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The Honorable Andrei Iancu
Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office
United States Patent and Trademark Office
600 Dulany Street
Alexandria, VA 22313-1450

Docket Number PTO-P-2019-0024

Re: USPTO Request for Comments on Discretion to Institute Trials Before the Patent Trial and Appeal Board, 85 Federal Register 66502 (October 20, 2020)

Comcast Cable Communications, LLC (“Comcast”) appreciates the US Patent and Trademark Office’s continued commitment to improving the success of the administrative review proceedings created by Congress in the America Invents Act (“AIA”), as well as the opportunity to respond to the Office’s Federal Register request for comments on Discretion to Institute Trials Before the Patent Trial and Appeal Board (“PTAB”). Comcast is both a leading innovator—listed among organizations that receive the most U.S. utility patents¹—and a company frequently subjected to abusive patent owner behaviors. Comcast believes that a balanced patent system that protects valid patents but rids the system of invalid patents promotes and protects U.S. innovation.

Congress created *inter partes* review (“IPR”) in the AIA as the result of a bipartisan effort to provide an improved alternative to litigation over the validity of granted patents by “establish[ing] a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs.”² Several aspects of IPR can make it, in some situations, a more advantageous venue for determining issues of patent validity than litigation in district courts or at the International Trade Commission (“ITC”). IPR is conducted by the expert patent judges of the PTAB, who are appointed by the Secretary of Commerce and must be “persons of competent legal knowledge and scientific ability,”³ while patent validity disputes in district court are resolved by lay jurors or judges likely without scientific training. In contrast to

¹ “Intellectual Property Owner’s Top 300 Organizations Granted U.S. Patents in 2019,” <https://ipo.org/wp-content/uploads/2020/05/2019-IPO-Patent-300%C2%AE-Top-Patent-Owners-List-FINAL-DRAFT.pdf>, (indicating that Comcast procured 270 U.S. utility patents in 2019) (last visited Nov. 19, 2020).

² H.R. Rep. No. 98, at 39-40, 112th Cong., 1st Sess. (2011) (“House Report”).

³ 35 U.S.C. § 6(a), (c).

general verdicts in typical jury trials, IPR ends with a “final written decision,”⁴ which enables a more informed appellate review. In contrast to ITC rulings, IPR decisions are preclusive.⁵ Thus, IPR enhances patent quality and can offer a more effective and efficient means to challenge low-quality patents and mitigate abusive litigation tactics.

Until fairly recently, IPR has been working as intended: reducing the high costs of challenging low-quality patents and curbing abusive behaviors that coerce companies into settling frivolous cases.⁶ But recent actions taken by the PTAB, namely the expansive use of discretionary denials, have weakened the effectiveness of IPR in achieving the intended goals. Recent institution decisions, denying petitions based on purely procedural grounds and without regard for the merits, are functioning to cut off access to IPR altogether. This is evident in recent trends. For example, the institution rate for IPR had dropped every year since the launch of IPR in 2013.⁷ And an exponentially growing proportion of institution denials is attributable to procedural denial, and namely to denials due to the PTAB exercising its discretion under 35 U.S.C. § 314(a).⁸

Comcast, as a high-technology company and leading innovator, is often the target of infringement claims of low-quality patents that IPR was designed to weed out. Comcast has therefore availed itself of IPR extensively, ranking as a top filer of IPR petitions, with 75 IPR petitions instituted to date.⁹ Comcast has successfully established unpatentability of claims in 87% of the instances in which IPR has proceeded to a final written decision.¹⁰ Comcast has been

⁴ 35 U.S.C. § 318(a).

⁵ *Max-Linear, Inc. v. CF CRESPE LLC*, 880 F.3d 1373, 1376 (Fed. Cir. 2018).

⁶ *See, e.g.*, “Inter Partes Review: Five Years, Over \$2 Billion Saved,” <http://www.patentprogress.org/2017/09/14/inter-partes-review-saves-over-2-billion/> (estimating that “implementation of *inter partes review* has helped plaintiffs and defendants avoid at least \$2.31 billion in deadweight losses by providing an efficient system for challenging patents”) (last visited Nov. 19, 2020); “Inter partes review as a means to improve patent quality,” <https://www.rstreet.org/2017/09/25/inter-partes-review-as-a-means-to-improve-patent-quality/> (“[T]he PTAB’s decisions have been continually affirmed by the Federal Circuit, which clearly demonstrates its success thus far as a means to increase patent quality. ... In fact, startups, independent inventors and even large companies have prospered because of the corresponding invalidations of poorly constructed and overly broad patents.”) (last visited Nov. 19, 2020).

⁷ “PTAB Annual Report,” <https://portal.unifiedpatents.com/ptab/annual-report?year=2020> (last visited Nov. 19, 2020).

⁸ “PTAB Procedural Denials and the Rise of § 314,” <https://www.unifiedpatents.com/insights/2020/5/13/ptab-procedural-denial-and-the-rise-of-314> (last visited Nov. 19, 2020).

⁹ Patexia IPR Intelligence Report–September 2020 (ranking Comcast number 6 in 2020 and number 9 in 2019 among the most active companies as petitioners) (enclosed as Exhibit A); Lex Machina report on PTAB trials by Comcast Cable Communications, LLC (Nov. 19, 2020) (enclosed as Exhibit B).

¹⁰ Lex Machina report on PTAB trials by Comcast Cable Communications, LLC (Nov. 19, 2020) (Exhibit B).

affected by the growth in procedural denials and has observed the weakening of IPR as a mechanism to weed out low-quality patents as Congress had intended. Specifically, a number of Comcast petitions have been discretionarily denied without any regard for the merits of the petitions themselves. As one recent example, three Comcast petitions were discretionarily denied institution based on the status of a co-pending ITC proceeding, where only one claim of the subject patent was at issue in the ITC proceeding, the ITC's invalidity ruling on that one claim was not binding, a parallel federal court action in which the patent was being asserted was stayed pending the ITC proceeding, and the Commission had even decided to review the ALJ's preliminary invalidity finding.¹¹

In response to the questions posed in the Office's Federal Register request for comments, Comcast supports the Office: (1) disregarding other proceedings in district court or the ITC in deciding whether to institute a petition on a patent that is or has been subject to such other proceedings; (2) disregarding the number of petitions filed in deciding whether to institute more than one petition filed at or about the same time on the same patent; and (3) disregarding whether the claims have previously been challenged in another petition in deciding whether to institute a petition. Each issue will be addressed in turn.

I. Proceedings in Other Tribunals

The Office's Federal Register request for comments posed the following questions regarding proceedings in other tribunals:

5. Should the Office promulgate a rule with a case-specific analysis, such as generally outlined in *Fintiv* and its progeny, for deciding whether to institute a petition on a patent that is or has been subject to other proceedings in a U.S. district court or the ITC?

6. Alternatively, in deciding whether to institute a petition on a patent that is or has been subject to other proceedings in district court or the ITC, should the Office (a) altogether disregard such other proceedings, or (b) altogether decline to institute if the patent that is or has been subject to such other proceedings, unless the district court or the ITC has indicated that it will stay the action?

Comcast supports the Office disregarding other proceedings in district court or the ITC in deciding whether to institute a petition on a patent that is or has been subject to such other proceedings.

Two recent precedential PTAB decisions have resulted in the massive expansion of procedural decisions under Section 314(a) based primarily, if not solely, on the status of

¹¹ *Comcast Cable Communications, LLC v. Rovi Guides, Inc.*, IPR2020-00800, IPR2020-00801, IPR2020-00802, Paper 10 (PTAB Oct. 22, 2020).

proceedings in a co-pending litigation.¹² These procedural decisions are not based on the merits of the petition. Rather, they result in the discretionary denial of meritorious, timely-filed IPR petitions and leave invalid patents in force to be litigated against the petitioner and others. Further, such discretionary denials are continuing to be more expansively used by the PTAB. A recent report shows that discretionary denials have grown exponentially over the past three years and are on track to double yet again this year.¹³

This trend has led to patent owners exerting gamesmanship to avoid IPR. By simply pointing to a proposed schedule in a pending district court or ITC proceeding that has not yet been stayed, IPR may be avoided, allowing questionable patents to remain unreviewed. This recent trend, in instituting petitions only where there is no co-pending litigation or the litigation is proceeding slowly, is severely misguided and undermines the very purpose of IPR. Congress intended for IPR to complement the patent litigation system, and a significant majority of IPRs arise from litigation.

In enacting the AIA, Congress explicitly considered the interaction between an already-filed patent infringement suit and an IPR petition filed by the defendant. Congress determined that, so long as the IPR petition is filed within a year after service of a complaint, IPR will not be unduly disruptive of the district court suit.¹⁴ In other words, Congress considered the potential for IPR to delay or otherwise interfere with a district court action that has already substantially progressed toward judgment—and it concluded that imposing a one-year deadline would adequately balance that concern with the need to provide alleged infringers adequate time to evaluate the patent claims and prepare for IPR.¹⁵ Indeed, the 2011 Committee Report noted that an initially proposed 6-month deadline was amended to a 12-month deadline, at least in part based on the following rationale:

High-technology companies, in particular, have noted that they are often sued by defendants asserting multiple patents with large numbers of vague claims, making it difficult to determine in the first few months of the litigation which claims will be relevant and how those claims are alleged to read on the defendant's products. Current [i.e., pre-AIA,] law imposes no deadline on seeking *inter partes* reexamination. And in light of the present bill's enhanced estoppels, it is important that the section 315(b) deadline afford defendants a reasonable opportunity to

¹² *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, 2020 WL 2126495 (PTAB Mar. 20, 2020); *NHK Spring Co., Ltd. v. Intri-Plex Techs., Inc.*, IPR2018-00752, 2018 WL 4373643 (PTAB Sept. 12, 2018).

¹³ “PTAB Discretionary Denials: In the First Half of 2020, Denials Already Exceed All of 2019,” <https://www.unifiedpatents.com/insights/2020/7/27/ptab-discretionary-denials-in-the-first-half-of-2020-denialsalready-exceed-all-of-2019> (last visited Nov. 19, 2020); “PTAB Procedural Denials and the Rise of § 314,” <https://www.unifiedpatents.com/insights/2020/5/13/ptab-procedural-denial-and-the-rise-of-314> (last visited Nov. 19, 2020).

¹⁴ H.R. Rep. No. 112-98, at 47 (2011).

¹⁵ 35 U.S.C. § 315(b).

identify and understand the patent claims that are relevant to the litigation. It is thus appropriate to extend the section 315(b) deadline to one year.¹⁶

Congress knew IPR and litigation about the same patent claim would often proceed in parallel, and the one-year limit was carefully calibrated to ensure that IPR is not used for delay while also giving defendants an adequate opportunity to investigate the claims asserted against them in litigation. In derogation of the statutory deadline enacted by Congress, the PTAB has substituted its own policy preference by directing the “discretionary denial” of timely-filed IPR petitions if a co-pending litigation docketed an early trial date. This has led to discretionary denials that vary based on the speed of a given forum, resulting in unpredictability in the availability of IPR and forum shopping by patent owners. This not only results in meritorious petitions being denied on extra-statutory grounds, but it also adds precisely the cost, complexity, and uncertainty that Congress sought to avoid by adopting a simple, clear one-year time bar, in 35 U.S.C. § 315(b).

To be sure, the PTAB may decline to institute IPR in individual cases.¹⁷ But the PTAB may not decline to institute on grounds that undermine Congress’s considered policy judgments. The one-year deadline in Section 315(b) reflects Congress’s judgment that a bright-line time bar—not a discretionary multifactor test—is the best mechanism for balancing the need to avoid disruption of district court proceedings with the need to allow defendants time to prepare their petitions. The *Fintiv* approach thus institutes the very discretionary, multifactor analysis that Congress declined to adopt. Under that approach, infringement defendants must account for the possibility that their petitions may be denied based on the progress of other litigation, even if they file within one year of that litigation. Rather than relying on the one-year deadline, IPR petitioners must attempt to file early—but in the face of considerable uncertainty about just how early they should file. IPR petitions will therefore lose the opportunity to evaluate the claims as asserted in litigation that Congress purposely gave them.

By contrast, where Congress wanted to give the PTAB discretion to deny IPR based on parallel proceedings, it knew how to do so explicitly. For example, the AIA provides that if the IPR petitioner has previously filed suit challenging the validity of a patent claim, IPR may not be instituted at all—regardless of how much time has passed between the suit and the IPR petition.¹⁸ Similarly, Congress expressly granted the PTAB discretion to decide how to manage IPRs when there is a parallel proceeding before the Office.¹⁹ Nowhere did Congress authorize denial of a timely IPR petition based on overlap with parallel district court or ITC litigation brought by the patent owner. To the contrary, Congress expressly provided that a petitioner’s counterclaim challenging the validity of a patent claim in such parallel proceedings would not bar IPR.²⁰ Although the AIA accords some discretion to the PTAB in evaluating the merits of IPR petitions

¹⁶ 157 Cong. Rec. S5429 (daily ed. Sept. 8, 2011) (statement of Sen. Kyl); S. 23, 112th Cong. sec. 5(a), § 315(b) (2011) (as passed by the Senate).

¹⁷ 35 U.S.C. § 314(a).

¹⁸ 35 U.S.C. § 315(a)(1).

¹⁹ 35 U.S.C. §§ 315(d) and 325(d).

²⁰ 35 U.S.C. § 315(a)(3).

or promulgating rules governing IPR institution, that discretion is limited.²¹ It certainly is not unbounded and cannot be exercised in a manner that is contrary to the statute's text, structure, and purpose and contrary to Congress' considered policy judgments.

Besides exceeding the PTAB's statutory authority to decline to institute review, the current discretionary approach has analytical flaws and causes several adverse consequences. For one thing, as part of assessing the progress of a parallel proceeding, the PTAB's focus on past investment in the proceeding (*Fintiv* factor 3) is misplaced. This is a sunk cost. Instead, Comcast submits that the analysis, if any, should focus on *future* investment in IPR as compared to the co-pending litigation. This comparison will almost always favor IPR.

Looking to a trial schedule is also a misguided approach to deny institution. Trial schedules are inherently speculative and are pushed back in a significant proportion of cases. Many IPR petitions denied by the PTAB based upon a looming trial date have seen subsequent significant delays in trial dates.²² And most infringement cases never result in a trial. Thus, the premise that district courts will determine patent validity sooner than the PTAB is speculative and does not reflect reality.

Further, this new PTAB policy has been applied inconsistently. Unjustifiable and unpredictable disparities among similarly-situated IPR petitioners have resulted, reflecting the uncertainty and malleability of the factors used in considering discretionary denial. For example, an overlap in issues between IPR and litigation has sometimes favored institution, but at other times disfavored institution.²³

An issue of further inconsistency is the application of discretionary denials where there is a co-pending ITC investigation. Unlike most district court litigation, ITC investigations are expedited. An ITC investigation will typically finish more quickly than a PTAB proceeding.²⁴ Treatment of ITC expedited schedules has been greatly inconsistent. In one instance, the PTAB determined "that efficiency and integrity of the system are best served by instituting review," emphasizing the differences between an IPR and the parallel ITC investigation and disregarding

²¹ See 35 U.S.C. §§ 314(a) and 316(b).

²² "District Court Trial Dates Tend to Slip After PTAB Discretionary Denials," <https://www.patentspostgrant.com/district-court-trial-dates-tend-to-slip-after-ptab-discretionary-denials/> (last visited Nov. 19, 2020).

²³ *Compare Medtronic, Inc., & Medtronic Vascular, Inc. v. Teleflex Innovations S.à.r.l.*, IPR2020-00135, 2020 WL 3053201 (PTAB Jun. 8, 2020) with *Cisco Sys., Inc. v. Ramot at Tel Aviv Univ. Ltd.*, No. IPR2020-00122, 2020 WL 2511246 (PTAB May 15, 2020).

²⁴ "SECTION 337 STATISTICS: AVERAGE LENGTH OF INVESTIGATIONS," https://www.usitc.gov/intellectual_property/337_statistics_average_length_investigations.htm (last visited Nov. 19, 2020).

the schedule of the ITC investigation.²⁵ In other recent instances, involving a similar timeline, the PTAB declined institution noting the advanced stage in the ITC proceedings.²⁶

Given the expedited schedules of ITC investigations, IPR petitions likely would be denied whenever there are co-pending ITC investigations. For many reasons, an ITC investigation is a poor substitute for IPR. For instance, a patent-based ITC investigation can involve a wide range of issues—including infringement, invalidity (under all applicable theories), importation, technical and economic domestic industries, remedies and the public interest, while an IPR proceeding encompasses only patent validity challenges under anticipation or obviousness theories arising from prior art patents and printed publications. The three administrative patent judges handling an IPR have greater subject matter expertise and will have more time to focus on the relevant subset of patent invalidity issues than an administrative law judge at the ITC, who must consider more issues over a shorter period.

Lastly, and most importantly, the ITC does not have the power to cancel patent claims, even where a claim is demonstrated to be unpatentable. District courts and other tribunals are not bound by any ruling from the ITC that a patent is invalid²⁷, and such patents may continue to be asserted and litigated against the public, at great expense. An ITC investigation is a wholly inadequate substitute for IPR. Thus, in considering whether to discretionarily deny an IPR, the PTAB should disregard any parallel ITC case. And even if an ITC proceeding may end before an IPR, a follow-on parallel district court proceeding would not. Thus, at the very least, if the PTAB considers any parallel ITC proceeding at all, it should consider all potential cases: the ITC proceeding and any parallel district court proceeding that would have to go forward following the ITC proceeding.

Additionally, typically only a small handful of claims are tried in an ITC investigation, with the bulk of the patent claims being delayed for assertion in the district court. Discretionarily denying an IPR based on a co-pending ITC investigation means there will be a subsequent district court case years later where the validity of all claims will need to be litigated and potentially tried. For example, of the patents previously asserted against Comcast in 2016, none went to trial in the district court regarding Comcast's invalidity claims or otherwise. *See, e.g., Rovi Guides, Inc., v. Comcast Corp., et al., Joint Status Report*, Case No. 1:16-cv-09826-JPO (S.D.N.Y.) (July 2, 2020).

Under current trends, petitioners are forced to file IPR petitions at earlier stages of litigation, where there is less certainty over the patent claims at issue, their scope, and how the patent owner interprets them. This also leads to lower-quality IPR petitions. Forcing infringement

²⁵ *3Shape A/S v. Align Tech., Inc.*, IPR2020-00223, Paper 12 (PTAB May 26, 2020).

²⁶ *Bio-Rad Laboratories, Inc v. 10X Genomics, Inc.*, IPR2019-00567, Paper 23 (PTAB Aug. 8, 2019); *Fitbit, Inc. v. Koninklijke Philips*, IPR2020-00771, Paper 14 (PTAB Oct. 19, 2020).

²⁷ *See Texas Instruments Inc. v. United States Int'l Trade Comm'n*, 851 F.2d 342, 344 (Fed. Cir. 1988) (stating that ITC determinations regarding patent issues should be given no collateral estoppel effect); *Corning Glass Works v. United States Int'l Trade Comm'n*, 799 F.2d 1559, 1570 n. 12 (Fed. Cir. 1986) (stating that the legislative history of the Trade Reform Act of 1974 supports the position that ITC decisions have no preclusive effect in district courts).

defendants to file IPR petitions earlier in litigation thus undermines a high quality and efficient IPR process. Even where an infringement defendant succeeds in rushing to file an IPR petition at a relative early date, the PTAB may still deny institution, simply based on the status of co-pending litigation.²⁸

Petitioners are already incentivized to file IPR petitions as soon as possible so that an invalidity decision resulting from IPR can affect the co-pending litigation and save costs. Of a set of 123 IPR petitions filed by Comcast, petitions were filed between 183 days and 363 days of service of a complaint. This timing is consistent with and attributable to the same concerns that Senator Kyl noted in recommending extending the statutory deadline from 6 months to one year. In addition, searching for and vetting the best prior art is an on-going, iterative process that can take months. Preparing strong IPR petitions that survive PTAB scrutiny along with the supporting documents similarly adds months to the filing timeline. This process takes long enough in isolation for one patent. But, as is often the case, preparing IPRs in response to the simultaneous assertion of multiple patents adds complication and time for these filings. Further adding to this timeline, these often complex proceedings must be modified and updated to reflect positions taken in parallel litigation. Additional time may also be needed for review of IPR petitions and related documents by clients and co-counsel. Filing an IPR petition close to the 1-year statutory deadline is not playing games, but a natural result of the time, effort, attention to detail, and parallel efforts by different teams of lawyers to identify the best prior art, understand the patent claims at issue and how the patentee interprets them, and then prepare a compelling petition or petitions that comply with the PTAB's IPR filing requirements.

Decisions by district courts are vastly more expensive (about 10 times more expensive) and offer no measurable increase in accuracy of patentability determinations. Thus, defendants are often forced into nuisance settlements with patent assertion entities, in which no forum ever considers the validity of the patent at issues—completely frustrating Congress's express purpose in creating IPR. These discretionary denials effectively undermine the purpose of IPR in providing a streamlined and specialized alternative to litigation over patent validity. In creating IPR, Congress sought to encourage defendants accused of patent infringement in litigation to assert their potentially meritorious challenges to patentability in an IPR petition—*inviting* overlap between IPR and litigation in which the petitioner would assert those same challenges as defenses against an infringement claim. Yet the recent application of discretionary denials threatens to make IPR unavailable in precisely the circumstances where Congress intended it to operate, defeating IPR's role as a more efficient mechanism for clearing away invalid patents and ultimately weakening the patent system.

Patent assertion entities may thus employ strategic gamesmanship in forum shopping for desirable trial timelines (*e.g.*, at the ITC or “rocket docket” district courts), strategically timing patent assertions and lawsuit, delaying certain stages of litigation, or expediting others, to avoid the possibility of an instituted IPR. For example, a patent owner can push for an aggressive trial

²⁸ *Fitbit*, IPR2020-00771, Paper 14 at 19 (denying institution citing to an estimated trial date despite commending “Petitioner’s diligence in filing this Petition within a short time after the ITC proceeding was instituted”).

schedule, or file in venues known for setting (but not necessarily keeping) aggressive schedules and early trial dates, and then argue that the PTAB should forego IPR because of the advanced stage of proceedings in the litigation. Even more damaging, the PTAB has not been willing to consider a patent owner's litigation history as relevant to institution.²⁹ This is a particularly acute problem for the technological industry in which Comcast operates.

Accused infringers may also face distorted incentives. For example, even though a motion to dismiss is available and can usefully crystallize the issues in the case, an accused infringer might be disincentivized to bring such a motion if doing so would accelerate the point where IPR institution may be denied due to progress of the litigation proceedings.

These actions degrade IPR and are a primary, direct contributor to the recent growth in the number of abusive suits brought by non-practicing entities.³⁰ The resultant increased litigation and forum shopping is precisely the type of "counterproductive litigation" that Congress sought to stem by passing the AIA.³¹ Such unnecessary and abusive litigation will be harmful to US companies and employers if this practice continues.

II. Parallel Petitions

The Office's Federal Register request for comments posed the following questions regarding parallel petitions:

3. Should the Office promulgate a rule with a case-specific analysis, such as generally outlined in the Consolidated Trial Practice Guide, for deciding whether to institute more than one petition filed at or about the same time on the same patent?
4. Alternatively, in deciding whether to institute more than one petition filed at or about the same time on the same patent, should the Office (a) altogether disregard the number of petitions filed, or (b) altogether decline to institute on more than one petition?

Comcast supports the Office ordinarily disregarding the number of petitions filed in deciding whether to institute more than one petition filed at or about the same time on the same patent, absent clear evidence of abuse. The Office should not institute a categorical prohibition on multiple petitions. There are several reasons that multiple petitions may be warranted for the same patent.

²⁹ See, e.g., *Intel Corp. v. VLSI Tech. LLC*, IPR2020-00106, Paper 17 at 12-13 (May 5, 2020) (denying institution) (although petitioner extensively addressed plaintiff's prolific litigation history, the PTAB did not consider it as relevant to institution).

³⁰ "Litigation on the Rise: Number of New Cases Filed By Patent Assertion Entities (PAEs)," https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/5eb03467c0e81e79e64c5bb0/1588606056624/Pae+stats+Diagram_Jan+-+Apr.pdf (last visited Nov. 19, 2020).

³¹ House Report, p. 40.

For instance, a patent may have numerous different embodiments falling within the claims. Different prior art references may have one or more embodiments but rarely have every embodiment. Such numerous embodiments may entail the application of various different prior art references or prior art combinations that necessitate multiple petitions.

As another example, some prior art may more closely resemble the accused product than the challenged patent. This type of prior art may be of interest so that even if the patent cannot be invalidated, the petitioner is ensured that practicing the prior art does not infringe the challenged patent.

Some prior art may be better tailored to a jury trial in a district court than the PTAB handling an IPR. A petitioner may seek to preserve those prior art references for trial while also petitioning for IPR with other prior art references better tailored to IPR, where PTAB judges have subject matter expertise.

The maximum word count for IPR petitions also necessitates multiple petitions in many instances. For example, some patents have a large number of claims or lengthy claims containing many limitations. As the claims that ultimately go to trial are subject to change throughout a litigation, a petitioner should be able to challenge all claims of a patent. Some patents have claims covering different inventive concepts that are difficult to cover in one petition. As another example, some patent claims may be subject to several potential claim constructions. It may not be possible to cover every possible claim construction position that the patent owner may take within the 14,000-word count limit of an IPR petition.

Following the Supreme Court's ruling in *SAS Institute, Inc. v. Iancu*, 138 S.Ct. 1348 (2018), the PTAB must institute review with respect to all challenged claims in a petition if it institutes on one claim, even if a likelihood of success has been identified regarding only one of them. Parallel petitions may provide the PTAB with the ability to reach different institution decisions for different claims. In some of the above scenarios, dividing challenged claims or invalidity assertions among different petitions may more efficiently allow the PTAB to institute less than all asserted claims.

III. Serial Petitions

The Office's Federal Register request for comments posed the following questions regarding serial petitions:

1. Should the Office promulgate a rule with a case-specific analysis, such as generally outlined in *General Plastic, Valve I, Valve II* and their progeny, for deciding whether to institute a petition on claims that have previously been challenged in another petition?
2. Alternatively, in deciding whether to institute a petition, should the Office (a) altogether disregard whether the claims have previously been challenged in another

petition, or (b) altogether decline to institute if the claims have previously been challenged in another petition?

Comcast supports the Office ordinarily disregarding whether the claims have previously been challenged in another petition in deciding whether to institute a petition, absent clear evidence of abuse. The Office should not institute a categorical prohibition on multiple petitions. So long as the petition is filed within the requirements set by 35 U.S.C. § 315(b), the status of an earlier filed IPR petition should bear little-to-no weight in deciding whether to institute a petition. For example, where a claim construction is adopted in a first IPR that differs from the claim construction presented in the petition, a petitioner should be permitted to file a second petition with the claim construction adopted by the PTAB, so long as it is filed within the timeline set by 35 U.S.C. §315(b). As another example, a petitioner may identify additional prior art references after an initial petition.

The PTAB has limited follow-on petitions under the premise that it may allow a petitioner to use the PTAB's denials as road map until a ground is found that results in institution. However, IPR proceedings are part of a prosecution file history and can be considered in other proceedings. There is no reason why an IPR petitioner should be prohibited from considering the previous IPR, as any other party could do. This is the same as a party considering the prosecution history of a patent when filing an initial IPR. If a patent owner argues for and receives a particular claim construction which the petitioner did not adequately anticipate, there is no ability to amend the IPR petition after claim construction. This leaves the IPR petitioner in a bind. Every district court allows the defendant to amend their invalidity contentions after claim construction. In an IPR, this basic due process is denied. The IPR process should either allow amendment after claim construction or allow for follow-on IPR petitions.

Further, denying a party any chance to use IPR simply because the patent owner sued some other, unrelated party earlier in time and that unrelated party sought to utilize IPR is fundamentally unfair, is an invitation for gamesmanship by the owners of invalid patents, and is at odds with Congress' goals in enacting the AIA.³²

Concerns about serial attacks and gamesmanship by petitioners are minimized given the one-year time bar applicable to petitioners and their real parties-in-interest or privies. Thus, if the relationship (if any) between petitioners in follow-on petition scenarios should be considered under the first *General Plastic* factor, Comcast proposes that the relationship should only extend to real parties-in-interest or privies.

IV. Conclusion

The recent actions by the PTAB, in denying institution of IPR without regard to the merits of the petition, harm the economy and are contrary to the promise of the AIA. A crucial element of any strong patent system is a mechanism for "weeding out" weak patents that never should have

³² House Report, p. 40.

been granted because the claimed invention was not novel or would have been obvious in light of prior art.³³

Comcast reiterates its support for the Office's goal to improve the administrative review process but respectfully disagrees with the PTAB's increasing use of discretionary denials. Promulgating a rule that codifies the use of discretionary denials would undermine due process in AIA post-grant proceedings and thwart Congress's stated purpose for these proceedings. Comcast appreciates the Office's consideration of its comments.

Sincerely,

/Heather A. Faltin/

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Comcast Cable

³³ *Thryv, Inc. v. Click-To-Call Techs., LP*, 140 S. Ct. 1367, 1374 (2020).

Exhibit A

Patexia. Insights

DATA COLECTION



DATA CLEANUP



DATA ANALYSIS



INSIGHTS



SEPTEMBER 2020

IPR Intelligence Report

JULY 2015 / JUNE 2020

2020 EDITION

Prepared By
Patexia Data Science Team



A comprehensive report on the top 100 best performing and most active IPR attorneys and law firms.

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Introduction

This September marks the eighth year since the first Inter-Partes Review (IPR) petition was filed. After its inception on September 16th, 2012, IPR gained popularity every year and quickly became part of the defense strategy utilized by defendants in patent litigation.

The IPR filing activity reached its peak in 2017 with a total of 1,725 petitions. In 2018, we saw a moderate decline of seven percent followed by a whopping decline of 21 percent last year, which was in-line with the drop in patent lawsuits in recent years.

According to our data, there was an uptick in filing activity towards the end of 2019,

and this accelerated in the first half of 2020. In fact, during the second quarter ended on June 30, IPR filing rose 12 percent, compared to the first quarter of 2020. Patent litigation also rose 27 percent in Q2 ([Patexia Insight 85](#)).

With 7,708 IPR petitions filed over the last five years (July 1, 2015 through June 30, 2020), IPR has gained a considerable market size. As a result, the majority of Am Law 100 firms with a robust IP practice have already formed a PTAB (*Patent Trial and Appeal Board*) practice. Also, over the last few years, we have seen several small IP boutiques forming with a focus on IPR and PTAB work.

What is New in Our 4th Report?

We have made a number of improvements to this year's report at the suggestion of our community, and we are confident you will see the added value in these changes.

One of the key questions companies would like to know is the estimated cost of an IPR and potential cost if the case is settled at different phases. This information is also very valuable to law firms as they would like to know how their pricing model stacks up

against other firms. To answer these questions, we conducted a [survey](#) and asked IPR attorneys to help us estimate the IPR cost in 9 different phases as highlighted and explained in Section 2.

We also attempted to estimate and find out the workload and staffing for typical IPR cases to help law firms compare themselves with other firms.

Another significant update was in our ranking methodology. In our previous reports, we measured and ranked attorneys by activity and success (we called it performance). However, we understand that large case numbers would inevitably dilute performance over time (after all, none of us can escape the law of averages!). This makes it unideal to compare the performance scores of firms/attorneys with very different case loads (even though we have a cut-off threshold which we use to exclude law firms or attorneys with very small case-load). By taking these considerations into account, we created a new “*Performance Score*” and “*Performance Ranking*”, which allow us to score and rank companies, attorneys, and firms for both *Activity and Success* combined. In other words, this new performance score is a weighted average of *Success* and *Activity* scores. This new performance ranking helps companies find the highly active and highly successful law firms and attorneys (i.e., the most qualified ones).

Another change we made in this report, was on allocating points for settled cases. In the past three reports, we gave all the points to the petitioner as the assumption was that the patent owner agreed to settle to cut its losses. But as many of our survey respondents indicated, this might not always be the case. As a result, we decided to divide the

point 75/25 between the petitioner and the patent owner (our assumption is that settlement is a better outcome for the petitioner).

We also improved our data quality by giving direct access to attorneys to review and verify their cases on Patexia website. Each IPR attorney was contacted and provided a unique link by our staff to login and access their cases. Our data analysts then reviewed all the changes suggested by the attorneys to make sure they correctly match with public records available through PTAB.

As we continue publishing these annual reports, we try to improve the accuracy (raw data), models, and the report content (type of analyses) each year. Moreover, we have expanded our offerings to cover other areas of IP such as *Patent Prosecution*, *ITC Section 337*, *ANDA/Hatch-Waxman* and *Patent Litigation*.

We consider all the feedback we receive from the IP community to improve and make the reports more useful to everybody, including our law firm and corporate partners. Our analysis has become more complex and covers a wider range than in the past.

This year, in response to our community request, we have increased our coverage of law firms, attorneys and companies to

the top 1,000 most active (up from 500 in prior years). While being in the top 100 in a respected category is a significant accomplishment, as it puts the attorney in the top two percentile, the law firm in the top 10 percentile and the company in almost the top three percentile, knowledge about the remaining participants is quite important and useful as well. We also have provided the additional data in the accompanying Excel file.

This update was done because many corporate clients who did not find their IPR counsel in the top 100, were interested to know about their performance, and they inquired about it after purchasing the report.

We hope that our corporate and law firm clients find this report useful and use it effectively for either counsel selection (corporation) or business development (law firms).



*Founder and CEO
September 2020*



What's in This Report?

The report content has been divided into the following sections:

- 1. Ranking Methodology:** We explain our activity, success and performance scores, and how we have calculated them for patent owners, petitioners, and their representatives, as well as the PTAB judges.
- 2. Staffing, Cost and Workload:** We analyze the result of our survey, which covered IPR staffing, cost estimation and workload
- 3. IPR Statistics:** We provide an overview of IPR including high-level statistics related to all parties, cases, patents, and claims.
- 4. Case Analysis:** We dive into case-level statistics and analyze *Settlement*, *Denial*, and *Invalidation* rates. We also examine IPC codes and their popularity in IPR.
- 5. PTAB Administrative Judges:** We examine the performance of about 200 *PTAB Administrative Judges*, identifying the most active as well as the best performing from the viewpoint of *Patent Owners* or *Petitioners*.
- 6. Petitioners and Patent Owners:** We identify the most active and the best-performing *Petitioners* and *Patent Owners* over the last five years.
- 7. Law Firms:** We analyze the performance and activity of law firms, comparing and providing rankings for the top firms representing *Petitioners* and *Patent Owners*.
- 8. Attorneys:** We review the performance and activity of attorneys, representing *Petitioners* and *Patent Owners*, comparing and providing rankings for top attorneys on each side.

As per our tradition for this and our other intelligence reports, and in order to have a meaningful comparison, as well as compensating for the time required for each case from filing to completion (e.g., 6 to 18 months), we covered a period of five years (e.g., July 1, 2015, through June 30, 2020). Although the cut-off day for cases was June 30, 2020, we used the latest updates for the cases as of August 30, 2020. Appendix A lists all sources of data used for this report

DISCLAIMER: *The data for this report was obtained from public sources including USPTO, PTAB, and PACER, as well as self-reported by attorneys on Patexia website. Patexia has gone to great lengths to provide valid and accurate analysis based on this data. However, Patexia does not guarantee 100 percent accuracy nor take any responsibility for possible losses caused by use of information provided in this report.*

Executive Summary

Since its inception in September 2012 through the end of the second quarter, 10,868 IPR petitions have been filed. The IPR filing activity for the period of this study (July 1, 2015 through June 30, 2020) was 7,708 which shows a 5 percent decline compared to the five year period we covered in our third annual report last year (July 1, 2014 through June 30, 2019).

Year-over-year filing peaked at 1,725 in 2017. Since then, the IPR filing has been declining. In 2019, we saw the largest year-over-year decline of around 20 percent. But as we had predicted in our last year's report, in the first half of 2020 we saw signs of recovery for both IPR and district court patent litigation. We anticipate the filing activity to continue its growth in 2020 and then in 2021.

Settlement rate has gone up 15 percentage points, from 16 percent in 2014 to 31 percent in 2018. Meanwhile the rate of *Final Written Decisions* has fallen as much as 11 percentage points over the same period. Overall, out of 5,967 IPR cases that were completed during this period (i.e., settled, denied or received FWD decisions), 41 percent denied institution, 25 percent settled, and 34 received the *Final Written Decision*.

During the five-year reporting period, a total of 7,708 IPRs were filed to challenge 4,886 unique patents and 79,523 unique claims. So far, this has resulted in institution and invalidation of 41,161 and 16,313 claims, respectively.

In the last five years, 2,685 companies have been involved in one or more IPRs. This includes about 1,286 petitioners and 1,665 patent owners. The top 20 petitioners account for about 31 percent of all cases. Apple remains the most active petitioner with 380 IPRs. Uniloc is the most active patent owner with 191 IPRs for this period.

915 law firms have represented patent owners and petitioners. From this number, 469 firms represented petitioners, while 770 firms represented patent owners in one or more cases (some were active on both sides). A total of 4,983 attorneys worked for these firms. From this number, 3,039 attorneys represented petitioners, while 3,335 attorneys represented patent owners. Similar to last year, we will be providing our law firm partners with the most active and best performing IPR badges for 2020.

Section 1

Ranking Methodology



Ranking Methodology

We have updated and improved our ranking methodology every year since the release of our first *IPR Intelligence Report* in 2017. We constantly seek feedback from our community either through direct communication or by conducting surveys. This feedback, combined with the experience we have gained over time has helped

us improve and make the rankings more relevant and useful.

In the following section, we will explain the changes as well as the ranking methodology we used in our 2020 IPR Intelligence Report. We look forward to receiving your feedback as we plan our next year's report.

Changes and Improvements to Our Ranking Methodology since 2019

This year, we covered a 5-year period from July 1, 2015 to June 30, 2020. There are several changes and updates that have impacted the way we measured performance and activity of attorneys, law firms and companies in 2020:

Activity Measurement (Score): We used to simply count the number of cases for each party or their representatives based on the filing dates of their cases. While this was certainly correct, it did not differentiate between recent and old filings. We noticed firms that were very active 5 years ago but had zero activity in the past three years. To take this into consideration, we implemented an *Activity Score Function*, which slightly discounted cases for earlier years. Under the new model, a firm with 50 cases in 2019 is ranked higher than a firm with 50 cases in 2017 (check *Activity Scores* in the accompanying Excel file for each attorney, law firm or company).

New Success and Performance Scores/ Rankings: In our previous reports, *Performance Score* meant how successful an attorney or a firm was in representing their clients. For example, we calculated the *Performance Score* of a firm by looking at the outcome of the cases (e.g., settled, dismissed, invalidated, etc.), allocating points to each case and then, taking the average of the points across all the cases.

For the performance ranking, we had a minimum threshold for the number of cases, which resulted in exclusion of some firms or attorneys with low activity rates. One thing that we did not consider, was that large case numbers will inevitably dilute performance over time (after all, none of us can escape the law of averages!). This makes it unideal to compare the performance scores of firms/attorneys with very different case loads even after excluding firms with low activity.

By taking these considerations into account, we created a new “*Performance Score*” and “*Performance Ranking*” which allow us to score and rank companies, attorneys and firms for both *Activity and Success* combined. In other words, this new performance score is a weighted average of *Success* and *Activity* Scores.

Settled Cases: In the three previous annual reports, we used to give all the points to the petitioner if a case was settled. While oftentimes settlement means the patent owner has limited options and may be chosen by patent owners to cut their losses, in some cases, it may be a part of a larger strategy related to co-pending district court cases and may have nothing to do with the strength or weakness of the patent. As a result, and to still treat all cases similarly, we decided to divide the point 0.75/0.25 between the petitioner and patent owner (according to our survey results, most of the respondents still believe a settled IPR is a victory for the petitioner).

Lowered Cut-off Numbers for Performance and Success Rankings: Even with the above adjustments, similar to prior years, we had to remove firms or attorneys with low activity for performance rankings. This year, with a drop of about 5 percent in the number of cases (IPR activity dropped almost 20% in 2019), we had to adjust our cut-off threshold to rank at least close to 100 law firms, attorneys or companies.

For *Success and Performance Scores*, we only considered non-pending cases (concluded) with one of the following three statuses: *Terminated-Denied*, *Terminated-Settled* and *Final Written Decision Entered* as of August 30, 2020. We applied the following thresholds to include attorneys, law firms and companies in *Success/Performance rankings*:

- a. **Attorneys (30/15):** Attorneys need to have at least 30 concluded (non-pending) cases to be included in the *Performance or Success Rankings* (or a minimum of 15 concluded cases for *Patent Owner/Petitioner Performance or Success Rankings*).
- b. **Law Firms (28/14):** Law firms need to have at least 28 concluded (non-pending) cases to be included in the *Performance or Success Rankings* (or a minimum of 14 concluded (non-pending) cases for *Patent Owner/Petitioner Performance or Success Rankings*).
- c. **Companies (18/9):** Companies need to have at least 18 concluded (non-pending) cases to be included in the *Performance or Success Rankings* (or a minimum of 9 concluded (non-pending) cases for *Patent Owner/Petitioner Performance or Success Rankings*).

If an attorney, law firm or company meets the above minimum case requirements,

then they will be included in our *Success or Performance Rankings* (overall or petitioner/patent owner).

This year, we decided to include up to 1,000 most active attorneys, law firms,

and companies with their scores and rankings in all categories in the accompanying Excel spreadsheet (up from 500 in prior years).

Success Scores for Petitioners, Patent Owners and Overall

In order for us to determine the performance ranking for each of the stakeholders, we first calculate the success for everybody involved in every IPR as soon as the case is terminated (settled or denied) or receives the *Final Written Decision* from

the panel of the PTAB judges. Claim-level data are considered and used whenever possible to better evaluate each party's success. The following table summarizes how the points are allocated to each party or representative (Table 1.1):

Table 1.1 - Point Allocation for the Petitioner and the Patent Owner or Their representatives

Status	PO Success Points	Petitioner Success Points
Terminated-Denied	1 Point	0 Point
Terminated-Settled	0.25 Point	0.75 Point
FWD Entered	Claims Valid / Claims Listed	Claims Invalidated / Claims Listed

For example, if the petition has challenged 10 claims but only 3 of them were invalidated after receiving the *Final Written Decision*, the attorney or law firm representing the petitioner will receive 3 out of 10 or 0.3 points, while the attorney or law firm representing the patent owner will receive 7/10 or 0.7 points for that case.

We understand that if the survived claims were part of a district court case, that is very good news for the patent owner (or plaintiff in the district court case), because

they can still move forward and potentially claim damages for infringed claims in the district court. From that perspective, it would be a victory for the patent owner. However, when it comes to IPR, the attorneys representing the petitioner have also worked hard and managed to invalidate some of the claims. Therefore, they deserve recognition for their work.

In the case of settlement, while it may be seen as a good outcome for both parties, it often means the patent owner and its repre-

sentative felt the case was not strong in light of the existing prior art and the argument brought forward by the petitioner. They then decided to settle to cut their losses rather than moving forward with the IPR.

We understand that there may be many other reasons for a settlement (e.g., part of a bigger strategy related to co-pending district court cases), but we had to come up with a consistent method to apply to all cases. Therefore, for the settled cases, we allocated 0.25 points to the patent owner or its representatives, and 0.75 points to the petitioner or its representatives.

Once the success points for each of the stakeholders involved in a case are calculated and allocated, we then calculate the average points for all their cases to measure their success. For the patent owner or petitioner scores, we take the average of all the non-pending (concluded) patent owner or petitioner cases (i.e., those with *Terminated-Denied*, *Terminated-Settled* or *FWD Entered* Statuses). For *Overall Success Score*, we calculate the average score for all the cases associated with a particular attorney, firm, or company (after we normalize the petitioner or patent owner success scores).

Activity Scores for Petitioners, Patent Owners and Overall

In prior years, to rank petitioners, patent owners or their representatives by activity, we simply counted the total number of cases they were involved in. However, this meant that for example, two attorneys with equal workload in 2015 and 2020 would be ranked the same.

We understand that the company's in-house counsel would prefer to hire some-

body with more activity and experience in recent years over somebody who was active five years ago. As a result, we adjusted the *Activity Score* to give a higher weight to more recent cases compared to older cases. Under this new model, an attorney who was involved in a total of 50 cases all filed back in 2015 is ranked lower than another attorney with the same 50 cases but distributed over 5-year period.

Performance Scores for Petitioners, Patent Owners and Overall

To calculate the *Performance Score*, this year for the first time, we combined the *Activity and Success Scores*. This was done as large case numbers will inevitably dilute the performance over time and makes it unideal to compare the performance scores

of firms/attorneys with very different case loads even after excluding firms with low activity.

The new "*Performance Score*" which allows us to score and rank companies, attorneys

and firms for both *Activity and Success* combined is a weighted average of success and activity scores. It helps companies find

the highly active and highly successful law firms and attorneys for their cases (i.e., the most qualified ones).

Performance and Activity Rankings for Petitioners, Patent Owners and Overall

We ranked all companies, law firms, and attorneys by activity based on their *Activity Score*. But when it came to *Performance Rankings*, we only ranked those companies, law firms or attorneys that met the minimum threshold for non-pending cases for the respective category. As a result, there

are companies, law firms or attorneys that have received performance scores because they had one or more non-pending cases. However, they were not included in the final performance rankings as they did not meet the minimum requirements for non-pending cases.

Performance of Judges

As for the *PTAB Administrative Judges*, we analyzed the cases and calculated the statistics for the main judge who wrote the *Final Written Decision*.

We applied the same methodology explained above for only those cases with the *Terminated-Denied or Final Written Decision* statuses. We removed the settled cases from this subset of cases considered, as judges have no involvement in settlements between the parties.

We calculated the scores out of 100 for each of the judges, showing if their judgment was more in favor of the petitioner.

The report covers the complete list of 2020 PTAB Administrative judges and their statistics. We have covered their activity (number of cases) as well as their performance as it relates to petitioners or patent owners.

When the *Performance Score* is closer to 100, it means that the judge more frequently sided with the petitioner.

Section 2

IPR Staffing and Cost



IPR Staffing and Cost

When it comes to IPR cost and staffing, there is almost no empirical study available to the public. Law firms hesitate to disclose that publicly because of their concerns about their current or past clients as well as competition. For similar reasons, petitioners or patent owners are also not comfortable disclosing the cost details publicly.

The resulting lack of empirical data leaves the important question of IPR costs to be addressed primarily through anecdotes – which can be compelling but also easily dismissed.

To help gather the necessary data on IPR costs, we developed a survey consists of 25 questions. Considering the fact that the IPR cost estimation is not simple and is a function of many factors such as the party (petitioner vs. patent owner), number of patents or defendants involved in the co-pending district court case (if there is a case), strategy, and the complexity of the technology, the survey sought detailed information about staffing, and cost.

Furthermore, to simplify the survey, for all questions, we assumed that the question

is related to the petitioner or its representatives (law firms or attorneys).

A key undertaking in developing the survey was to alleviate concerns about confidentiality and the difficulty of responding in order to encourage law firms' participation and obtain sufficient empirical data to draw reasonable conclusions (The survey questions are available in Appendix E). The survey was sent to around 5,000 IPR attorneys in July 2020. Almost all of the respondents were from midsize to large law firms. Around 95 percent of the participants responded to all the survey questions, which helped us gather valuable information for this section. We will analyze the data we collected in the following sections.

Note

Throughout this section, to simplify everything, we assume that the cost or staffing analysis is from the perspective of the petitioner or its representatives (law firms or attorneys).

Staffing

The purpose of this section is to understand how law firms allocate their resources to an IPR case differently, how many partners and/or associates are assigned to a typical IPR case, and how would the staffing be affected if the number of patents grows.

As shown in Figure 2.1, about 80% of the respondents believed that at least two partners need to be involved in a typical IPR petition at different capacities. It appears that when the client needs to file more than one IPR petition, the number of partners involved would also increase to 3 or more in the majority of cases (Figure 2.2).

Figure 2.1 Number of partners usually assigned to a single IPR case

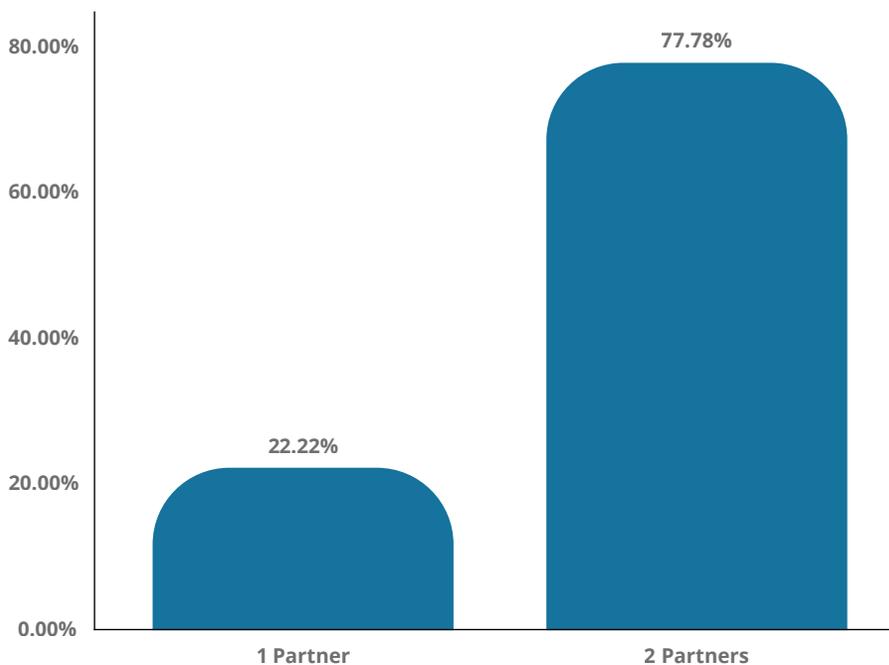
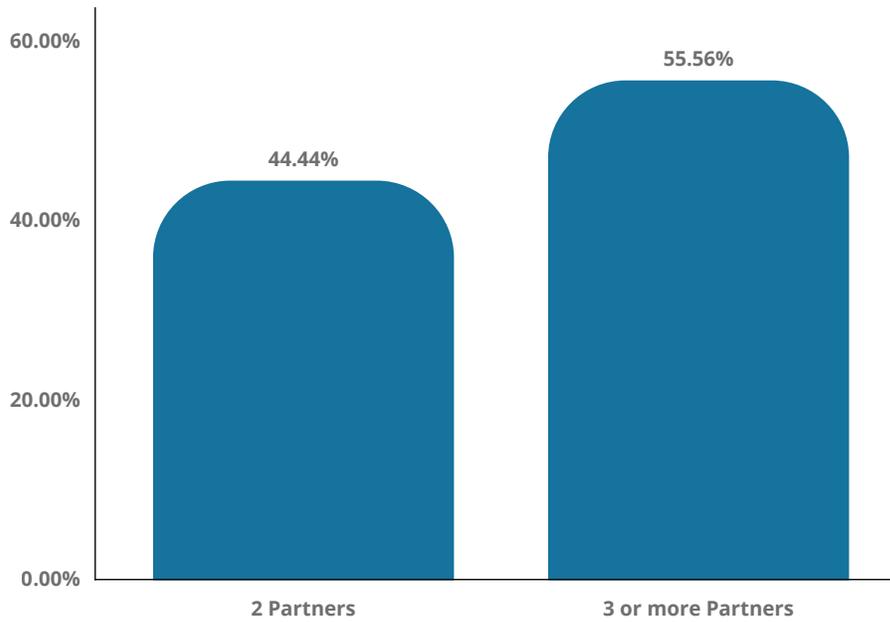
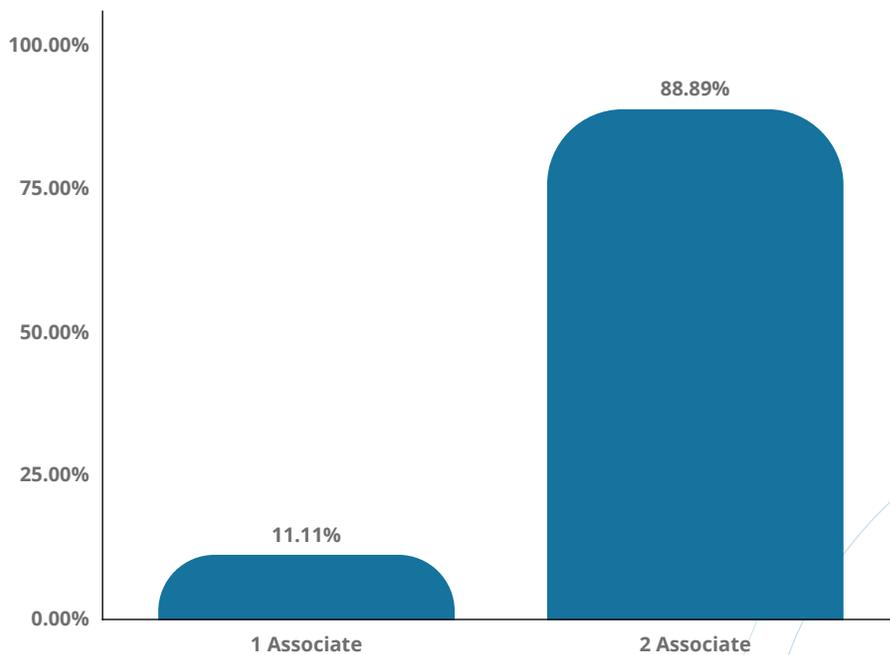


Figure 2.2 Number of partners involved in more than a single IPR Case



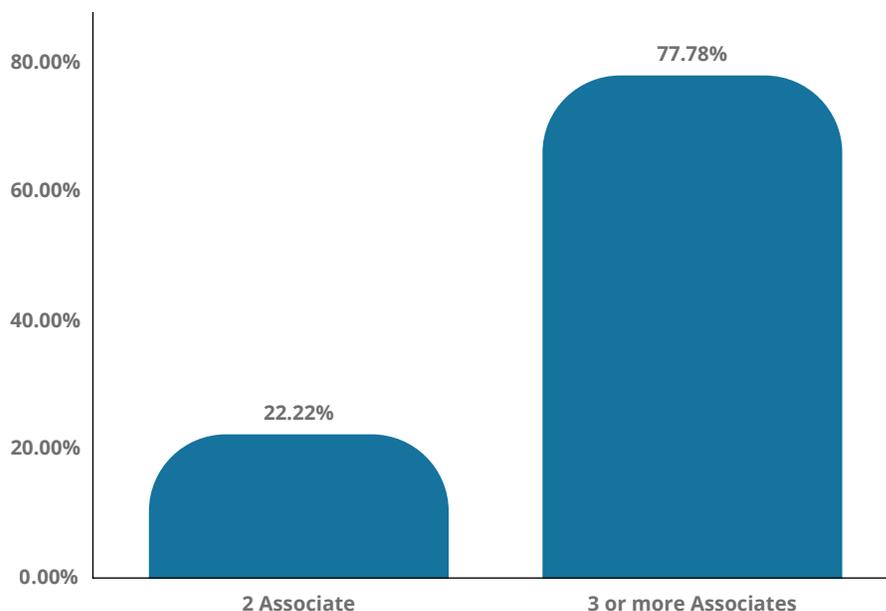
Similarly, it seems that close to 90% of the respondents assign at least two associates to a single IPR case (Figure 2.3).

Figure 2.3 Number of associates involved in a single IPR Case



Survey results indicate that when there are more than a single IPR case (i.e., up to five cases), firms may use three or more associates. Figure 2.4 shows that 78% of the law firms assign 3 or more associates

Figure 2.4 Number of associates when there are more than one IPR case



Cost Analysis

To estimate the cost, we decided to divide the process into multiple phases to collect more accurate data for each phase. The following covers nine phases from filing to appeal (if there is an appeal). For simplicity, we only consider this from the petitioner’s perspective:

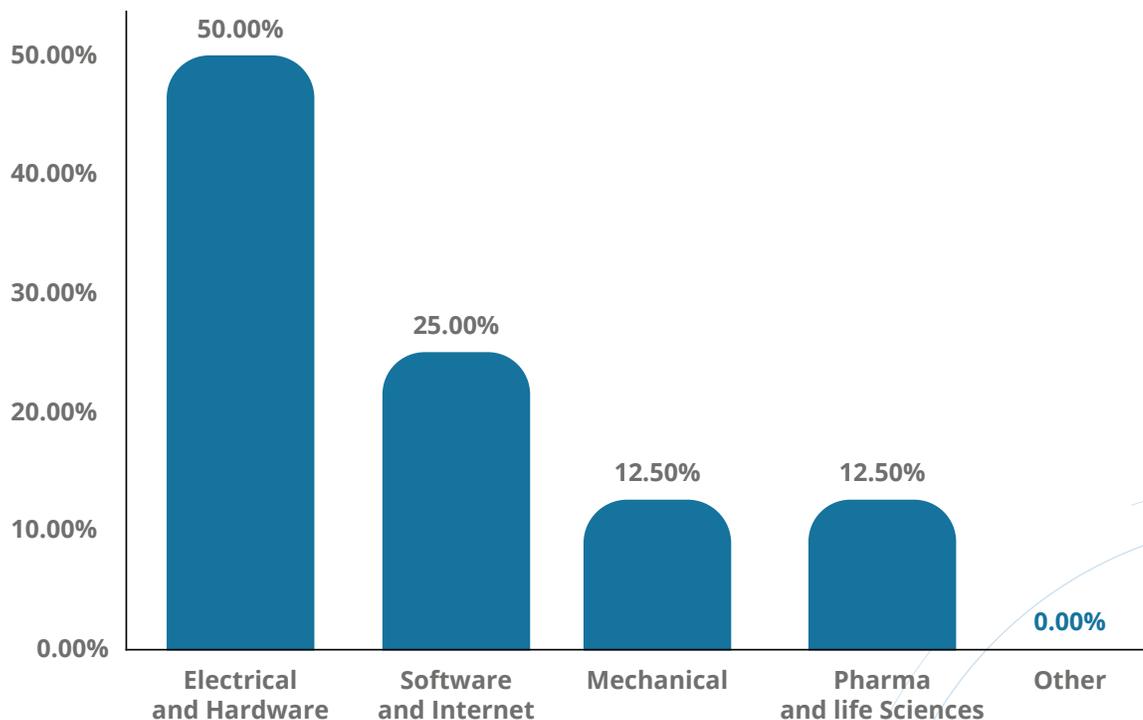
- **Phase 0 - Initial Review:** Patent and Prior Art Review
- **Phase 1 - Petition:** Draft and file IPR petition and one expert declaration
- **Phase 2 - Patent Owner’s Response:** Evaluate the patent owner’s preliminary response
- **Phase 3 - Patent Owner’s Discovery:** Evaluate Board’s institution decision, draft and file evidentiary objections as necessary, prepare the expert for deposition, defend the expert in the deposition, and responses and motions as necessary during patent owner’s discovery period
- **Phase 4 - Petitioner’s Discovery:** Evaluate the patent owner’s response and expert declaration, draft and file evidentiary objections as necessary, take the deposition of patent owner’s expert, and responses and motions as necessary during petitioner’s discovery period

- **Phase 5 - Pre-Hearing:** Draft and file petitioner’s reply and supplemental expert declaration, draft and file motion to exclude evidence as necessary
- **Phase 6 - Oral Hearing:** Prepare for and conduct the oral hearing
- **Phase 7 - Post-Hearing:** Evaluate final written decision and draft and file request for rehearing as necessary
- **Phase 8 - Appeal:** Appeal file and conduct appeal to Federal Circuit

Data confirms that IPR attorney fees generally range between \$100,000 to \$600,000. As illustrated in the following charts, costs vary widely between different law firms. This wide range may be attributed to several factors such as the technology (e.g., life sciences vs. high-tech), petitioner (large company vs. small) and possible affected products (e.g., expected damage in the district court case), law firm size and brand, etc.

Seventy five percent of our survey respondents reported that the majority of their cases are related to high-technology areas such as software or hardware. This has been illustrated in Figure 2.5.

Figure 2.5 The most common technology areas for IPR cases

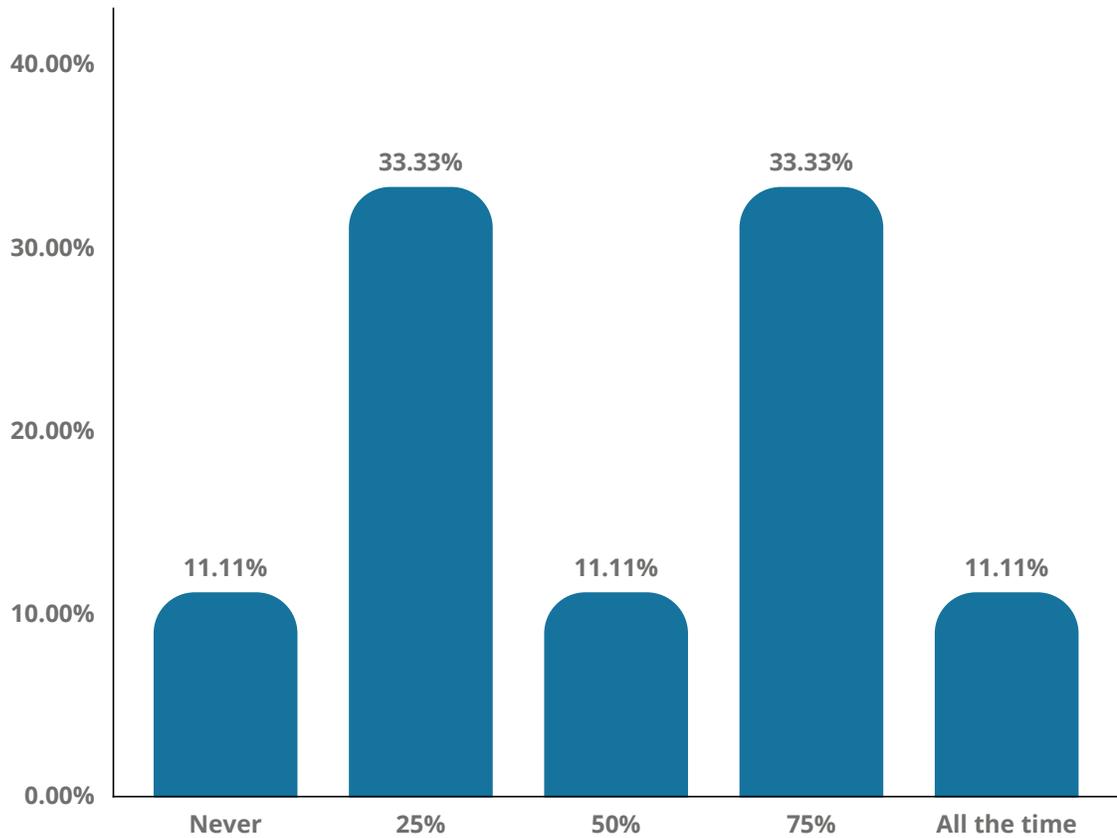


Attorney Fees

To keep attorney fees under control, it may be beneficial and advantageous to work with a fixed-fee or cap the cost at some level. We asked our respondents to understand how common it is to work on a fixed fee model. The collected data shows

that around 55% of the law firms work on a fixed-fee structure at least half of the times. Eleven percent of the respondents indicated that they would never work under a capped fee structure (Figure 2.6).

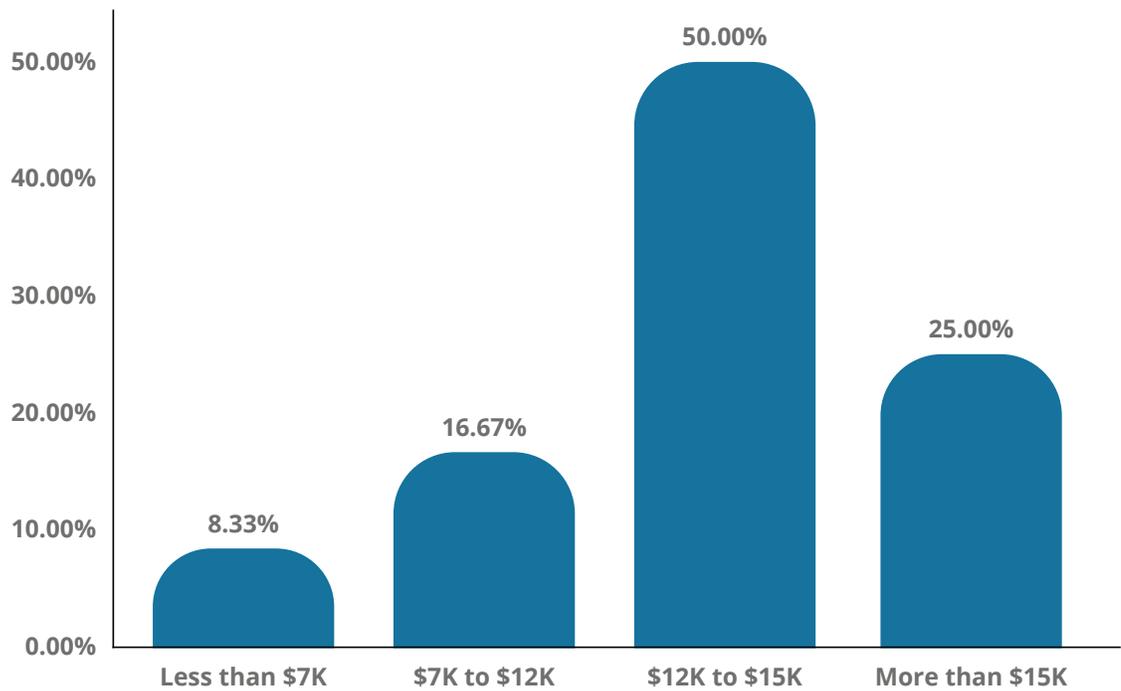
Figure 2.6 Percentage of time IPR project managed under a fixed or capped fee structure



Initial Review (Phase 0) - Before firms file anything, there is an assessment phase where the attorneys look at the patent and prior art to evaluate the strength of the case in light of the existing prior art. While in some cases, law firms indicated that

they did not charge anything for this phase, our survey data shows that in almost 75% of cases, law firms charge \$12,000 or more for the initial evaluation. Figure 2.7 shows the distribution of cost as indicated by all survey respondents.

Figure 2.7 Estimated attorney fee for Patent and Prior Art Review (Phase 0)

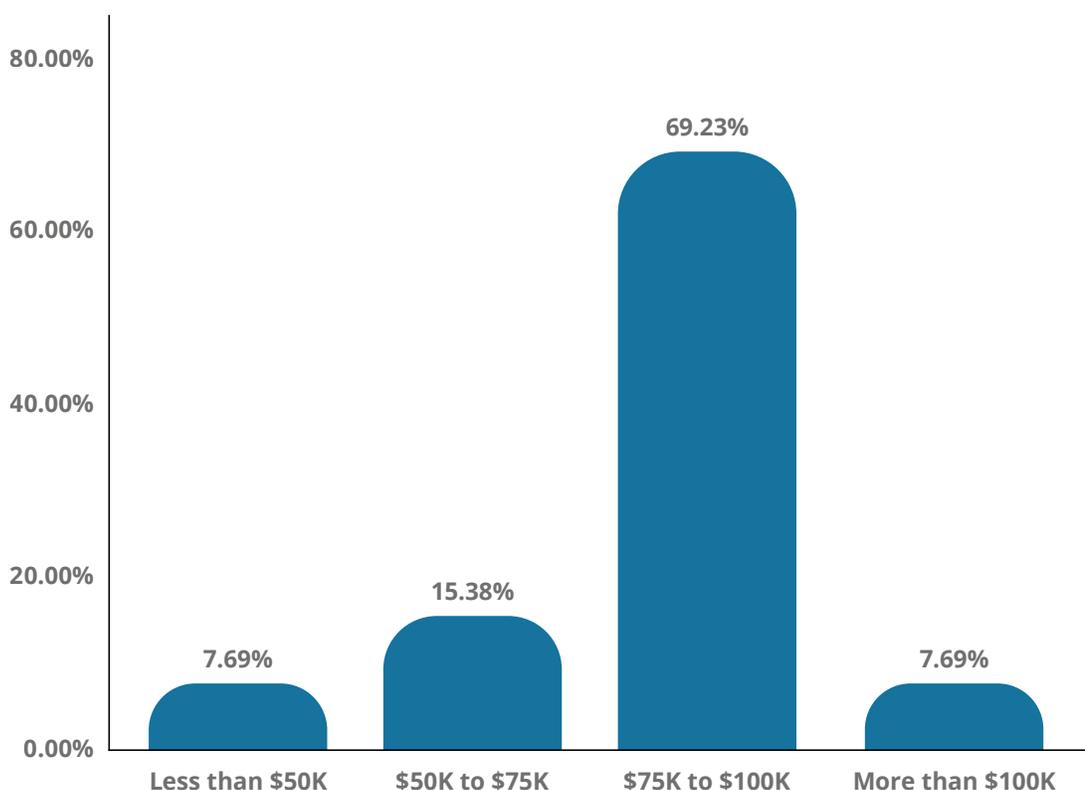


Petition (Phase 1) - Drafting and filing the petition seems to be one of the most expensive phases of an IPR according to our survey respondents. Almost 70% of our respondents indicated that the attorney fee for phase 1 ranges between \$75,000 to \$100,000. This covers the attorney fees

for drafting and filing the petition and one expert declaration.

About 8 percent of the respondents indicated that the cost would be more than \$100,000, while 8 percent believe they could keep the cost below \$50,000 (Figure 2.8).

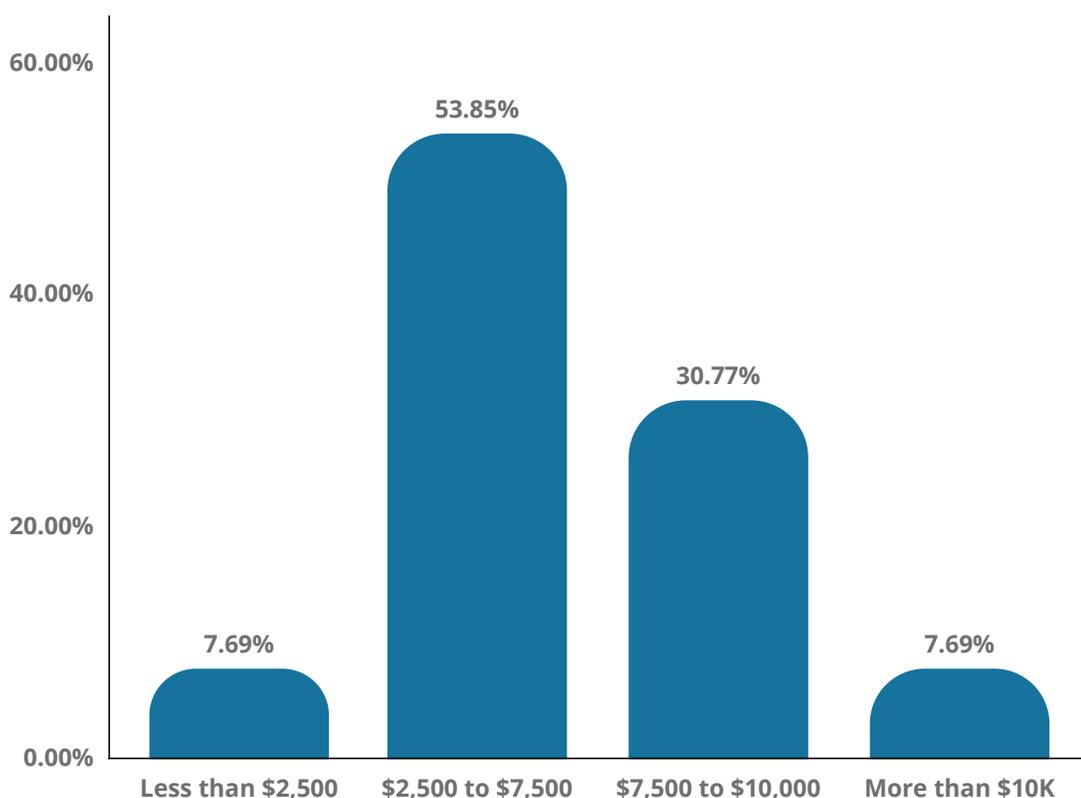
Figure 2.8 Draft and file IPR petition and one expert declaration (Phase 1)



Patent Owner’s Response (Phase 2) - Once a petition for IPR has been filed, and the patent owner has filed a preliminary response to the petition, then the petitioner’s attorney will need to evaluate the patent owner’s response. We considered this, Phase 2 of the IPR process. According to

our survey data, in about 54% of the cases, a simple evaluation of the patent owner’s response costs between \$2,500 to \$7,500. However, close to 40% of the law firms responded to our survey charge more than \$7,500 (Figure 2.9).

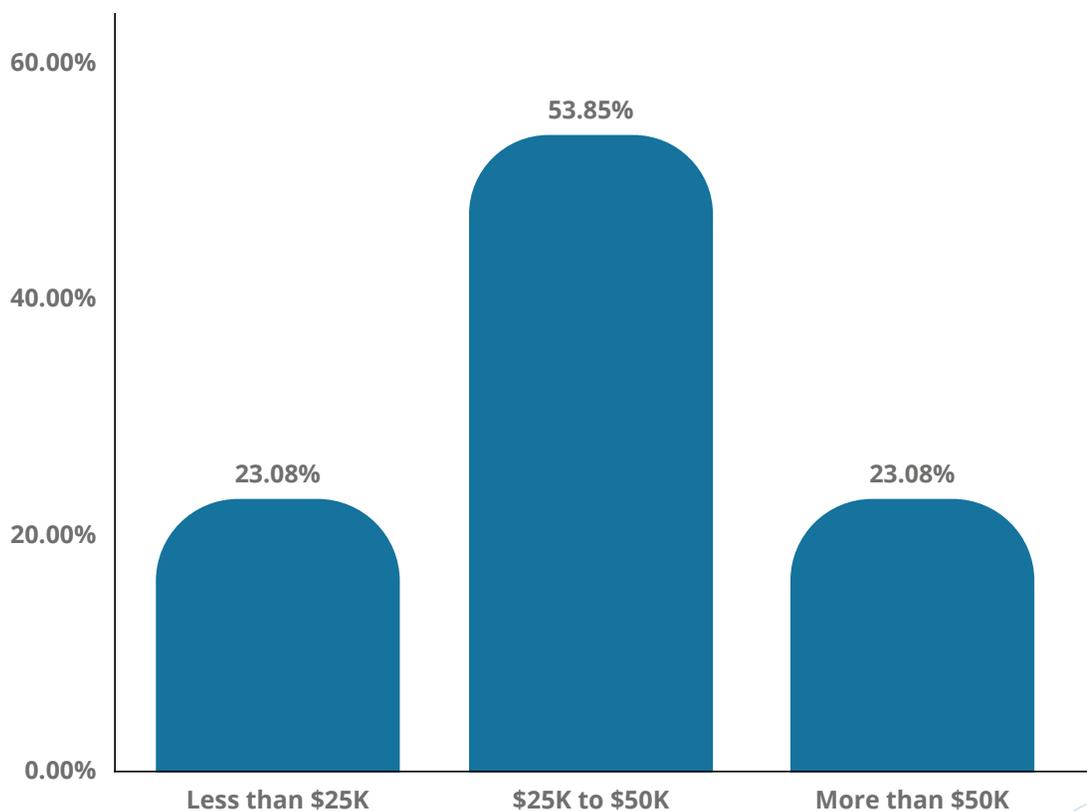
Figure 2.9 Estimated attorney fee to evaluate patent Owner’s Preliminary Response (Phase 2)



Patent Owner’s Discovery (Phase 3) - According to our respondents data, the cost for evaluating board’s institution decision, drafting and filing evidentiary objections as necessary, preparing the expert for deposition, and defending the expert in the deposition during the patent owner’s discovery

period, tends to be mostly between \$25,000 to \$50,000 (~54%). The opinions for the remaining of the respondents (46%) were equally divided as 23% believed that the cost would be less than \$25,000 and 23% indicated that this phase would cost considerably more than \$50,000 (Figure 2.10).

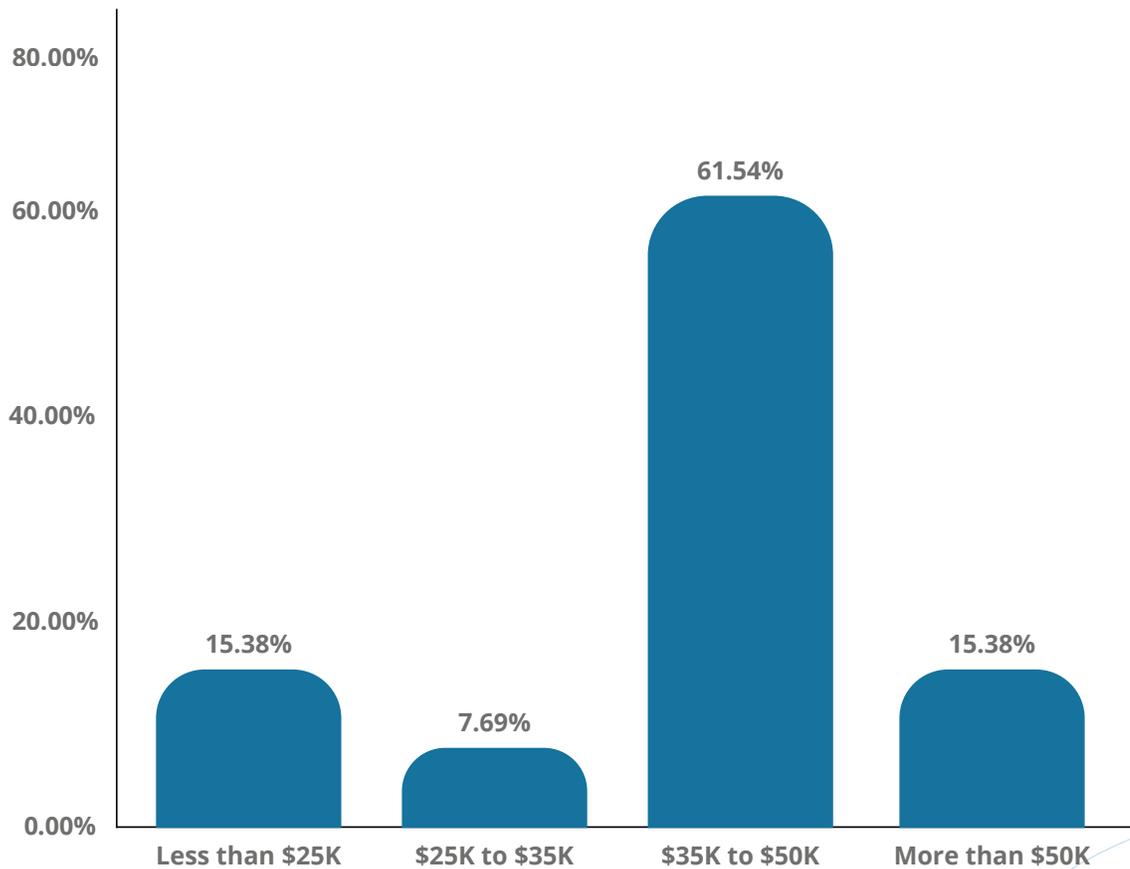
Figure 2.10 Estimated attorney fee for evaluating board’s institution decision (Phase 3)



Petitioner’s Discovery (Phase 4) - After the institution, about 62% of our survey respondents suggested a cost between \$35,000 to \$50,000 to evaluate patent owner’s response and expert declaration, to draft and file evidentiary objections as necessary, to take the deposition of the patent owner’s

expert, and responses and motions as necessary during the petitioner’s discovery period. Only a small fraction (about eight percent) reported a cost between \$25,000 to \$35,000, while almost 16% reported a cost of more than \$50,000 (Figure 2.11).

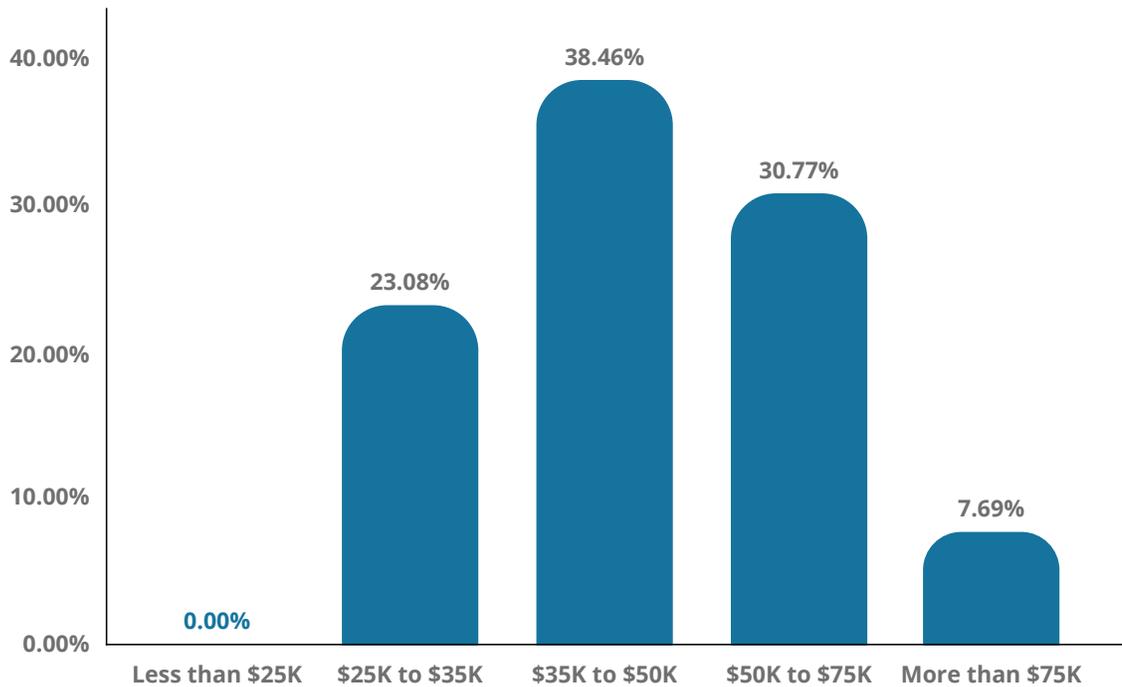
Figure 2.11 Estimated attorney fee for evaluating patent owner’s response and expert declaration (Phase 4)



Pre-Hearing (Phase 5) - The attorney fee to draft and file petitioner’s reply, supplemental expert declaration, and draft and file motion to exclude evidence as necessary is slightly different in the law firms that have

participated in our survey. About 70% of the respondents indicated that this phase costs between \$35,000 to \$75,000. However, around 23% indicated a cost less than \$35,000 (Figure 2.12).

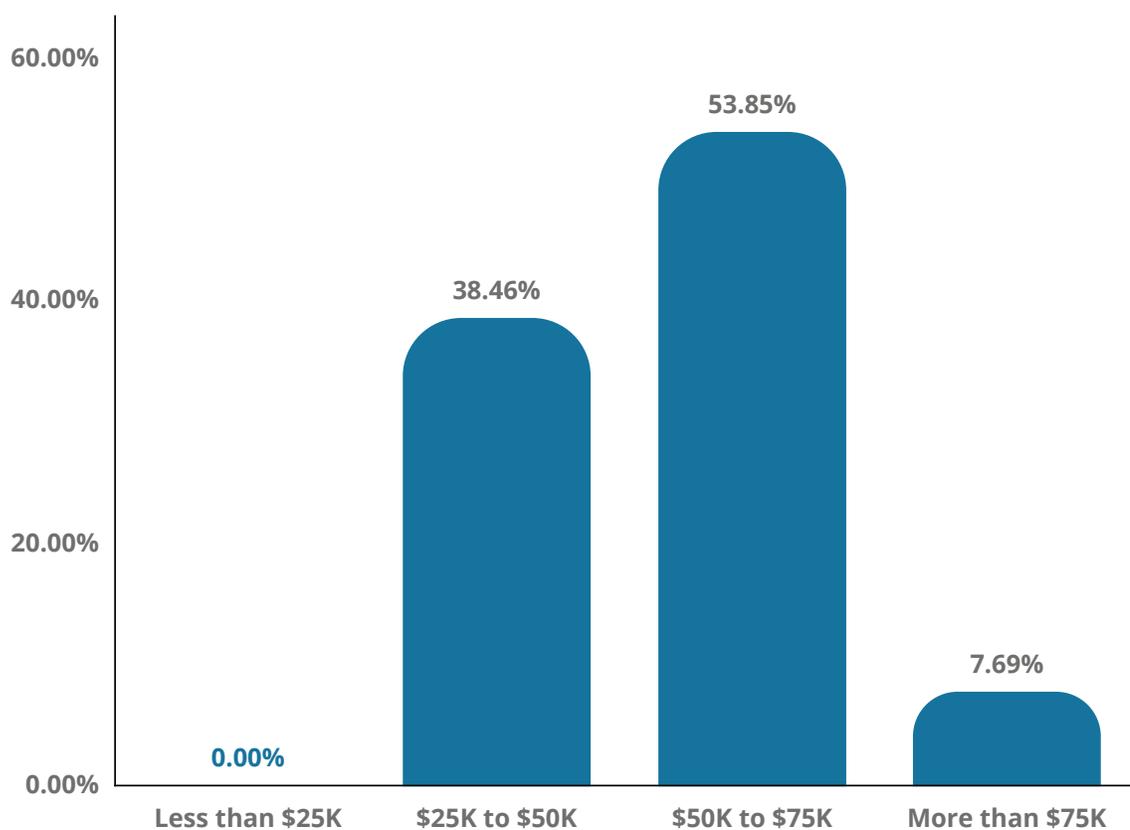
Figure 2.12 Estimated attorney fee for drafting and filing petitioner’s reply and supplemental expert declaration, drafting and filing motion (Phase 5)



Oral Hearing (Phase 6) - The cost of preparing and conducting an oral hearing may vary significantly depending on the firm. But the majority of the respondents (about 54%) indicated that this phase

would cost between \$50,000 and \$75,000 (Figure 2.13). Only around 8 percent of the respondents said the cost would be above \$75,000 for an oral hearing.

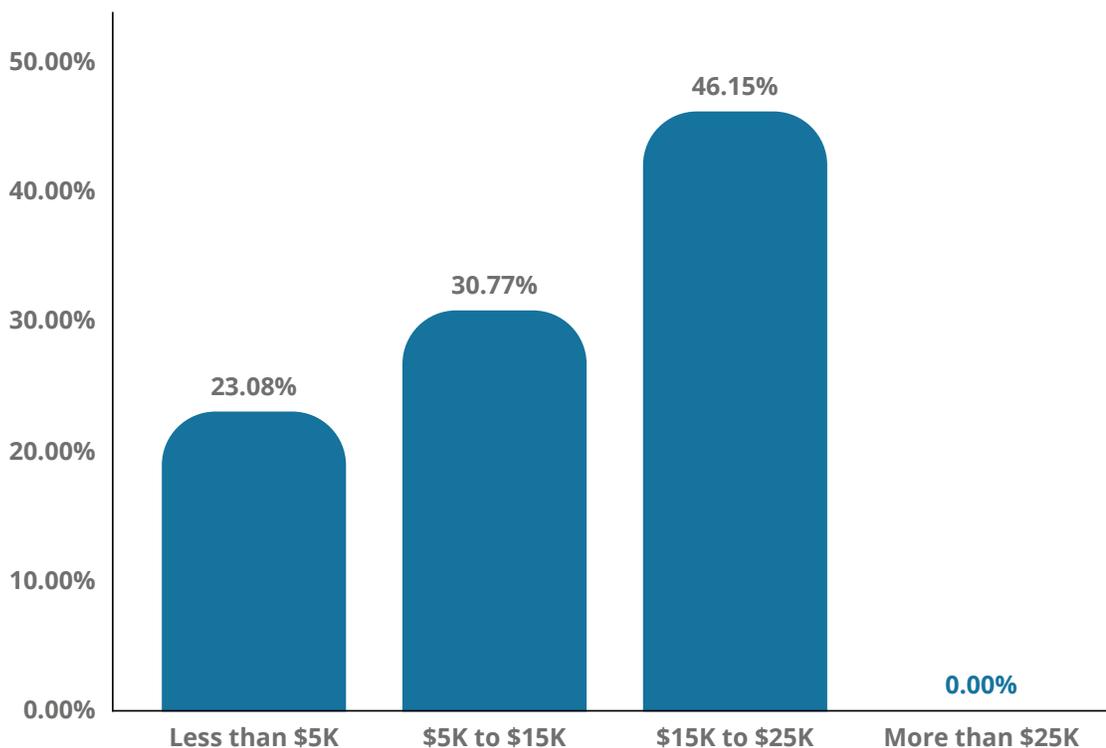
Figure 2.13 Estimated attorney fee for preparing for and conducting oral hearing (Phase 6)



Post-Hearing (Phase 7) - As the final phase, the petitioner’s attorney evaluates the final written decision, and possibly may draft and file a request for rehearing which is not usually very costly relative to other phases.

Based on our survey data, slightly more than half of the respondents (~54%) believe this would cost less than \$15,000, while the remainder believe that cost would be between \$15,000 to \$25,000 (Figure 2.14).

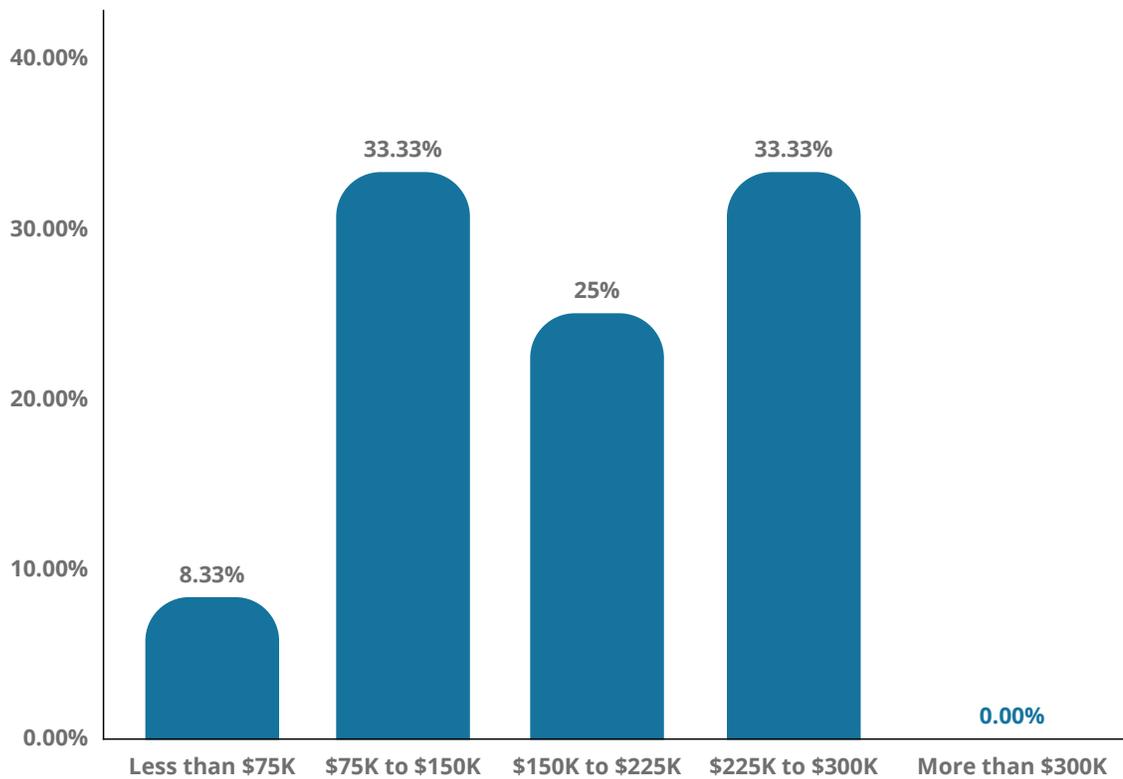
Figure 2.14 Estimated attorney fee for evaluating the final written decision, and drafting and filing request for rehearing as necessary (Phase 7)



Appeal - (Phase 8) - While an appeal to the Federal Circuit is not very common, its cost tends to be between \$70,000 and \$300,000. Close to 60% of the law firms

who have participated in our survey, reported a fee between \$150,000 to \$300,000. About 8 percent reported fees of less than \$75,000 (Figure 2.15).

Figure 2.15 Estimated attorney fee for filing an appeal and conducting appeal to Federal Circuit (Phase 8)



Expert Cost

Experts may have a significant impact on the outcome of the IPR. As a result, selecting the right expert is crucial and may often increase the cost considerably for both petitioner or patent owner.

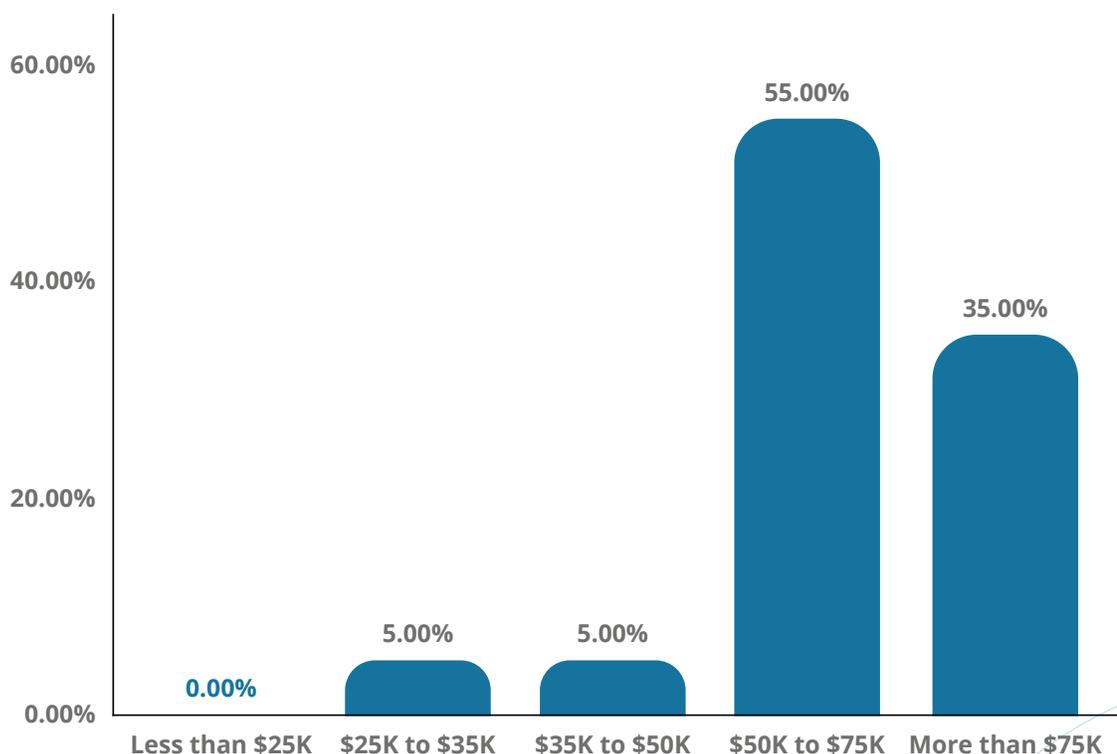
Our survey results indicate that more than half of the respondents allocate \$50,000 to \$75,000 to experts. Figure 2.16 shows

that 35% of the firms pay even more than \$75,000 for the expert.

Note

The number of experts who submit declarations could significantly impact the cost.

Figure 2.16 Estimated cost of experts

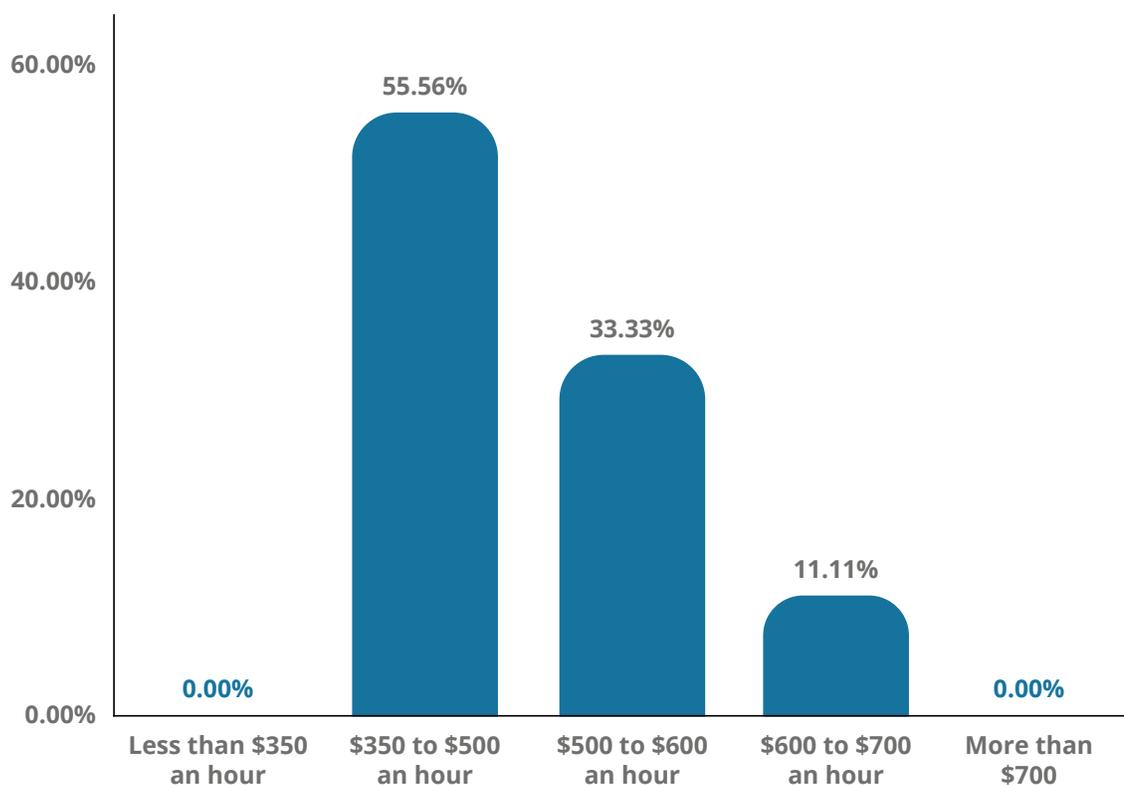


Hourly Rates of Attorneys

One of the questions of the survey covered the typical hourly rates for IPR associates. Based on the responses, the hourly rates varied between \$350 to \$700 per hour. This wide range is mainly due to several factors such as experience level, location, as well

as size and brand of the firm. About 56% of associates charge between \$350 to \$500 per hour, while around 33% charge between \$500 to \$600 per hour, and only 11% reported an hourly rate between \$600 to \$700 (Figure 2.17).

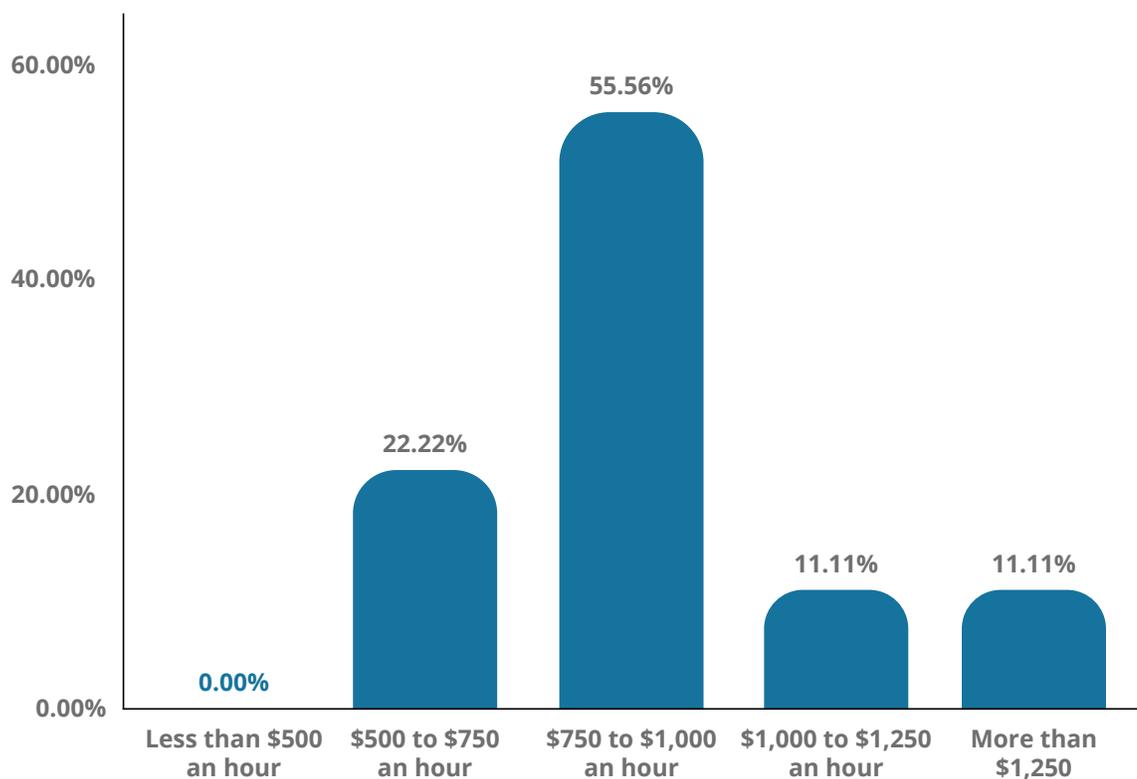
Figure 2.17 Typical hourly rates for IPR associates



The standard hourly rate of partners involved in IPR also varied considerably. More than half (about 56 percent) of the law firms indicated a range between \$750 to \$1,000 per hour. Yet there was also a fair

share of firms (22 percent of the respondents) that have an hourly rate between \$500 and \$750 (Figure 2.18). More than 20% of respondents suggested a rate of more than \$1,000 per hour.

Figure 2.18 Typical hourly rates for IPR partners



Other Key Factors Driving the Cost of IPR

Our survey covered some other areas related to cost that we summarize here:

- Close to 90% of respondents indicated that the IPR cost would change by the number of independent grounds of invalidity included in the IPR. For example, an IPR that tries to invalidate Claim 1 in one ground is less costly than arguing two separate grounds.
- Seventy five percent of the respondents indicated that they would provide up to 25% discount if there are more than one patents from the same family.
- Some of the respondents mentioned that the number of experts who submit expert declarations would significantly impact the cost.
- One of the respondents pointed out that the nature of the technology in dispute really affects pricing.

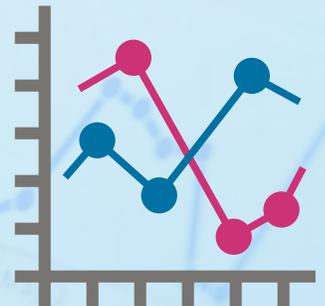
Section 3

Traffic Sources Overview



Visitors Overview

IPR Statistics



IPR Statistics

As per our tradition for our *Patexia Intelligence Reports*, to evaluate and rank stakeholders in Inter-Partes Review (IPR), we considered a filing period of five years, from July 1, 2015, through June 30, 2020.

Over this period, a total of 7,708 IPR petitions were filed. This marks a 5 percent decline over the 8,107 cases filed in the previous period (July 1, 2014, through June 30, 2019) that we used in *IPR Intelligence Report 2019*.

IPR has become a key defense strategy for defendants. And in almost all serious district court cases, it is used by the defendants to challenge the validity of the asserted claims in the case.

Although the number of cases for a five-year period has seen a modest decline, we noticed that filing activity was edging higher in the first half of 2020. IPR activity peaked at 1,725 cases in 2017. In 2018, a total of 1,607 IPR petitions were filed, which was 7 percent lower than 2017. But in 2019,

the number of cases dropped to 1,271, which represented a 21 percent decline compared to 2018.

During this five-year period, a total of 4,886 unique patents were challenged in one or more IPRs. Looking at the claim-level data, petitioners challenged 79,523 unique claims of these patents. This means, on average, about 16 claims for each patent were challenged. And assuming patents on average have 20 claims, this indicates that petitioners tried to invalidate about 80% of the patents. This is 5 percent lower than what we reported last year.

Note

From July 1, 2015 through June 30, 2020, we have had:

- **7,708** Unique Cases
- **4,886** Unique Patents
- **79,523** Unique Claims

YoY Comparison of IPR Filings (Case, Patent, and Claim Levels)

Year-over-year (YoY) comparison of the IPR data shows that the activity has fluctuated between 1,271 and 1,725 cases per year. In the first half of 2020, a total of 673 IPR petitions were filed, which is about 7 percent higher than the 623 IPR petitions filed in the first half of 2019. This shows a change in the direction and acceleration in filing activity compared to recent years.

We studied this trend extensively in our *Patexia Insight Articles*. As we concluded there, IPR follows the district court trends with a lag of about 12 months. Because district court activity has been gaining

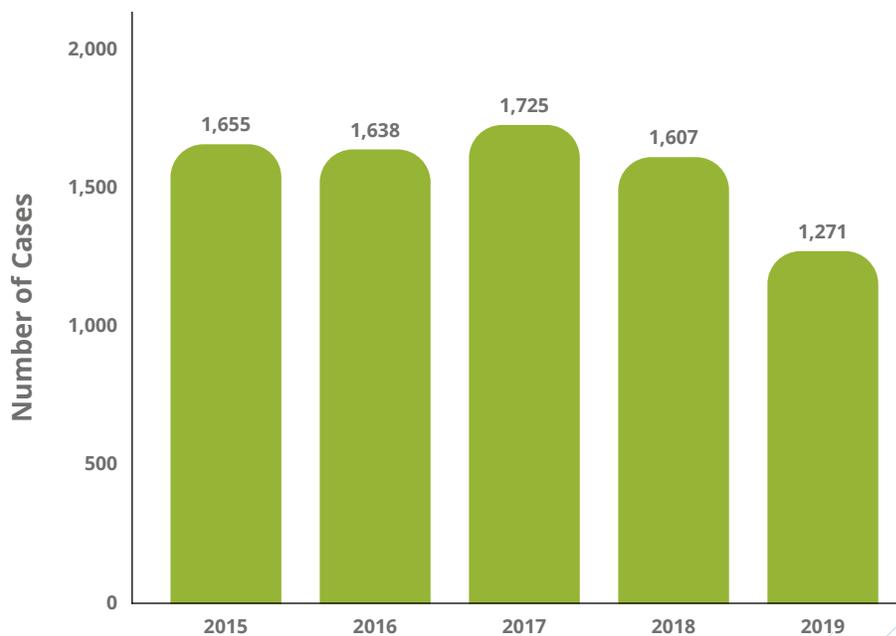
momentum in the last 12 months ([Patexia Insight 85](#)), this kind of increase in IPR filing was expected.

Figure 3.1 shows the IPR filing activity for the full five years from 2015 to 2019.

Note

In the first half of 2020 we noticed that IPR filing activity was gaining momentum as it rose 12 percent in the second quarter compared to the first quarter of 2020.

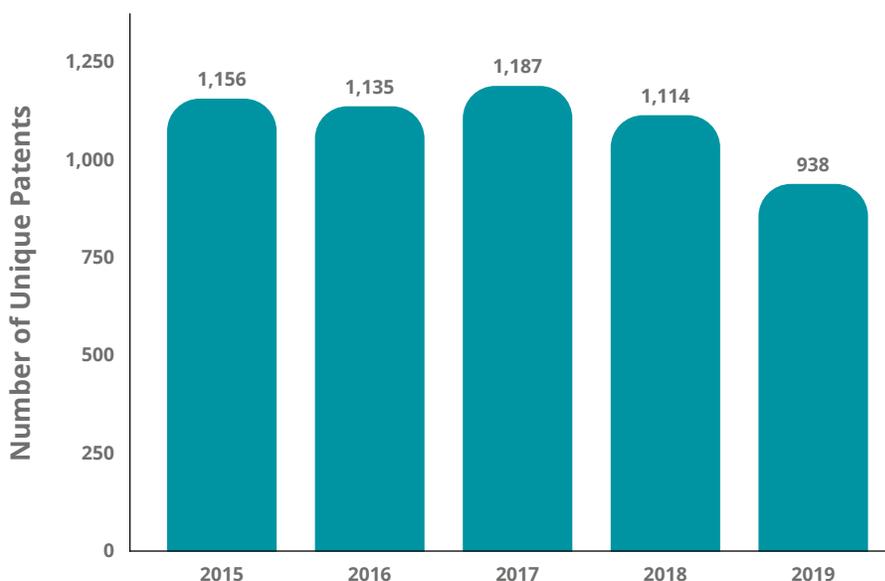
Figure 3.1- IPR Petitions Filed from 2015 to 2019



We observed similar trends at the patent level as well. The number of unique patents challenged by IPRs fluctuated between 900 and 1,200 per year, with a slight drop in 2018 followed by a larger drop in 2019.

In the first half of 2020, a total of 554 unique patents were challenged by 673 IPRs. Figure 3.2 illustrates the patent-level activity per year for the full five years from 2015 through 2019.

Figure 3.2 - Unique Patents Challenged from 2015 to 2019

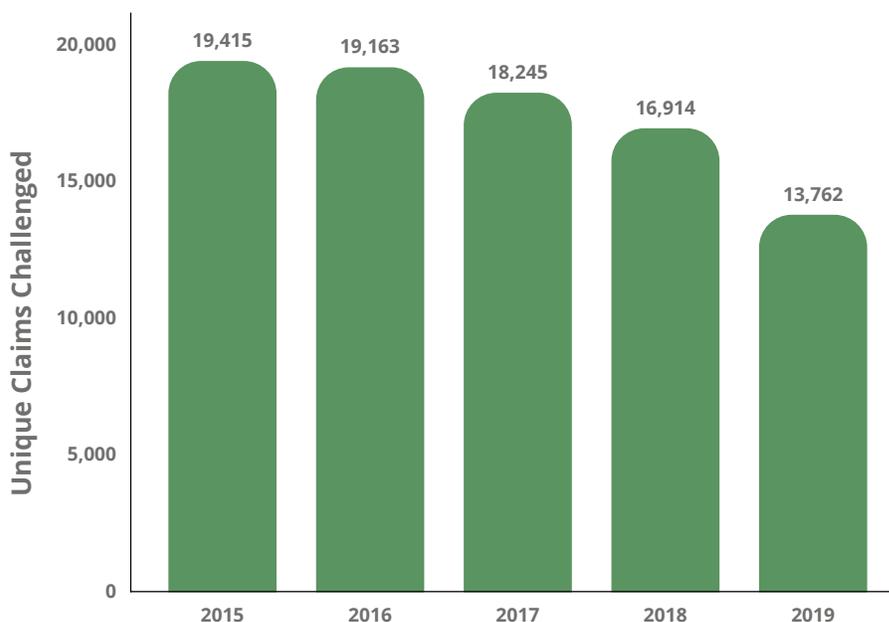


The same trends hold true at the claim level. Figure 3.3 shows the number of unique claims challenged for each of the years from 2015 to 2019. In the first half of 2020, a total of 8,388 claims were challenged.

Note

Number of petitions per year seems to be approximately 40 to 50 percent higher than number of patents, which suggests that many patents are challenged multiple times by several entities or in some cases, the petitioner files more than one petition, as they use different pieces of prior art.

Figure 3.3 - Unique Claims Challenged from 2015 to 2019



Most Popular IPC Codes

We categorized the patents challenged in all 7,708 IPR petitions over the last five years by the International Patent Classification (IPC) codes. This exercise reveals the technology areas petitioners primarily target (or in fact, targeted by plaintiffs in district courts). A total of 393 IPC codes were used to categorize 4,886 unique patents in these IPR cases. Some patents may have multiple IPC codes as the subject is related to different areas.

The following chart shows the 10 most popular IPC codes. IPC code G06F was by far the most popular code. This code covers *Electric Digital Data Processing*. 1,464 IPR petitions out of 7,708 challenged a patent related to this technology area, or approximately 19% of all cases filed during this period.

H04L, which is still related to high-tech (*Digital Data Transmission*), is the second most popular category with 763 cases.

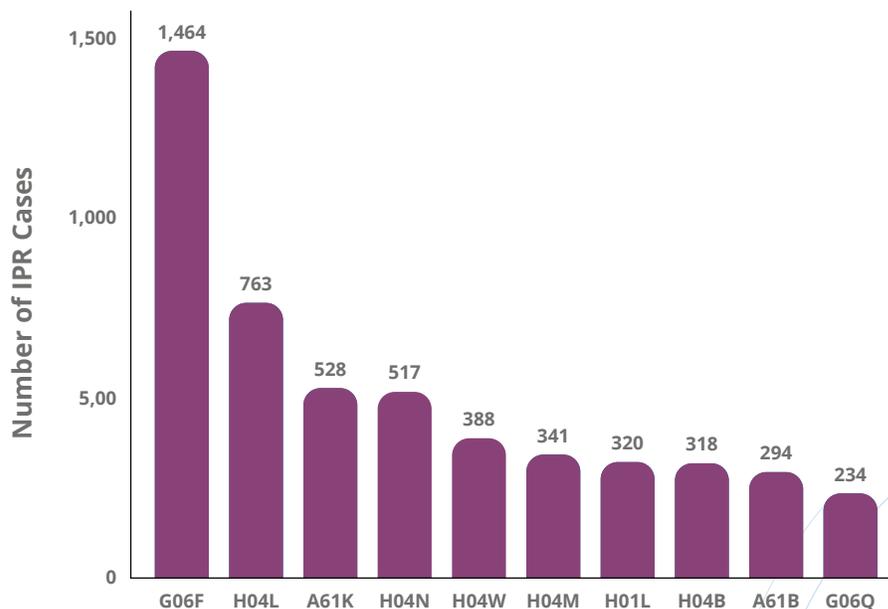
Pharmaceutical patents take the third position. A61K is related to *Preparation for Medical and Dental Purposes*. A total of 528 cases are categorized under A61K.

The top 10 categories cover 5,167 cases or about 67% of all IPR cases filed during this period (most patents may have more than one IPC code).

Note

About 19 percent of all IPR cases filed over the last five years are related to IPC code G06F (*High-Tech*). A61K is the third most popular category which is related to pharmaceutical patents.

Figure 3.4 - Most popular IPC codes in IPRs filed from 2015 to 2019



By the Numbers: Judges, Law Firms, Petitioners, and Patent Owners

To conclude this section, we will provide the high-level statistics for all the stakeholders and parties involved in IPR over the period of this study. There will be a section dedicated to each group in the following pages.

Note

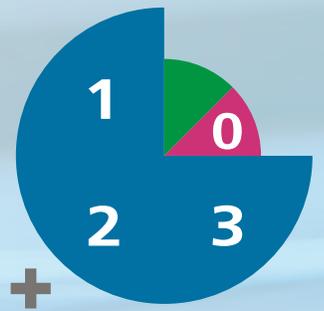
The number of Patent Owners are about 30 percent more than Petitioners. But a small number of petitioners are extremely active.

Table 3.1 - Case-Level Statistics for All Parties Involved in IPRs

	Total People	Max Cases	Avg. Cases
All Law Firms	915	792	20
<i>Law Firms (Petitioners)</i>	469	458	19
<i>Law Firms (Patent Owners)</i>	770	342	12
All Attorneys	4983	316	9
<i>Attorneys (Petitioners)</i>	3,038	264	8
<i>Attorneys (Patent Owners)</i>	3,335	190	7
All Companies	2,685	389	6
<i>Petitioners</i>	1,286	380	6
<i>Patent Owners</i>	1,665	190	5
Admin Judges	202	91	38

Section 4

IPR Denial and Invalidation Analysis by Technology Area



IPR Denial and Invalidation Analysis by Technology Area

We reviewed the IPR cases at a high level in the previous section. In this section, we dive deeper and review the outcome of all cases for the period of this study in an effort to observe any changes in the trends over the last five years.

We will expand the research to cover claim and patent level data, understanding that our conclusions may be different at different levels.

First, we will review the case-level status as reported by the US Patent Office. The USPTO only releases the case-level status. Analyzing the case denial and institution rates over time can provide us with valuable information.

Second, we will look into the patent and claim-level data, comparing that with the case-level data. As we discussed in the previous section, many patents receive more than one challenge.

At the end, we will compare the settlement, denial, and institution rates for different technology areas to determine whether patents in life sciences are generally stronger than in high-tech.

Note

USPTO only provides case-level denial and institution rates. But, analyzing the IPR results at the patent and claim levels may reveal different rates of denial or institution.

Case-Level Status as Reported by the USPTO

We will begin by looking at the status reported by the USPTO. Later, we will use the case-level status to construct the denial and survival rates for different technology areas.

Table 4.1 summarizes the most recent status as of August 30, 2020, for 7,708 cases

filed through the end of Q2 2020. As shown in the table below, 77.4% (or 5,967 cases) have one of the following three statuses: *Terminated-Denied*, *Terminated-Settled*, and *Final Written Decision (FWD) Entered*. These are the most common outcomes for IPRs. Nearly all cases eventually will end up in one of these three categories.

About 6.2% of the cases are pending, which means they were filed within the last six months (*Notice of Filing Date Accorded or PO Response Filed*). These at some point will change to one of the above common statuses.

Instituted cases also cover about 6.8%, but they eventually will settle or receive the final written decision. The remaining cases are terminated because of some procedural errors or adverse judgement.

Table 4.1 - IPR Status of Cases Filed Through End of Q2 of 2020 as Reported by the USPTO (as of August 30, 2020)

Status	Cases	Percent
Terminated-Denied	2,436	31.6%
FWD Entered	2,046	26.5%
Terminated-Settled	1,485	19.3%
Instituted	526	6.8%
Terminated-Dismissed	317	4.1%
PO Response Filed	246	3.2%
Notice OF Filing Date Accorded	232	3.0%
Terminated-Other	224	2.9%
Terminated-Adverse Judgment	185	2.4%
Submitted	7	0.1%
Waiver Filed	4	0.1%

Because the pending cases eventually will change to one of the three common statuses, for the remainder of this report (unless otherwise stated) we will focus on the most common statuses, which represent about 80% of the cases for the period of this study. We will remove the pending cases and those terminated due to reasons other than denial or settlement.

Note

For the remaining of this report, we will work with a subset of cases that has been completed. In other words, their current status is one of the followings: Terminated-Denied, Terminated-Settled, or FWD Entered. We refer to this subset as *non-pending cases*.

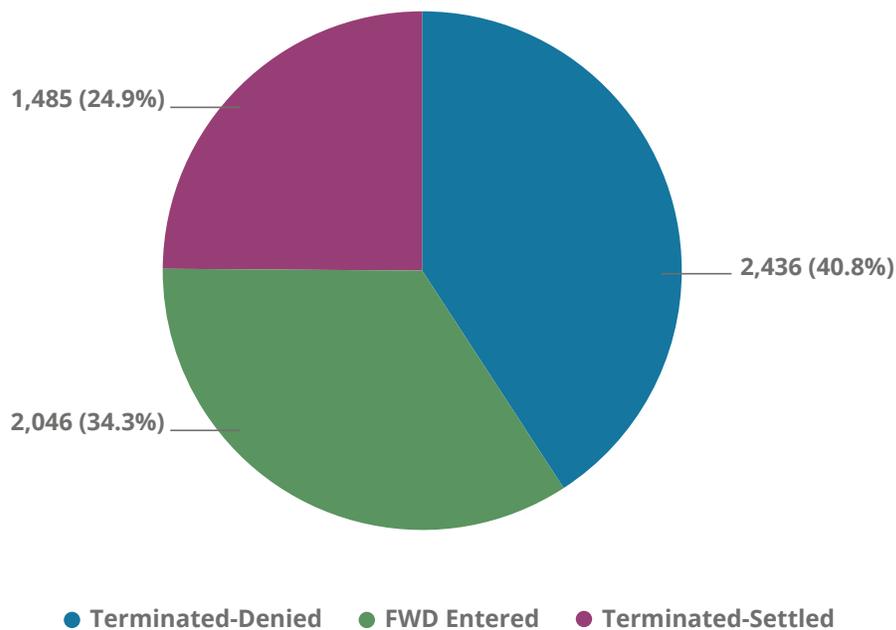
We will call this subset of cases the *non-pending* cases. This will help us better understand the true impact of IPR.

By limiting the cases to only the *non-pending* ones, we see that close to 41% of all cases are denied. The following pie chart shows the breakdown of all 5,967 cases.

Note

Nearly 41 percent of all IPR cases are denied institution.

Figure 4.1 - Status of *non-pending* cases through the end of Q2 of 2020 (as of August 30, 2020)



YoY Comparison of FWD Entered, Settlement, and Denial Rates

We compared case-level institution, settlement, and denial rates over the last five years to observe any patterns. We also sought to determine whether the patent owners or petitioners have applied past learnings and changed their strategies and behaviors over time. We limited this study to

data through the end of 2018, as the data in the last 18 months is not complete and will change in the near future.

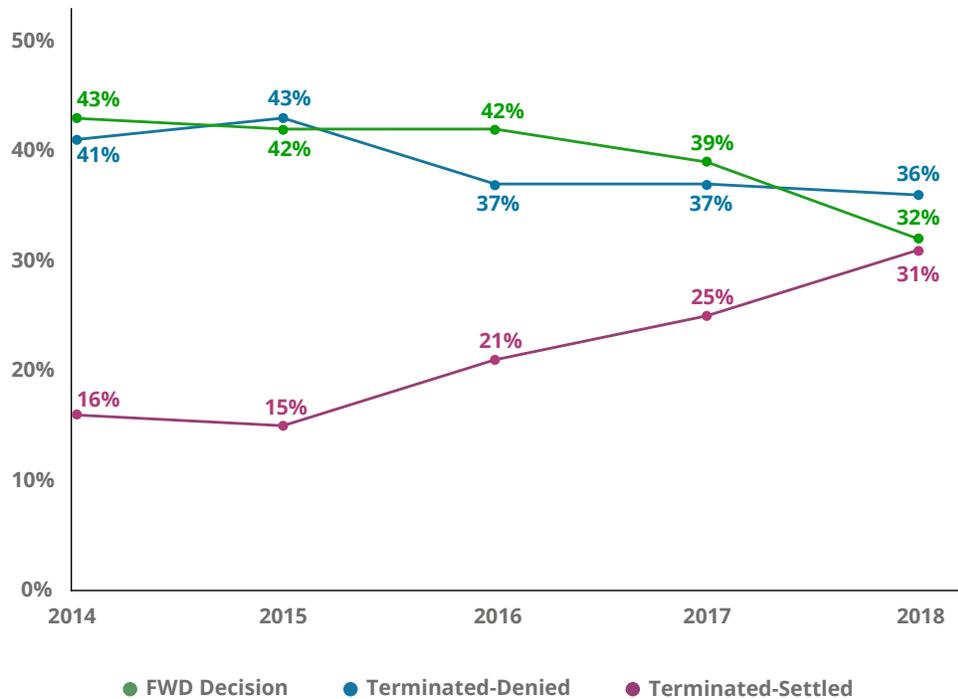
Analysis of *Final Written Decision* rate shows it has declined, going from 43% to 32% for the period between 2014 through

Note

Settlement rate has been rising in recent years. From 2014 through 2018, settlement rate has increased by as much as 15 percentage point. That means almost 1/3 of all cases are settled.

2018. This happened while the denial rate declined from 41% to 36% during the same period. On the other hand, the settlement rate has risen significantly from 16% in 2014 to 31% in 2018.

Figure 4.2 - Year-over-Year Comparison of FWD, Settlement and Denial Rates



From 2014 to 2018, the settlement rate has risen considerably. In 2018, almost one-third of all cases were settled.

Several items may explain this increase in the settlement rate. First of all, with more than 10,000 IPR cases filed in less than a decade, enough history exists for both

sides to predict the outcome of a case. As a result, if the patent owners feel the probability of victory is limited, they may decide to cut their losses and settle rather than continuing the fight.

Second, petitioners have become more careful in choosing the patent they want to

challenge as well as the prior art. This may have impacted the quality of cases that are brought before the PTAB.

The decline in the denial rate also may stem from similar reasonings. Again,

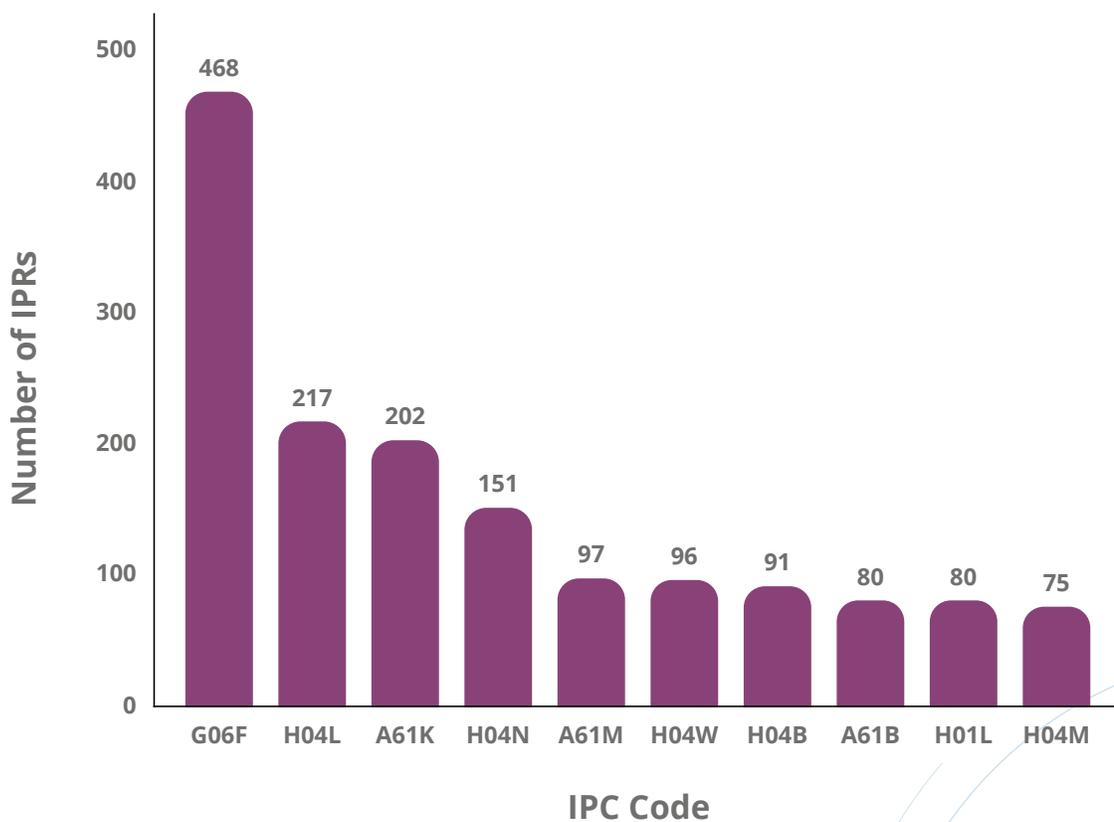
petitioners choose higher quality cases and only proceed with an IPR if they find a quality piece of prior art. This may have contributed to the roughly 5 percentage point decline in the denial rate.

Top 10 IPC Codes for Patents with Denial or Settlement Decision

In the previous section, we analyzed the International Patent Classification (IPC) codes for all the patents challenged in IPRs with the goal of identifying technology areas that petitioners targeted frequently. Here, we

go one step further to see which technology areas are typically settled or denied the institution. Figure 4.3 shows the top 10 IPC codes that are denied institution.

Figure 4.3 - Top 10 IPC Codes for IPR Cases that are Denied Institution



G06F, which was the most popular IPC code overall, still maintains its top rank.

Looking at the settled cases, we can draw an interesting conclusion. Life sciences patents are now in the fifth position, which is lower than the third position they held in the overall popularity rank we calculated in the previous section.

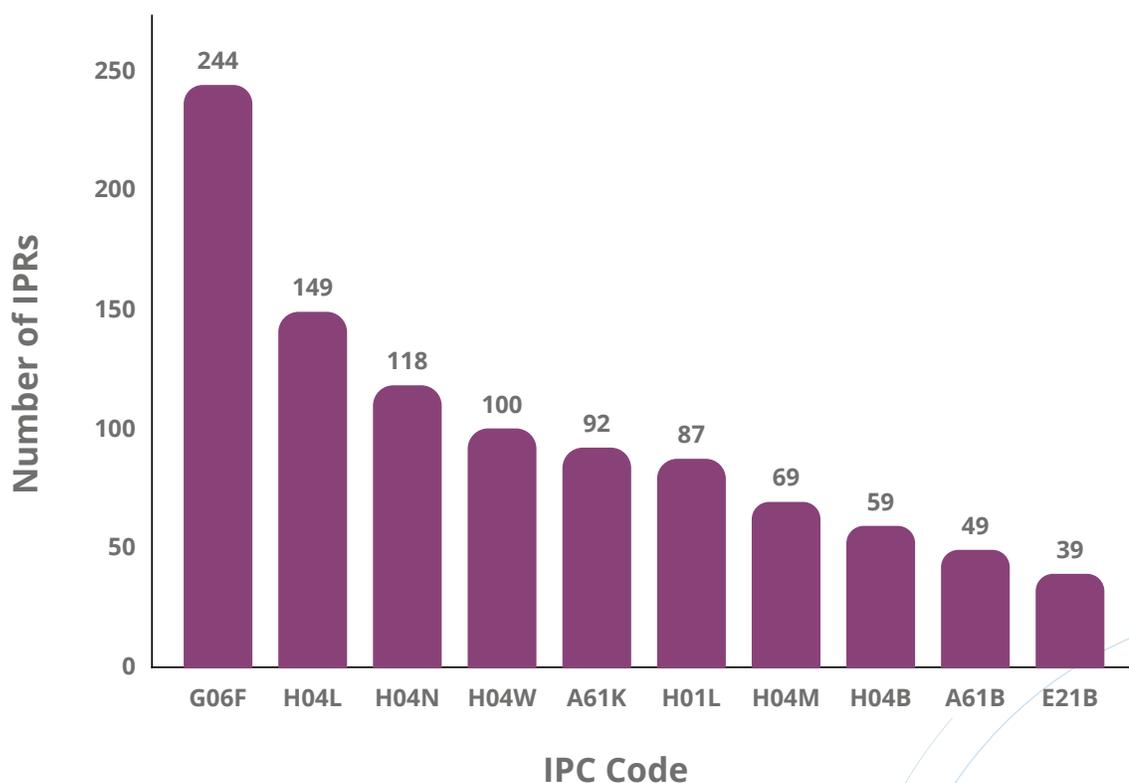
This means, it is less likely for patent owners to settle when the patent is related to A61K (life sciences). This may also mean

that the USPTO has had a better examination process for these patents or in general patents are stronger in life sciences. Figure 4.4 shows the top 10 technology areas for IPRs that were settled.

Note

Analyzing the IPC codes of patents challenged in IPRs, reveals that settlement for life sciences patents (A61K) is not as common as other technology area. This may be a sign of higher quality patents.

Figure 4.4 - Top 10 IPC Codes for IPR Cases that are Settled



Top 10 IPC Codes for Patents with Final Written Decisions

Once an IPR is instituted, parties need to either save the instituted claims (patent owners) or invalidate them (petitioners). We

looked at the patents that received the *Final Written Decision* and identified the top 10 technology areas by IPC codes (Figure 4.5).

Figure 4.5 - Top 10 IPC Codes for IPR Cases that reach the Final Written Decision



As reaching the *Final Written Decision* is not necessarily a sign of the patent strength or weakness, we had to look at the claim-level data to figure out the patent’s strength. We calculated the ratio of claims that survived

to all claims challenged. This allowed us to measure the strength of the patents for each of the top 10 IPC codes. This has been summarized in Table 4.2.

What is evident from the table is that in all 10 IPC codes, the petitioner has scored higher than 50%, which means more than 50 percent of the challenged claims (and often closer to 70% or more) have been invalidated.

Note

Data suggests that more than 50 percent and often closer to 70 percent of claims that reach the final written decision are invalidated. This means that some claims remain valid which may be a positive outcome for the patent owners.

Table 4.2 - Top 10 IPC codes for those cases reached the *Final Written Decision* and the average score for petitioners

IPC Code	Cases	Petitioner Score
G06F	344	0.65
H04L	202	0.65
A61K	149	0.62
H04N	121	0.65
H04M	114	0.7
H04W	94	0.73
H04B	91	0.65
A61B	77	0.52
G06Q	76	0.58
H01L	60	0.51

Section 5

Performance of the PTAB Judges



Performance of the PTAB Judges

In this section, we are turning our attention toward one of the key players involved in IPR: The *PTAB Administrative Judges*. We will review the level of activity and performance for each of the judges, we will compare their performances, and analyze how their decisions impact the parties involved (i.e., *Patent Owners* and *Petitioners*).

Typically, three judges are assigned to each case. For the purpose of this report, we

focused on the judge who wrote the *Final Written Decision* for the IPR and assumed that particular judge had a bigger influence on the case and the final decision.

Note

A total of **202 PTAB judges**
Each on average, has written **38 Final Written Decisions**

10 Most Active PTAB Judges

For the period of our study, PTAB has engaged a total of 202 *Administrative Judges*. Not all judges have an equal amount of activity. Their activity depends on several factors, such as their starting date, the types of cases that are filed (i.e., technology areas), their availability, and their areas of expertise.

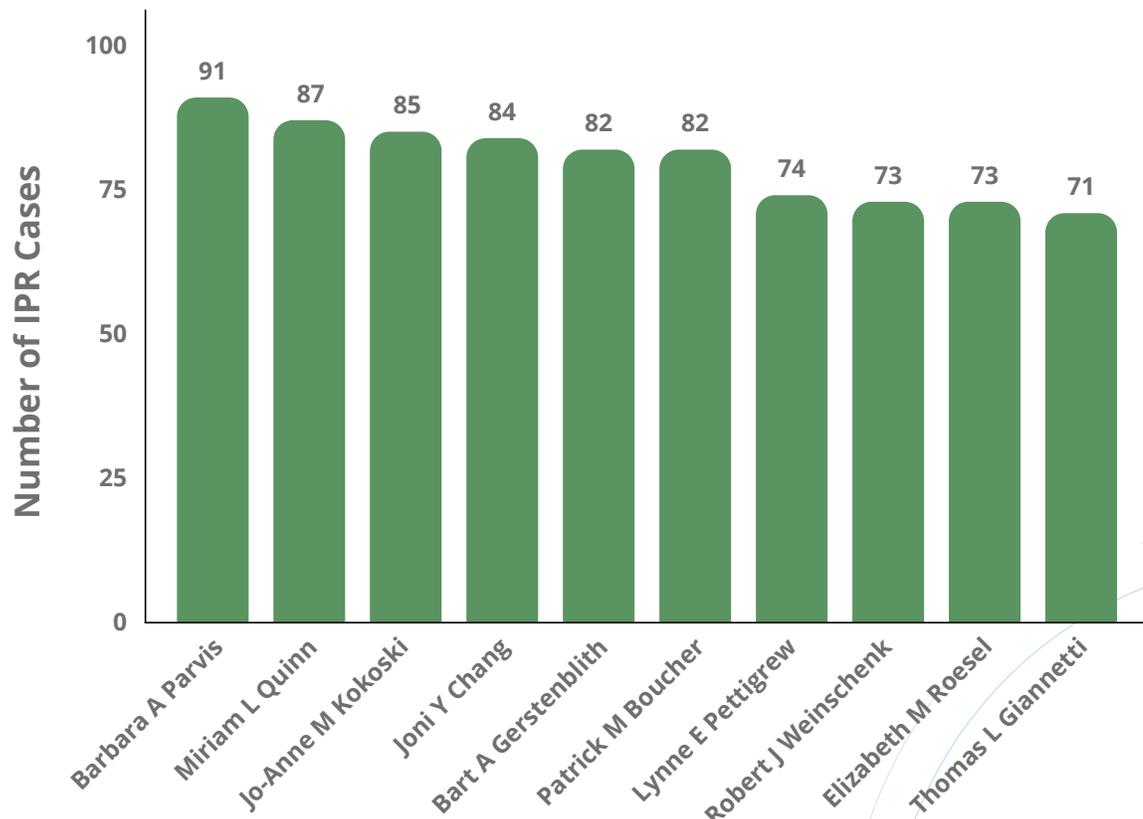
We reviewed the activity of all 202 judges who wrote one or more final decisions. The following chart (Figure 5.1) shows the top 10 most active *PTAB Administrative Judges* by the number of final decisions they wrote.

Judge Barbara A. Parvis, with a total of 91 cases as of the end of June 2020, has the largest caseload for the last five years, followed by Judge Miriam L. Quinn with 87 cases.

Note

Barbara A. Parvis, a *PTAB Administrative Judge*, has written the *final decisions* for 91 IPR Cases. This is the highest number for a single judge in the past five years and represents more than 2 times the average (38).

Figure 5.1 - Top 10 Administrative Judges by Activity



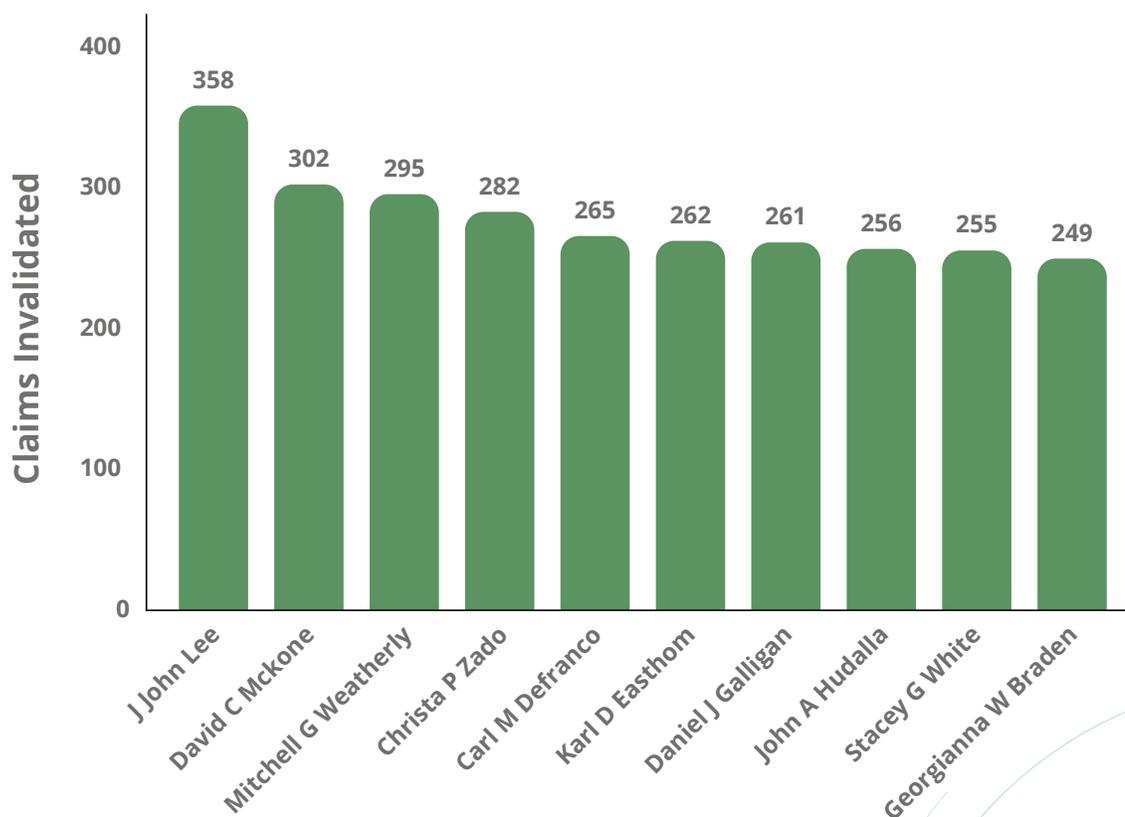
Top 10 Judges with the Highest Number of Invalidated Claims

To review the judges’ activities based on the number of claims they invalidated, we isolated all cases with the *Final Written Decision* where at least one or more claims were invalidated by the *Panel of Administrative Judges*. The 10 judges with the most invalidated claims are highlighted in Figure 5.2 below.

Note

Judge J. John Lee, one of the *PTAB Administrative Judges*, has written final decisions to invalidate at least 358 claims in 43 IPR cases. This is the highest number of claims invalidated by a judge over the last five years.

Figure 5.2 - Top 10 Administrative Judges with the highest number of claims invalidated



Performance of PTAB Administrative Judges

Using the methodology we described in Section 1, we calculated the performance of all judges based on their overall ruling. The “Judge’s Score” indicates if the ruling was

more in favor of the petitioner (if the score is closer to 100, it means the judge more frequently sided with the petitioner). The list has been summarized in Table 5.1

Table 5.1 - Average performance of 202 PTAB Administrative Judges in the last five years (If the score is closer to 100, it means they more frequently sided with the petitioner)

Main Judge (Author)	All Cases	Unique patents	Judge's Score	Claims Challenged	Claims Instituted	Claims Invalidated
Barbara A Parvis	91	46	22%	904	510	206
Miriam L Quinn	87	43	23%	607	321	127
Jo-Anne M Kokoski	85	59	17%	867	480	112
Joni Y Chang	84	48	36%	824	591	156
Bart A Gerstenblith	82	45	15%	1,106	405	144
Patrick M Boucher	82	47	34%	667	440	190
Lynne E Pettigrew	74	41	22%	760	339	129
Robert J Weinschenk	73	39	34%	664	376	180
Elizabeth M Roesel	73	50	23%	799	429	132
Thomas L Giannetti	71	54	23%	920	557	228
Ken B Barrett	71	48	13%	671	199	64
James J Mayberry	70	50	19%	1,078	642	170
Sheila F Mcshane	70	50	31%	772	593	201
Michelle N Wormmeester	70	43	26%	725	230	132
Zhenyu Yang	69	40	17%	667	338	91
Patrick R Scanlon	68	43	30%	699	318	147
Daniel N Fishman	68	39	42%	714	482	232
John A Hudalla	67	43	51%	601	432	256
Jameson Lee	66	41	25%	578	289	126
Jon B Tornquist	66	45	16%	930	487	137
Charles J Boudreau	65	24	24%	446	299	102

Table 5.1 - Average performance of 202 PTAB Administrative Judges in the last five years (If the score is closer to 100, it means they more frequently sided with the petitioner) (Part 2)

Main Judge (Author)	All Cases	Unique patents	Judge's Score	Claims Challenged	Claims Instituted	Claims Invalidated
David C Mckone	65	43	31%	961	671	302
John F Horvath	64	43	32%	546	392	121
James B Arpin	64	42	16%	697	265	137
Jeffrey W Abraham	63	51	23%	726	362	78
Bryan F Moore	63	51	22%	788	339	127
Minn Chung	63	41	26%	496	228	96
Brian J Mnamara	62	40	43%	741	469	183
Erica A Franklin	62	39	15%	693	301	76
Sally C Medley	62	40	34%	692	321	172
Mitchell G Weatherly	62	51	38%	858	592	295
William V Saindon	61	50	28%	589	359	120
Trevor M Jefferson	61	40	23%	662	420	63
Kristina M Kalan	60	46	26%	709	479	85
Karl D Easthom	59	39	50%	641	454	262
Timothy J Goodson	59	53	41%	724	535	218
Michael L Woods	59	50	21%	673	348	98
Robert A Pollock	59	40	18%	475	307	77
Kristen L Droesch	57	35	15%	470	223	69
Amanda F Wieker	57	41	17%	670	267	142
Tina E Hulse	56	44	30%	785	348	157
Jennifer S Bisk	56	33	22%	650	247	121
Hyun J Jung	56	42	40%	512	355	181
Michael R Zecher	56	38	28%	722	328	126
Josiah C Cocks	56	43	11%	915	459	51
James A Tartal	56	42	32%	583	385	160
Christa P Zado	55	38	24%	859	540	282

Table 5.1 - Average performance of 202 PTAB Administrative Judges in the last five years (If the score is closer to 100, it means they more frequently sided with the petitioner) (Part 3)

Main Judge (Author)	All Cases	Unique patents	Judge's Score	Claims Challenged	Claims Instituted	Claims Invalidated
Jennifer Meyer Chagnon	55	33	61%	449	320	176
Garth D Baer	55	41	32%	478	259	90
Barry L Grossman	54	44	38%	658	361	149
Kimberly Mcgraw	54	35	26%	668	355	141
Terrence W Mcmillin	54	36	46%	484	269	141
Scott A Daniels	53	46	35%	576	418	167
Daniel J Galligan	53	36	64%	696	543	261
Kevin W Cherry	53	34	23%	466	350	109
Kevin F Turner	52	33	42%	582	320	151
Gregg I Anderson	51	37	34%	528	286	85
Sheridan K Snedden	51	36	20%	588	367	66
Justin T Arbes	51	37	24%	543	237	86
Kevin C Trock	51	38	28%	707	426	185
Jacqueline T Harlow	50	36	21%	533	316	89
Michelle N Ankenbrand	48	40	12%	532	226	93
Kristi L R Sawert	48	41	23%	604	377	87
Jeremy M Plenzler	47	22	16%	423	245	90
Robert L Kinder	46	34	45%	434	323	229
Christopher L Crumbley	45	30	31%	553	414	103
Christopher G Paulraj	45	29	32%	544	344	122
Kalyan K Deshpande	45	28	43%	549	400	198
Scott C Moore	45	29	30%	436	286	109
Neil T Powell	44	29	50%	525	454	230
Matthew R Clements	44	29	31%	475	310	212
Meredith C Petravick	44	37	29%	438	211	86
Christopher M Kaiser	43	35	28%	429	206	102

Table 5.1 - Average performance of 202 PTAB Administrative Judges in the last five years (If the score is closer to 100, it means they more frequently sided with the petitioner) (Part 4)

Main Judge (Author)	All Cases	Unique patents	Judge's Score	Claims Challenged	Claims Instituted	Claims Invalidated
J John Lee	43	30	58%	748	538	358
Jason W Melvin	43	34	27%	484	351	86
Georgianna W Braden	42	30	55%	583	508	249
William M Fink	42	22	24%	382	133	107
Scott B Howard	42	25	28%	409	314	75
Barbara A Benoit	40	22	29%	518	270	146
Jessica C Kaiser	38	26	31%	470	213	129
Stacey G White	37	26	53%	511	360	255
Kamran Jivani	37	32	18%	486	191	96
Wesley B Derrick	36	25	0%	377	124	0
Michael J Fitzpatrick	35	22	27%	373	179	139
Lora M Green	35	27	32%	285	147	64
Jason J Chung	35	15	32%	179	86	67
Susan L C Mitchell	34	30	17%	506	131	53
Grace Karaffa Obermann	33	28	13%	431	172	87
Jeffrey S Smith	33	27	58%	398	348	133
Frederick C Laney	32	24	3%	497	231	14
Richard J Smith	32	25	26%	330	260	77
Carl M Defranco	31	25	63%	410	375	265
Beverly M Bunting	31	25	35%	484	255	60
Christopher L Ogden	31	21	9%	419	144	24
Michael W Kim	30	25	37%	507	360	128
Phillip J Kauffman	30	21	30%	388	251	98
Frances L Ippolito	30	26	27%	344	179	72
Brent M Dougal	30	19	38%	287	196	41
Aaron W Moore	30	21	23%	308	179	42

Table 5.1 - Average performance of 202 PTAB Administrative Judges in the last five years (If the score is closer to 100, it means they more frequently sided with the petitioner) (Part 5)

Main Judge (Author)	All Cases	Unique patents	Judge's Score	Claims Challenged	Claims Instituted	Claims Invalidated
Stephen C Siu	29	17	49%	214	145	95
Richard H Marschall	29	25	29%	377	268	70
James A Worth	29	23	29%	549	258	62
Stacy B Margolies	29	25	54%	409	317	152
Monica S Ullagaddi	29	25	13%	297	120	60
Richard E Rice	28	21	36%	442	213	179
Benjamin D M Wood	28	22	25%	333	222	62
Rama G Elluru	28	17	31%	285	223	68
George R Hoskins	28	24	36%	300	188	41
Jon M Jurgovan	28	20	11%	350	198	63
Amber L Hagy	28	22	35%	405	279	84
Melissa A Haapala	27	23	39%	349	146	72
Kerry Begley	26	16	31%	242	104	80
Brian P Murphy	25	23	48%	471	336	156
Thu A Dang	25	19	50%	445	431	129
Sharon Fenick	25	23	61%	381	250	153
John D Hamann	25	16	24%	272	183	27
Lynne H Browne	23	14	15%	207	81	31
Michael P Tierney	22	6	18%	175	138	116
Donna M Praiss	21	17	20%	320	179	51
Hubert C Lorin	21	20	7%	339	95	20
John R Kenny	21	14	12%	156	72	11
Norman H Beamer	21	11	30%	197	174	51
Scott E Bain	21	15	27%	219	93	30
Sean P Ohanlon	21	15	23%	229	196	61
Toni R Scheiner	20	18	29%	249	126	54

Table 5.1 - Average performance of 202 PTAB Administrative Judges in the last five years (If the score is closer to 100, it means they more frequently sided with the petitioner) (Part 6)

Main Judge (Author)	All Cases	Unique patents	Judge's Score	Claims Challenged	Claims Instituted	Claims Invalidated
Eric C. Jeschke	20	13	0%	223	83	8
Avelyn M Ross	20	18	26%	266	161	49
Jason M Repko	19	19	5%	202	68	3
Timothy G Majors	19	15	14%	126	57	7
Nathan A Engels	18	13	0%	260	129	0
Paul J Korniczky	18	13	27%	219	149	21
Debra K Stephens	17	11	24%	133	48	36
John E Schneider	17	17	48%	289	160	103
Alyssa A Finamore	17	14	17%	200	192	21
Trenton A Ward	16	12	19%	101	49	32
Julia Heaney	16	13	17%	168	118	21
Nabeel U Khan	15	10	40%	141	125	36
Matthew S Meyers	15	13	21%	171	56	19
Matthew J Mcneill	15	12	13%	176	75	15
Jeffrey N Fredman	15	6	56%	146	139	45
Glenn J Perry	14	11	11%	142	74	9
Howard B Blankenship	14	12	27%	219	137	51
Linda E Horner	14	13	10%	132	36	4
Sheldon M Mcgee	14	14	0%	250	163	0
Jacqueline Wright Bonilla	13	12	50%	176	146	78
John P Pinkerton	13	11	56%	135	104	74
Ulrike W. Jenks	13	12	0%	204	55	2
David Cotta	13	12	19%	169	89	21
Peter P Chen	12	8	62%	116	45	38
Jean R Homere	12	9	63%	175	158	68
Steven M Amundson	12	11	13%	85	53	3

Table 5.1 - Average performance of 202 PTAB Administrative Judges in the last five years (If the score is closer to 100, it means they more frequently sided with the petitioner) (Part 7)

Main Judge (Author)	All Cases	Unique patents	Judge's Score	Claims Challenged	Claims Instituted	Claims Invalidated
Kara L Szpondowski	12	9	16%	116	63	25
Juliet Mitchell Dirba	12	6	25%	44	17	3
James T Moore	11	10	39%	179	150	40
Arthur M Peslak	11	7	22%	87	45	5
Christopher C Kennedy	11	11	17%	125	69	5
Debra L Dennett	11	7	25%	96	37	14
Carl L Silverman	10	7	98%	71	49	38
Denise M Pothier	9	9	20%	74	44	1
Hung H Bui	9	4	0%	92	56	0
Alex S Yap	9	8	25%	92	76	16
Ryan H Flax	9	8	0%	115	100	0
Beth Z Shaw	8	5	51%	98	52	49
Deborah Katz	8	5	100%	71	71	41
Fred E Mckelvey	8	4	0%	200	20	0
John G New	7	7		121	121	0
Eleni Mantis Mercader	7	4	17%	47	21	19
Russell E Cass	7	5	25%	44	43	11
Stephen E Belisle	7	6	0%	85	85	0
Sean P Ohanlon	6	5	66%	86	67	66
Irvin E Branch	6	5	0%	98	96	0
Michael T Cygan	6	5	0%	36	36	0
Francisco C Prats	5	2	0%	43	43	0
Justin Busch	5	4	100%	28	28	15
John C Kerins	5	5	16%	85	84	18
Scott Raevsky	5	4	23%	45	11	9
Jeffrey A Stephens	4	4	70%	62	41	39

Table 5.1 - Average performance of 202 PTAB Administrative Judges in the last five years (If the score is closer to 100, it means they more frequently sided with the petitioner) (Part 8)

Main Judge (Author)	All Cases	Unique patents	Judge's Score	Claims Challenged	Claims Instituted	Claims Invalidated
John A Evans	4	4	0%	44	12	0
George C Best	4	3	25%	35	16	2
Jeremy J Curcuri	4	3	25%	40	17	17
Jamie T Wisz	4	4	25%	63	36	36
Iftikhar Ahmed	4	3	100%	31	31	10
Joseph A Fischetti	3	3	0%	76	0	0
Marc S Hoff	3	3	0%	26	6	12
Devon Zastrow Newman	3	3	50%	58	58	29
Michael G Mcmanus	3	3	31%	39	24	11
Cynthia M Hardman	3	3	0%	44	44	0
Elizabeth A Lavier	2	2	100%	37	22	13
Michael J Engle	2	2	0%	29	0	0
Joseph L Dixon	2	2	0%	9	7	0
Brian D Range	2	2	100%	9	9	2
Jill D Hill	2	2	100%	22	22	22
Per Curiam	2	2	100%	33	33	17
Michael Valek	2	2	0%	27	19	0
Sally G Lane	1	1	100%	12	12	12
Patrick E Baker	1	1	0%	5	0	0
Amy Kattula	1	1	86%	14	14	12
Den Serna	1	1	50%	20	20	10
Scott C Weidenfeller	1	1		3	3	0
Robert J Silverman	1	1	0%	23	0	0
Mont T Squire	1	1	100%	1	1	1
Maryjoan Mcnamara	1	1	0%	9	0	0

Section 6

Performance of the Petitioners and Patent Owners



Performance of the Petitioners and Patent Owners

In this section, we will review both parties involved in all 7,708 IPR petitions filed from July 1, 2015, through June 30, 2020. We will measure activity, success and performance in order to identify the *Most Active*, and *the Best Performing* parties on each side. For the *Most Successful* ones, please see Appendix B (accompanying Excel spreadsheet).

For better accuracy in this study, we have tried to use the parent companies of the entities involved in different cases. Often-

times on the patent owner side, companies may file a lawsuit under different entity names for a variety of reasons. For example, Acacia Research Group or Marathon Patent Group use different holding companies for different patent portfolios.

Similarly, big corporations that primarily use IPR as a defense tool, may acquire different companies over time or may form different entities for branches of their operation. For example, Sony and AT&T have many such subsidiaries.

The Most Active Petitioners and Patent Owners

On average, petitioners and patent owners have been involved in 6 and 5 IPR cases, respectively. However, our study found that a small number of companies have been responsible for a large percentage of all challenges filed. Tables 6.1 through 6.3 show the 100 most active patent owners, petitioners, and overall. See Appendix B for the top 1000 most active companies.

On the patent owner side, Uniloc with 191 IPRs is the most active patent owner, followed by Tivo Corporation with 117 cases. The top 10 patent owners have collectively been involved in 799 IPRs, or about 10 percent of all cases.

On the petitioner side, Apple sits at the top with 380 cases, followed by Samsung

with 318 cases. The top 10 petitioners have collectively filed 1,784 IPRs, or roughly 23 percent of all challenges.

Did you know?

In the last five years:

Apple has been the most active petitioner in IPR with 380 cases.

Uniloc with 191 cases is the most active patent owner.

The 10 most active petitioners have filed 23 percent of all IPRs.

Top 100 Most Active Companies in IPR

In tables 6.1, 6.2, and 6.3, we have summarized the top 100 most active patent

owners, petitioners, and overall, respectively.

Table 6.1 - Top 100 Most Active Companies as Patent Owners

2020 Rank	2019 Rank	Company	Patent Owner Cases
1	1	Uniloc	191
2	6	Tivo Corporation	117
3	2	Intellectual Ventures	90
4	32	IP Bridge	64
5	4	Realtime Data LLC	61
6	54	Abbvie Inc.	58
7	8	Finjan Holdings, Inc.	59
8	18	Seven Networks	55
9	5	Imperial Brands	54
10	18	Qualcomm	50
11	42	Maxell LTD.	47
12	9	Papst Licensing Gmbh & Co. KG	48
13	26	Schlumberger	46
14	28	Xperi Corporation	44
15	131	Quarterhill Inc.	44
16	20	Genentech, Inc	44
17	3	Acacia Research Corporation	44
18	13	Blackberry	41
19	11	Alacritech, Inc.	42
20	13	Ipa Technologies Inc.	37
21	98	Immersion Corporation	37
22	59	Huawei Technologies	36
23	37	Boston Scientific	36

2020 Rank	2019 Rank	Company	Patent Owner Cases
24	22	United Technologies	35
25		Broadcom	34
26	37	Sanofi	33
27		Michigan Motor Technologies LLC	32
28	34	Document Security Systems, Inc.	33
29	42	Philips	32
30	167	Nxp Semiconductors USA	30
31		Bell Northern Research	29
32	119	Fundamental Innovation Systems International LLC	29
33	167	Realtime Adaptive Streaming LLC	28
34	31	Ericsson	29
35		Neodron LTD.	26
36	26	Tracbeam	28
37	78	Lone Star Silicon Innovations LLC	27
38	50	Nike	27
39	98	Pfizer	27
40	167	Agis Software Development LLC	26
41	314	Cms Energy Corporation	26
42	28	Daniel L Flamm	26
43	28	Power Integrations	24
44	69	Promos Technologies	23
45		Personalized Media Communications	23
46	196	Sound View Innovations	22

Table 6.1 - Top 100 Most Active Companies as Patent Owners (Part 2)

2020 Rank	2019 Rank	Company	Patent Owner Cases
47	22	Tq Delta, LLC	23
48		Bio-Rad Laboratories	22
49	46	Oyster Optics	22
50	42	Fractus SA	21
51	78	Johnson & Johnson	21
52	78	Align Technology, Inc.	21
53	78	Invue Security Products	21
54		Collect LLC	20
55	46	On Semiconductor Corporation	21
56		Hammond Development International, Inc.	20
57	131	Fisher & Paykel Healthcare	21
58	37	Windy City Innovations	21
59	69	Astrazeneca Pharmaceuticals	21
60	22	Energetiq Technology	21
61	119	International Business Machines	20
62	78	Parity Networks LLC	20
63	69	Getinge Group	20
64	59	Sony	20
64	46	Novartis	20
66	87	Resmed	20
67		Packet Intelligence LLC	19
68	15	Paice LLC	20
69	50	Hera Wireless S.A.	19
70	37	Netlist	19
71		Corephotonics	18
72	98	Lighting Science Group Corporation	18
73	314	Canon	18

2020 Rank	2019 Rank	Company	Patent Owner Cases
74	314	Blitzsafe Texas	18
75	54	Valencell Inc.	18
76	54	Evolved Wireless	18
77	314	Medtronic	17
78	69	Vivint	18
79		Bristol Myers Squibb	17
80	98	Biogen	17
81	98	Conformis	17
82		United Services Automobile Association	16
83	87	Eli Lilly And Company	17
83		Tela Innovations	16
85		Cellular Communications Equipment	17
86	59	Elm 3ds Innovations	17
87		Irobot Corporation	16
88	167	Memory Technologies LLC	16
89	87	M2m Solutions	16
90	34	Samsung Electronics	16
91	69	Arthrex	16
92	167	Velos Media	15
92	221	Carucel Investments LP	15
92		Opiant Pharmaceuticals	15
95	149	Saint Regis Mohawk Tribe	15
96	149	Koninklijke Kpn Nv	15
97	167	Nichia	15
98		Impinj, Inc.	14
99	37	Willis Electric	15
100	259	Eagle View Technologies	15

Table 6.2 - Top 100 Most Active Companies as petitioners

2020 Rank	2019 Rank	Company	Petitioner Cases
1	1	Apple	380
2	2	Samsung Electronics	318
3	3	Google	194
4	4	Unified Patents	182
5	7	Intel	163
6	9	Comcast	146
7	5	Microsoft	125
8	8	Cisco Systems	102
9	6	LG Electronics	89
10	12	Facebook	85
11	11	Mylan	80
12	10	Sony	72
13	27	Ericsson	63
14	18	Volkswagen of America	62
15	13	Huawei Technologies	58
16	14	ZTE USA	55
17	18	General Electric	54
18	16	Amazon	50
19	37	Dish Network	46
20	20	Micron Technology, Inc.	46
21	23	Pfizer	42
22	16	HTC	42
23		Arris Group	41
24	21	RPX Corporation	40
24		RPX Corporation	40
25	80	Juniper Networks	36
26	37	Hewlett Packard	35
27	25	Dell Technologies	34
28	29	Taiwan Semiconductor Manufacturing Company	34
29	33	Smith & Nephew	34
30	23	ASM International	33
31	34	Qualcomm	33
32	27	International Business Machines	32

2020 Rank	2019 Rank	Company	Petitioner Cases
33	32	Halliburton Company	32
34	49	Altria Group, Inc.	31
35	49	Nokia	30
36	54	Medtronic	30
37	29	Symantec	30
38	39	Merck & Co.	28
39	68	Fitbit	27
40	41	Kingston Technology Inc.	26
41	31	Ford Motor	26
42	46	R. J. Reynolds Vapor	26
43	39	T-Mobile USA	26
44	22	Daimler AG	23
45	52	TCT Mobile	24
46	57	SK hynix	23
47	42	NetApp	22
48	59	10X Genomics	22
49	54	BMW Manufacturing	22
50	59	Vizio	22
51	42	Johnson & Johnson	22
52		Roku	21
53	25	Toyota	22
54	59	Teva Pharmaceuticals	22
55		Snap Inc.	21
56	86	Motorola	21
57	122	Netflix	21
58	86	Becton Dickinson and Company	21
59	59	On Semiconductor Corporation	21
60	59	ResMed	21
61	52	Marvell Technology Group LTD.	20
62	113	Elekta	20
62	68	Abiomed	20
64	59	Dr. Reddy's Laboratories	20
64	46	Hyundai	20

Table 6.2 - Top 100 Most Active Companies as petitioners (Part 2)

2020 Rank	2019 Rank	Company	Petitioner Cases	2020 Rank	2019 Rank	Company	Petitioner Cases
66	269	NXP Semiconductors USA	19	83	80	Celltrion	18
66	59	Emerson Electric Co.	20	85		Satco Products, Inc.	17
68	68	Fisher & Paykel Healthcare	20	86	68	Baker Hughes	18
68	68	Skechers USA	20	87	103	DJI Technology, Inc.	17
70	122	Intuitive Surgical	19	88	155	Nevro	17
71	103	3Shape	19	89	34	Hayman Capital Management, L.P.	18
72	76	Power Integrations	19	90	91	Federal Express	16
73	91	Edwards Lifesciences	19	91	91	Fujifilm	16
73	54	GlobalFoundries	19	92	438	Husky Injection Molding Systems	15
75	91	Mobile Tech Inc.	19	93	103	Nalox-1 Pharmaceuticals, LLC	15
76	57	Amneal Pharmaceuticals	19	94	226	Advanced Micro Devices	15
77	42	BlackBerry	18	94	91	Activision Blizzard	16
78	42	Verizon	18	96	103	Paypal	15
79	76	Alarm.com	19	97	103	Canon	15
80		Techtronic Industries Power Equipment	18	97	103	Wabtec Corporation	15
81	80	Valve Corporation	18	99	15	AT&T Company	15
82	130	Varian Medical Systems, Inc.	18	100		Fresenius Medical Care	15
83		Broadcom	18				

Table 6.3 - Top 100 Most Active Companies overall (petitioners or patent owners)

2020 Rank	2019 Rank	Company	All Cases
1	1	Apple	389
2	2	Samsung Electronics	334
3	3	Google	194
4	9	Uniloc	191
5	4	Unified Patents	182
6	5	Intel	164
7	12	Comcast	146
8	6	Microsoft	125
9	21	Tivo Corporation	117
10	8	Cisco Systems	112
11	7	LG Electronics	101
12	18	Huawei Technologies	94
13	23	Ericsson	92
14	10	Sony	92
15	11	Intellectual Ventures	92
16	15	Facebook	91
17	19	Qualcomm	83
18	13	Mylan	82
19	28	Pfizer	69
20	25	General Electric	66
21	97	IP Bridge	64
22	31	Volkswagen of America	62
23	17	Realtime Data LLC	62
24	146	AbbVie Inc.	61
25	21	BlackBerry	59
26	26	Finjan Holdings, Inc.	59
27	59	Seven Networks	55
28	24	ZTE USA	55
29	19	Imperial Brands	54
30	50	Schlumberger	53
31		Broadcom	52
32	29	Amazon	51
33	203	NXP Semiconductors USA	49

2020 Rank	2019 Rank	Company	All Cases
34	108	Maxell Ltd.	47
35	76	Medtronic	47
36	33	Papst Licensing GmbH & Co. KG	48
37	64	Dish Network	46
38	69	Philips	46
39	34	Micron Technology, Inc.	46
40	64	Sanofi	45
41	86	Xperi Corporation	44
42	276	Quarterhill Inc.	44
43	61	Genentech, Inc	44
44	43	Johnson & Johnson	43
45	36	Power Integrations	43
46	16	Acacia Research Corporation	44
47	31	International Business Machines	42
48	36	Symantec	43
49		Arris Group	42
50	30	HTC	42
51	47	Alacritech, Inc.	42
52	45	On Semiconductor Corporation	42
53	64	Nokia	41
54	58	ResMed	41
54	67	Fisher & Paykel Healthcare	41
56	41	RPX Corporation	40
56	135	RPX Corporation	40
57	47	Hewlett Packard	38
58	41	Merck & Co.	38
59	51	IPA Technologies Inc.	37
60	228	Immersion Corporation	37
61	146	Juniper Networks	36
62	86	Boston Scientific	36
63	34	ASM International	36
64	71	United Technologies	35
65	36	Dell Technologies	34

Table 6.3 - Top 100 Most Active Companies overall (petitioners or patent owners) (Part 2)

2020 Rank	2019 Rank	Company	All Cases
66	51	Taiwan Semiconductor Manufacturing Company	34
67	51	Halliburton Company	34
68	86	Teva Pharmaceuticals	34
69	59	Smith & Nephew	34
70		Michigan Motor Technologies LLC	32
71	128	Canon	33
72	102	Document Security Systems, Inc.	33
73	93	Altria Group, Inc.	31
74	135	3Shape	30
75	115	Align Technology, Inc.	30
76	97	Varian Medical Systems, Inc.	31
77		BELL NORTHERN RESEARCH	29
78	102	Nike	30
79	55	Baker Hughes	30
80	254	Fundamental Innovation Systems International LLC	29
81	333	Realtime Adaptive Streaming LLC	28
82	372	Bio-Rad Laboratories	28
83	135	Nichia	28

2020 Rank	2019 Rank	Company	All Cases
84	93	Eli Lilly and Company	28
85	86	10X Genomics	27
86		Neodron Ltd.	26
87	128	Fitbit	27
88	76	TracBeam	28
89	189	Lone Star Silicon Innovations LLC	27
90	203	Intuitive Surgical	26
91	36	Toyota	27
92	333	AGIS Software Development LLC	26
93	102	Advanced Micro Devices	26
94	76	Kingston Technology Inc.	26
95	51	Ford Motor	26
96	83	Fujifilm	26
97	86	R. J. Reynolds Vapor	26
98		CMS Energy Corporation	26
99	14	AT&T Company	26
100	115	Motorola	25
100	86	Daniel L Flamm	26

Top 100 Best Performing Petitioners and Patent Owners

Looking beyond activity, we investigated success and performance by company. For the purpose of success and performance calculations, we only considered those companies named as a petitioner or patent owner in at least 9 cases. For the overall performance calculation, we considered companies with 18 cases or more. (We described the methodology earlier in Section 1).

In tables 6.4, 6.5, and 6.6, we have summarized the 100 best performing patent owners, petitioners, and overall, respectively.

The success scores and rankings which were used as part of performance calculations, together with the complete list of top 1000 most active companies and all their metrics have been covered in Appendix B.

Did you know?

Finjan Holdings Inc. was the best performing company overall with a score of 100%

Table 6.4 - Top 100 Best Performing Companies as Patent Owners

2020 Rank	2019 Rank	Company	PO Performance Score
1	1	Getinge Group	100.0%
2	12	Finjan Holdings, Inc.	94.8%
3		Align Technology, Inc.	94.6%
4		Opiant Pharmaceuticals	92.7%
5		NXP Semiconductors USA	92.2%
6	35	Energetiq Technology	90.8%
7	4	Elm 3DS Innovations	87.8%
8		Plastipak Packaging, Inc.	84.6%
9	45	Magna International	82.3%
10		Velos Media	81.2%
11		Versata Development Group, Inc.	80.7%
12	5	ChanBond	80.3%
13		Blitzsafe Texas	79.4%
14	19	ResMed	79.4%
15	46	Novartis	79.1%
16		AGIS Software Development LLC	77.8%
17	15	Eli Lilly and Company	77.3%
18		Eagle View Technologies	77.1%
19	30	On Semiconductor Corporation	76.6%
20		Lexmark International	76.5%
21		Bio-Rad Laboratories	76.5%
22		Fundamental Innovation Systems International LLC	75.8%
23		iRobot Corporation	75.4%
24	33	Philips	75.1%
25		Gilead Sciences	74.6%
26		Envision IT, LLC	74.3%
27		Voip-Pal.Com Inc	73.4%
28	26	Boston Scientific	73.0%
29	16	Nike	72.0%
30	24	Oyster Optics	71.5%
31	10	Andrea Electronics	71.1%
32	20	Longitude Flash Memory Systems Sarl	71.1%
33	44	United Technologies	71.1%

2020 Rank	2019 Rank	Company	PO Performance Score
34	22	Biogen	70.0%
35	14	Vivint	69.8%
36		Knauf Gips KG	69.5%
37	61	Uniloc	68.9%
38		Cornell Research Foundation, Inc.	68.7%
39	70	AstraZeneca Pharmaceuticals	68.6%
40		Veveo, Inc.	68.0%
41	38	TracBeam	68.0%
42	66	IPA Technologies Inc.	68.0%
43	34	Windy City Innovations	67.2%
44	58	Tivo Corporation	67.2%
45		Team Worldwide Corporation	66.5%
46		Stryker	66.0%
47	6	International Business Machines	65.4%
48	49	Imperial Brands	65.4%
49		Sanofi	65.3%
50		Packet Intelligence LLC	65.2%
51	69	Genentech, Inc	64.2%
52	50	Adidas	63.4%
53		Koninklijke KPN NV	63.3%
54	39	Papst Licensing GmbH & Co. KG	63.3%
55		CMS Energy Corporation	63.2%
56	8	Baxter International	62.6%
57	9	California Institute of Technology	62.5%
58		Bristol Myers Squibb	62.5%
59	40	Alacritech, Inc.	61.7%
60	55	Acacia Research Corporation	61.5%
61		North Star Innovations	61.3%
62		Quarterhill Inc.	60.9%
63	27	M2M Solutions	60.7%
64		Nomadix	59.6%
65	57	Fisher & Paykel Healthcare	59.1%
66	56	BlackBerry	57.9%
67	31	AbbVie Inc.	57.9%

Table 6.4 - Top 100 Best Performing Companies as Patent Owners (Part 2)

2020 Rank	2019 Rank	Company	PO Performance Score
68		Realtime Adaptive Streaming LLC	57.6%
69	28	Global Tel Link	57.5%
70		Canon	56.9%
71	42	Acceleration Bay, LLC	56.5%
72		General Electric	56.4%
73	96	Maxell LTD.	56.4%
74		The Duchossois Group Inc	56.3%
75		Hera Wireless S.A.	56.2%
76		Fractus SA	55.8%
77	84	Johnson & Johnson	55.4%
78	29	Immersion Corporation	55.2%
79	36	Sipco	54.9%
80		Sound View Innovations	54.1%
81		Qualcomm	53.8%
82		Michigan Motor Technologies LLC	53.7%
83	80	Intellectual Ventures	53.4%
84	93	IP Bridge	53.0%

2020 Rank	2019 Rank	Company	PO Performance Score
85	82	ConforMIS	52.4%
86	83	Realtime Data LLC	52.4%
87	65	Daniel L Flamm	52.3%
88		Blackbird Technologies	52.2%
89	89	Paice LLC	52.1%
90	79	Document Security Systems, Inc.	50.1%
91		Memory Technologies LLC	49.9%
92		Lighting Science Group Corporation	49.6%
93	102	Seven Networks	49.6%
94	97	Huawei Technologies	49.2%
95	104	InVue Security Products	48.7%
96	31	IBEX PT Holdings Co., LTD.	48.4%
97	106	Pfizer	48.4%
98		Medtronic	47.7%
99	67	Samsung Electronics	47.7%
100		Broadcom	47.5%

Table 6.5 - Top 100 Best Performing Companies as petitioners

2020 Rank	2019 Rank	Company	Petitioner Performance Score
1	4	TCT Mobile	100.0%
2	12	Taiwan Semiconductor Manufacturing Company	91.8%
3	36	RPX Corporation	91.8%
4	30	Sony	91.8%
5	25	SK hynix	89.5%
6	29	Qualcomm	89.3%
7	49	Dell Technologies	89.3%
8	11	Ericsson	88.8%
9	6	Amneal Pharmaceuticals	85.5%
10	28	Baker Hughes	84.3%
11	5	Mobile Tech Inc.	84.1%
12	19	Toshiba	83.9%
13	16	Volkswagen of America	81.9%
14	27	Samsung Electronics	81.9%
15	20	Smith & Nephew	81.4%
16	23	Merck & Co.	81.2%
17	1	TaylorMade Golf Company	81.0%
18		DJI Technology, Inc.	80.2%
19	13	Altria Group, Inc.	79.7%
20	13	Halliburton Company	79.1%
21	55	On Semiconductor Corporation	78.1%
22	1	Nitto Denko	77.4%
23	15	Panduit	77.0%
24		Netflix	77.0%
25	17	Dish Network	76.7%
26	57	Daimler AG	75.9%
27	39	Huawei Technologies	75.4%
28	40	Facebook	74.9%
29		Ulterra	74.6%
30		Eli Lilly and Company	73.8%
31	58	Hayman Capital Management, L.P.	73.8%
32		Roku	70.4%
33	33	HTC	70.1%

2020 Rank	2019 Rank	Company	Petitioner Performance Score
34	32	Intel	69.7%
35		Wockhardt LTD.	69.0%
36	71	Verizon	69.0%
37	10	Aristocrat Technologies	68.7%
38	44	Cisco Systems	68.2%
39	9	Elekta	67.9%
40	50	Nokia	67.8%
41	38	Vizio	67.4%
42		Broadcom	66.7%
43	31	Lupin Limited	66.6%
44	42	Emerson Electric Co.	66.3%
45	26	Canon	66.0%
46	34	Fitbit	65.7%
47	54	LG Electronics	65.5%
48	69	Hewlett Packard	65.4%
49	48	Amazon	64.9%
50	88	Medtronic	63.7%
51	43	BlackBerry	62.7%
52	47	Mylan	62.4%
53	66	Wabtec Corporation	62.2%
54	53	Fujifilm	62.0%
55	59	Micron Technology, Inc.	61.9%
56	80	Unified Patents	60.6%
57	82	Apple	60.5%
58	45	BMW Manufacturing	60.1%
59	97	Pfizer	60.1%
60	70	Google	59.9%
61	87	Juniper Networks	59.3%
62		Motorola	58.6%
63	41	Sprint Corporation	57.0%
64	81	General Electric	56.9%
65	37	Hyundai	56.3%
66	75	Activision Blizzard	56.1%
67		Snap Inc.	56.0%

Table 6.5 - Top 100 Best Performing Companies as petitioners (Part 2)

2020 Rank	2019 Rank	Company	Petitioner Performance Score
68		Sanofi	55.3%
69	99	ZTE USA	54.9%
70	79	Comcast	54.4%
71	64	NVidia	53.5%
72	93	ResMed	53.5%
73	92	Teva Pharmaceuticals	53.0%
74	96	NetApp	52.6%
75		Bosch Corporation	52.2%
76	52	Thermo Fisher Scientific	52.0%
77	84	Kingston Technology Inc.	51.9%
78	83	Microsoft	51.4%
79	86	T-Mobile USA	51.1%
80	67	Securus Technologies	50.9%
81		Arris Group	50.5%
82		Techtronic Industries Power Equipment	49.6%
83		Fresenius Medical Care	49.3%
84		Cook Group	49.2%

2020 Rank	2019 Rank	Company	Petitioner Performance Score
85	62	Varian Medical Systems, Inc.	49.2%
86	95	AT&T Company	49.1%
87	74	International Business Machines	49.0%
88	91	Apotex Pharmaceutical Holdings Inc.	48.8%
89	104	Becton Dickinson and Company	48.3%
90	73	ASM International	48.1%
91	94	Valve Corporation	47.6%
92	102	Celltrion	47.2%
93	100	Symantec	47.1%
94		Endo International	46.0%
95	101	Alarm.com	45.7%
96	108	R. J. Reynolds Vapor	45.6%
97	78	Xilinx	45.4%
98	113	Toyota	45.4%
99		Coherus BioSciences	45.1%
100		Intuitive Surgical	44.9%

Table 6.6 - Top 100 Best Performing Companies (as petitioners or patent owners)

2020 Rank	2019 Rank	Company	Overall Performance Score
1	3	Finjan Holdings, Inc.	100.0%
2		NXP Semiconductors USA	97.1%
3	29	RPX Corporation	94.3%
4	5	Taiwan Semiconductor Manufacturing Company	92.8%
5	10	Volkswagen of America	92.8%
6	18	Samsung Electronics	92.8%
7	28	On Semiconductor Corporation	89.6%
8	2	TCT Mobile	87.9%
9		Eli Lilly and Company	87.0%
10	23	Sony	86.6%
11	11	Dish Network	86.0%
12	12	Smith & Nephew	85.2%
13	32	Facebook	84.6%
14	15	Merck & Co.	84.2%
15		SK hynix	84.0%
16	6	Altria Group, Inc.	83.6%
17		Mobile Tech Inc.	81.9%
18	22	Energetiq Technology	81.3%
19		Getinge Group	81.2%
20	8	Halliburton Company	81.0%
21	14	Intel	80.4%
22	19	Ericsson	79.9%
23		AGIS Software Development LLC	79.4%
24		Fundamental Innovation Systems International LLC	79.4%
25	20	HTC	77.7%
26		Align Technology, Inc.	77.5%
27	16	Philips	77.0%
28	26	Cisco Systems	76.4%
29	44	ResMed	75.7%
30	59	Uniloc	75.4%
31		Stryker	75.3%
32	4	TaylorMade Golf Company	75.1%
33	24	Boston Scientific	75.1%

2020 Rank	2019 Rank	Company	Overall Performance Score
34	53	Hewlett Packard	74.6%
35		Nike	74.5%
36	47	LG Electronics	72.5%
37	34	United Technologies	72.4%
38	21	Qualcomm	71.1%
39		IPA Technologies Inc.	70.8%
40		Oyster Optics	70.7%
41		Sanofi	70.7%
42	52	Tivo Corporation	70.6%
43	55	Huawei Technologies	69.6%
44		Sprint Corporation	69.5%
45	51	Baker Hughes	68.7%
46		Canon	68.7%
47	41	Amazon	68.6%
48		Bio-Rad Laboratories	66.8%
49	36	Mylan	66.8%
50	38	Imperial Brands	66.4%
51	50	Micron Technology, Inc.	65.7%
52	39	BlackBerry	65.0%
53	66	Unified Patents	65.0%
54	57	Google	64.8%
55	65	Genentech, Inc	64.3%
56	27	Papst Licensing GmbH & Co. KG	64.2%
57		Motorola	63.7%
58	75	General Electric	63.7%
59	40	Fujifilm	62.8%
60	73	Apple	62.7%
61		CMS Energy Corporation	62.2%
62	45	Acacia Research Corporation	61.4%
63	63	Medtronic	60.8%
64		AbbVie Inc.	60.7%
65		Juniper Networks	60.2%
66		Elekta	59.9%
67		Quarterhill Inc.	59.7%

Table 6.6 - Top 100 Best Performing Companies (as petitioners or patent owners) (Part 2)

2020 Rank	2019 Rank	Company	Overall Performance Score
68	64	Comcast	59.2%
69		Broadcom	58.5%
70	85	ZTE USA	58.0%
71	88	Pfizer	57.4%
72	67	Nokia	57.2%
73	71	Intellectual Ventures	57.0%
74	37	International Business Machines	56.7%
75	77	Realtime Data LLC	55.3%
76	78	Symantec	55.2%
77	74	Microsoft	55.2%
78		Maxell Ltd.	55.0%
79		Becton Dickinson and Company	53.9%
80	30	Hyundai	53.6%
81		Immersion Corporation	52.6%
82	87	IP Bridge	52.5%
83		Kingston Technology Inc.	52.2%
84	84	Fisher & Paykel Healthcare	51.9%

2020 Rank	2019 Rank	Company	Overall Performance Score
85		Arris Group	51.6%
86		Fractus SA	51.5%
87	92	Seven Networks	50.1%
88	80	10X Genomics	49.9%
89		Teva Pharmaceuticals	49.5%
90		3Shape	49.3%
91		Document Security Systems, Inc.	48.7%
92	89	Johnson & Johnson	47.9%
93	91	Schlumberger	47.8%
94	83	Paice LLC	47.4%
95		Fresenius Medical Care	47.4%
96	70	ASM International	47.4%
97	93	Toyota	47.2%
98	76	Varian Medical Systems, Inc.	47.1%
99	86	Power Integrations	47.1%
100	33	Xperi Corporation	46.6%

Section 7

Performance of the Law Firms



Performance of the Law Firms

In this section, we will review law firms representing both parties involved in all 7,708 IPR challenges. Also, we will measure activity, success and performance in order to identify the *Most Active*, the *Most Successful* and the *Best Performing* firms representing each side. For the *Most Successful* firms, please refer to Appendix C (accompanying Excel spreadsheet).

The source for assigning a case to a firm is the attorney's involvement in that case. If the attorney is named on one of the PTAB-issued documents (e.g., Institution Decision, Final Written Decision, Mandatory Notices documents or Power of Attorneys), we associate that case to the firm where the attorney was working at the time of filing.

If the attorney later changes his or her firm, the case will still be associated with the original firm. However, should a PTAB document show a new filing by the attorney under the

new firm, the case will also be considered as one of the cases for the new firm.

We have done our best to identify different variations of law firms' names to improve the accuracy of the report. We have used natural language processing (NLP) techniques, and have taken into account the major publicly announced mergers between law firms.

As a final verification, we contacted all the law firms named in different rankings of this report, provided them with the statistics related to their firm, and requested their feedback and verification.

Although there is always room for improvement – which we certainly will make in our future releases – we feel this data provides a highly accurate analysis of law firms' performance in representing patent owners and petitioners.

Most Active Law Firms in IPR

In total, 915 law firms represented either the patent owner or petitioner over the course of 7,708 IPR cases. We identified 469 firms that represented petitioners and 770 firms that represented patent owners. Some firms were active on both sides.

On average, law firms representing petitioners and/or patent owners have been involved in 19 and 12 cases respectively. However, our study found that a handful of firms have been extremely active, resulting in a large percentage of all cases being handled by a small group of large firms.

Fish & Richardson, one of the major IP firms, appeared to be the most active firm overall with a total of 792 cases (458 on the petitioner's side and 334 on the patent owner's side), or approximately 10 percent of all cases. Next, Sterne Kessler was involved in a total of 614 cases. The top 10 law firms collectively have been involved in 4,106 cases.

On the patent owner side, Sterne Kessler is ranked first with 342 cases, while Fish and Richardson is second with 334 cases.

Did you know?

In the last five years:

Fish & Richardson is the most active firm in IPR with about 792 cases, or involvement in close to 10 percent of all cases.

The 10 most active firms have been involved in 4,106 cases overall.

In tables 7.1, 7.2, and 7.3, we have summarized the 100 most active law firms representing patent owners, petitioners, and overall, respectively.

Table 7.1 - Top 100 Most Active Law Firms representing Patent Owner

2020 Rank	2019 Rank	Law Firm	Patent Owner Cases
1	1	Sterne, Kessler, Goldstein & Fox	342
2	2	Fish & Richardson	334
3	4	Quinn Emanuel Urquhart & Sullivan	202
4	7	Etheridge Law Group	196
5	3	Finnegan, Henderson, Farabow, Garrett & Dunner	187
6	5	Irell & Manella LLP	155
7	6	Knobbe Martens Olson & Bear, LLP	148
8	9	Lowenstein & Weatherwax	143
9	17	Kramer Levin Naftalis & Frankel	125
10	35	Russ August & Kabat	115
11	16	Perkins Coie	111
12	10	Oblon McClelland Maier & Neustadt	112
13	11	Ropes & Gray	110
14	24	Nelson Bumgardner Albritton PC	106
15	11	Jones Day	106
16	22	Baker Botts LLP	99
17	25	Brown Rudnick LLP	97
18	46	Devlin Law Firm	92
19	13	Davidson Berquist Jackson & Gowdey	95
20	45	Skiermont Derby	89
21	26	Robins Kaplan LLP	91
22	20	DiNovo Price	90
23	19	Mintz Levin Cohn Ferris Glovsky & Popeo	90
24	17	Kirkland & Ellis	89
25	15	Wilmer Cutler Pickering Hale and Dorr	89
26	28	Alston & Bird	85
27	27	Troutman Pepper Hamilton Sanders LLP	83
28	35	Covington & Burling LLP	80
29	14	Fitch, Even, Tabin & Flannery LLP	80
30	8	Ascenda Law Group	80
31	21	McAndrews, Held & Malloy	74
32	33	Wilson Sonsini Goodrich & Rosati	73

2020 Rank	2019 Rank	Law Firm	Patent Owner Cases
33	29	Venable	70
34	31	Weil, Gotshal & Manges	64
35	43	Mayer Brown	64
36	40	Banner & Witcoff	64
37	29	Gonsalves Law Firm	62
38	40	Latham & Watkins	60
39	49	Wolf, Greenfield & Sacks	58
40	53	Foley & Lardner LLP	57
41	32	Paul Hastings	58
42	38	Kilpatrick Townsend & Stockton	56
43	46	Sidley Austin	55
44	48	Brooks Kushman	54
45	39	Williams & Connolly	54
46	23	Bragalone Conroy PC	53
47	50	Noroozi	51
48	43	Arnold & Porter Kaye Scholer	50
49	37	Morrison & Foerster	45
50	65	Cooley LLP	44
51	54	Desmarais LLP	44
52	50	Greenberg Traurig LLP	42
53	58	Paul Weiss Rifkind Wharton & Garrison	42
54	76	Heim, Payne & Chorush LLP	41
55	61	Durie Tangri	40
56	61	Caldwell Cassidy & Curry	39
57	105	Bunsow De Mory	38
58	68	Akin Gump Strauss Hauer & Feld	39
59	58	Dovel & Luner	39
60	70	Buchanan Ingersoll & Rooney PC	38
61	50	Polsinelli	38
62	58	Morgan Lewis & Bockius	35
63	55	Proskauer Rose	35
64	65	Steptoe & Johnson LLP	34
65	70	Norton Rose Fulbright	32

Table 7.1 - Top 100 Most Active Law Firms representing Patent Owner (Part 2)

2020 Rank	2019 Rank	Law Firm	Patent Owner Cases
66	57	Kasha Law LLC	32
67	76	White & Case	31
68	70	Winston & Strawn	30
69	78	SoCal IP Law Group	31
70	85	Friedman Suder & Cooke	30
71	97	Laurence & Phillips IP Law	29
72	91	Birch Stewart Kolasch & Birch	29
73	63	Carmichael IP	29
74	89	Shore Chan DePumpo LLP	28
75	97	Schwegman Lundberg & Woessner	28
76	34	McKool Smith	28
77	42	Ahmad Zavitsanos Anaipakos Alavi & Mensing	28
77	81	Meagher Emanuel Laks Goldberg & Liao, LLP	28
79	67	Hunton Andrews Kurth	28
80	97	Schmeiser Olsen & Watts	28
81	89	Harness Dickey & Pierce	27
82	73	Carlson Gaskey & Olds	27
83	97	Toler Law Group	26

2020 Rank	2019 Rank	Law Firm	Patent Owner Cases
84	91	Antonelli Harrington & Thompson	26
85	84	Rothwell, Figg, Ernst & Manbeck	25
86	115	McDonnell Boehnen Hulbert & Berghoff LLP	25
87	78	TechKnowledge Law Group	25
88	85	Green, Griffith & Borg-Breen LLP	24
89	105	Nixon Peabody	24
90	91	Michael Best & Friedrich	24
91	81	Orrick, Herrington & Sutcliffe	23
92	73	Haynes & Boone, LLP	23
93	148	Rabicoff Law	22
94	75	Dechert	22
95	186	Kutak Rock	22
96	168	Carlson Caspers Vandenburg & Lindquist, PA.	22
97	102	Nixon & Vanderhye	22
98	119	Crowell & Moring	22
99	85	Lewis Baach Kaufmann Middlemiss	22
100	142	Merchant & Gould	21

Table 7.2 - Top 100 Most Active Law Firms representing petitioners

2020 Rank	2019 Rank	Law Firm	Petitioner Cases
1	1	Fish & Richardson	458
2	2	Finnegan, Henderson, Farabow, Garrett & Dunner	330
3	4	Paul Hastings	278
4	3	Sterne, Kessler, Goldstein & Fox	272
5	5	Wilmer Cutler Pickering Hale and Dorr	240
6	6	Baker Botts LLP	240
7	10	Haynes & Boone, LLP	228
8	8	Cooley LLP	211
9	9	Perkins Coie	205
10	11	Kirkland & Ellis	185
11	17	Banner & Witcoff	178
12	7	Sidley Austin	173
13	12	Weil, Gotshal & Manges	155
14	26	Ropes & Gray	143
15	14	DLA Piper	141
16	20	Erise IP P.A.	135
17	13	Morgan Lewis & Bockius	136
18	15	Wilson Sonsini Goodrich & Rosati	135
19	19	Knobbe Martens Olson & Bear, LLP	125
20	21	Alston & Bird	122
21	17	Duane Morris LLP	122
22	24	Quinn Emanuel Urquhart & Sullivan	114
23	22	Kilpatrick Townsend & Stockton	106
24	25	Winston & Strawn	103
25	31	O'Melveny & Myers	99
26	27	Goodwin Procter LLP	89
27	23	Latham & Watkins	88
28	31	Jones Day	87
29	30	Orrick, Herrington & Sutcliffe	86
30	44	Sheppard Mullin Richter & Hampton	82
31	34	McDermott Will & Emery	81
32	45	Greenberg Traurig LLP	80
33	40	Klarquist Sparkman	80

2020 Rank	2019 Rank	Law Firm	Petitioner Cases
34	29	K&L Gates	80
35	37	White & Case	75
36	43	Wolf, Greenfield & Sacks	75
37	35	Covington & Burling LLP	70
38	36	Morrison & Foerster	67
39	33	Pillsbury Winthrop Shaw Pittman	65
40	16	Oblon McClelland Maier & Neustadt	65
41	27	Hunton Andrews Kurth	66
42	42	Brinks Gilson & Lione	62
43	40	Foley & Lardner LLP	61
44	48	Irell & Manella LLP	55
45	47	Sughrue Mion	56
46	37	Norton Rose Fulbright	54
47	51	Bryan Cave Leighton Paisner	51
48	80	Faegre Drinker Biddle & Reath	47
48	66	Faegre Drinker Biddle & Reath	47
49	50	Fenwick & West LLP	41
50	52	BakerHostetler	41
51	52	Polsinelli	40
52	58	Arnold & Porter Kaye Scholer	37
53	78	Husch Blackwell LLP	36
54	114	Desmarais LLP	35
55	55	Lerner David Littenberg Krumholz & Mentlik	36
56	37	Mayer Brown	36
57	91	Harness Dickey & Pierce	34
58	45	Venable	35
59	49	Akin Gump Strauss Hauer & Feld	34
60	64	Carlson Caspers Vandenberg & Lindquist, PA.	34
61	60	Merchant & Gould	32
62	66	Step toe & Johnson LLP	32
63	80	Troutman Pepper Hamilton Sanders LLP	31
64	55	Crowell & Moring	30

Table 7.2 - Top 100 Most Active Law Firms representing petitioners (Part 2)

2020 Rank	2019 Rank	Law Firm	Petitioner Cases	2020 Rank	2019 Rank	Law Firm	Petitioner Cases
65	87	Barnes & Thornburg LLP	29	83	95	Holland & Knight	19
66	100	Robins Kaplan LLP	29	84	108	Thompson Coburn LLP	19
67	74	Buchanan Ingersoll & Rooney PC	29	85	70	Wiley Rein	19
68	66	King & Spalding	28	86	58	Williams & Connolly	19
69	74	Gibson Dunn & Crutcher	27	87	73	Hill, Kertscher & Wharton, LLP	19
70	70	Hogan Lovells	27	88	87	Schiff Hardin LLP	19
71	76	Arent Fox	25	89	60	Brooks Kushman	19
72	62	Keker, Van Nest & Peters LLP	25	90	100	Shearman & Sterling	18
73	80	Shook, Hardy & Bacon	24	91	100	Reed Smith	18
74	76	Rothwell, Figg, Ernst & Manbeck	23	92	63	Baker Mckenzie	17
75	54	Locke Lord	23	93	70	McAndrews, Held & Malloy	17
76	84	Rakoczy Molino Mazzochi Siwik	22	94	108	Paul Weiss Rifkind Wharton & Garrison	17
77	125	Meunier Carlin & Curfman	21	95	114	Patterson Belknap Webb & Tyler	16
77	114	Choate Hall & Stewart	21	96	100	Cravath Swaine & Moore	17
79	87	Nixon Peabody	21	97	133	Smith Baluch	16
80	95	Vinson & Elkins	20	98	100	Gardella Grace P.A.	16
81	84	McGuireWoods	20	99	95	Farella Braun & Martel	16
82	78	McCarter & English	20	100	93	Law Office of S.J. Christine Yang	16

Table 7.3 - Top 100 Most Active Law Firms overall (representing petitioners or patent owners)

2020 Rank	2019 Rank	Law Firm	All Cases
1	1	Fish & Richardson	792
2	2	Sterne, Kessler, Goldstein & Fox	614
3	3	Finnegan, Henderson, Farabow, Garrett & Dunner	517
4	5	Baker Botts LLP	339
5	5	Paul Hastings	336
6	4	Wilmer Cutler Pickering Hale and Dorr	329
7	9	Quinn Emanuel Urquhart & Sullivan	316
8	7	Perkins Coie	316
9	10	Kirkland & Ellis	274
10	11	Knobbe Martens Olson & Bear, LLP	273
11	16	Ropes & Gray	253
12	12	Cooley LLP	255
13	15	Haynes & Boone, LLP	251
14	22	Banner & Witcoff	242
15	8	Sidley Austin	228
16	14	Weil, Gotshal & Manges	219
17	19	Irell & Manella LLP	210
18	20	Alston & Bird	207
19	18	Wilson Sonsini Goodrich & Rosati	208
20	29	Etheridge Law Group	196
21	17	Jones Day	193
22	13	Oblon McClelland Maier & Neustadt	177
23	21	Morgan Lewis & Bockius	171
24	23	Kilpatrick Townsend & Stockton	162
25	32	Erise IP P.A.	155
26	25	DLA Piper	155
27	26	Covington & Burling LLP	150
28	24	Latham & Watkins	148
29	39	Lowenstein & Weatherwax	143
30	30	Winston & Strawn	133
31	41	Wolf, Greenfield & Sacks	133
32	34	Duane Morris LLP	130

2020 Rank	2019 Rank	Law Firm	All Cases
33	49	Kramer Levin Naftalis & Frankel	130
34	44	Greenberg Traurig LLP	122
35	73	Russ August & Kabat	118
36	51	Robins Kaplan LLP	120
37	40	Foley & Lardner LLP	118
38	47	O'Melveny & Myers	119
39	60	Troutman Pepper Hamilton Sanders LLP	114
40	28	Morrison & Foerster	112
41	56	Brown Rudnick LLP	110
42	38	Davidson Berquist Jackson & Gowdey	111
43	41	Orrick, Herrington & Sutcliffe	109
44	35	Goodwin Procter LLP	110
45	63	Nelson Bumgardner Albritton PC	107
46	69	Skiermont Derby	104
47	48	White & Case	106
48	27	Venable	105
49	43	Mintz Levin Cohn Ferris Glovsky & Popeo	104
50	30	Mayer Brown	100
51	67	Sheppard Mullin Richter & Hampton	97
52	82	Devlin Law Firm	93
53	32	Hunton Andrews Kurth	94
54	68	Klarquist Sparkman	91
55	56	DiNovo Price	91
56	35	McAndrews, Held & Malloy	91
57	50	K&L Gates	91
58	54	McDermott Will & Emery	90
59	58	Arnold & Porter Kaye Scholer	87
60	45	Norton Rose Fulbright	86
61	46	Fitch, Even, Tabin & Flannery LLP	82
62	35	Ascenda Law Group	81
63	79	Desmarais LLP	79
64	54	Pillsbury Winthrop Shaw Pittman	78

Table 7.3 - Top 100 Most Active Law Firms overall (representing petitioners or patent owners) (Part 2)

2020 Rank	2019 Rank	Law Firm	All Cases
65	59	Polsinelli	78
66	60	Brooks Kushman	73
67	66	Akin Gump Strauss Hauer & Feld	73
68	51	Williams & Connolly	73
69	65	Gonsalves Law Firm	71
70	70	Brinks Gilson & Lione	68
71	75	Buchanan Ingersoll & Rooney PC	67
72	60	Sughrue Mion	69
73	71	Step toe & Johnson LLP	66
74	94	Harness Dickey & Pierce	61
75	51	Bragalone Conroy PC	60
76	74	BakerHostetler	59
77	81	Paul Weiss Rifkind Wharton & Garrison	59
78	90	Carlson Caspers Vandenburg & Lindquist, PA.	56
79	85	Bryan Cave Leighton Paisner	56
80	128	Faegre Drinker Biddle & Reath	55
80	95	Faegre Drinker Biddle & Reath	55
81	85	Merchant & Gould	53
82	88	Noroozi	52

2020 Rank	2019 Rank	Law Firm	All Cases
83	78	Crowell & Moring	52
84	71	Fenwick & West LLP	50
85	82	Lerner David Littenberg Krumholz & Mentlik	49
86	114	Heim, Payne & Chorush LLP	48
87	82	Rothwell, Figg, Ernst & Manbeck	48
88	76	Proskauer Rose	47
89	97	Nixon Peabody	45
90	146	Bunsow De Mory	43
91	92	Durie Tangri	44
92	115	Meunier Carlin & Curfman	42
93	97	Barnes & Thornburg LLP	42
94	63	McKool Smith	41
95	106	Caldwell Cassady & Curry	39
96	106	Shook, Hardy & Bacon	39
97	103	Dovel & Luner	39
98	124	Husch Blackwell LLP	37
99	120	McDonnell Boehnen Hulbert & Berghoff LLP	37
100	151	Schwegman Lundberg & Woessner	36

Top 100 Best Performing Law Firms in IPR

Looking beyond activity, we were interested to find out which firms have done a better job representing their clients. To measure the success and performance, we used the methodology and formula explained in Section 1.

We limited this analysis to only those firms that had been involved in a minimum number of IPR cases over the past five years. For the patent owner or petitioner performance, the cut-off number was 14. Any firm with less than 14 cases on each side was not included in the ranking. For overall performance, we only considered those firms with overall activity of at least 28 cases over the past five years.

If a law firm's 2019 rank is shown as blank it means the law firm was not ranked in the previous year, most likely because of insufficient activity (e.g., 15+ cases).

In terms of success, Schwegman Lundberg & Woessner and Carmichael IP ranked first and second on the patent owner side, with *Success Scores* of 99% and 97.8%, respectively. Turner Boyd ranked first on the petitioner side with a *Success Score* of 80.3%, while Merchant & Gould was ranked first overall with a *Success Score* of 78.4%.

Kramer Levin Naftalis & Frankel ranked first overall and on the patent owner side with a performance score of 100%. Sheppard Mullin Richter & Hampton ranked first on the petitioner side with a performance score of 100% performance.

Did you know?

In the last five years:

Kramer Levin ranked first as the best law firm for IPR with a performance Score of 100%. The firm was involved in a total of 130 IPR cases and obtained a *Success Score* of 76.3%

The success scores and rankings which were used as part of performance calculations, together with the complete list of top 1000 most active law firms and all their metrics have been covered in Appendix C (accompanying Excel Spreadsheet).

In tables 7.4, 7.5, and 7.6, we have summarized the top 100 best performing law firms representing patent owners, petitioners, and overall.

Table 7.4 - Top 100 Best Performing Law Firms representing Patent Owners

2020 Rank	2019 Rank	Law Firm	PO Performance Score
1	3	Kramer Levin Naftalis & Frankel	100.0%
2	11	Brown Rudnick LLP	98.8%
3	39	Proskauer Rose	89.9%
4	2	Buchanan Ingersoll & Rooney PC	89.6%
5	5	Wilson Sonsini Goodrich & Rosati	89.6%
6	23	Irell & Manella LLP	89.2%
7		Schwegman Lundberg & Woessner	88.9%
8	6	Brooks Kushman	88.7%
9	1	Carmichael IP	88.5%
10	14	Venable	88.5%
11	54	Weil, Gotshal & Manges	85.5%
12	37	Perkins Coie	85.3%
13	47	Covington & Burling LLP	85.1%
14	22	Knobbe Martens Olson & Bear, LLP	84.5%
15	41	Etheridge Law Group	82.6%
16		Bunsow De Mory	82.4%
17	45	Alston & Bird	81.4%
18	10	Desmarais LLP	81.2%
19	53	Kilpatrick Townsend & Stockton	80.6%
20		Merchant & Gould	80.2%
21	58	Dechert	79.1%
22	20	Troutman Pepper Hamilton Sanders LLP	78.9%
23	34	Davidson Berquist Jackson & Gowdey	78.2%
24	9	Foley & Lardner LLP	77.3%
25	38	Fish & Richardson	76.9%
26		Green, Griffith & Borg-Breen LLP	75.9%
27	16	Baker Botts LLP	75.9%
28	8	Mishcon de Reya	72.3%
29	49	Skiermont Derby	71.4%
30	55	Quinn Emanuel Urquhart & Sullivan	70.9%
31	33	Wilmer Cutler Pickering Hale and Dorr	70.1%
32	17	Wolf, Greenfield & Sacks	69.8%
33	32	Polsinelli	69.5%

2020 Rank	2019 Rank	Law Firm	PO Performance Score
34	27	O'Melveny & Myers	68.8%
35	25	Arnold & Porter Kaye Scholer	67.9%
36	43	SoCal IP Law Group	67.3%
37	59	Sterne, Kessler, Goldstein & Fox	66.7%
38	40	Orrick, Herrington & Sutcliffe	66.5%
39	15	White & Case	66.5%
40		Eckert Seamans Cherin & Mellott	66.1%
41	26	Williams & Connolly	65.7%
42		Nixon & Vanderhye	65.2%
43	46	Dovel & Luner	64.4%
44	42	Sidley Austin	64.4%
45	7	Banner & Witcoff	63.8%
46	84	Step toe & Johnson LLP	62.4%
47	65	Finnegan, Henderson, Farabow, Garrett & Dunner	62.3%
48	73	Noroozi	62.1%
49	31	Kirkland & Ellis	61.9%
50	36	Lowenstein & Weatherwax	61.5%
51	85	Michael Best & Friedrich	61.3%
52	80	Winston & Strawn	61.1%
53	101	Russ August & Kabat	60.8%
54	89	Mayer Brown	59.9%
55	64	Schmeiser Olsen & Watts	59.3%
56	72	Devlin Law Firm	59.1%
57	97	Nelson Bumgardner Albritton PC	58.7%
58	48	Robins Kaplan LLP	58.4%
59	21	Norton Rose Fulbright	58.0%
60	63	Cooley LLP	57.9%
61	82	Haynes & Boone, LLP	56.9%
62		McDonnell Boehnen Hulbert & Berghoff LLP	56.7%
63	87	Ascenda Law Group	56.7%
64	13	McKool Smith	56.2%
65	69	DiNovo Price	55.6%

Table 7.4 - Top 100 Best Performing Law Firms representing Patent Owners (Part 2)

2020 Rank	2019 Rank	Law Firm	PO Performance Score
66	104	Latham & Watkins	55.2%
67	66	Mintz Levin Cohn Ferris Glovsky & Popeo	54.8%
68	81	Jones Day	54.8%
69	71	Birch Stewart Kolasch & Birch	54.4%
70	44	Barclay Damon	53.9%
71	74	Durie Tangri	53.1%
72	30	Fitch, Even, Tabin & Flannery LLP	52.9%
73	83	Heim, Payne & Chorush LLP	52.5%
74	51	Antonelli Harrington & Thompson	51.7%
75	95	Akin Gump Strauss Hauer & Feld	50.9%
76	99	Paul Weiss Rifkind Wharton & Garrison	50.7%
77	79	Ropes & Gray	50.7%
78	62	Greenberg Traurig LLP	50.4%
79	70	Paul Hastings	50.4%
80	35	Lewis Baach Kaufmann Middlemiss	49.9%
81	75	Rothwell, Figg, Ernst & Manbeck	49.5%
82	96	Kasha Law LLC	49.1%
83	102	Oblon McClelland Maier & Neustadt	48.7%

2020 Rank	2019 Rank	Law Firm	PO Performance Score
84	92	Gonsalves Law Firm	48.6%
85	67	Friedman Suder & Cooke	48.6%
86	78	McAndrews, Held & Malloy	48.5%
87	91	Laurence & Phillips IP Law	47.7%
88	98	Morrison & Foerster	47.5%
89	76	Hunton Andrews Kurth	46.9%
90	93	Carlson Gaskey & Olds	46.2%
91	113	Morgan Lewis & Bockius	45.2%
92		Capital Legal Group	45.0%
93	56	Bragalone Conroy PC	44.9%
94	85	BakerHostetler	44.2%
95	77	Crowell & Moring	44.0%
96		Toler Law Group	43.5%
97		Reising Ethington	43.4%
98	116	Caldwell Cassady & Curry	43.0%
99	112	Nixon Peabody	42.9%
100	18	Ahmad Zavitsanos Anaipakos Alavi & Mensing	42.9%

Table 7.5 - Top 100 Best Performing Law Firms representing petitioners

2020 Rank	2019 Rank	Law Firm	Petitioner Performance Score
1	2	Sheppard Mullin Richter & Hampton	100.0%
2	17	Ropes & Gray	95.5%
3	11	Duane Morris LLP	94.7%
4	15	Wolf, Greenfield & Sacks	94.0%
5	13	Morgan Lewis & Bockius	93.7%
6	7	Merchant & Gould	92.7%
7	14	Quinn Emanuel Urquhart & Sullivan	91.4%
8	5	Husch Blackwell LLP	90.7%
9	3	Polsinelli	89.3%
10	26	Winston & Strawn	89.1%
11	22	Perkins Coie	88.8%
12	6	Orrick, Herrington & Sutcliffe	87.0%
13	12	Haynes & Boone, LLP	86.6%
14	48	Sidley Austin	86.4%
15		Holland & Knight	85.7%
16	56	Norton Rose Fulbright	85.1%
17		Thompson Coburn LLP	84.7%
18	9	Hogan Lovells	84.2%
19	1	Turner Boyd	83.8%
20	18	Weil, Gotshal & Manges	83.6%
21	16	Hunton Andrews Kurth	82.8%
22	42	Baker Botts LLP	81.8%
23	32	Finnegan, Henderson, Farabow, Garrett & Dunner	81.8%
24	23	Covington & Burling LLP	79.7%
25	38	Cooley LLP	79.2%
26	60	Lerner David Littenberg Krumholz & Mentlik	78.6%
27	81	King & Spalding	78.4%
28	34	Fish & Richardson	78.3%
29	8	Crowell & Moring	73.7%
30		Troutman Pepper Hamilton Sanders LLP	72.6%
31	30	Paul Hastings	72.0%
32	41	Sterne, Kessler, Goldstein & Fox	71.2%
33	29	McDermott Will & Emery	70.8%

2020 Rank	2019 Rank	Law Firm	Petitioner Performance Score
34	19	Alston & Bird	70.7%
35	52	Akin Gump Strauss Hauer & Feld	70.2%
36	84	Wiley Rein	69.9%
37	62	Gibson Dunn & Crutcher	68.3%
38	46	BakerHostetler	67.1%
39		Reed Smith	66.9%
40	43	Mayer Brown	66.8%
41	28	Erise IP P.A.	66.8%
42	45	Klarquist Sparkman	66.7%
43	55	Goodwin Procter LLP	66.5%
44	70	Keker, Van Nest & Peters LLP	66.3%
45	75	DLA Piper	64.4%
46	57	Jones Day	64.3%
47	64	Paul Weiss Rifkind Wharton & Garrison	64.0%
48	73	Robins Kaplan LLP	64.0%
49	58	Wilmer Cutler Pickering Hale and Dorr	63.2%
50	50	Foley & Lardner LLP	63.0%
51	69	Kilpatrick Townsend & Stockton	63.0%
52	72	Jeffer Mangels Butler & Mitchell LLP	62.2%
53	20	Venable	62.2%
54	21	Kirkland & Ellis	62.2%
55	67	Faegre Drinker Biddle & Reath	61.5%
55	33	Faegre Drinker Biddle & Reath	61.5%
56	59	Banner & Witcoff	60.7%
57	37	Greenberg Traurig LLP	60.6%
58	83	Oblon Mcclelland Maier & Neustadt	60.2%
59	27	Latham & Watkins	59.9%
60	35	Schiff Hardin LLP	59.8%
61	54	O'Melveny & Myers	58.5%
62	76	Nixon Peabody	57.9%
63	53	Irell & Manella LLP	57.8%
64	51	Knobbe Martens Olson & Bear, LLP	57.5%
65	31	Rothwell, Figg, Ernst & Manbeck	57.2%
66	65	Wilson Sonsini Goodrich & Rosati	56.8%

Table 7.5 - Top 100 Best Performing Law Firms representing petitioners (Part 2)

2020 Rank	2019 Rank	Law Firm	Petitioner Performance Score
67	47	Morrison & Foerster	56.4%
68	82	Sughrue Mion	55.4%
69	80	K&L Gates	53.9%
70	39	McGuireWoods	53.7%
71	79	Shook, Hardy & Bacon	53.7%
72	74	White & Case	52.5%
73	86	Carlson Caspers Vandenberg & Lindquist, PA.	52.5%
74	77	Rakoczy Molino Mazzochi Siwik	52.1%
75	88	Step toe & Johnson LLP	52.0%
76	89	Fenwick & West LLP	51.7%
77		Barnes & Thornburg LLP	51.1%
78	91	Arnold & Porter Kaye Scholer	50.6%
79	92	Brinks Gilson & Lione	50.4%
80	94	Pillsbury Winthrop Shaw Pittman	50.4%

2020 Rank	2019 Rank	Law Firm	Petitioner Performance Score
81		Choate Hall & Stewart	49.9%
82	63	Axinn Veltrop & Harkrider	49.5%
83	87	Locke Lord	49.2%
84	97	Bryan Cave Leighton Paisner	48.6%
85	85	Harness Dickey & Pierce	48.2%
86		Buchanan Ingersoll & Rooney PC	48.1%
87	78	McCarter & English	47.9%
88	95	Cravath Swaine & Moore	47.2%
89	93	Williams & Connolly	46.6%
90		Arent Fox	46.3%
91		Shearman & Sterling	45.6%
92	49	Brooks Kushman	45.4%
93	98	Gardella Grace P.A.	44.4%

Table 7.6 - Top 100 Best Performing Law Firms overall (Representing petitioners or patent owners)

2020 Rank	2019 Rank	Law Firm	Overall Performance Score
1	1	Kramer Levin Naftalis & Frankel	100.0%
2	7	Duane Morris LLP	99.2%
3	3	Brown Rudnick LLP	98.9%
4	2	Sheppard Mullin Richter & Hampton	98.3%
5	15	Wolf, Greenfield & Sacks	98.3%
6	29	Weil, Gotshal & Manges	94.9%
7	27	Perkins Coie	94.9%
8	39	Covington & Burling LLP	93.1%
9	6	Merchant & Gould	91.7%
10	17	Haynes & Boone, LLP	89.8%
11	51	Winston & Strawn	88.7%
12	37	Proskauer Rose	88.3%
13	8	Polsinelli	88.0%
14	38	Etheridge Law Group	87.4%
15	69	Sidley Austin	86.7%
16	9	Orrick, Herrington & Sutcliffe	85.1%
17	36	Quinn Emanuel Urquhart & Sullivan	85.1%
18	13	Venable	83.3%
19	47	Baker Botts LLP	83.3%
20	61	Lerner David Littenberg Krumholz & Mentlik	83.1%
21	43	Troutman Pepper Hamilton Sanders LLP	82.7%
22	28	Irell & Manella LLP	81.5%
23	19	Hogan Lovells	80.6%
24	46	Fish & Richardson	80.0%
25	25	Davidson Berquist Jackson & Gowdey	79.9%
26	53	Morgan Lewis & Bockius	79.0%
27		Michael Best & Friedrich	78.6%
28	34	Alston & Bird	78.4%
29		Reed Smith	77.9%
30	59	Norton Rose Fulbright	77.4%
31		McDonnell Boehnen Hulbert & Berghoff LLP	76.9%

2020 Rank	2019 Rank	Law Firm	Overall Performance Score
32	50	Finnegan, Henderson, Farabow, Garrett & Dunner	76.2%
33	54	Cooley LLP	76.1%
34	41	Knobbe Martens Olson & Bear, LLP	72.6%
35	60	Sterne, Kessler, Goldstein & Fox	72.6%
36	44	Klarquist Sparkman	72.0%
37	75	Kilpatrick Townsend & Stockton	71.7%
38	23	McKool Smith	70.9%
39	4	Buchanan Ingersoll & Rooney PC	70.7%
40	33	Hunton Andrews Kurth	70.5%
41	35	Foley & Lardner LLP	70.5%
42	10	Desmarais LLP	69.6%
43	31	Wilson Sonsini Goodrich & Rosati	69.6%
44		Shook, Hardy & Bacon	69.5%
45	42	Erise IP P.A.	67.8%
46	48	Paul Hastings	67.8%
47	56	Ropes & Gray	67.5%
48	70	Skiermont Derby	67.1%
49	57	Wilmer Cutler Pickering Hale and Dorr	67.1%
50	32	McDermott Will & Emery	66.6%
51	26	Kirkland & Ellis	65.2%
52		Heim, Payne & Chorush LLP	65.1%
53	45	Banner & Witcoff	63.7%
54	80	Mayer Brown	63.3%
55	18	Brooks Kushman	62.4%
56	65	O'Melveny & Myers	62.4%
57	78	Noroozi	61.5%
58		Faegre Drinker Biddle & Reath	60.4%
58	16	Faegre Drinker Biddle & Reath	60.4%
59	30	Lowenstein & Weatherwax	60.3%
60	89	Goodwin Procter LLP	58.4%
61	52	Robins Kaplan LLP	58.4%
62		Russ August & Kabat	57.8%

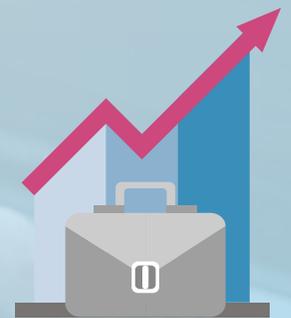
Table 7.6 - Top 100 Best Performing Law Firms overall (Representing petitioners or patent owners) (Part 2)

2020 Rank	2019 Rank	Law Firm	Overall Performance Score
63	62	Durie Tangri	57.4%
64	84	Akin Gump Strauss Hauer & Feld	57.4%
65	77	Latham & Watkins	57.3%
66	92	DLA Piper	57.1%
67	79	BakerHostetler	56.9%
68	73	Devlin Law Firm	56.6%
69	97	Steptoe & Johnson LLP	56.5%
70	24	Barnes & Thornburg LLP	56.1%
71	81	Jones Day	56.1%
72	94	Nelson Bumgardner Albritton PC	55.1%
73	55	Greenberg Traurig LLP	54.6%
74	22	Crowell & Moring	54.6%
75	76	Williams & Connolly	54.5%
76	72	Arnold & Porter Kaye Scholer	53.6%
77	95	Carlson Caspers Vandenburg & Lindquist, PA.	53.3%
78	88	Ascenda Law Group	52.1%
79	67	DiNovo Price	52.0%
80	91	Paul Weiss Rifkind Wharton & Garrison	51.8%
81	64	White & Case	51.7%

2020 Rank	2019 Rank	Law Firm	Overall Performance Score
82	85	Morrison & Foerster	51.6%
83	71	Mintz Levin Cohn Ferris Glovsky & Popeo	51.2%
84	21	Fitch, Even, Tabin & Flannery LLP	50.9%
85	100	Oblon McClelland Maier & Neustadt	50.6%
86	74	Harness Dickey & Pierce	50.3%
87	96	K&L Gates	50.1%
88	63	Rothwell, Figg, Ernst & Manbeck	49.9%
89	83	McAndrews, Held & Malloy	49.3%
90	101	Sughrue Mion	48.8%
91	90	Gonsalves Law Firm	48.2%
92	106	Fenwick & West LLP	47.7%
93	104	Pillsbury Winthrop Shaw Pittman	47.4%
94	103	Nixon Peabody	46.6%
95	102	Brinks Gilson & Lione	46.6%
96	58	Bragalone Conroy PC	46.0%
97	107	Bryan Cave Leighton Paisner	45.5%
98	105	Meunier Carlin & Curfman	45.5%
99	93	Kasha Law LLC	45.3%
100		Caldwell Cassidy & Curry	44.4%

Section 8

Performance of Attorneys



Performance of Attorneys

In this last section, we will analyze and review the activity, success and the performance of attorneys, as the key players in IPR. We will start by reviewing the activity level then we will look at success and performance to identify the *Most Successful* and the *Best Performing* attorneys representing each side.

Our source for assigning a case is PTAB documents. We rely only on the documents issued by PTAB (e.g., Institution Decision, Final Written Decision or Mandatory Notices and Power of Attorney documents) to see who has been involved in a case. Other than using computer algorithms for cleaning and normalizing the names based on many variables, such as emails, firm, etc., we have also reached out to every attorney named in this report personally. We asked

them to review their public profiles on Patexia and give us an update, if any cases were missing from their profiles.

As a reminder, all patent attorneys have a public profile on Patexia that they can access and claim by logging in using their current law firm email as their User ID (<https://www.patexia.com>).

Attorneys have the ability to add cases, which then will be reviewed and verified by our internal data team. They can provide some descriptions about their practice and what makes them different or. Our mission is bring transparency and one way to accomplish that is to provide the most accurate analytics and rankings in various areas of IP.

Most Active Attorneys in IPR

Overall, 4,983 attorneys represented either the patent owners or petitioners in one of the 7,708 IPR cases filed over the last five years. This includes 3,039 attorneys representing petitioners and 3,335 attorneys representing patent owners, with some attorneys active on both sides.

On average, attorneys representing petitioners and patent owners have been involved in eight and seven cases, respectively. However, our study found that a small handful of attorneys have been extremely active, representing their clients in a large percentage of all cases.

For the fourth year in a row, Naveen Modi from Paul Hastings is at the top with 316 IPR cases overall. This includes 264 cases representing petitioners and 52 cases representing patent owners. The top 10 attorneys have collectively been involved in 2,058 cases.

On the petitioner side, Naveen Modi is again at the top with 264 cases. On the patent owner side, Ryan S. Loveless from Loveless Law Group, leads with 190 cases.

Did you know?

In the last five years:

4,983 attorneys have worked on representing one of the parties involved in **7,708 cases**.

Naveen Modi from Paul Hastings is the most active attorney overall with 316 IPR challenges.

Ryan S. Loveless from Loveless Law Group is the most active on the Patent Owner side with 190 cases.

Top 100 Most Active Attorneys

In tables 8.1, 8.2, and 8.3, we have summarized the top 100 most active attorneys

representing patent owners, petitioners, and overall.

Table 8.1 - Top 100 most active attorneys representing patent owners

2020 Rank	2019 Rank	Attorney	Law Firm	Patent Owner Cases
1	1	Ryan S Loveless	Etheridge Law Group	190
2	38	Brett A Mangrum	Etheridge Law Group	180
3	4	Jason Daniel Eisenberg	Sterne, Kessler, Goldstein & Fox	155
4	12	James L Etheridge	Etheridge Law Group	149
5	17	Jeffrey Huang	Etheridge Law Group	144
6	3	Kenneth James Weatherwax	Lowenstein & Weatherwax	143
7	8	James R Hannah	Kramer Levin Naftalis & Frankel	122
8	15	Jeffrey H Price	Kramer Levin Naftalis & Frankel	114
9	11	Walter K. Renner	Fish & Richardson	110
10	8	James M Glass	Quinn Emanuel Urquhart & Sullivan	104
11	4	Robert G Sterne	Sterne, Kessler, Goldstein & Fox	102
12	47	Timothy Devlin	Devlin Law Firm	92
13	7	Wayne Michael Helge	Davidson Berquist Jackson & Gowdey	94
14	116	Nathan Lowenstein	Lowenstein & Weatherwax	89
15	16	Peter Lambrianakos	Fabricant LLP	90
16	46	Parham Hendifar	Lowenstein & Weatherwax	87
17	116	Edward Hsieh	Lowenstein & Weatherwax	85
18	52	Steven W Hartsell	Skiermont Derby	80
19	97	Patrick G. Maloney	Lowenstein & Weatherwax	79
20		Tim R Seeley	Eastgate IP	83
21	58	Alexander E Gasser	Skiermont Derby	79
22	116	Neil Alan Rubin	Russ August & Kabat	79
23	18	Dorothy P Whelan	Fish & Richardson	80
24	22	Vincent James Rubino III	Fabricant LLP	80
25	2	Tarek N Fahmi	Ascenda Law Group	80
26	131	Bridget A. Smith	Lowenstein & Weatherwax	77
27	13	Sean D Burdick	Burdick Patents, P.A.	79

Table 8.1 - Top 100 most active attorneys representing patent owners (Part 2)

2020 Rank	2019 Rank	Attorney	Law Firm	Patent Owner Cases
28	43	Matthew C Juren	Nelson Bumgardner Albritton PC	77
29	18	Michael J Kane	Fish & Richardson	76
30	14	Gregory Stephen Donahue	DiNovo Price	75
31	172	Jason C. Linger	Lowenstein & Weatherwax	69
32	29	Cyrus A Morton	Robins Kaplan LLP	72
33	10	Nicholas T Peters	Fitch, Even, Tabin & Flannery LLP	70
34	40	Barry J Bumgardner	Nelson Bumgardner Albritton PC	68
35	30	Aldo Noto	Davidson Berquist Jackson & Gowdey	68
36	33	Michael T Renaud	Mintz Levin Cohn Ferris Glovsky & Popeo	66
37	22	William A Meunier	Mintz Levin Cohn Ferris Glovsky & Popeo	65
38	20	Gregory J Gonsalves	Gonsalves Law Firm	62
39	27	Jon E Wright	Sterne, Kessler, Goldstein & Fox	59
40	140	Kent N. Shum	Russ August & Kabat	57
41	43	James T Wilson	Davidson Berquist Jackson & Gowdey	57
42	34	David L Cavanaugh	Wilmer Cutler Pickering Hale and Dorr	57
43	28	Michael J Wise	Perkins Coie	55
44	31	Scott A McKeown	Ropes & Gray	54
45	51	Joseph E. Mutschelknaus	Sterne, Kessler, Goldstein & Fox	55
46	35	Eugene Goryunov	Haynes & Boone, LLP	53
47	61	Michael T Hawkins	Fish & Richardson	52
48	47	Michael T Rosato	Wilson Sonsini Goodrich & Rosati	52
49	25	Naveen Modi	Paul Hastings	52
50	90	Joseph M. Paunovich	Quinn Emanuel Urquhart & Sullivan	51
51	90	Richard F Giunta	Wolf, Greenfield & Sacks	51
52	76	Robert G Pluta	Mayer Brown	50
53	63	David M Maiorana	Jones Day	50

Table 8.1 - Top 100 most active attorneys representing patent owners (Part 3)

2020 Rank	2019 Rank	Attorney	Law Firm	Patent Owner Cases
54	40	Joshua L. Goldberg	Finnegan, Henderson, Farabow, Garrett & Dunner	50
55	56	Jeremy J. Monaldo	Fish & Richardson	50
56	35	Christopher T. L. Douglas	Alston & Bird	50
57	83	Amanda Streff Bonner	Mayer Brown	49
58	63	Enrique W Iturralde	Fabricant LLP	49
59	35	Joseph P Hamilton	Perkins Coie	50
60	54	Gabrielle E Higgins	Ropes & Gray	48
61	69	Brian E Mack	Quinn Emanuel Urquhart & Sullivan	48
62	76	Sarah E Spires	Skiermont Derby	46
63	26	Lori Ann Gordon	King & Spalding	48
64	90	Joshua R Nightingale	Jones Day	46
65	40	Scott Patrick McBride	McAndrews, Held & Malloy	47
66	49	Christopher M Scharff	McAndrews, Held & Malloy	47
67	218	Marc A. Fenster	Russ August & Kabat	44
68	24	Timothy Paul Maloney	Fitch, Even, Tabin & Flannery LLP	45
69	52	Mark D Rowland	Ropes & Gray	45
70	162	Chang Jay Y Chung	Russ August & Kabat	43
71	126	S Benjamin Pleune	Alston & Bird	44
72	69	Kayvan B. Noroozi	Noroozi	44
73	97	Andrew G DiNovo	DiNovo Price	44
74	31	Holly J Atkinson	Ascenda Law Group	45
75	83	Jonathan M Strang	Latham & Watkins	43
76	83	Paul B. Henkelmann	Fitch, Even, Tabin & Flannery LLP	44
77	63	Justin J Oliver	Venable	44
78		Flavio M Rose	Lowenstein & Weatherwax	41
79	111	Saqib J Siddiqui	Mayer Brown	42

Table 8.1 - Top 100 most active attorneys representing patent owners (Part 4)

2020 Rank	2019 Rank	Attorney	Law Firm	Patent Owner Cases
80	69	Adam R Brausa	Durie Tangri	43
81	104	Brent N Bumgardner	Nelson Bumgardner Albritton PC	42
82	76	Elizabeth S Weiswasser	Weil, Gotshal & Manges	41
83	68	S.H. Michael Kim	Kim & Stewart LLP	43
84	60	Christopher Ricciuti	Oblon Mcclelland Maier & Neustadt	41
85	69	Anish R. Desai	Weil, Gotshal & Manges	40
86	83	Hong Zhong	Irell & Manella LLP	39
87	90	Lisa M. Mandrusiak	Oblon Mcclelland Maier & Neustadt	41
88	90	Nicholas C Kliever	Buether Joe & Counselors, LLC	40
89	97	Matthew C Phillips	Laurence & Phillips IP Law	39
90	61	Kevin K McNish	McNish PLLC	39
90	97	David B Cochran	Jones Day	38
90	69	Joseph M Sauer	Jones Day	38
93	69	Matthew A Argenti	Wilson Sonsini Goodrich & Rosati	39
94	126	Alfred R. Fabricant	Fabricant LLP	38
94	21	Justin B Kimble	Bragalone Conroy PC	39
96	218	Reza Mirzaie	Russ August & Kabat	37
97	111	W Todd Baker	Oblon Mcclelland Maier & Neustadt	39
98	107	Matthew W Johnson	Jones Day	37
99	50	Timothy W Riffe	Fish & Richardson	38
99	126	Sean A. Luner	Dovel & Luner	38

Table 8.2 - Top 100 most active attorneys representing petitioners

2020 Rank	2019 Rank	Attorney	Law Firm	Petitioner Cases
1	1	Naveen Modi	Paul Hastings	264
2	2	Walter K. Renner	Fish & Richardson	199
3	3	Joseph E Palys	Paul Hastings	192
4	18	Frederic Maxwell Meeker	Banner & Witcoff	132
5	5	Heidi L Keefe	Cooley LLP	133
6	7	David L McCombs	Haynes & Boone, LLP	122
7	9	Joshua L. Goldberg	Finnegan, Henderson, Farabow, Garrett & Dunner	112
8	4	David L Cavanaugh	Wilmer Cutler Pickering Hale and Dorr	112
9	20	Bradley C Wright	Banner & Witcoff	106
10	14	Brian W Oaks	Baker Botts LLP	103
11	8	Joseph A Micallef	Sidley Austin	103
12	12	Michael T Rosato	Wilson Sonsini Goodrich & Rosati	98
13	13	Jeremy J. Lang	Orrick, Herrington & Sutcliffe	97
14	10	Eugene Goryunov	Haynes & Boone, LLP	93
15	11	Andrew C Mace	Cooley LLP	87
16	16	Eliot D Williams	Baker Botts LLP	87
17	26	Michael D Specht	Sterne, Kessler, Goldstein & Fox	85
18	33	Gregory S Arovos	Kirkland & Ellis	82
19	15	Scott A McKeown	Ropes & Gray	80
20	21	Jeremy J. Monaldo	Fish & Richardson	80
21	17	Michael T Hawkins	Fish & Richardson	80
22	31	James M Heintz	DLA Piper	77
23	74	Erika H. Arner	Finnegan, Henderson, Farabow, Garrett & Dunner	76
24	18	Eric A Buresh	Erise IP P.A.	77
25	37	James M Glass	Quinn Emanuel Urquhart & Sullivan	70
26	22	Anish R. Desai	Weil, Gotshal & Manges	71
27	60	Blair A Silver	Banner & Witcoff	67
28	22	Donald R Steinberg	Wilmer Cutler Pickering Hale and Dorr	69
29	50	Arvind Jairam	Paul Hastings	66
30	89	James L Davison	Business Consulting Services	66
31	41	Richard F Giunta	Wolf, Greenfield & Sacks	67
32	26	Roberto J Devoto	Fish & Richardson	65
33	31	Timothy W Riffe	Fish & Richardson	65

Table 8.2 - Top 100 most active attorneys representing petitioners (Part 2)

2020 Rank	2019 Rank	Attorney	Law Firm	Petitioner Cases
34	37	Dion M Bregman	Morgan Lewis & Bockius	65
35	41	Andrew S Ehmke	Haynes & Boone, LLP	64
36	26	Benjamin E Weed	K&L Gates	64
37	64	Cory C. Bell	Finnegan, Henderson, Farabow, Garrett & Dunner	61
38	30	Patrick J. Bisenius	Fish & Richardson	63
39	35	Lionel M Lavenue	Finnegan, Henderson, Farabow, Garrett & Dunner	62
40	36	Patrick D McPherson	Duane Morris LLP	62
41	92	Adam P Seitz	Erise IP P.A.	58
42	45	Chetan R. Bansal	Paul Hastings	59
43	64	Jonathan M Strang	Latham & Watkins	58
44	43	Theodore M Foster	Haynes & Boone, LLP	58
45	25	Bing Ai	Perkins Coie	59
46	33	Adrian C. Percer	Weil, Gotshal & Manges	58
47	37	Gregory P Huh	Haynes & Boone, LLP	57
48	50	Andrew Ryan Sommer	Greenberg Traurig LLP	57
49	72	Matthew W Johnson	Jones Day	56
50	58	Stuart A. Nelson	Fish & Richardson	56
51	180	John R Hutchins	Banner & Witcoff	54
52	60	Christopher T. L. Douglas	Alston & Bird	55
53	43	Daniel Zeilberger	Paul Hastings	54
54	74	Todd M Siegel	Klarquist Sparkman	51
55	180	Jason A. Fitzsimmons	Sterne, Kessler, Goldstein & Fox	50
56	37	Lori Ann Gordon	King & Spalding	51
57	29	Phillip E Morton	Cooley LLP	51
58	262	Daniel E Yonan	Sterne, Kessler, Goldstein & Fox	49
59	55	Thomas A Rozylowicz	Fish & Richardson	50
59	134	Paul R. Hart	Erise IP P.A.	49
61	45	Brian E Ferguson	Weil, Gotshal & Manges	50
62	57	Hersh H Mehta	Morgan Lewis & Bockius	48
63	64	Scott M Kelly	Banner & Witcoff	48
64	85	Quadeer A. Ahmed	Paul Hastings	47
65	55	Xin-Yi Zhou	O'Melveny & Myers	48
66	60	David M Tennant	White & Case	47

Table 8.2 - Top 100 most active attorneys representing petitioners (Part 3)

2020 Rank	2019 Rank	Attorney	Law Firm	Petitioner Cases
67	123	Heath J Briggs	Greenberg Traurig LLP	46
68	6	Jeffrey P Kushan	Sidley Austin	46
69	53	William H Mandir	Sughrue Mion	47
70	48	Steven W Parmelee	Wilson Sonsini Goodrich & Rosati	46
71	74	Joseph J Richetti	Bryan Cave Leighton Paisner	46
72	72	Phillip W Citroen	Paul Hastings	45
73	107	Andrew Moerke Mason	Klarquist Sparkman	44
74	79	Gabrielle E Higgins	Ropes & Gray	44
75	134	Nicholas J. Whilt	O’Melveny & Myers	43
76	68	John C. Phillips	Fish & Richardson	43
77	92	George H Guy III	Baker Botts LLP	43
78	60	Jason A Engel	K&L Gates	44
79		David A. Garr	Covington & Burling LLP	42
80		Jonathan R Bowser	Haynes & Boone, LLP	41
81	79	Martin R Bader	Sheppard Mullin Richter & Hampton	42
82	79	Kim H Leung	Fish & Richardson	40
83	123	David L. Holt	Fish & Richardson	40
84	24	Robert Steinberg	Latham & Watkins	41
85	100	S Benjamin Pleune	Alston & Bird	40
86	49	Jon S Baughman	Paul Weiss Rifkind Wharton & Garrison	41
87	79	Stephen Sandor Korniczky	Sheppard Mullin Richter & Hampton	41
88	74	James P Murphy	Polsinelli	40
89	85	Bradford A Cangro	Morgan Lewis & Bockius	41
90	115	Christopher J Tyson	Duane Morris LLP	39
91	64	David M O’Dell	Haynes & Boone, LLP	39
92	100	Theodoros Konstantakopoulos	Desmarais LLP	38
93	79	Randy J Pritzker	Wolf, Greenfield & Sacks	39
94	239	Ching-Lee Fukuda	Sidley Austin	37
95	68	Jason Daniel Eisenberg	Sterne, Kessler, Goldstein & Fox	38
96	100	Kevin J. Patariu	Perkins Coie	38
97	79	Thomas A Broughan III	Sidley Austin	37
98	115	Nicholas W Stephens	Fish & Richardson	37
99	123	Christopher M Pepe	Weil, Gotshal & Manges	37
100	92	John Christopher Kappos	O’Melveny & Myers	37

Table 8.3 - Top 100 Most Active Attorneys overall (representing petitioners or patent owners)

2020 Rank	2019 Rank	Attorney	Law Firm	All Cases
1	1	Naveen Modi	Paul Hastings	316
2	2	Walter K. Renner	Fish & Richardson	309
3	3	Joseph E Palys	Paul Hastings	216
4	7	Jason Daniel Eisenberg	Sterne, Kessler, Goldstein & Fox	193
5	18	Ryan S Loveless	Etheridge Law Group	190
6	111	Brett A Mangrum	Etheridge Law Group	180
7	9	James M Glass	Quinn Emanuel Urquhart & Sullivan	174
8	4	David L Cavanaugh	Wilmer Cutler Pickering Hale and Dorr	169
9	5	Joshua L. Goldberg	Finnegan, Henderson, Farabow, Garrett & Dunner	162
10	41	James L Etheridge	Etheridge Law Group	149
11	12	Michael T Rosato	Wilson Sonsini Goodrich & Rosati	150
12	14	Heidi L Keefe	Cooley LLP	148
13	55	Jeffrey Huang	Etheridge Law Group	144
14	21	Kenneth James Weatherwax	Lowenstein & Weatherwax	143
15	6	Eugene Goryunov	Haynes & Boone, LLP	146
16	11	Scott A McKeown	Ropes & Gray	134
17	61	Frederic Maxwell Meeker	Banner & Witcoff	133
18	15	David L McCombs	Haynes & Boone, LLP	131
19	17	Michael T Hawkins	Fish & Richardson	132
20	22	Jeremy J. Monaldo	Fish & Richardson	130
21	43	Bradley C Wright	Banner & Witcoff	122
22	29	Brian W Oaks	Baker Botts LLP	123
23	33	James R Hannah	Kramer Levin Naftalis & Frankel	123
24	13	Joseph A Micallef	Sidley Austin	120
25	36	Richard F Giunta	Wolf, Greenfield & Sacks	118
26	45	Jeffrey H Price	Kramer Levin Naftalis & Frankel	118
27	25	Eliot D Williams	Baker Botts LLP	117
28	25	Anish R. Desai	Weil, Gotshal & Manges	111
29	15	Robert G Sterne	Sterne, Kessler, Goldstein & Fox	111
30	30	Christopher T. L. Douglas	Alston & Bird	105
31	31	Michael D Specht	Sterne, Kessler, Goldstein & Fox	104
32	25	Dorothy P Whelan	Fish & Richardson	103
33	58	James L Davison	Business Consulting Services	102
34	24	Timothy W Riffe	Fish & Richardson	103

Table 8.3 - Top 100 Most Active Attorneys overall (representing petitioners or patent owners) (Part 2)

2020 Rank	2019 Rank	Attorney	Law Firm	All Cases
35	53	Jonathan M Strang	Latham & Watkins	101
36	23	Wayne Michael Helge	Davidson Berquist Jackson & Gowdey	103
37	81	Erika H. Arner	Finnegan, Henderson, Farabow, Garrett & Dunner	96
38	20	Lori Ann Gordon	King & Spalding	99
39	38	Jeremy J. Lang	Orrick, Herrington & Sutcliffe	97
40	125	Timothy Devlin	Devlin Law Firm	93
41	33	Michael J Kane	Fish & Richardson	96
42	64	Cyrus A Morton	Robins Kaplan LLP	95
43	61	Matthew W Johnson	Jones Day	93
44	52	Roberto J Devoto	Fish & Richardson	93
45	48	Peter Lambrianakos	Fabricant LLP	94
46	45	Gabrielle E Higgins	Ropes & Gray	92
47	261	Nathan Lowenstein	Lowenstein & Weatherwax	89
48	53	Vincent James Rubino III	Fabricant LLP	91
49	36	Andrew C Mace	Cooley LLP	90
50	120	Parham Hendifar	Lowenstein & Weatherwax	87
51	38	Adrian C. Percer	Weil, Gotshal & Manges	89
52	261	Edward Hsieh	Lowenstein & Weatherwax	85
53	43	Dion M Bregman	Morgan Lewis & Bockius	88
54	209	Bridget A. Smith	Lowenstein & Weatherwax	84
55	58	Jon E Wright	Sterne, Kessler, Goldstein & Fox	85
56	74	S Benjamin Pleune	Alston & Bird	84
57	83	Gregory S Arovas	Kirkland & Ellis	82
58	252	Neil Alan Rubin	Russ August & Kabat	81
59	74	James M Heintz	DLA Piper	81
60	142	Alexander E Gasser	Skiermont Derby	80
61	137	Steven W Hartsell	Skiermont Derby	80
62	221	Patrick G. Maloney	Lowenstein & Weatherwax	79
63		Tim R Seeley	Eastgate IP	83
64	61	Bing Ai	Perkins Coie	81
65	18	Tarek N Fahmi	Ascenda Law Group	81
66	102	Cory C. Bell	Finnegan, Henderson, Farabow, Garrett & Dunner	78
67	58	Eric A Buresh	Erise IP P.A.	78

Table 8.3 - Top 100 Most Active Attorneys overall (representing petitioners or patent owners) (Part 3)

2020 Rank	2019 Rank	Attorney	Law Firm	All Cases
68	48	Sean D Burdick	Burdick Patents, P.A.	79
69	120	Matthew C Juren	Nelson Bumgardner Albritton PC	77
70	8	Jeffrey P Kushan	Sidley Austin	78
71	55	Donald R Steinberg	Wilmer Cutler Pickering Hale and Dorr	77
72	50	Gregory Stephen Donahue	DiNovo Price	76
73	71	Patrick J. Bisenius	Fish & Richardson	76
74	32	Jon S Baughman	Paul Weiss Rifkind Wharton & Garrison	77
75	28	Robert Steinberg	Latham & Watkins	76
76	74	John C. Phillips	Fish & Richardson	74
77	86	David B Cochran	Jones Day	71
78	382	Jason C. Linger	Lowenstein & Weatherwax	69
79	35	Nicholas T Peters	Fitch, Even, Tabin & Flannery LLP	72
80	111	Barry J Bumgardner	Nelson Bumgardner Albritton PC	69
81	45	Gregory J Gonsalves	Gonsalves Law Firm	71
82	57	William A Meunier	Mintz Levin Cohn Ferris Glovsky & Popeo	70
83	105	Heath J Briggs	Greenberg Traurig LLP	69
84	86	Aldo Noto	Davidson Berquist Jackson & Gowdey	69
85	41	Amanda Streff Bonner	Mayer Brown	69
86	162	Blair A Silver	Banner & Witcoff	67
87		David A. Garr	Covington & Burling LLP	67
88	92	Michael T Renaud	Mintz Levin Cohn Ferris Glovsky & Popeo	68
89	135	Arvind Jairam	Paul Hastings	66
90	92	Patrick D McPherson	Duane Morris LLP	67
91	86	Chetan R. Bansal	Paul Hastings	66
92	118	Stuart A. Nelson	Fish & Richardson	67
93	95	David M Maiorana	Jones Day	66
94	92	Lionel M Lavenue	Finnegan, Henderson, Farabow, Garrett & Dunner	66
95	74	Benjamin E Weed	K&L Gates	67
96	95	James T Wilson	Davidson Berquist Jackson & Gowdey	66
97	83	Elizabeth S Weiswasser	Weil, Gotshal & Manges	66
98	68	Andrew Ryan Sommer	Greenberg Traurig LLP	66
99	100	Thomas A Rozylowicz	Fish & Richardson	65
100	137	Brian E Mack	Quinn Emanuel Urquhart & Sullivan	65

Top 100 Best Performing Attorneys

We limited this analysis to only those attorneys with involvement in a minimum number of IPR cases over the past five years.

For the patent owner or petitioner performance, the cut-off number was 15. Any attorney with less than 15 cases on each side was not included in the ranking. For overall performance, we only considered those attorneys with overall activity of at least 30 cases for the past five years.

We used the methodology described in Section 1 to calculate the *Success and Performance Scores* and rankings for all qualified attorneys. If an attorney's rank is blank, it means the attorney did not have sufficient activity (e.g., 15+ cases) this year or did not have ranking in the previous year.

This year, Reza Mirzaie of Russ August & Kabat, with Lauren E. Burrow and Michael S. Connor of Alston & Bird ranked first for **Success** on the patent owner side, with *Success Scores of 100%*. On the petitioner side, David A. Randall from Brooks Kushman ranked first with a *Success Score of 98.6%*. Overall, Martin R Bader from Sheppard Mullin Richter & Hampton ranked first for *Success* with a *Success Score of 83.3%*.

When it comes to Performance, Reza Mirzaie was also ranked as the *Best Performing* attorney on the patent owner side with a

Performance Score of 100%. For petitioners also, Martin R. Bader from Sheppard Mullin Richter & Hampton maintained his top rank with the *Performance Score of 100%*. Overall, James R. Hannah from Kramer Levin Naftalis & Frankel ranked first with a *Performance Score of 100%*.

Did you know?

In the last five years:

James R. Hannah from Kramer Levin Naftalis & Frankel ranked first with a *Performance Score of 100%*.

Reza Mirzaie from Russ August and Martin R. Bader from Sheppard Mullin both ranked the best performing attorneys for patent owners and petitioners, respectively, with *Performance Scores of 100%*.

Appendix D covers the activity, success and performance scores and rankings as well as other metrics measured for the top 1000 most active IPR attorneys .

In tables 8.4, 8.5, and 8.6, we have summarized the 100 best performing attorneys representing patent owners, petitioners, and overall.

Table 8.4 - Top 100 best performing attorneys representing patent owners

2020 Rank	2019 Rank	Attorney	Law Firm	PO Performance Score
1		Reza Mirzaie	Russ August & Kabat	100.0%
2	15	Jeffrey H Price	Kramer Levin Naftalis & Frankel	92.6%
3		Chang Jay Y Chung	Russ August & Kabat	92.2%
4	12	James R Hannah	Kramer Levin Naftalis & Frankel	90.3%
5	17	Salvador M Bezos	Sterne, Kessler, Goldstein & Fox	89.7%
6	8	S.H. Michael Kim	Kim & Stewart LLP	88.7%
7	22	Michael J Kane	Fish & Richardson	87.5%
8	3	James Carmichael	Carmichael IP	87.0%
9	30	Peter Lambrianakos	Fabricant LLP	85.7%
10	19	Dorothy P Whelan	Fish & Richardson	84.9%
11	1	Michael S Connor	Alston & Bird	84.6%
12	1	Lauren E. Burrow	Alston & Bird	83.2%
13	67	Jason Daniel Eisenberg	Sterne, Kessler, Goldstein & Fox	82.8%
14	11	Matthew A Argenti	Wilson Sonsini Goodrich & Rosati	81.8%
15	35	Vincent James Rubino III	Fabricant LLP	80.0%
16	55	Gerald E Worth	Proskauer Rose	79.7%
17	21	Alfred R. Fabricant	Fabricant LLP	79.7%
18	43	Anthony M Insogna	Jones Day	78.7%
19	6	Christopher B Kelly	Alston & Bird	76.3%
20	51	Steven M Bauer	Proskauer Rose	75.9%
21		Timothy E Bianchi	Schwegman Lundberg & Woessner	75.5%
22	13	Kevin P B Johnson	Quinn Emanuel Urquhart & Sullivan	75.0%
23		Jennifer L. Robbins	Covington & Burling LLP	74.9%
24		David L. Holt	Fish & Richardson	74.8%
25		Babak Redjaian	Irell & Manella LLP	73.0%
26	165	Sarah E Spires	Skiermont Derby	72.2%
27	52	Joseph Anthony Capraro Jr	Proskauer Rose	71.0%
28		Roger H. Lee	Buchanan Ingersoll & Rooney PC	70.9%
29	86	Jeffrey Huang	Etheridge Law Group	70.8%
30	78	S Benjamin Pleune	Alston & Bird	70.5%
31	112	James L Etheridge	Etheridge Law Group	70.4%
32	49	Hong Zhong	Irell & Manella LLP	70.2%
33	38	Michael T Hawkins	Fish & Richardson	70.1%
34	23	Keith A Orso	Irell & Manella LLP	69.6%

Table 8.4 - Top 100 best performing attorneys representing patent owners (Part 2)

2020 Rank	2019 Rank	Attorney	Law Firm	PO Performance Score
35		Shui Li	Robins Kaplan LLP	68.5%
36	33	Joseph E. Mutschelknaus	Sterne, Kessler, Goldstein & Fox	68.4%
37	20	Michael T Rosato	Wilson Sonsini Goodrich & Rosati	67.1%
38	9	Christopher C. Hoff	Fish & Richardson	66.9%
39		Marc Lorelli	Brooks Kushman	66.6%
40	10	Jason M Dorsky	Venable	66.4%
41	79	Walter K. Renner	Fish & Richardson	65.7%
42		Joshua A Griswold	Fish & Richardson	65.6%
43	29	Kevin K McNish	McNish PLLC	65.6%
44	65	David L Cavanaugh	Wilmer Cutler Pickering Hale and Dorr	64.7%
45	204	Anish R. Desai	Weil, Gotshal & Manges	64.4%
46	63	Nathan Lowenstein	Lowenstein & Weatherwax	63.9%
47	96	Ryan S Loveless	Etheridge Law Group	63.6%
48	24	Justin J Oliver	Venable	63.2%
49		Jessica Tyrus Mackay	Green, Griffith & Borg-Breen LLP	63.1%
50	25	Timothy J Rousseau	Brown Rudnick LLP	63.1%
51		Brett A Mangrum	Etheridge Law Group	63.1%
52	7	Roger J Fulghum	Baker Botts LLP	62.7%
53	70	Daniel S Block	Sterne, Kessler, Goldstein & Fox	61.0%
54	73	Wayne Michael Helge	Davidson Berquist Jackson & Gowdey	60.2%
55	5	Erik S Maurer	Banner & Witcoff	60.1%
56	106	Bridget A. Smith	Lowenstein & Weatherwax	60.1%
57	39	Dov P Grossman	Williams & Connolly	59.8%
58	61	Aldo Noto	Davidson Berquist Jackson & Gowdey	59.6%
59	31	Tyler R. Bowen	Perkins Coie	59.5%
60	54	Roberto J Devoto	Fish & Richardson	59.4%
61	111	Robert W Ashbrook Jr	Dechert	59.3%
62	32	Kerry S Taylor	Knobbe Martens Olson & Bear, LLP	59.2%
63	16	Emily R Whelan	Wilmer Cutler Pickering Hale and Dorr	59.0%
64		Brian W Oaks	Baker Botts LLP	59.0%
65	109	Robert G Sterne	Sterne, Kessler, Goldstein & Fox	58.9%
66	36	Wallace Wu	Arnold & Porter Kaye Scholer	58.7%
67	69	Enrique W Iturralde	Fabricant LLP	58.7%

Table 8.4 - Top 100 best performing attorneys representing patent owners (Part 3)

2020 Rank	2019 Rank	Attorney	Law Firm	PO Performance Score
68	4	Kelsey J. McElveen	Robins Kaplan LLP	58.6%
69		Scott E Kamholz	Covington & Burling LLP	56.7%
70	110	Christopher T. L. Douglas	Alston & Bird	56.2%
71		Thomas A. Lewry	Brooks Kushman	56.1%
72	80	James T Wilson	Davidson Berquist Jackson & Gowdey	56.1%
73	91	James M Glass	Quinn Emanuel Urquhart & Sullivan	56.0%
74	14	Christopher J Renk	Arnold & Porter Kaye Scholer	55.9%
75	139	Michael D Specht	Sterne, Kessler, Goldstein & Fox	55.7%
76		Thomas C. Cecil	Nelson Bumgardner Albritton PC	55.7%
77		Patrick G. Maloney	Lowenstein & Weatherwax	55.6%
78		Gerald B Hryczyszyn	Wolf, Greenfield & Sacks	55.4%
79	143	Matthew C Juren	Nelson Bumgardner Albritton PC	55.2%
80	37	Richard L Torczon Jr	Wilson Sonsini Goodrich & Rosati	55.1%
81		Elizabeth S Weiswasser	Weil, Gotshal & Manges	54.8%
82	77	Eliot D Williams	Baker Botts LLP	54.6%
83	46	Gary N Frischling	Milbank LLP	53.6%
84		Joseph A Rhoa	Nixon & Vanderhye	53.5%
85		Robert F Green	Green, Griffith & Borg-Breen LLP	53.1%
86	42	David A Caine	Arnold & Porter Kaye Scholer	52.8%
87	100	Michael J Wise	Perkins Coie	52.4%
88	122	Jon E Wright	Sterne, Kessler, Goldstein & Fox	51.9%
89	60	Walter D Davis Jr	Davidson Berquist Jackson & Gowdey	51.8%
90	101	Lestin L Kenton Jr.	Sterne, Kessler, Goldstein & Fox	51.7%
91	62	Brian E Mack	Quinn Emanuel Urquhart & Sullivan	51.5%
92	131	Jonathan Tuminaro	Sterne, Kessler, Goldstein & Fox	51.4%
93		Jason C. Linger	Lowenstein & Weatherwax	51.1%
94	92	Joseph M. Paunovich	Quinn Emanuel Urquhart & Sullivan	50.9%
95	230	Edward Hsieh	Lowenstein & Weatherwax	50.7%
96	88	Richard F Giunta	Wolf, Greenfield & Sacks	50.6%
97	64	David M Krinsky	Williams & Connolly	50.5%
98	98	Steven W Hartsell	Skiermont Derby	49.9%
99	104	Jeffrey P Kushan	Sidley Austin	49.5%
100	99	Steven C Sereboff	SoCal IP Law Group	49.1%

Table 8.5 - Top 100 best performing attorneys representing petitioners

2020 Rank	2019 Rank	Attorney	Law Firm	Petitioner Performance Score
1	6	Martin R Bader	Sheppard Mullin Richter & Hampton	100.0%
2	6	Stephen Sandor Korniczky	Sheppard Mullin Richter & Hampton	97.6%
3	10	Bradford A Cangro	Morgan Lewis & Bockius	96.3%
4	5	Jeremy D Peterson	Morgan Lewis & Bockius	88.1%
5	74	Jon S Baughman	Paul Weiss Rifkind Wharton & Garrison	87.9%
6	32	Kevin P B Johnson	Quinn Emanuel Urquhart & Sullivan	87.5%
7	9	David L. Holt	Fish & Richardson	86.2%
8	53	John T McKee	Quinn Emanuel Urquhart & Sullivan	85.9%
9	13	Michael N Rader	Wolf, Greenfield & Sacks	82.6%
10	23	Joshua A Griswold	Fish & Richardson	82.4%
11	30	Theodoros Konstantakopoulos	Desmarais LLP	81.9%
12	16	John D Vandenberg	Klarquist Sparkman	81.6%
13	42	James R Barney	Finnegan, Henderson, Farabow, Garrett & Dunner	81.3%
14	96	Richard F Giunta	Wolf, Greenfield & Sacks	80.2%
15	50	Roberto J Devoto	Fish & Richardson	79.4%
16	34	Clifford A Ulrich	Carter Deluca Farrell & Schmidt	79.3%
17	11	Nam H Kim	Sheppard Mullin Richter & Hampton	78.2%
18	15	Nicholas J. Whilt	O'Melveny & Myers	77.2%
19	57	Jeremy J. Lang	Orrick, Herrington & Sutcliffe	76.9%
20		Matthew Alexander Smith	Smith Baluch	76.2%
21	91	Joshua L. Goldberg	Finnegan, Henderson, Farabow, Garrett & Dunner	74.4%
22	65	Theodore M Foster	Haynes & Boone, LLP	73.7%
23	123	Scott M Kelly	Banner & Witcoff	73.4%
24	21	Henry August Petri	Polsinelli	73.2%
25	45	Michael J Lennon	Hunton Andrews Kurth	72.8%
26	85	David M O'Dell	Haynes & Boone, LLP	72.8%
27	2	Daniel N Yannuzzi	Sheppard Mullin Richter & Hampton	72.5%
28	143	Eliot D Williams	Baker Botts LLP	71.7%
29	11	Hector A Agdeppa	Sheppard Mullin Richter & Hampton	71.2%
30	81	Roger J Fulghum	Baker Botts LLP	70.6%
31		Craig A. Deutsch	Fish & Richardson	70.4%
32	20	James P Murphy	Polsinelli	69.8%
33		Ali N Dhanani	Baker Botts LLP	69.4%

Table 8.5 - Top 100 best performing attorneys representing petitioners (Part 2)

2020 Rank	2019 Rank	Attorney	Law Firm	Petitioner Performance Score
34	14	Jason A. Fitzsimmons	Sterne, Kessler, Goldstein & Fox	69.4%
35	63	James L Davison	Business Consulting Services	69.1%
36	80	Joseph E Palys	Paul Hastings	68.9%
37	128	Andrew Ryan Sommer	Greenberg Traurig LLP	68.8%
38	92	Jason R Mudd	Erise IP P.A.	68.7%
39		Jordan N Bodner	Banner & Witcoff	68.6%
40	146	Charles M McMahan	McDermott Will & Emery	68.6%
41	79	Christopher J Tyson	Duane Morris LLP	68.6%
42	17	Charles W Shifley	Banner & Witcoff	68.3%
43	160	Brian K Erickson	DLA Piper	67.5%
44		Robert S. Magee	Weil, Gotshal & Manges	67.3%
45	40	Thomas A Broughan III	Sidley Austin	66.9%
46	122	Gabrielle E Higgins	Ropes & Gray	66.8%
47	66	M. Scott Stevens	Alston & Bird	66.5%
48	115	Randy J Pritzker	Wolf, Greenfield & Sacks	65.7%
49	112	Orion Armon	Cooley LLP	65.1%
50	39	Patrick J McKeever	Perkins Coie	65.0%
51	3	David E Heisey	Sheppard Mullin Richter & Hampton	64.5%
51	3	Robert J Gaybrick	Morgan Lewis & Bockius	64.5%
53	168	George H Guy III	Baker Botts LLP	63.6%
54	118	Walter K. Renner	Fish & Richardson	63.5%
55	149	Thomas A Rozyłowicz	Fish & Richardson	63.4%
56	175	Joseph A Micallef	Sidley Austin	63.4%
57	130	Quadeer A. Ahmed	Paul Hastings	63.3%
58	70	Adrian C. Percer	Weil, Gotshal & Manges	63.1%
59	153	Heidi L Keefe	Cooley LLP	62.9%
60	31	Elizabeth S Weiswasser	Weil, Gotshal & Manges	62.2%
61	59	Andrew S Ehmke	Haynes & Boone, LLP	61.9%
62	121	James M Glass	Quinn Emanuel Urquhart & Sullivan	61.7%
63	83	Lori Ann Gordon	King & Spalding	61.5%
64		Anthony F Blum	Thompson Coburn LLP	60.4%
64		Alan H Norman	Thompson Coburn LLP	60.4%
66	33	Todd M Briggs	Quinn Emanuel Urquhart & Sullivan	60.3%
67		Camille D. Sauer	Banner & Witcoff	60.3%

Table 8.5 - Top 100 best performing attorneys representing petitioners (Part 3)

2020 Rank	2019 Rank	Attorney	Law Firm	Petitioner Performance Score
68	89	Mark T Garrett	Norton Rose Fulbright	60.0%
69	108	Richard A Goldenberg	Wilmer Cutler Pickering Hale and Dorr	60.0%
70	29	David W O'Brien	Haynes & Boone, LLP	59.9%
71	113	Amanda Streff Bonner	Mayer Brown	59.8%
72	156	Darren M Jiron	Finnegan, Henderson, Farabow, Garrett & Dunner	59.7%
73	1	David A Randall	Brooks Kushman	59.6%
74	107	David L McCombs	Haynes & Boone, LLP	59.5%
75	72	Jay I Alexander	Covington & Burling LLP	58.7%
76	179	Chetan R. Bansal	Paul Hastings	57.8%
77	87	Jeremy J. Monaldo	Fish & Richardson	57.0%
78	186	James M Heintz	DLA Piper	56.6%
79		Marc J Pensabene	O'Melveny & Myers	55.7%
80	46	Arlene L Chow	Hogan Lovells	55.4%
81	84	Kim H Leung	Fish & Richardson	55.4%
82	104	Charles L Miller	Banner & Witcoff	55.3%
83	231	Jeffrey P Kushan	Sidley Austin	55.2%
84	38	Derek S. Neilson	Alston & Bird	55.1%
85	125	Phillip W Citroen	Paul Hastings	54.6%
86	94	Lionel M Lavenue	Finnegan, Henderson, Farabow, Garrett & Dunner	54.4%
87		Jonathan L. McFarland	Perkins Coie	54.1%
88	90	Arvind Jairam	Paul Hastings	53.2%
89	35	Christopher T. L. Douglas	Alston & Bird	52.7%
90		Shambhavi Patel	Banner & Witcoff	52.5%
91	106	Kerry S Taylor	Knobbe Martens Olson & Bear, LLP	52.5%
92	95	Richard D. Coller III	Sterne, Kessler, Goldstein & Fox	52.2%
93	71	Heath J Briggs	Greenberg Traurig LLP	52.2%
94	165	Brian W Oaks	Baker Botts LLP	52.0%
95	136	Dion M Bregman	Morgan Lewis & Bockius	51.8%
96	139	Anish R. Desai	Weil, Gotshal & Manges	51.5%
97		Christopher C. Hoff	Fish & Richardson	51.0%
98	181	Timothy W Riffe	Fish & Richardson	50.8%
99	41	Erika H. Arner	Finnegan, Henderson, Farabow, Garrett & Dunner	50.4%
100	110	Matthew R Shapiro	Ropes & Gray	50.4%

Table 8.6 - Top 100 best performing attorneys (representing petitioners or patent owners)

2020 Rank	2019 Rank	Attorney	Law Firm	Overall Performance Score
1	5	James R Hannah	Kramer Levin Naftalis & Frankel	100.0%
2	8	Jeffrey H Price	Kramer Levin Naftalis & Frankel	95.4%
3	1	David L. Holt	Fish & Richardson	92.7%
4	6	Kevin P B Johnson	Quinn Emanuel Urquhart & Sullivan	91.4%
5	24	Michael J Kane	Fish & Richardson	91.2%
6	19	Peter Lambrianakos	Fabricant LLP	88.0%
7	21	Jeremy J. Lang	Orrick, Herrington & Sutcliffe	87.6%
8	20	Roberto J Devoto	Fish & Richardson	87.4%
9	45	Jon S Baughman	Paul Weiss Rifkind Wharton & Garrison	87.0%
10	28	Vincent James Rubino III	Fabricant LLP	85.1%
11	10	Joshua A Griswold	Fish & Richardson	83.7%
12	18	Theodore M Foster	Haynes & Boone, LLP	83.5%
13	30	Adrian C. Percer	Weil, Gotshal & Manges	81.1%
14	99	Eliot D Williams	Baker Botts LLP	81.1%
15	40	Dorothy P Whelan	Fish & Richardson	80.9%
16	83	Jeffrey Huang	Etheridge Law Group	80.1%
17	14	Roger J Fulghum	Baker Botts LLP	80.0%
18	103	Andrew Ryan Sommer	Greenberg Traurig LLP	80.0%
19	112	James L Etheridge	Etheridge Law Group	80.0%
20	9	Bradford A Cangro	Morgan Lewis & Bockius	78.8%
21	15	Anthony M Insogna	Jones Day	77.8%
22	2	Martin R Bader	Sheppard Mullin Richter & Hampton	77.5%
23	69	Walter K. Renner	Fish & Richardson	76.8%
24	2	Stephen Sandor Korniczky	Sheppard Mullin Richter & Hampton	76.7%
25	53	Richard F Giunta	Wolf, Greenfield & Sacks	76.4%
26	133	Jason Daniel Eisenberg	Sterne, Kessler, Goldstein & Fox	75.4%
27	4	S.H. Michael Kim	Kim & Stewart LLP	74.8%
28		Craig A. Deutsch	Fish & Richardson	74.0%
29	71	Scott M Kelly	Banner & Witcoff	73.3%
30	25	Elizabeth S Weiswasser	Weil, Gotshal & Manges	72.5%
31	59	David L McCombs	Haynes & Boone, LLP	70.8%
32	36	Christopher C. Hoff	Fish & Richardson	70.7%
33	130	Joseph A Micallef	Sidley Austin	70.5%
34	23	Joseph E. Mutschelknaus	Sterne, Kessler, Goldstein & Fox	69.8%
35	127	Heidi L Keefe	Cooley LLP	69.5%

**Table 8.6 - Top 100 best performing attorneys (representing petitioners or patent owners)
(Part 2)**

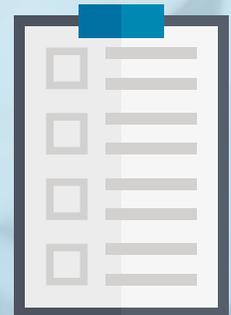
2020 Rank	2019 Rank	Attorney	Law Firm	Overall Performance Score
36	27	Salvador M Bezos	Sterne, Kessler, Goldstein & Fox	69.2%
37	91	Ryan S Loveless	Etheridge Law Group	68.9%
38		Alfred R. Fabricant	Fabricant LLP	68.5%
39		Brett A Mangrum	Etheridge Law Group	68.3%
40	61	Joseph E Palys	Paul Hastings	68.2%
41	58	Gerald E Worth	Proskauer Rose	66.8%
42	31	Clifford A Ulrich	Carter Deluca Farrell & Schmidt	66.7%
43	34	Kerry S Taylor	Knobbe Martens Olson & Bear, LLP	66.3%
44		Brian E Mack	Quinn Emanuel Urquhart & Sullivan	66.3%
45	35	James P Murphy	Polsinelli	65.9%
46		Nathan Lowenstein	Lowenstein & Weatherwax	65.9%
47	114	S Benjamin Pleune	Alston & Bird	65.8%
48	16	Justin J Oliver	Venable	65.5%
49	77	James M Glass	Quinn Emanuel Urquhart & Sullivan	65.5%
50	32	Henry August Petri	Polsinelli	65.4%
51	22	Andrew S Ehmke	Haynes & Boone, LLP	65.1%
52	38	Daniel S Block	Sterne, Kessler, Goldstein & Fox	64.9%
53		Quadeer A. Ahmed	Paul Hastings	64.8%
54	88	Brian W Oaks	Baker Botts LLP	64.8%
55	125	Anish R. Desai	Weil, Gotshal & Manges	63.7%
56	49	Steven M Bauer	Proskauer Rose	63.6%
57	192	Chetan R. Bansal	Paul Hastings	63.4%
58	12	Lauren E. Burrow	Alston & Bird	63.2%
59	52	Christopher T. L. Douglas	Alston & Bird	62.3%
60	26	Matthew A Argenti	Wilson Sonsini Goodrich & Rosati	62.1%
61	64	Randy J Pritzker	Wolf, Greenfield & Sacks	61.8%
62	57	Jay I Alexander	Covington & Burling LLP	61.7%
63		Eagle H. Robinson	Norton Rose Fulbright	61.6%
64	46	Aldo Noto	Davidson Berquist Jackson & Gowdey	61.0%
65	183	Jeffrey P Kushan	Sidley Austin	60.4%
66	68	Wayne Michael Helge	Davidson Berquist Jackson & Gowdey	60.2%
67	51	Kim H Leung	Fish & Richardson	60.1%
68		Orion Armon	Cooley LLP	59.8%
69	73	David M O'Dell	Haynes & Boone, LLP	59.0%

**Table 8.6 - Top 100 best performing attorneys (representing petitioners or patent owners)
(Part 3)**

2020 Rank	2019 Rank	Attorney	Law Firm	Overall Performance Score
70		Richard A Goldenberg	Wilmer Cutler Pickering Hale and Dorr	58.5%
71	80	Michael D Specht	Sterne, Kessler, Goldstein & Fox	58.5%
72		Tyler R. Bowen	Perkins Coie	57.9%
73		Bridget A. Smith	Lowenstein & Weatherwax	57.9%
74	166	James M Heintz	DLA Piper	56.8%
75		Arvind Jairam	Paul Hastings	56.3%
76	122	Robert G Sterne	Sterne, Kessler, Goldstein & Fox	56.3%
77	124	Joshua L. Goldberg	Finnegan, Henderson, Farabow, Garrett & Dunner	55.4%
78	107	David L Cavanaugh	Wilmer Cutler Pickering Hale and Dorr	55.2%
79	98	Michael T Hawkins	Fish & Richardson	54.9%
80	123	Bing Ai	Perkins Coie	54.9%
81	39	Kevin K McNish	McNish PLLC	54.6%
82	134	Amanda Streff Bonner	Mayer Brown	54.5%
83		Richard M Bembem	Sterne, Kessler, Goldstein & Fox	54.3%
84	165	Sarah E Spires	Skiermont Derby	53.6%
85	74	Phillip W Citroen	Paul Hastings	53.4%
86	93	James T Wilson	Davidson Berquist Jackson & Gowdey	52.8%
87	67	Jonathan Tuminaro	Sterne, Kessler, Goldstein & Fox	52.7%
88		Patrick G. Maloney	Lowenstein & Weatherwax	52.7%
89	142	Matthew C Juren	Nelson Bumgardner Albritton PC	52.5%
90	111	John C Alemanni	Kilpatrick Townsend & Stockton	52.2%
91	106	Erika H. Arner	Finnegan, Henderson, Farabow, Garrett & Dunner	51.9%
92	84	Jeremy J. Monaldo	Fish & Richardson	51.7%
93		Douglas R Wilson	Armond Wilson LLP	51.6%
94	72	Gregory S Arovas	Kirkland & Ellis	51.4%
95	85	Enrique W Iturralde	Fabricant LLP	50.7%
96	141	Steven W Parmelee	Wilson Sonsini Goodrich & Rosati	50.4%
97	104	Michael T Rosato	Wilson Sonsini Goodrich & Rosati	50.2%
98	63	Lionel M Lavenue	Finnegan, Henderson, Farabow, Garrett & Dunner	50.0%
99	13	Richard L Torczon Jr	Wilson Sonsini Goodrich & Rosati	49.7%
100	94	Michael J Wise	Perkins Coie	49.6%



Appendix



Appendix A

Sources of Data

Data is the foundation and building block of any data-driven analysis. Therefore, collecting data from quality sources and taking extra care in maintaining the data integrity is something we at Patexia take into account very seriously. We have collected our raw data from many sources including:

- Patent Trial and Appeal Board (PTAB) Database
- United States Patent and Trademark (USPTO) Patent Database
- Public Access to Court Electronic Records (PACER)
- Self-reported by attorneys named on the case
- US Patent Classification Database

For this release, we limited the date range of our analysis to the last five years (July 1, 2015 through June 30, 2020).

While the possibility of errors such as typos in legal documents are inevitable, cleaning and organizing the attorney data is even more challenging as attorneys have similar names (or sometimes exactly the same names), change firms, may not update their information, and often use different variations of their names.

Our engineering team has implemented sophisticated machine learning and natural language processing techniques to find the correct matches for various occurrences of the same name. To further minimize the errors, we not only review suspicious matches manually, but also host profile pages for more than 100,000 attorneys and agents who can directly review and add missing cases to our database. All the user added data will again be verified by Patexia internal data team for accuracy.

Appendix B

Patent Owners and Petitioners Statistics

See the attached Excel spreadsheet for the stats related to up to 1,000 most active patent owners and petitioners, involved in one or more IPR cases, filed during the period of our study. The spreadsheet covers the following information for each of the companies:

1. Company name with a link to Patexia page
2. All Cases (Patent Owner + Petitioner)
3. Patent Owner Cases
4. Petitioner Cases
5. Overall Performance Rank
6. Overall Activity Rank
7. Overall Success Rank
8. Patent Owner Performance Rank
9. Patent Owner Activity Rank
10. Patent Owner Success Rank
11. Petitioner Performance Rank
12. Petitioner Activity Rank
13. Petitioner Success Rank
14. 2019 Overall Performance Rank
15. 2019 Overall Activity Rank
16. 2019 Patent Owner Performance Rank
17. 2019 Patent Owner Activity Rank
18. 2019 Petitioner Performance Rank
19. 2019 Petitioner Activity Rank
20. Overall Performance Score
21. Patent Owner Performance Score
22. Petitioner Performance Score
23. Overall Success Score
24. Patent Owner Success Score
25. Petitioner Success Score
26. Overall Activity Score
27. Patent Owner Activity Score
28. Petitioner Activity Score
29. Patent Owner non-pending (Concluded) Cases
30. Petitioner non-pending (Concluded) Cases

Appendix C

Law Firms Statistics

See the attached Excel spreadsheet for the stats related to all 915 law firms, involved in one or more IPR cases, filed during the period of our study. The spreadsheet covers the following information for each of the law firms:

1. Law firm name with a link to Patexia page
2. All Cases (Patent Owner + Petitioner)
3. Patent Owner Cases
4. Petitioner Cases
5. Overall Performance Rank
6. Overall Activity Rank
7. Overall Success Rank
8. Patent Owner Performance Rank
9. Patent Owner Activity Rank
10. Patent Owner Success Rank
11. Petitioner Performance Rank
12. Petitioner Activity Rank
13. Petitioner Success Rank
14. 2019 Overall Performance Rank
15. 2019 Overall Activity Rank
16. 2019 Patent Owner Performance Rank
17. 2019 Patent Owner Activity Rank
18. 2019 Petitioner Performance Rank
19. 2019 Petitioner Activity Rank
20. Overall Performance Score
21. Patent Owner Performance Score
22. Petitioner Performance Score
23. Overall Success Score
24. Patent Owner Success Score
25. Petitioner Success Score
26. Overall Activity Score
27. Patent Owner Activity Score
28. Petitioner Activity Score
29. Patent Owner non-pending (Concluded) Cases
30. Petitioner non-pending (Concluded) Cases

Appendix D

Attorneys Statistics

See the attached Excel spreadsheet for the stats related to the top 1000 most active attorneys, involved in one or more IPR cases, filed during the period of our study. The spreadsheet covers the following information for each of the law firms:

1. Attorney name with a link to Patexia page
2. Law firm name with a link to Patexia page
3. All Cases (Patent Owner + Petitioner)
4. Patent Owner Cases
5. Petitioner Cases
6. Overall Performance Rank
7. Overall Activity Rank
8. Overall Success Rank
9. Patent Owner Performance Rank
10. Patent Owner Activity Rank
11. Patent Owner Success Rank
12. Petitioner Performance Rank
13. Petitioner Activity Rank
14. Petitioner Success Rank
15. 2019 Overall Performance Rank
16. 2019 Overall Activity Rank
17. 2019 Patent Owner Performance Rank
18. 2019 Patent Owner Activity Rank
19. 2019 Petitioner Performance Rank
20. 2019 Petitioner Activity Rank
21. Overall Performance Score
22. Patent Owner Performance Score
23. Petitioner Performance Score
24. Overall Success Score
25. Patent Owner Success Score
26. Petitioner Success Score
27. Overall Activity Score
28. Patent Owner Activity Score
29. Petitioner Activity Score
30. Patent Owner non-pending (Concluded) Cases
31. Petitioner non-pending (Concluded) Cases

Appendix E

Survey Questions

The following questions were designed to help us estimate the cost and workload in different stages of an IPR case.

We understand that the cost estimation is not simple and is a function of many factors including the party (petitioner vs. patent owner), number of patents and defendants involved in the district court case (if there is a case), strategy, complexity, etc.

For simplicity, we only considered this from the petitioner's perspective and divide the process into the following 9 phases:

- Phase 0: Patent and Prior Art Review
- Phase 1: Draft and file IPR petition and one expert declaration
- Phase 2: Evaluate the patent owner's preliminary response
- Phase 3: Evaluate Board's institution decision, draft and file evidentiary objections as necessary, prepare the expert for deposition, defend the expert in the deposition, and responses and motions as necessary during patent owner's discovery period
- Phase 4: Evaluate the patent owner's response and expert declaration, draft and file evidentiary objections as necessary, take the deposition of patent owner's expert, and responses and motions as necessary during petitioner's discovery period
- Phase 5: Draft and file petitioner's reply and supplemental expert declaration, draft and file motion to exclude evidence as necessary
- Phase 6: Prepare for and conduct the oral hearing
- Phase 7: Evaluate final written decision and draft and file request for rehearing as necessary
- Phase 8: Appeal File and conduct appeal to Federal Circuit

Questions

1. How often do you manage an IPR project under a fixed or capped fee structure?

- Never
- About 25% of the time
- About 50% of the time
- About 75% of the time
- All the time

2. Which technology area covers a considerable area of your IPR projects?

- Electrical and Hardware
- Software and Internet
- Mechanical
- Pharma and life Sciences
- Other

3. What is your estimated attorney fee for Phase 0 - Patent and Prior Art Review?

- Less than \$7K
- Between \$7K to \$12K
- Between \$12K to \$15K
- More than \$15K

4. What is your estimated attorney fee for Phase 1 - Draft and file IPR petition and one expert declaration?

- Less than \$50K
- Between \$50K to \$75K
- Between \$75K to \$100K
- More than \$100K

5. What is your estimated attorney fee for Phase 2 - Evaluate patent owner's preliminary response?

- Less than \$2,500
- Between \$2,500 to \$7,500
- Between \$7,500 to \$10,000
- More than \$10K

6. What is your estimated attorney fee for Phase 3 - Evaluate Board's institution decision, draft and file evidentiary objections as necessary, prepare the expert for deposition, defend the expert in the deposition, and responses and motions as necessary during patent owner's discovery period?

- Less than \$25K
- More than \$50K
- Between \$25K to \$50K

7. What is your estimated attorney fee for Phase 4 - Evaluate patent owner's response and expert declaration, draft and file evidentiary objections as necessary, take the deposition of patent owner's expert, and responses and motions as necessary during petitioner's discovery period?

- Less than \$25K
- Between \$35K to \$50K
- Between \$25K to \$35K
- More than \$50K

8. What is your estimated attorney fee for Phase 5 - Draft and file petitioner's reply and supplemental expert declaration, draft and file motion to exclude evidence as necessary?

- Less than \$25K
- Between \$50K to \$75K
- Between \$25K to \$35K
- More than \$75K
- Between \$35K to \$50K

9. What is your estimated attorney fee for Phase 6 - Prepare for and conduct oral hearing?

- Less than \$25K
- Between \$50K to \$75K
- Between \$25K to \$50K
- More than \$75K

10. What is your estimated attorney fee for Phase 7 - Evaluate final written decision and draft and file request for rehearing as necessary?

- Less than \$5K
- Between \$5K to \$15K
- Between \$15K to \$25K
- More than \$25K

11. What is your estimated attorney fee for Phase 8 - Appeal File and conduct appeal to Federal Circuit?

- Less than \$75K
- Between \$75K to \$150K
- Between \$150K to \$225K
- Between \$225K to \$300K
- More than \$300K

12. Does the IPR cost change by the number of independent grounds of invalidity included in the IPR? For example, an IPR that tries to invalidate Claim 1 in one ground is less costly than arguing two separate grounds.

- Yes, definitely! Arguing multiple separate grounds of invalidity will cost more
- No, not at all! The cost is not a function of number of grounds of invalidity

13. Is there any discount provided if there are more than one patent from the same family?

- No discount
- Less than 25%
- Between 25% to 50%
- More than 50%

14. What is the estimated cost of Experts?

- Less than \$25K
- Between \$25K to \$35K
- Between \$35K to \$50K
- Between \$50K to \$75K
- More than \$75K

15. What is the average hourly rate for your IPR associates?

- Less than \$350 an hour
- Between \$350 to \$500 an hour
- Between \$500 to \$600 an hour
- Between \$600 to \$700 an hour
- More than \$700

16. What is the average hourly rate for your IPR partners?

- Less than \$500 an hour
- Between \$500 to \$750 an hour
- Between \$750 to \$1,000 an hour
- Between \$1,000 to \$1,250 an hour
- More than \$1,250

17. Any additional comments on cost and workload?

Staffing

We understand that law firms allocate their resources differently. In terms of staffing, how many partners and associates are assigned to a typical IPR case by your firm:

18. For partners:

1 2 3

19. For associates:

0 1 2

20. How would the staffing be affected on the petitioner side, if the number of patents grows to 5 (how many more partners or associates are needed)?

21. Any additional comments on staffing?

Performance Measurement

The following questions will help us calculate the points for each side (petitioner and patent owners) under different circumstances.

22. How should we allocate the points for settled cases?

Background: For the last three years, we assumed a settled case is a victory for the petitioner. While this is not always the case, we believe that in the majority of cases, when an IPR is settled, it is a sign that the petitioner’s prior art was strong and the patent owner decided to settle rather than continuing the fight and burning more cash.

- 0 for the patent owner and 100% for the petitioner (similar to last years)
- 25% for the patent owner and 75% for the petitioner
- 50% for the patent owner and 50% for the petitioner
- None of the above (please explain)

23. Should we give extra weight to attorneys with higher activity?

Background: For the last three years, we had a cut-off number (e.g., a minimum of 40 concluded cases in five years). Only attorneys or firms with more cases than the threshold were included in the rankings. But once included, we treated everybody the same.

We are considering to change our performance score function to a weighted function which takes into account the activity. That means having a higher activity in general, can have some positive weight on the performance score.

- I agree that more activity should improve the performance
- Activity has nothing to do with the performance and it should not impact the performance

24. Your work Email address (optional):

25. Any additional comments (other challenges, suggestions, ...)

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We're able to provide complex IP due diligence, where Patent Portfolio Analysis is just the beginning. Enjoy robust crowd-sourced prior art and evidence of use searches using our content platform.

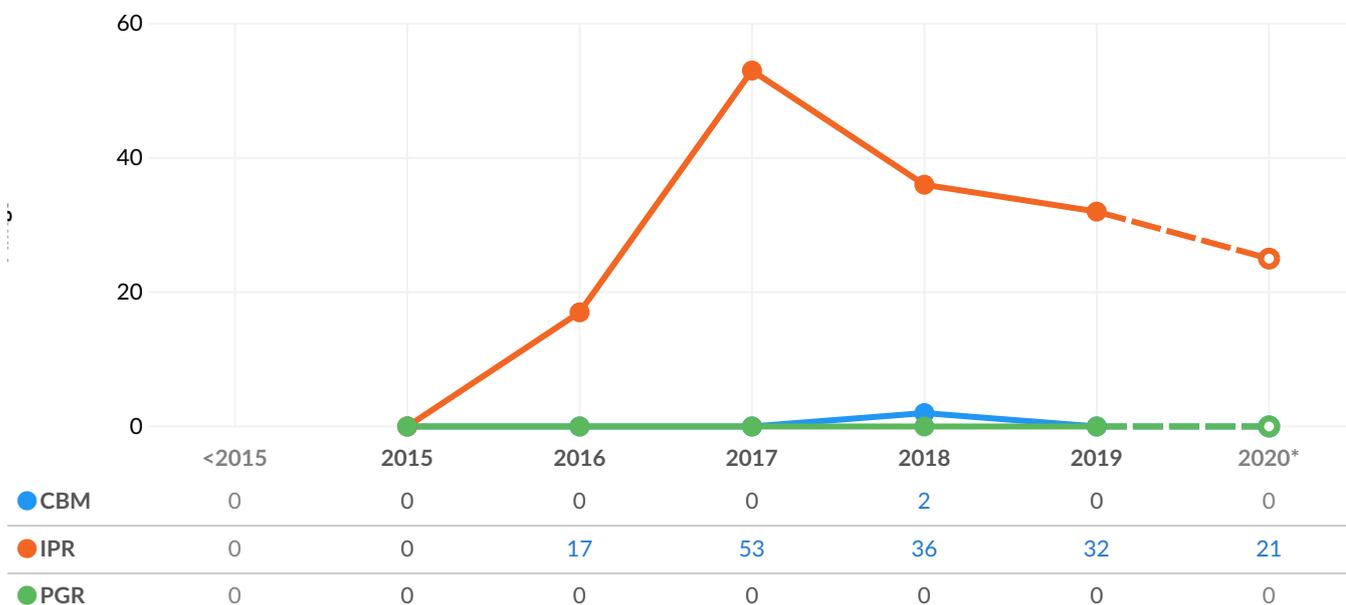
For questions or inquiries related to any of our offerings please contact us, at info@patexia.com or 424-239-9714 or visit us at www.patexia.com

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Exhibit B

Summary

Trial Filings



* 2020 numbers are year-to-date. Open dots are full-year estimates.

Trial Status



Party Roles



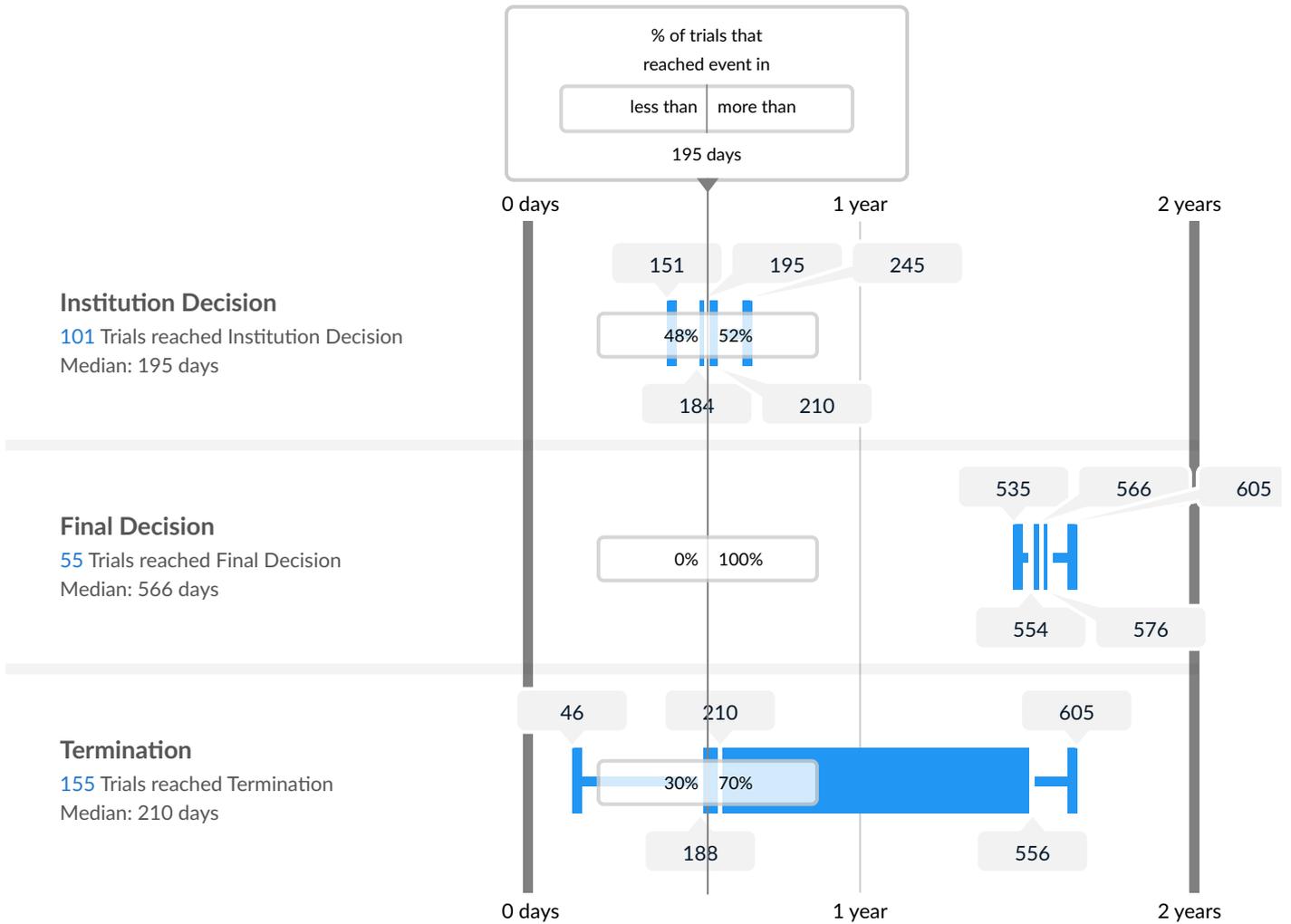
USPTO Technology Centers

2400: Computer Networks, Multiple...	90	56%
2600: Communications	51	32%
2100: Computer Architecture, Softw...	20	12%

Judges

Karl D. Easthom	61	38%
Lynne E. Pettigrew	41	25%
Barbara A. Parvis	33	20%
Kalyan K. Deshpande	25	16%
Sheila F. McShane	25	16%
35 Other Judges		

Timing



Law Firms

Top Law Firms Representing Comcast Cable Communications, LLC and 2 other parties

Banner & Witcoff

Farella Braun & Martel

Keker, Van Nest & Peters

Baker Botts

Duane Morris

Top Law Firms Representing Petitioners

Banner & Witcoff

Farella Braun & Martel

Keker, Van Nest & Peters

Baker Botts

Sheppard Mullin Richter & Hampton

Top Law Firms Representing Patent Owners

Sterne, Kessler, Goldstein & Fox

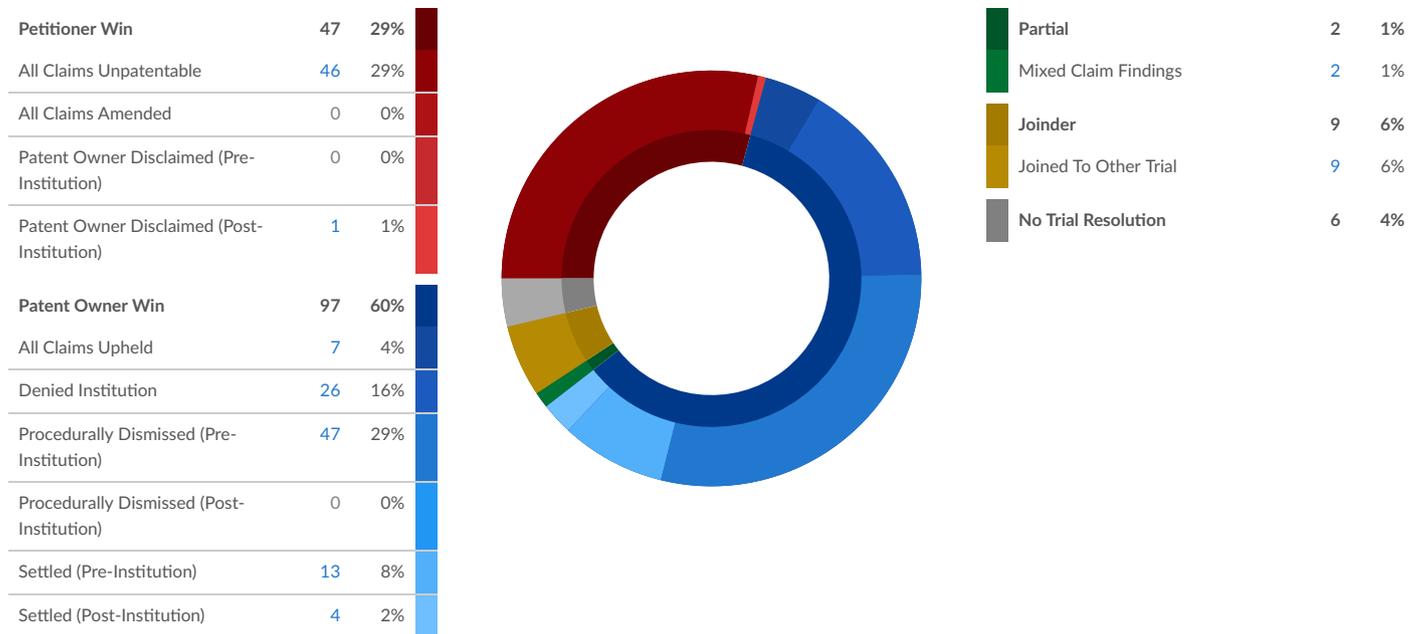
Ropes & Gray

Finnegan, Henderson, Farabow, Garrett & Dunner

McAndrews, Held & Malloy

Carr & Ferrell

Trial Resolutions



Grounds

Statute	Trials	Grounds
Institution Decision: Instituted		
§ 101	1	1
§ 102	7	7
§ 103	74	282
§ 112	1	1
Institution Decision: Denied Institution		
§ 101	0	0
§ 102	1	1
§ 103	27	76
§ 112	0	0
Final Decision: Unpatentable		
§ 101	1	1
§ 102	3	3
§ 103	47	146
§ 112	1	1
Final Decision: Upheld		
§ 101	0	0
§ 102	0	0
§ 103	16	61
§ 112	0	0

Case List

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2020-00798	2020-04-22	2020-10-21	7386871	10307004	Comcast Cable Communications Management, LLC Comcast Financial Agency Corporation NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Corporation Comcast of Santa Maria, LLC Comcast of Lompoc, LLC Comcast Business Communications, LLC Comcast Cable Communications, LLC	Rovi Corporation Rovi Guides, Inc.
IPR2020-00806	2020-04-17	2020-10-06	8001564	10383313	Comcast Cable Communications Management, LLC Comcast Financial Agency Corporation NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Corporation Comcast of Santa Maria, LLC Comcast of Lompoc, LLC Comcast Business Communications, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01353	2019-07-19	2020-01-27	8448215	13335649	Comcast Corporation Comcast Holdings Corporation NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Cable Communications, LLC Comcast Financial Agency Corporation Comcast of Santa Maria, LLC Comcast Cable Communications Management, LLC Comcast STB Software I, LLC Comcast of Lompoc, LLC Comcast Business Communications, LLC	Rovi Guides, Inc.
IPR2019-01434	2019-07-31	2020-02-12	8973069	14048818	Comcast Cable Communications Management, LLC	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Corporation NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	
IPR2019-01420	2019-08-05	2020-02-11	7873978	12814030	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01431	2019-07-31	2020-01-23	8272019	12818657	Comcast Cable Communications Management, LLC Comcast Corporation NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01421	2019-07-31	2020-01-30	9118948	13918689	Comcast Cable Communications Management, LLC Comcast Corporation NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast of Lompoc, LLC Comcast Financial Agency Corporation	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	
IPR2019-01413	2019-07-31	2020-01-31	9232254	13338014	Comcast Cable Communications Management, LLC Comcast Corporation NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01416	2019-07-30	2020-02-11	7735107	11712785	Comcast Corporation Comcast Cable Communications Management, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01375	2019-07-26	2020-02-10	9055319	14531624	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Cable Communications, LLC	
IPR2020-00789	2020-04-24	None	7200855	09864602	Comcast Corporation Comcast Cable Communications Management, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Corporation Rovi Guides, Inc.
IPR2020-00811	2020-04-22	None	8156528	10105082	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Corporation Rovi Guides, Inc.
IPR2020-00810	2020-04-22	None	8156528	10105082	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Corporation Rovi Guides, Inc.
IPR2020-00809	2020-04-22	None	8156528	10105082	Comcast Cable Communications Management, LLC Comcast Corporation	Rovi Corporation Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	
IPR2020-00793	2020-04-22	None	7301900	09864115	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Corporation Rovi Guides, Inc.
IPR2020-00792	2020-04-22	None	7301900	09864115	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Corporation Rovi Guides, Inc.
IPR2020-00791	2020-04-22	None	7301900	09864115	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC	Rovi Corporation Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	
IPR2020-00790	2020-04-22	None	7301900	09864115	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Corporation Rovi Guides, Inc.
IPR2020-00788	2020-04-22	None	7200855	09864602	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Corporation Rovi Guides, Inc.
IPR2020-00787	2020-04-22	None	7200855	09864602	Comcast Cable Communications Management, LLC Comcast Corporation NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Corporation Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2020-00802	2020-04-17	None	7779445	12350393	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2020-00801	2020-04-17	None	7779445	12350393	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2020-00800	2020-04-17	None	7779445	12350393	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2020-00799	2020-04-22	None	7386871	10307004	Comcast Cable Communications Management, LLC Comcast Corporation NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast of Lompoc, LLC	Rovi Corporation Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	
IPR2020-00796	2020-04-22	None	7386871	10307004	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Corporation Rovi Guides, Inc.
IPR2020-00812	2020-04-22	None	7386871	10307004	Comcast Cable Communications Management, LLC Comcast Corporation NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Corporation Rovi Guides, Inc.
IPR2020-00797	2020-04-22	None	7386871	10307004	Comcast Cable Communications Management, LLC Comcast Corporation NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC	Rovi Corporation Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Holdings Corporation Comcast Cable Communications, LLC	
IPR2020-00808	2020-04-17	None	8001564	10383313	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2020-00807	2020-04-17	2020-10-06	8001564	10383313	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00555	2019-01-10	2019-07-24	9668014	15195530	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2019-00209	2018-11-11	2019-05-30	7386046	10076013	Netflix, Inc. Hulu, LLC Netflix Streaming Services, Inc. Comcast Cable Communications, LLC	Realtime Adaptive Streaming LLC
IPR2019-00292	2018-11-12	2019-07-05	7937394	12848432	Comcast Cable Communications Management, LLC Comcast of Massachusetts III, Inc. Comcast STB Software I, LLC Comcast Cable Communications, LLC Comcast of Southern New England, Inc. Comcast of Needham, Inc. Comcast of Milton, Inc. Comcast Business Communications, LLC Comcast of Massachusetts I, Inc. Comcast of California/Massachusetts/Michigan/Utah, LLC Comcast Corporation Comcast of Massachusetts/Virginia, Inc. Comcast of Boston, Inc. Comcast of Connecticut/Georgia/Massachusetts/New Hampshire/New York/North Carolina/Virginia/Vermont, LLC Comcast of Brockton, Inc. Comcast Financial Agency Corporation Comcast of Massachusetts/New Hampshire, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast of Massachusetts II, Inc.	Veveo, Inc.
IPR2019-00290	2018-11-12	2019-07-05	7937394	12848432	Comcast Cable Communications Management, LLC Comcast of Massachusetts III, Inc. Comcast STB Software I, LLC Comcast Cable Communications, LLC Comcast of Southern New England, Inc. Comcast of Needham, Inc. Comcast of Milton, Inc. Comcast Business Communications, LLC Comcast of Massachusetts I, Inc.	Veveo, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast of California/Massachusetts/Michigan/Utah, LLC Comcast Corporation Comcast of Massachusetts/Virginia, Inc. Comcast of Boston, Inc. Comcast of Connecticut/Georgia/Massachusetts/New Hampshire/New York/North Carolina/Virginia/Vermont, LLC Comcast of Brockton, Inc. Comcast Financial Agency Corporation Comcast of Massachusetts/New Hampshire, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast of Massachusetts II, Inc.	
IPR2019-00239	2018-11-12	2019-07-05	7779011	11312908	Comcast Cable Communications Management, LLC Comcast of Massachusetts III, Inc. Comcast STB Software I, LLC Comcast Cable Communications, LLC Comcast of Southern New England, Inc. Comcast of Needham, Inc. Comcast of Milton, Inc. Comcast Business Communications, LLC Comcast of Massachusetts I, Inc. Comcast of California/Massachusetts/Michigan/Utah, LLC Comcast Corporation Comcast of Massachusetts/Virginia, Inc. Comcast of Boston, Inc. Comcast of Connecticut/Georgia/Massachusetts/New Hampshire/New York/North Carolina/Virginia/Vermont, LLC Comcast of Brockton, Inc. Comcast Financial Agency Corporation Comcast of Massachusetts/New Hampshire, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast of Massachusetts II, Inc.	Veveo, Inc.
IPR2019-00237	2018-11-12	2019-07-05	7779011	11312908	Comcast Cable Communications Management, LLC	Veveo, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast of Massachusetts III, Inc. Comcast STB Software I, LLC Comcast Cable Communications, LLC Comcast of Southern New England, Inc. Comcast of Needham, Inc. Comcast of Milton, Inc. Comcast Business Communications, LLC Comcast of Massachusetts I, Inc. Comcast of California/Massachusetts/Michigan/Utah, LLC Comcast Corporation Comcast of Massachusetts/Virginia, Inc. Comcast of Boston, Inc. Comcast of Connecticut/Georgia/Massachusetts/New Hampshire/New York/North Carolina/Virginia/Vermont, LLC Comcast of Brockton, Inc. Comcast Financial Agency Corporation Comcast of Massachusetts/New Hampshire, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast of Massachusetts II, Inc.	
IPR2019-00299	2018-11-12	2019-07-01	9294799	14926640	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00281	2018-11-12	2019-07-01	9621956	14725875	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	
IPR2019-00224	2018-11-10	2019-06-03	7827585	11197867	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00231	2018-11-12	2019-05-20	9369741	14741034	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01280	2019-06-27	2019-12-10	7386046	10076013	Comcast Corporation Comcast Cable Communications, LLC Netflix, Inc.	Realtime Adaptive Streaming LLC
IPR2018-00343	2017-12-19	2018-07-19	RE44326	13288848	Comcast Corporation Comcast Cable Communications, LLC	Promptu Systems Corporation

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2018-00342	2017-12-19	2018-07-19	RE44326	13288848	Comcast Corporation Comcast Cable Communications, LLC	Promptu Systems Corporation
IPR2017-01050	2017-03-27	2017-10-18	8578413	13275565	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-00952	2017-03-24	2017-09-20	8006263	11246392	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-01049	2017-03-16	2017-10-18	8578413	13275565	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-01048	2017-03-16	2017-10-18	8578413	13275565	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	
IPR2017-00951	2017-03-06	2017-09-20	8006263	11246392	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-00950	2017-03-06	2017-09-20	8006263	11246392	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
CBM2018-00034	2018-04-02	2018-10-09	RE44326	13288848	Comcast Corporation Comcast Cable Communications, LLC	Promptu Systems Corporation
IPR2018-01342	2018-07-03	2019-01-31	8934535	14033245	Google LLC Dish Network L.L.C. Sling TV L.L.C. Sling Media, L.L.C. DISH Technologies L.L.C. Comcast Cable Communications, LLC	Realtime Adaptive Streaming LLC
IPR2019-01423	2019-08-19	None	9118948	13918689	Comcast Corporation	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Cable Communications Management, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	
IPR2019-01422	2019-08-16	None	9118948	13918689	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01433	2019-08-05	None	8272019	12818657	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01432	2019-08-05	2020-01-23	8272019	12818657	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	
IPR2019-01419	2019-08-05	None	7873978	12814030	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01436	2019-08-02	None	8973069	14048818	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01435	2019-08-02	None	8973069	14048818	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Cable Communications, LLC	
IPR2019-01417	2019-08-02	None	7735107	11712785	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01376	2019-08-01	2020-02-10	9055319	14531624	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01418	2019-07-31	None	7873978	12814030	Comcast Cable Communications Management, LLC Comcast Corporation NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01415	2019-08-02	None	9232254	13338014	Comcast Corporation Comcast Cable Communications Management, LLC	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	
IPR2019-01414	2019-08-02	None	9232254	13338014	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01377	2019-08-01	None	9055319	14531624	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01355	2019-08-01	None	8448215	13335649	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	
IPR2019-01354	2019-08-01	None	8448215	13335649	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC NBCUniversal Shared Services, LLC (FKA Comcast Shared Services, LLC) Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-01109	2019-05-17	2019-11-18	9769477	14876276	Comcast Corporation Comcast Cable Communications, LLC	Realtime Adaptive Streaming LLC
IPR2018-01630	2018-09-24	2019-04-19	9769477	14876276	Netflix, Inc. Amazon.com Services, Inc. Hulu, LLC Netflix Streaming Services, Inc. Comcast Cable Communications, LLC Amazon Digital Services, LLC Amazon.com, Inc.	Realtime Adaptive Streaming LLC
IPR2018-01169	2018-06-04	2019-01-17	8934535	14033245	Netflix, Inc. Amazon.com Services, Inc. Hulu, LLC ARRIS Solutions, Inc. Netflix Streaming Services, Inc. Comcast Cable Communications, LLC Amazon Digital Services, LLC Amazon.com, Inc.	Realtime Adaptive Streaming LLC

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
IPR2019-00760	2019-02-28	2019-08-13	8934535	14033245	Comcast Corporation Comcast Cable Communications, LLC	Realtime Adaptive Streaming LLC
IPR2018-01187	2018-06-04	2019-02-04	9769477	14876276	Netflix, Inc. Amazon.com Services, Inc. Hulu, LLC Netflix Streaming Services, Inc. Comcast Cable Communications, LLC Amazon Digital Services, LLC Amazon.com, Inc.	Realtime Adaptive Streaming LLC
IPR2019-00558	2019-01-10	None	9668014	15195530	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00557	2019-01-10	None	9668014	15195530	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00556	2019-01-10	None	9668014	15195530	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC Comcast Financial Agency Corporation	Rovi Corporation Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	
IPR2019-00304	2018-11-12	None	9294799	14926640	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00303	2018-11-12	None	9294799	14926640	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00305	2018-11-12	None	9294799	14926640	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Shared Services, LLC Comcast Cable Communications, LLC	
IPR2019-00300	2018-11-12	None	9294799	14926640	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00293	2018-11-12	None	7937394	12848432	Comcast Cable Communications Management, LLC Comcast of Massachusetts III, Inc. Comcast STB Software I, LLC Comcast Cable Communications, LLC Comcast of Southern New England, Inc. Comcast of Needham, Inc. Comcast of Milton, Inc. Comcast Business Communications, LLC Comcast of Massachusetts I, Inc. Comcast of California/Massachusetts/Michigan/Utah, LLC Comcast Corporation Comcast of Massachusetts/Virginia, Inc. Comcast of Boston, Inc. Comcast of Connecticut/Georgia/Massachusetts/New Hampshire/New York/North Carolina/Virginia/Vermont, LLC Comcast of Brockton, Inc. Comcast Financial Agency Corporation Comcast of Massachusetts/New Hampshire, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast of Massachusetts II, Inc.	Veveo, Inc.
IPR2019-00291	2018-11-12	None	7937394	12848432	Comcast Cable Communications Management, LLC	Veveo, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast of Massachusetts III, Inc. Comcast STB Software I, LLC Comcast Cable Communications, LLC Comcast of Southern New England, Inc. Comcast of Needham, Inc. Comcast of Milton, Inc. Comcast Business Communications, LLC Comcast of Massachusetts I, Inc. Comcast of California/Massachusetts/Michigan/Utah, LLC Comcast Corporation Comcast of Massachusetts/Virginia, Inc. Comcast of Boston, Inc. Comcast of Connecticut/Georgia/Massachusetts/New Hampshire/New York/North Carolina/Virginia/Vermont, LLC Comcast of Brockton, Inc. Comcast Financial Agency Corporation Comcast of Massachusetts/New Hampshire, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast of Massachusetts II, Inc.	
IPR2019-00282	2018-11-12	None	9621956	14725875	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00283	2018-11-12	None	9621956	14725875	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	
IPR2019-00280	2018-11-12	None	9621956	14725875	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00279	2018-11-12	None	9621956	14725875	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00238	2018-11-12	None	7779011	11312908	Comcast Cable Communications Management, LLC Comcast of Massachusetts III, Inc. Comcast STB Software I, LLC Comcast Cable Communications, LLC Comcast of Southern New England, Inc. Comcast of Needham, Inc. Comcast of Milton, Inc. Comcast Business Communications, LLC	Veveo, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast of Massachusetts I, Inc. Comcast of California/Massachusetts/Michigan/Utah, LLC Comcast Corporation Comcast of Massachusetts/Virginia, Inc. Comcast of Boston, Inc. Comcast of Connecticut/Georgia/Massachusetts/New Hampshire/New York/North Carolina/Virginia/Vermont, LLC Comcast of Brockton, Inc. Comcast Financial Agency Corporation Comcast of Massachusetts/New Hampshire, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast of Massachusetts II, Inc.	
IPR2019-00786	2019-03-04	2019-08-26	9769477	14876276	Comcast Corporation Comcast Cable Communications, LLC	Realtime Adaptive Streaming LLC
IPR2018-00345	2017-12-19	2018-07-02	7047196	09785375	Comcast Corporation Comcast Cable Communications, LLC	Promptu Systems Corporation
IPR2018-00344	2017-12-19	2018-07-02	7047196	09785375	Comcast Corporation Comcast Cable Communications, LLC	Promptu Systems Corporation
IPR2019-00289	2018-11-12	None	9578363	14851972	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Technologies Corporation Rovi Guides, Inc.
IPR2019-00288	2018-11-12	None	9578363	14851972	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC	Rovi Technologies Corporation Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	
IPR2019-00286	2018-11-12	None	9578363	14851972	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00287	2018-11-12	None	9578363	14851972	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00285	2018-11-12	None	9578363	14851972	Comcast Corporation Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC	Rovi Guides, Inc.

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					Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	
IPR2019-00232	2018-11-12	None	9369741	14741034	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00229	2018-11-10	None	7827585	11197867	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00228	2018-11-10	None	7827585	11197867	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.

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IPR2019-00227	2018-11-10	None	7827585	11197867	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00226	2018-11-10	None	7827585	11197867	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00225	2018-11-10	None	7827585	11197867	Comcast Cable Communications Management, LLC Comcast Corporation Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2019-00684	2019-02-15	2019-07-16	8934535	14033245	Comcast Corporation Comcast Cable Communications, LLC	Realtime Adaptive Streaming LLC
IPR2019-00284	2018-11-12	2019-06-07	9578363	14851972	Comcast Corporation	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Cable Communications Management, LLC Comcast of Lompoc, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast of Santa Maria, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	
IPR2018-00341	2017-12-19	2018-06-26	7260538	10338591	Comcast Corporation Comcast Cable Communications, LLC	Promptu Systems Corporation
IPR2018-00340	2017-12-19	2018-06-26	7260538	10338591	Comcast Corporation Comcast Cable Communications, LLC	Promptu Systems Corporation
CBM2018-00033	2018-04-02	None	7047196	09785375	Comcast Corporation Comcast Cable Communications, LLC	Promptu Systems Corporation
IPR2017-00942	2017-03-10	2017-10-13	8566871	11182081	Comcast Cable Communications Management, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-00944	2017-03-07	2017-09-20	7895218	11136261	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Veveo, Inc. Rovi Guides, Inc.

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IPR2017-00939	2017-03-01	2017-09-11	9172987	13193233	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-01149	2017-04-10	2017-11-13	6418556	08119367	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-01151	2017-04-10	2017-11-07	6418556	08119367	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-01150	2017-04-10	2017-11-13	6418556	08119367	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Cable Communications, LLC Comcast of Houston, LLC	
IPR2017-01148	2017-04-10	2017-11-13	6418556	08119367	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-01147	2017-04-10	2017-11-07	6418556	08119367	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-01146	2017-04-10	2017-11-07	6418556	08119367	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-01145	2017-04-10	2017-11-07	6418556	08119367	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	
IPR2017-01144	2017-04-10	2017-11-07	6418556	08119367	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-00866	2017-02-09	2017-08-28	8713595	10846124	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-00867	2017-02-09	2017-08-28	8713595	10846124	Comcast Corporation Comcast Cable Communications Management, LLC Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-01143	2017-03-29	2017-10-18	8046801	10927814	Comcast Cable Communications Management, LLC	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	
IPR2017-01066	2017-03-23	2017-10-18	8046801	10927814	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-01065	2017-03-23	2017-10-18	8046801	10927814	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-00943	2017-03-10	2017-10-13	8566871	11182081	Comcast Cable Communications, LLC	Rovi Guides, Inc.
IPR2017-00744	2017-02-02	2017-08-08	8621512	13280215	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	
IPR2017-00742	2017-02-02	2017-08-09	8621512	13280215	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-00715	2017-01-19	2017-07-28	8433696	12869991	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Veveo, Inc.
IPR2017-00934	2017-02-21	2017-09-11	8768147	11894797	Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-00941	2017-03-01	2017-09-11	9172987	13193233	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	
IPR2017-00217	2016-11-08	2017-05-15	7996864	10704318	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast Cable Communications, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Software I, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2016-01008	2016-05-06	2016-11-04	8238412	12779660	Cox Communications, Inc. Comcast Cable Communications, LLC Verizon Services Corp. Dish Network L.L.C. Cisco Systems, Inc. Time Warner Cable LLC Arris Group, Inc.	TQ Delta LLC
IPR2016-01744	2016-09-06	2017-03-03	7941822	12068102	Atlantic Broadband Finance, LLC Cox Communications, Inc. Cisco Systems, Inc. Time Warner Cable LLC Universal Cable Holdings, Inc. Charter Communications, Inc. Mediacom Communications Corporation Comcast Cable Communications, LLC Cequel Communications, LLC CSC Holdings, LLC Cequel Communications Holdings I, LLC Bright House Networks, LLC Comcast Corporation	ChanBond, LLC

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Cablevision Systems Corporation Cable One, Inc. RCN Telecom Services, LLC WideOpenWest Finance, LLC WaveDivision Holdings, LLC Atlantic Broadband Group, LLC Time Warner Cable, Inc.	
IPR2016-01021	2016-05-09	2016-11-04	8718158	13303417	Cox Communications, Inc. Comcast Cable Communications, LLC Verizon Services Corp. Cisco Systems, Inc. Time Warner Cable LLC Dish Network L.L.C. Arris Group, Inc.	TQ Delta LLC
IPR2016-01020	2016-05-09	2016-11-04	9014243	13718016	Cox Communications, Inc. Comcast Cable Communications, LLC Verizon Services Corp. Dish Network L.L.C. Cisco Systems, Inc. Time Warner Cable LLC Arris Group, Inc.	TQ Delta LLC
IPR2016-01006	2016-05-06	2016-11-04	7835430	12477742	Cox Communications, Inc. Comcast Cable Communications, LLC Verizon Services Corp. Cisco Systems, Inc. Time Warner Cable LLC Dish Network L.L.C. Arris Group, Inc.	TQ Delta LLC
IPR2017-00990	2017-03-20	2017-10-16	6725281	09432853	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC	Rovi Technologies Corporation

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					Comcast Holdings Corporation Comcast Cable Communications, LLC Comcast of Houston, LLC Comcast Shared Services, LLC	
IPR2017-00988	2017-03-20	2017-10-16	6725281	09432853	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Technologies Corporation
IPR2017-00994	2017-03-20	2017-10-16	6725281	09432853	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC Comcast of Houston, LLC Comcast Shared Services, LLC	Rovi Technologies Corporation
IPR2017-00993	2017-03-20	2017-10-16	6725281	09432853	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC Comcast of Houston, LLC Comcast Shared Services, LLC	Rovi Technologies Corporation
IPR2017-00989	2017-03-20	2017-10-16	6725281	09432853	Comcast Cable Communications Management, LLC Comcast Corporation	Rovi Technologies Corporation

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC Comcast of Houston, LLC Comcast Shared Services, LLC	
IPR2017-00991	2017-03-20	2017-10-16	6725281	09432853	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC Comcast of Houston, LLC Comcast Shared Services, LLC	Rovi Technologies Corporation
IPR2017-00992	2017-03-20	2017-10-16	6725281	09432853	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Cable Communications, LLC Comcast of Houston, LLC Comcast Shared Services, LLC	Rovi Technologies Corporation
IPR2017-01455	2017-05-19	None	7028327	09538602	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Cable Communications, LLC	OpenTV, Inc.
IPR2017-00945	2017-03-07	2017-09-20	7895218	11136261	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation	Veveo, Inc. Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	
IPR2017-01880	2017-07-27	None	6345389	09176611	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Cable Communications, LLC	OpenTV, Inc.
IPR2017-01877	2017-07-27	None	6345389	09176611	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Cable Communications, LLC	OpenTV, Inc.
IPR2017-00957	2017-03-16	2017-09-15	8755666	13952404	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-00956	2017-03-15	2017-09-15	8755666	13952404	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC	Rovi Guides, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast of Houston, LLC	
IPR2017-00955	2017-03-15	2017-09-15	8755666	13952404	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-00953	2017-03-15	2017-09-15	8755666	13952404	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-00954	2017-03-15	2017-09-15	8755666	13952404	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Rovi Guides, Inc.
IPR2017-00933	2017-02-22	2017-09-11	8122034	11246432	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC	Veveo, Inc.

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	
IPR2017-00932	2017-02-22	2017-09-07	8122034	11246432	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Veveo, Inc.
IPR2017-00716	2017-01-19	2017-07-28	8433696	12869991	Comcast Cable Communications Management, LLC Comcast Corporation Comcast Financial Agency Corporation Comcast Business Communications, LLC Comcast STB Software I, LLC Comcast Holdings Corporation Comcast Shared Services, LLC Comcast Cable Communications, LLC Comcast of Houston, LLC	Veveo, Inc.
IPR2017-00420	2016-12-05	2017-04-03	7835430	12477742	Cellco Partnership DBA Verizon Wireless Comcast Corporation Verizon Services Organization, Inc. Cox Communications, Inc. Spectrum Management Holding Company, LLC 2Wire, Inc. Verizon Services Corp. Verizon Data Services LLC Verizon Corporate Resources Group LLC Time Warner Cable LLC Verizon Communications, Inc. CoxCom, LLC	TQ Delta LLC

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Cable Communications, LLC Arris Group, Inc.	
IPR2017-00419	2016-12-05	2017-04-03	8238412	12779660	Cellco Partnership DBA Verizon Wireless Comcast Corporation Verizon Services Organization, Inc. Cox Communications, Inc. Spectrum Management Holding Company, LLC 2Wire, Inc. Verizon Services Corp. Verizon Data Services LLC Verizon Corporate Resources Group LLC Time Warner Cable LLC Verizon Communications, Inc. CoxCom, LLC Comcast Cable Communications, LLC Arris Group, Inc.	TQ Delta LLC
IPR2017-00418	2016-12-05	2017-04-03	9014243	13718016	Cellco Partnership DBA Verizon Wireless Comcast Corporation Verizon Services Organization, Inc. Cox Communications, Inc. Spectrum Management Holding Company, LLC 2Wire, Inc. Verizon Services Corp. Verizon Data Services LLC Verizon Corporate Resources Group LLC Time Warner Cable LLC Verizon Communications, Inc. CoxCom, LLC Comcast Cable Communications, LLC Arris Group, Inc.	TQ Delta LLC
IPR2017-00417	2016-12-05	2017-04-03	8718158	13303417	Comcast Corporation Verizon Services Organization, Inc. Cellco Partnership DBA Verizon Wireless Cox Communications, Inc.	TQ Delta LLC

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Spectrum Management Holding Company, LLC 2Wire, Inc. Verizon Services Corp. Verizon Data Services LLC Verizon Corporate Resources Group LLC Time Warner Cable LLC Verizon Communications, Inc. CoxCom, LLC Comcast Cable Communications, LLC Arris Group, Inc.	
IPR2016-01899	2016-09-28	2017-03-29	8341679	12564663	Atlantic Broadband Finance, LLC Cox Communications, Inc. Cisco Systems, Inc. Time Warner Cable LLC Universal Cable Holdings, Inc. Charter Communications, Inc. Mediacom Communications Corporation Comcast Cable Communications, LLC Cequel Communications, LLC CSC Holdings, LLC Cequel Communications Holdings I, LLC Bright House Networks, LLC Comcast Corporation Cablevision Systems Corporation Cable One, Inc. RCN Telecom Services, LLC WideOpenWest Finance, LLC WaveDivision Holdings, LLC Atlantic Broadband Group, LLC Time Warner Cable, Inc.	ChanBond, LLC
IPR2016-01898	2016-09-28	2017-03-29	8341679	12564663	Atlantic Broadband Finance, LLC Cox Communications, Inc. Cisco Systems, Inc. Time Warner Cable LLC	ChanBond, LLC

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Universal Cable Holdings, Inc. Charter Communications, Inc. Mediacom Communications Corporation Comcast Cable Communications, LLC Cequel Communications, LLC CSC Holdings, LLC Cequel Communications Holdings I, LLC Bright House Networks, LLC Comcast Corporation Cablevision Systems Corporation Cable One, Inc. RCN Telecom Services, LLC WideOpenWest Finance, LLC WaveDivision Holdings, LLC Atlantic Broadband Group, LLC Time Warner Cable, Inc.	
IPR2016-01900	2016-09-28	2017-03-29	8341679	12564663	Atlantic Broadband Finance, LLC Cox Communications, Inc. Cisco Systems, Inc. Time Warner Cable LLC Universal Cable Holdings, Inc. Charter Communications, Inc. Mediacom Communications Corporation Comcast Cable Communications, LLC Cequel Communications, LLC CSC Holdings, LLC Cequel Communications Holdings I, LLC Bright House Networks, LLC Comcast Corporation Cablevision Systems Corporation Cable One, Inc. RCN Telecom Services, LLC WideOpenWest Finance, LLC WaveDivision Holdings, LLC Atlantic Broadband Group, LLC	ChanBond, LLC

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Time Warner Cable, Inc.	
IPR2016-01891	2016-09-26	2017-03-29	8984565	13682222	Atlantic Broadband Finance, LLC Cox Communications, Inc. Cisco Systems, Inc. Time Warner Cable LLC Universal Cable Holdings, Inc. Charter Communications, Inc. Mediacom Communications Corporation Comcast Cable Communications, LLC Cequel Communications, LLC CSC Holdings, LLC Cequel Communications Holdings I, LLC Bright House Networks, LLC Comcast Corporation Cablevision Systems Corporation Cable One, Inc. RCN Telecom Services, LLC WideOpenWest Finance, LLC WaveDivision Holdings, LLC Atlantic Broadband Group, LLC Time Warner Cable, Inc.	ChanBond, LLC
IPR2016-01889	2016-09-26	2017-03-29	8984565	13682222	Atlantic Broadband Finance, LLC Cox Communications, Inc. Cisco Systems, Inc. Time Warner Cable LLC Universal Cable Holdings, Inc. Charter Communications, Inc. Mediacom Communications Corporation Comcast Cable Communications, LLC Cequel Communications, LLC CSC Holdings, LLC Cequel Communications Holdings I, LLC Bright House Networks, LLC Comcast Corporation	ChanBond, LLC

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Cablevision Systems Corporation Cable One, Inc. RCN Telecom Services, LLC WideOpenWest Finance, LLC WaveDivision Holdings, LLC Atlantic Broadband Group, LLC Time Warner Cable, Inc.	
IPR2016-01890	2016-09-26	2017-03-29	8984565	13682222	Atlantic Broadband Finance, LLC Cox Communications, Inc. Cisco Systems, Inc. Time Warner Cable LLC Universal Cable Holdings, Inc. Charter Communications, Inc. Mediacom Communications Corporation Comcast Cable Communications, LLC Cequel Communications, LLC CSC Holdings, LLC Cequel Communications Holdings I, LLC Bright House Networks, LLC Comcast Corporation Cablevision Systems Corporation Cable One, Inc. RCN Telecom Services, LLC WideOpenWest Finance, LLC WaveDivision Holdings, LLC Atlantic Broadband Group, LLC Time Warner Cable, Inc.	ChanBond, LLC
IPR2016-01746	2016-09-06	2017-03-03	7941822	12068102	Atlantic Broadband Finance, LLC Cox Communications, Inc. Cisco Systems, Inc. Time Warner Cable LLC Universal Cable Holdings, Inc. Charter Communications, Inc. Mediacom Communications Corporation	ChanBond, LLC

Trial	Filed On	Institution Decision	Patent	Application	Petitioners	Patent Owners
					Comcast Cable Communications, LLC Cequel Communications, LLC CSC Holdings, LLC Cequel Communications Holdings I, LLC Bright House Networks, LLC Comcast Corporation Cablevision Systems Corporation Cable One, Inc. RCN Telecom Services, LLC WideOpenWest Finance, LLC WaveDivision Holdings, LLC Atlantic Broadband Group, LLC Time Warner Cable, Inc.	
