437**	21	77.80%
Devlin Law Firm	106	197	88	**391**	28	55.75%
Morris, Nichols, Arsht & Tunnell	132	101	110	**343**	3	2.62%
Garteiser Honea	96	67	131	**294**	20	76.53%
Direction IP Law	121	133	38	**292**	21	77.05%
McKool Smith	61	143	43	**247**	23	54.25%
Ward, Smith & Hill	97	80	58	**235**	10	36.60%

Looking at defendants'-side firms, Fish & Richardson was the most active law firm representing patent litigation defendants in the same three-year period with 629 cases in 41 districts. Over 60% of these cases were filed in defense against HVPs. Gillam & Smith was second with 432 cases in 10 districts, and DLA Piper was third with 251 cases in 21 districts.

Figure 10: Most Active Law Firms Representing Defendants by Cases Filed from 2021 to 2023

Firm	2021	2022	2023	Total	Districts	HVP
Fish & Richardson	243	269	117	**629**	41	63.12%
Gillam & Smith	149	147	136	**432**	10	33.10%
DLA Piper	98	101	52	**251**	21	45.42%
Morris, Nichols, Arsht & Tunnell	112	73	56	**241**	6	35.68%
Winston & Strawn	99	77	55	**231**	19	28.14%
Perkins Coie	75	94	31	**200**	27	38.50%
The Dacus Firm	58	68	58	**184**	5	33.15%
Alston & Bird	44	48	46	**138**	17	48.55%
Quinn Emanuel Urquhart & Sullivan	62	35	36	**133**	21	29.32%
Baker Botts	62	37	32	**131**	12	40.46%

Most Active Attorneys

William Peterson Ramey III from Ramey was the individual attorney who represented plaintiffs in the highest number of patent cases with 756 cases. Isaac Phillip Rabicoff from Rabicoff Law Law was second with 578 cases, followed by Jimmy C. Chong from The Chong Law Firm with 571 cases.

Figure 11: Most Active Attorneys Representing Plaintiffs by Cases Filed from 2021 to 2023

Attorney	2021	2022	2023	Total	Law Firm
William Peterson Ramey III	169	329	258	**756**	Ramey
Isaac Phillip Rabicoff	159	164	255	**578**	Rabicoff Law
Jimmy C. Chong	318	249	4	**571**	The Chong Law Firm
Jack B. Blumenfeld	113	90	98	**301**	Morris, Nichols, Arsht & Tunnell
David Randolph Bennett	121	133	38	**292**	Direction IP Law
Howard Leigh Wernow	189	92	7	**288**	Sand, Sebolt & Wernow
Randall T. Garteiser	88	58	104	**250**	Garteiser Honea
Jeffrey Eugene Kubiak	13	90	142	**245**	Ramey
Michael Scott Fuller	95	53	90	**238**	Garteiser Honea
Raymond William Mort III	87	117	29	**233**	The Mort Law Firm

On the defendants' side in patent cases, Melissa Richards Smith from Gillam & Smith was the individual attorney who defended her clients against the highest number of patent cases (424 cases each). Neil J. McNabnay from Fish & Richardson was second with 422 cases, followed by Ricardo J. Bonilla from Fish & Richardson with 246 cases.

Figure 12: Most Active Attorneys Representing Defendants by Cases Filed from 2021 to 2023

Attorney	2021	2022	2023	Total	Law Firm
Melissa Richards Smith	148	143	133	**424**	Gillam & Smith
Neil J. McNabnay	160	181	81	**422**	Fish & Richardson
Ricardo J. Bonilla	116	90	40	**246**	Fish & Richardson
Deron R. Dacus	58	68	58	**184**	The Dacus Firm
Lance E. Wyatt Jr.	54	69	24	**147**	Fish & Richardson
Jack B. Blumenfeld	69	34	29	**132**	Morris, Nichols, Arsht & Tunnell
Eric Hugh Findlay	46	32	33	**111**	Findlay Craft
Jeremy Douglas Anderson	52	43	7	**102**	Fish & Richardson
John Michael Guaragna Jr.	46	36	19	**101**	DLA Piper
Noel Franco Chakkalakal	34	44	23	**101**	Fish & Richardson

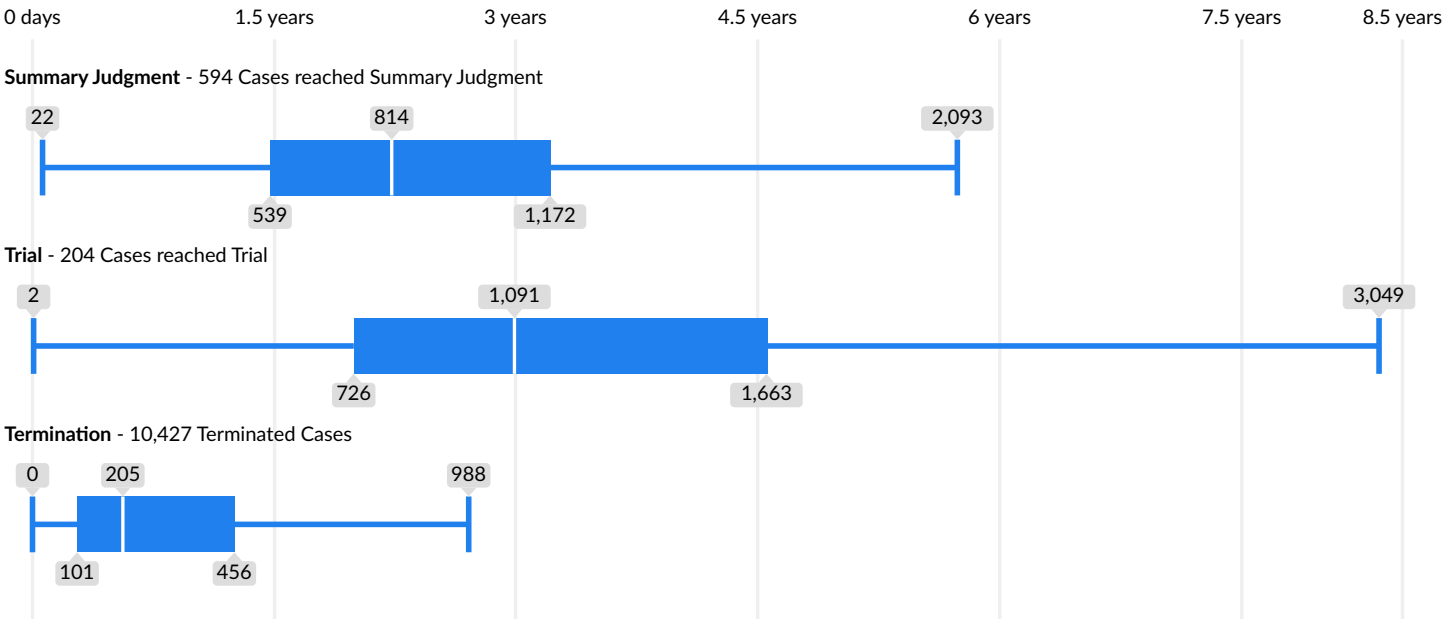
Timing

This section contains figures with timing analytics. Lex Machina provides case timing data to certain milestones, which is often used for forecasting, calendaring, and budgeting. In viewing boxplots, the lines represent the lower and upper quartiles, and the box represents the middle 50% of cases with the median number highlighted in the center (more information is in the Understanding Boxplots section at the end of this report).

The data showed that for all patent cases terminated in the three-year period from 2021 to 2023, the median time to summary judgment was 814 days. The median time to trial was 1,091 days, and the median time to termination was 205 days.

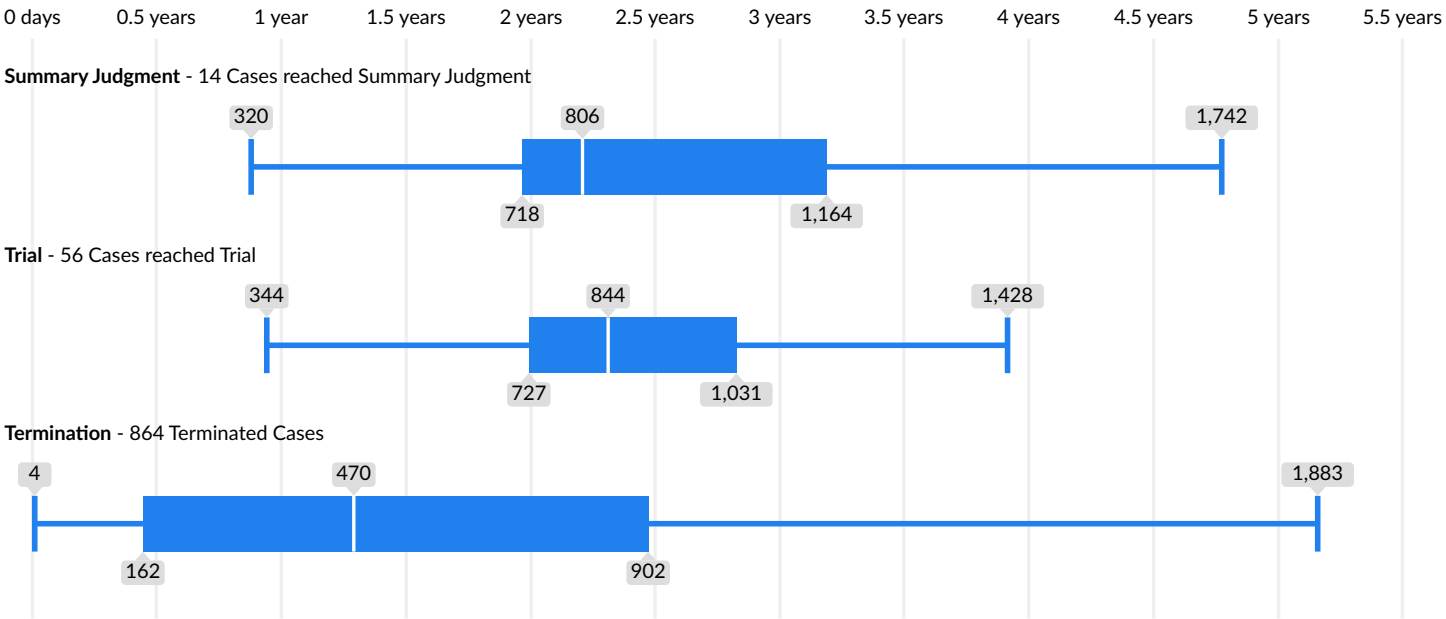
Note that the range of time it takes to get to trial is particularly wide. Practitioners should consider other information, such as case claims and the assigned judge, in order to obtain additional insights on timing.

Figure 13: Time to Events in Patent Cases Terminated from 2021 to 2023 (excluding ANDA Cases)



When filtered to ANDA cases terminated within the same three-year period, the data showed that while the time to trial was considerably shorter, the time to termination was notably longer (over two times longer). One factor that likely contributes, at least in part, to the longer time to termination is the fact that ANDA cases are less likely to settle early.

Figure 14: Time to Events in ANDA Patent Cases Terminated from 2021 to 2023



Patent Appellate Cases reached termination in a median of nearly one year after docketing in the federal appellate court.

Figure 15: Time to Termination in Patent-Originating Federal Appellate Cases Terminated from 2021 to 2023

Case Resolutions

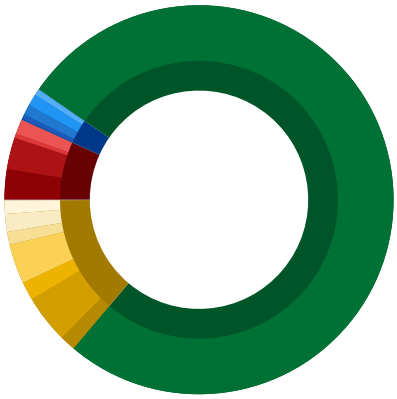
Lex Machina monitors case resolutions for district court patent cases and Patent Appellate Cases terminated in the three-year period from 2021 to 2023.

For district court cases, settlements and procedural resolutions are on the right with the parties' wins on the left. On the left side, case resolutions are broken down into claimant and claim defendant wins for cases that resolved at various stages of litigation.

For district court patent cases terminated in the last three years, the vast majority were resolved with a likely settlement or on procedural grounds (91% of cases altogether). Looking at the cases that resolved on substantive grounds, claimants won over twice as often as claim defendants (763 cases to 323), primarily on default judgment, consent judgment, and at trial. At summary judgment, on the other hand, claim defendants prevailed nearly three times as often as claimants. Note that as this figure looked at the way cases were terminated, claim defendants were likely to have more cases resolved at judgments on the pleadings and summary judgments due to the nature of those proceedings. In comparison, if the claimant won at those stages, the cases often did not terminate and instead proceeded onward.

Figure 16: District Court Case Resolutions for Cases Terminated from 2021 to 2023

Claimant Win	**763**	**7%**
Default Judgment	285	3%
Consent Judgment	296	3%
Judgment on the Pleadings	2	0%
Summary Judgment	40	0%
Trial	136	1%
Judgment as a Matter of Law	4	0%
Decision on Bankruptcy Appeal	0	0%
Claim Defendant Win	**323**	**3%**
Default Judgment	9	0%
Consent Judgment	43	0%
Judgment on the Pleadings	98	1%
Summary Judgment	111	1%
Trial	54	0%
Judgment as a Matter of Law	8	0%
Decision on Bankruptcy Appeal	0	0%



Likely Settlement	**8,643**	**77%**
Likely Settlement	8,643	77%
Class Action Settlement	0	0%
Procedural Resolution	**1,558**	**14%**
Contested Dismissal	147	1%
Dismissal	450	4%
Consolidation	174	2%
Severance	0	0%
Interdistrict Transfer	372	3%
Intradistrict Transfer	120	1%
Stay	168	1%
Multidistrict Litigation	127	1%
No Case Resolution	**5**	**0%**
Open Cases	0	0%
Remaining Federal	0	0%
Other	5	0%

For Patent Appellate Cases, appellant/appellee wins are on the left, and the settlement and procedural resolutions are on the right. On the bottom, the bar graph shows the reversal rate of the district court cases that resulted in a substantive decision (either reversed or affirmed).

The Patent Appellate Cases that terminated in the last three years with a decision on the merits of the appeal held a 34% reversal rate.

Figure 17: Federal Appellate Case Resolutions for Patent-Originating Cases Terminated from 2021 to 2023

All Resolutions

Reversed or Affirmed	Cases	%
Reversed	89	11%
Affirmed / Reversed in Part	74	9%
Affirmed	320	39%
Total	483	58%

Appealability Resolution	Cases	%
Appealability Granted	0	0%
Appealability Denied	3	0%
Total	3	0%

Miscellaneous	Cases	%
Granted (Other)	30	4%
Denied (Other)	73	9%
Total	103	12%

Likely Settlement	Cases	%
Likely Settlement	157	19%
Total	157	19%

Procedural Resolution	Cases	%
Dismissal	73	9%
Consolidation	0	0%
Transfer	8	1%
Other Ruling	0	0%
Remand	3	0%
Total	84	10%

No Resolution	Cases	%
Open Cases	0	0%
Pending	0	0%
Total	0	0%

Reversal Rate of Reversed or Affirmed Cases

34%
Reversal rate

66%
Affirmance rate

The reversal rate is calculated by dividing the number of cases (163) that were either ● Reversed (89) or ● Affirmed / Reversed in Part (74) by the total number of cases (483) that were ● Reversed, ● Affirmed / Reversed in Part, or ● Affirmed (320).

Findings

Lex Machina tracks findings at various stages of litigation, which may indicate how difficult it will be to receive a favorable decision at various points in the case. Outside of this report, Lex Machina also breaks down findings by judge or court in order to enable attorneys to strategize accordingly. The figures below show the number of cases with a finding at each stage of litigation, as well as overall. The columns will not necessarily add up to the "Any" column because a case may have findings at more than one judgment event; for example, a finding at summary judgment and another finding at trial. Note that this is not an exhaustive list of the available findings that can be found on the Lex Machina platform. By looking at the number of cases with a finding at various judgment events for patent cases terminated during the three-year period from 2021 to 2023, trends and patterns emerge from which data-driven insights may be derived.

The first figure in this section shows the number of cases with a patent finding at various judgment events for patent cases that terminated in the last three years. The second figure delves deeper into the specific reasons patents were found invalid over the same three-year time period. For the figures in this section, findings made as part of a claim construction order are counted as findings at summary judgment.

Courts found Infringement the most often in patent cases terminated during the three-year period from 2021 to 2023 (in 636 cases, half of them at default judgment). They found the opposite finding, No Infringement, in half the number of cases (332 cases), largely on summary judgment and trial. At the summary judgment stage, courts found No Infringement more than four times as often as infringement. The most common findings at trial were Infringement (in 120 cases) and No Invalidity (in 122 cases).

Figure 18: Patent Findings by Judgment Event for Cases Terminated from 2021 to 2023

Findings	Default Judgment	Consent Judgment	Judgment on the Pleadings	Summary Judgment	Trial	Judgment as a Matter of Law	Any Judgment Event
Infringement	323	187	1	40	120	3	636
No Infringement	6	67	24	170	91	10	332
Invalidity	7	7	103	146	47	5	305
No Invalidity	27	152	0	65	122	6	352
Unenforceability	4	1	0	1	2	0	8
No Unenforceability	25	139	1	28	15	0	205

By focusing further on Invalidity, the data revealed that courts invalidated patents most frequently on the grounds that the patent was directed towards an ineligible subject matter, primarily found at judgment on the pleadings. The second most common finding that invalidated patents was on the grounds of indefiniteness, chiefly found at claim construction (as mentioned above, claim construction is combined with summary judgment for the purposes of the findings in this section).

Figure 19: Patent Invalidity Reasons by Judgment Event for Cases Terminated from 2021 to 2023

Findings	Default Judgment	Consent Judgment	Judgment on the Pleadings	Summary Judgment	Trial	Judgment as a Matter of Law	Any Judgment Event
101 Subject Matter	0	1	102	28	1	1	131
102 Anticipation / Novelty	6	2	0	16	13	2	39
103 Obviousness	1	1	0	9	24	1	36
112 Definiteness	0	0	1	95	1	1	98
112 Enablement	0	0	0	4	3	2	9
112 Written Description	0	0	0	7	6	1	14
171 Improper Design Patent	0	1	0	1	0	0	1
132, 251, 255, 305 Defective Correction	0	0	0	2	0	0	2
Obviousness-Type Double Patenting	0	0	0	0	3	0	3
No Invalidity Reason Specified	1	2	0	1	11	0	15

Damages

Figure 20 reflects the total patent damages awarded each year (excluding fees, costs, and interest) over the ten-year period from 2014 to 2023. The first three columns from the left show the numbers of cases with damages awarded each year and the total damages awarded that year. The damages awards in the third column are those that have not been reversed on appeal, and thus, many are final awards. The fifth column shows the damages awarded each year that were later reversed on appeal. The damages in the third and fifth columns are mutually exclusive.

The total amount of patent damages awarded in each of the past three years surpassed $1 billion per year. In addition, the number of cases in which patent damages were awarded increased over the last four years. In 2023, the highest annual amount of total damages was awarded to the highest number of cases in any year over the ten-year period.

Note that as it takes time to reverse damages on appeal, the amounts of reversed damages for recent years may shift. Lex Machina will continue tracking damages to see whether these newer damage awards are reversed or left to stand.

Figure 20: Total Patent Damages Awarded from 2014 to 2023 (excluding Fees and Interest)

Year	Cases	Amount	Reversed Cases	Reversed Amount
2023	80	$3,532,288,320	—	—
2022	69	$2,806,033,118	—	—
2021	57	$1,217,013,757	1	$2,175,000,000
2020	36	$517,571,972	6	$3,898,584,309
2019	50	$773,862,004	7	$780,833,141
2018	58	$1,234,505,028	6	$545,131,441
2017	61	$700,383,484	8	$385,117,446
2016	53	$547,325,309	8	$29,900,504
2015	43	$337,722,691	12	$445,891,690
2014	54	$1,418,537,292	8	$512,654,435

Lex Machina tracks the various types of damages and the amounts of damages awarded at various judgment events. Lex Machina annotates certain types of damages specific to patent cases: Enhanced Damages, Lost Profits, and Reasonable Royalty. Attorneys' Fees / Costs, Other / Mixed Damage Types, and Prejudgment Interest are not specific to the patent litigation practice area, but are annotated generally within Lex Machina.

During the three-year period from 2021 to 2023, the highest amount of damages was $6 billion awarded as Reasonable Royalty in 129 patent cases, primarily on verdict. The second-highest amount of damages was $785 million awarded as Enhanced Damages in 25 patent cases, primarily on the merits.

Figure 21: Total Patent Damages by Type Awarded from 2021 to 2023 (Millions)

Type	Cases	Awarded	DFJ	CJ	Verdict	Merits
Enhanced Damages	25	$785	$3	$10	$4	$769
Lost Profits	40	$567	$15	$18	$519	$15
Reasonable Royalty	129	$6,093	$4	$8	$6,044	$38
Attorneys' Fees / Costs	198	$102	$3	$28	—	$72
Other / Mixed Damage Types	48	$110	$19	$6	$84	$3
Prejudgment Interest	35	$116	$2	$72	—	$42

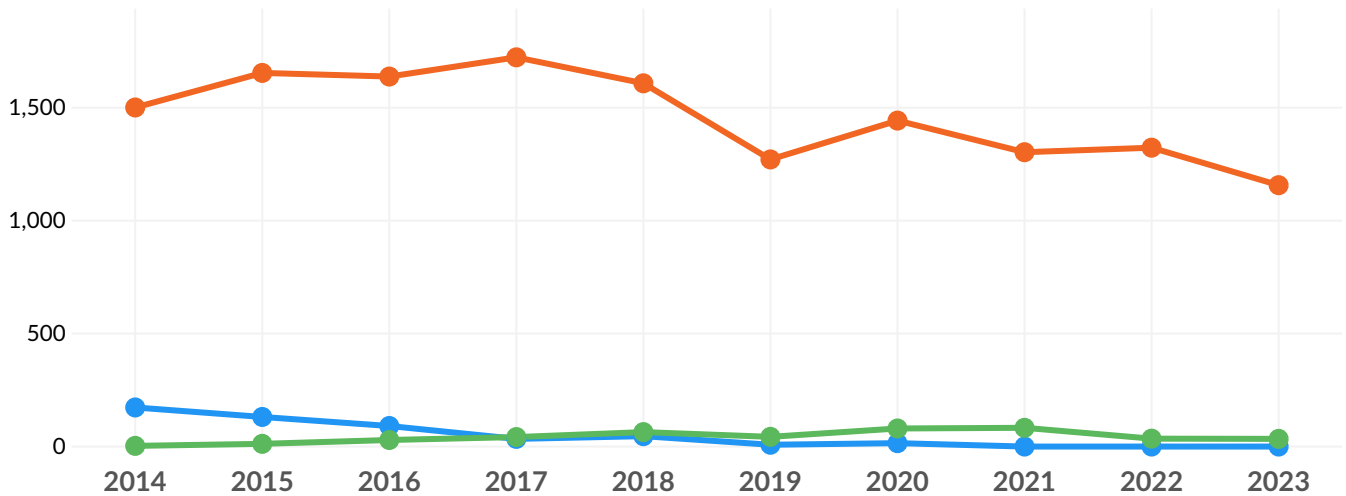
Patent Trial and Appeal Board

PTAB Filings

Over the ten-year period from 2014 to 2023, the number of PTAB petitions filed each year remained relatively steady from 2014 to 2018. After a drop in filings in 2019, filings stabilized at a lower range of numbers through 2023.

The decline in PTAB petition filings in 2019 was likely driven, at least in part, by the fact that in that year, the USPTO and the Federal Circuit Court adjusted standards of review for patents among the different venues and instituted policies to minimize redundant reviews of patents. Relatedly, the brief and mild spike in filings in 2020 may have been influenced by an eventual clarification of the standards set forth in 2019 (compounded with the relative resilience of PTAB during the pandemic, thereby offering an attractive venue for litigation in 2020). Note that there are no covered business method ("CBM") filings in 2021, 2022, and 2023 because CBM review ended in September of 2020.

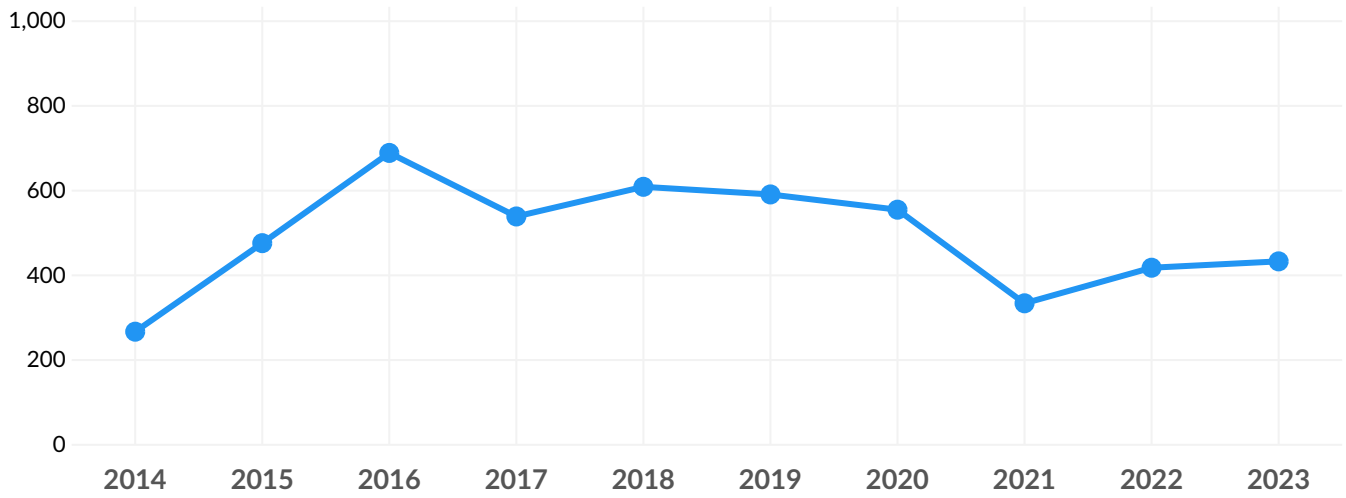
Figure 22: PTAB Petitions Filed from 2014 to 2023



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
CBM	173	131	91	34	46	8	15	0	0	0
IPR	1,501	1,654	1,638	1,723	1,608	1,271	1,443	1,303	1,323	1,157
PGR	3	12	29	42	64	43	80	83	35	34

The cases originating from PTAB that were appealed to the federal courts of appeals (the "PTAB Appeals Cases") increased from 2014 until 2016, when it peaked. The PTAB Appeals Cases dropped in 2017, after which they remained fairly steady until dropping again in 2021. As discussed above, this drop was possibly caused, at least in part, by the increasingly clear standards set forth by the USPTO and the Federal Circuit Court in 2019. Since 2021, PTAB Appeals Case filings have been gradually increasing.

Figure 23: Federal Court of Appeals Cases Originating from PTAB Filed from 2014 to 2023



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cases	267	476	689	539	609	591	555	334	418	433

Most Active Parties (PTAB)

This section examines the parties who appeared in the most PTAB trials based on petitions during the three-year period from 2021 to 2023. The right-hand columns list the number of patents at issue and the number of administrative patent judges presiding over trials involving the specific party.

The most active petitioners during this period were largely composed of major tech companies. During the three-year period from 2021 to 2023, Samsung Electronics Co., Ltd. appeared in the most PTAB trials based on petitions. Two Samsung entities dominated as the two most active petitioners, followed by Apple Inc. and Google LLC. These four entities were also the four most active defendants in patent cases filed in district court from 2021 to 2023, albeit in a different order (see Figure 8 above).

Figure 24: Most Active Petitioners by Trials Petitioned from 2021 to 2023

Party	2021	2022	2023	Total	Patents	APJs
Samsung Electronics Co., Ltd.	138	135	99	**372**	310	92
Samsung Electronics America, Inc.	134	101	92	**327**	276	86
Apple Inc.	69	138	35	**242**	195	70
Google LLC	63	96	54	**213**	154	74
Microsoft Corporation	27	26	15	**68**	58	48
Intel Corporation	34	9	21	**64**	45	36
Meta Platforms, Inc.	2	26	33	**61**	54	33
Unified Patents, LLC	24	29	3	**56**	56	78
Cisco Systems, Inc.	17	13	24	**54**	47	44
Dell Inc.	19	17	16	**52**	43	35

Jawbone Innovations, LLC topped the list of the patent owners who defended their patents in the highest number of trials petitioned (69) during the three-year period from 2021 to 2023. Telefonaktiebolaget LM Ericsson is second with 62 trials petitioned.

Figure 25: Most Active Patent Owners by Trials Petitioned from 2021 to 2023

Party	2021	2022	2023	Total	Patents	APJs
Jawbone Innovations, LLC	1	35	33	**69**	9	8
Telefonaktiebolaget LM Ericsson	30	32	0	**62**	35	11
Ericsson, Inc	26	27	0	**53**	32	11
WSOU Investments LLC	31	4	3	**38**	38	6
Webroot, Inc.	0	4	33	**37**	15	9
Open Text Corporation	0	4	32	**36**	14	9
Scramoge Technology Ltd.	10	24	2	**36**	22	7
Express Mobile, Inc.	19	11	0	**30**	5	8
Greenthread, LLC	0	8	21	**29**	6	4
Centripetal Networks, Inc.	17	7	3	**27**	22	12
Intellectual Ventures II LLC	7	20	0	**27**	18	14
Netlist, Inc.	5	13	9	**27**	16	8

Most Active Law Firms (PTAB)

This section looks at the law firms who appeared in the highest number of PTAB trials in the three-year period from 2021 to 2023. The right-hand columns show the percentage of cases in which the firm appeared on behalf of petitioners, the number of patents at issue, and the number of administrative patent judges they appeared before.

Similar to the list of the most active law firms representing defendants in district court (see Figure 10 above), Fish & Richardson topped the list of the most active law firms by trials petitioned from 2021 to 2023. They were followed by Finnegan, Henderson, Farabow, Garrett & Dunner, and then by Baker Botts.

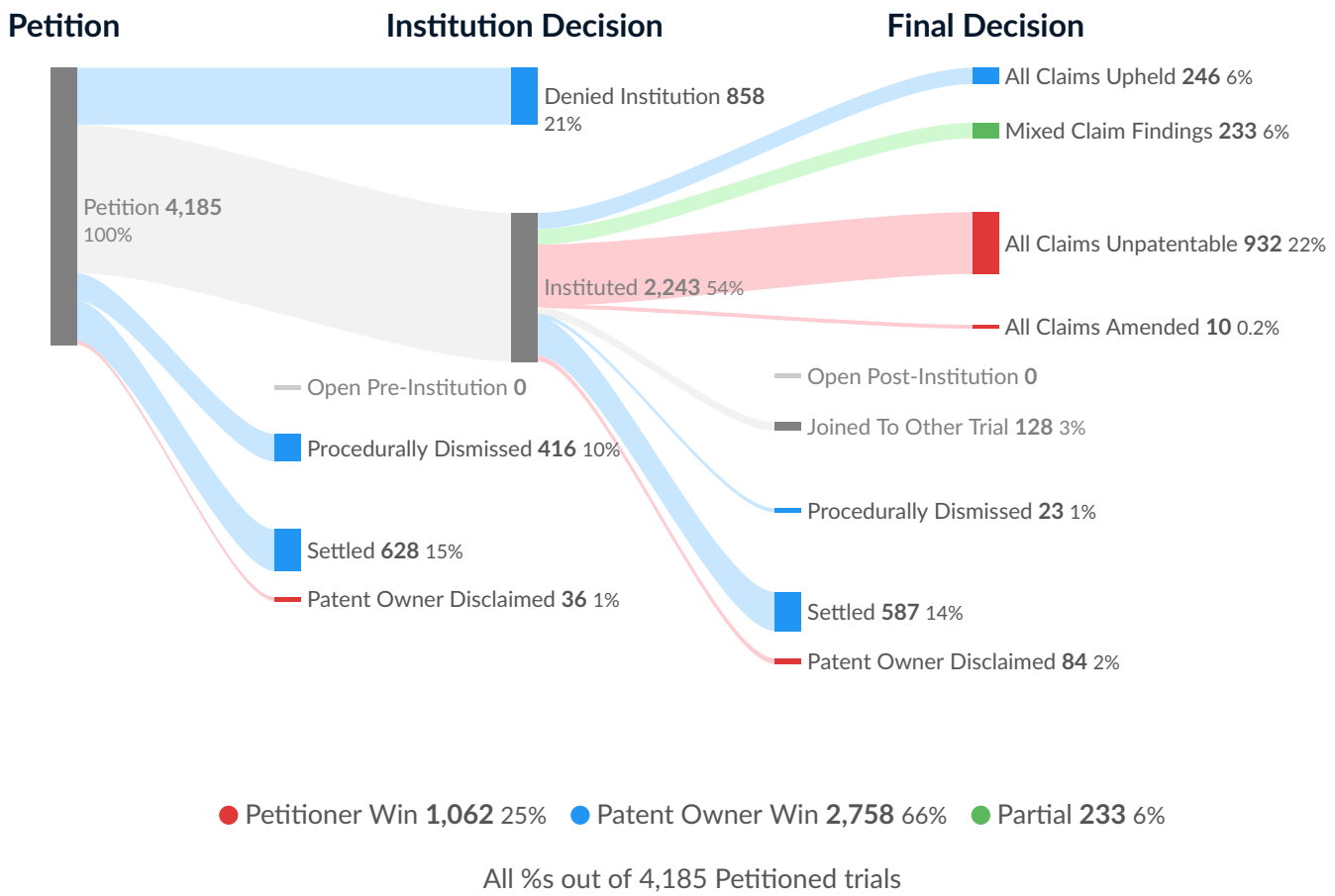
Figure 26: Most Active Firms by Trials Petitioned from 2021 to 2023

Party	2021	2022	2023	Total	For Petitioner	Patents	APJs
Fish & Richardson	142	142	137	**421**	82.42%	331	125
Finnegan, Henderson, Farabow, Garrett & Dunner	81	124	85	**290**	71.03%	248	122
Baker Botts	61	94	62	**217**	76.04%	195	86
Russ August & Kabat	55	90	36	**181**	0.55%	115	51
Haynes and Boone	65	76	31	**172**	80.81%	161	90
McKool Smith	42	60	67	**169**	13.61%	92	66
Perkins Coie	50	60	53	**163**	86.50%	136	92
Paul Hastings	78	37	47	**162**	91.98%	118	73
Fabricant	26	57	72	**155**	0.00%	62	46
Sterne, Kessler, Goldstein & Fox	58	68	28	**154**	48.70%	120	86

PTAB Trial Flow

The following trial flow analytics show the progression of PTAB trials from Petition through various stages and includes a summary of how the trial ended. For trials ending during the period from 2021 to 2023, over half of the cases were instituted. All claims were found to be unpatentable 22% of the time, with mixed claim findings 6% of the time. All claims were upheld 6% of the time. The data supports a continuation of the trend we observed in our 2023 Patent Litigation Report, in which instituted trials increased (from 49% in 2022 to 51% in 2023 to 54% in 2024) as a likely result, at least in part, of PTO Director Kathi Vidal's scaling back of the Fintiv (discretionary denial) doctrine.

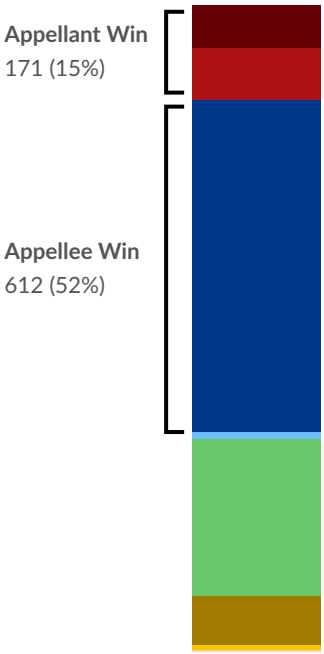
Figure 27: PTAB Trial Flow for Trials Terminated from 2021 to 2023



For PTAB Appeals Cases, 22% of those appeals decided on the merits resulted in a reversal.

Figure 28: Federal PTAB Appellate Cases Terminated from 2021 to 2023

All Resolutions



Reversed or Affirmed	Cases	%
Reversed	79	7%
Affirmed / Reversed in Part	92	8%
Affirmed	600	51%
Total	771	66%

Appealability Resolution	Cases	%
Appealability Granted	0	0%
Appealability Denied	0	0%
Total	0	0%

Miscellaneous	Cases	%
Granted (Other)	0	0%
Denied (Other)	12	1%
Total	12	1%

Likely Settlement	Cases	%
Likely Settlement	284	24%
Total	284	24%

Procedural Resolution	Cases	%
Dismissal	87	7%
Consolidation	9	1%
Transfer	0	0%
Other Ruling	0	0%
Remand	3	0%
Total	99	8%

No Resolution	Cases	%
Open Cases	0	0%
Pending	0	0%
Total	0	0%

Reversal Rate of Reversed or Affirmed Cases

22%
Reversal rate

78%
Affirmance rate

The reversal rate is calculated by dividing the number of cases (171) that were either ● Reversed (79) or ● Affirmed / Reversed in Part (92) by the total number of cases (771) that were ● Reversed, ● Affirmed / Reversed in Part, or ● Affirmed (600).

Data and Methodology

This report presents data from Lex Machina's Legal Analytics platform. Using machine learning and technology-assisted attorney review, raw data is extracted from sources including PACER. The raw data is then cleaned, tagged, structured, and loaded into Lex Machina's proprietary platform. This report is prepared by the Lex Machina Product Team using charts and graphs from the platform. Commentary is provided by Lex Machina's legal experts.

Lex Machina supplements and corrects primary data from PACER in a variety of ways, including:

- Correcting errors ranging from spelling mistakes to complex data problems
- Normalizing data on judges, parties, law firms, and attorneys
- Extracting records of law firms and attorneys not found in docket reports
- Tagging and categorizing cases
- Annotating case resolutions, damages, and dispositive rulings

What Kinds of Data Does Lex Machina Offer?

Lex Machina maintains a specialized database containing information about litigation in the U.S. District Courts, many state courts, the U.S. Patent and Trademark Office's Patent Trial and Appeal Board, the U.S. International Trade Commission, the U.S. Bankruptcy Courts, and the U.S. Federal Courts of Appeals. On a daily basis, Lex Machina requests and receives data from the various courts' PACER systems on new cases and docket entries filed. Lex Machina's automated systems ensure the completeness and consistency of this data before analyzing it in conjunction with other data sources.

This document was published in February 2024. The Lex Machina platform updates daily; therefore, any numbers in this report will change as new cases get added to PACER with new information. This report is meant to provide trends and general research information as of the date of publication.

What is a Patent Case?

A case with one or more claims involving patent infringement, invalidity, or unenforceability brought under 35 USC § 271. False marking, inventorship, or contract cases are not included in the patent case type.

What are the Patent Case Tags?

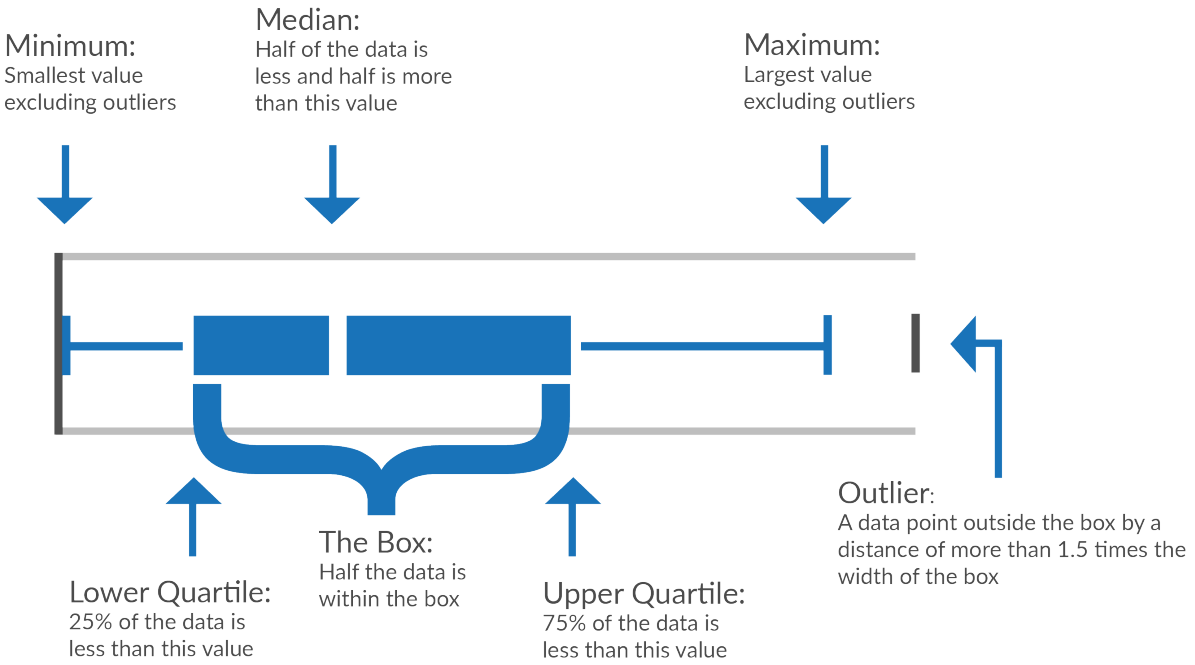
Lex Machina uses machine learning and natural language processing to create case tags that identify certain claims in a case. In patent, case tags to identify these common types of claims include:

ANDA — Patent cases prompted by the filing of an ANDA or paper NDA that includes a Paragraph IV Certification (incentivized by the Hatch-Waxman Act's first to file exclusivity provisions for prospective generic drug makers).

High-Volume Plaintiff — Patent cases in which a plaintiff (or defendant in a declaratory judgment case) is a high-volume filer, meaning that the party has filed at least 10 patent cases (excluding ANDA cases) within a 365-day period. Once a party is determined to be a high-volume filer, this tag applies to all of the party's patent cases (excluding ANDA cases) in which the party is a plaintiff (or defendant in a declaratory judgment case), regardless of when the cases were filed. This behavior-based classification focuses objectively on a party's tendency towards mass litigation, and it avoids the inherent subjectivity and ambiguity of classifying parties as Non-Practicing Entities (NPEs) or Patent Assertion Entities (PAEs). Thus, while this tag primarily applies to cases with NPEs or PAEs, the tag also applies to cases with operating companies that file a significant volume of patent cases.

Understanding Box Plots

Lex Machina's analytics use a data visualization known as the box plot to convey information about the timing of significant events in a case. A box plot summarizes a series of data points to help you understand the shape or distribution of the values in those points. The box plot is drawn based on five numbers: the median, the upper and lower quartiles, and the whiskers for a distribution.



The four observations below explain the significance of a box plot:

Median
The middle dividing line of the box splits the data points evenly so that 50% fall to either side. It's a form of average that gives a single number representation of what to reasonably expect.

Box bounds
The box encloses the middle-most 50% of the data points (from the 25th percentile to the 75th), with 25% of the data points falling outside to either side. This makes the box a good representation of the range one can reasonably expect.

Box compressed or elongated
A more compressed box means that more data points fall into a smaller range of time and therefore are more consistent; in contrast, a longer box means that the data points are spread out over a wider time period and are therefore less predictable.

Whiskers
Whiskers are drawn to show the outside bounds of reasonable expectation, beyond which data points are considered outliers. By statistical convention, box plots define outliers as points beyond more than 1.5 times the width of the box (sometimes called the "interquartile range").