

Patent Pilot Program: Final Report

*Prepared for the
Court Administration and Case Management Committee of the
Judicial Conference of the United States*

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Federal Judicial Center
April 2021

This Federal Judicial Center report was prepared as required by Pub. L. No. 111-349 and undertaken in furtherance of the Center's statutory mission to conduct and stimulate research and development for the improvement of judicial administration. While the Center regards the content as responsible and valuable, this publication does not reflect policy or recommendations of the Board of the Federal Judicial Center.

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Executive Summary

The Patent Pilot Program (PPP) has been underway for approximately 10 years. At the request of the Judicial Conference’s Court Administration and Case Management Committee, the Federal Judicial Center has been studying the PPP since its inception. For this final report, we gathered data for all patent cases filed on or after the PPP start date for each of the 13 current pilot courts through January 14, 2021; the earliest court joined the pilot on September 1, 2011, and the latest on January 10, 2012. In the intervening time, over 22,000 patent cases were filed in these districts.

Key findings from the PPP include:

- Of the 315 active and senior district judges with at least one patent case, 62 (15%) were participating in the PPP as “designated judges” as of January 14, 2021. Designated judges are those judges who volunteered to receive patent cases transferred to them from nondesignated judges within their districts as well as randomly assigned patent cases. Cases before designated judges (through random assignment, transfer within the transfer window, or transfer from one designated judge to another outside the transfer window) are referred to as pilot cases, and those before nondesignated judges are nonpilot cases.
- Over the life of the PPP, judges serving as designated judges had more experience with patent litigation than their nondesignated counterparts. Compared to nondesignated judges, designated judges had more patent litigation experience when the PPP began (as described in prior reports) and also received more patent cases because of their participation in the program.
- Almost three quarters (73%) of all patent cases filed in pilot districts since the start of the PPP were handled by a designated judge. Nondesignated judges frequently transfer their randomly assigned cases to designated judges.
- Patent cases before designated judges terminated faster than those before nondesignated judges, and this result held when looking across cases dismissed, cases terminated on judgment, and cases terminated through disposition methods classified as “other” in court data.
- Stays for U.S. Patent and Trademark Office and International Trade Commission review, the appointment of third-party technical advisors and special masters, *Markman* hearings, and orders for summary judgment occurred rarely in both pilot and nonpilot cases (in 6% or fewer cases).
- Sixty-four percent of pilot cases were filed by a serial filer (a plaintiff filing cases against different defendants across consecutive days in the same court).
- The Eastern District of Texas dominated all other pilot districts in patent filings before the 2017 decision in *TC Heartland LLC v. Kraft Foods Group Brands LLC*, but its share of patent filings in PPP districts declined after the decision. The relative movement of filings from the Eastern District of Texas did not affect the results of the PPP with respect to making litigation more efficient and increasing expertise among designated judges, but it did affect the frequency of some case events such as the frequency of serial filers.
- Cases before designated judges were less likely to be appealed, likely due to the frequency of settlements. Of the district court decisions that are appealed, designated and nondesignated judges’ rulings are affirmed at the same rates.
- When asked about their participation in the pilot, both current and former designated judges reported mixed success in terms of increased efficiency and expertise, largely depending on the number of patent cases they handled before and during the pilot.

- Relative to the goals of the PPP stated in the enacting legislation, the findings based on case analysis are also mixed. Increases in efficiency and experience are shown, with no substantial impact on affirmance by appellate courts or changes in choice of venue as a result of the PPP.

Introduction

The Patent Pilot Program (PPP), a 10-year pilot program addressing the assignment of patent cases in certain U.S. district courts, was established on January 4, 2011, by Pub. L. No. 111-349. This legislation instructed the director of the Administrative Office of the U.S. Courts (AO) to designate participant pilot courts and, in consultation with the chief judge of each pilot court and the director of the Federal Judicial Center (FJC), submit to the Committee on the Judiciary of the House of Representatives and the Committee on the Judiciary of the Senate a report at approximately the 5-year and 10-year marks of the program. In response to a request from the AO director, the Judicial Conference appointed its Committee on Court Administration and Case Management (CACM) to oversee the pilot's implementation. CACM asked the FJC to conduct the study of the pilot in preparation for the AO director's statutorily required reports. The AO director implemented CACM's recommendation of courts to participate in the pilot, in keeping with the legislation's requirements (no fewer than six districts representing at least three circuits, at least three districts with 10 or more district judges and three or more designated judges, and at least three districts with fewer than 10 district judges but at least two designated judges). CACM also oversaw each pilot court's establishment of implementation procedures (e.g., selection of designated judges (judges who volunteered to receive patent cases transferred to them from nondesignated judges within their districts, as well as receiving randomly assigned patent cases), an official start date, and a process for case reassignment).

The PPP has now been underway for approximately 10 years, the length varying by individual pilot courts' start dates. In this final report, we provide information on filings, transfers, terminations, time to disposition, type of disposition, *Markman* hearings, multidistrict litigation participation, serially filed cases, the use of special masters and technical advisors, the prevalence of summary judgment, and the appellate review of patent litigation.¹ Also included are findings from interviews with current and former designated judges regarding their experiences with the PPP.

We begin with a look at judge participation in the pilot program by district, then move into an exploration of designated and nondesignated judges' experience with patent litigation. From there, we focus on filings and terminations in each of the 13 pilot districts.² We report cases terminated, method of termination, and how long cases stay open before terminating, distinguishing cases that we define as pilot cases from those we do not.³ We compare cases from the 13 pilot courts before designated judges to those cases from the pilot courts that are not before a designated judge. We also examine the effects of staying cases for review by the U.S. Patent and Trademark Office (PTO) or International

1. The COVID-19 pandemic affected litigation across the federal courts, and the PPP is no exception. The closure of courthouses and the postponement of in-person hearings and trials resulted in litigation proceeding at a slower than normal pace. However, the effects of the PPP (discussed below) were unchanged from prior reports, in part because the pandemic impacted only 1 of the 10 years included in our analysis. Patent cases filed in pilot courts, which have consistently declined in the years since the Supreme Court decision in *TC Heartland LLC v. Kraft Foods Group Brands LLC*, were filed in approximately equal numbers in 2020 and the prior year, suggesting that the rate of filings may have been unaffected by the pandemic.

2. The PPP began with 14 participating courts. In July 2014, the Southern District of Florida withdrew from the pilot program (S.D. Fla. Administrative Order 2014-58). Because the district is no longer participating in the pilot, we exclude it and its cases from this update.

3. Cases are included in the pilot program in one of three ways. First, cases filed in a district and randomly assigned to a judge participating in the pilot program (a "designated judge") are included as pilot cases. Second, cases filed in the district, randomly assigned to a nondesignated pilot judge, but transferred to a designated judge inside the transfer window set by the district are considered pilot cases. Third, cases randomly assigned to a designated judge and transferred to another designated judge outside the transfer window are considered pilot cases. Cases not meeting one of these three criteria are not considered pilot cases for purposes of this analysis.

Trade Commission (ITC), as well as the effects of case inclusion in multidistrict litigation (MDL) proceedings. We discuss the prevalence of *Markman* hearings and the appointment of third-party experts (such as special masters or technical advisors). We report the frequency with which orders for summary judgment are entered in patent cases in our study. We also investigate the frequency with which plaintiffs file multiple lawsuits in the same district on the same day or sequential days (what we call serially filed cases) as a way of understanding the filing activity of nonpracticing entities (NPEs), sometimes referred to as “patent trolls,” and the influence these filing practices have on district caseloads.

For this report’s analysis, we gathered data from a database of court records for all patent cases filed in each of the 13 pilot courts on or after the individual PPP start date established by each pilot court, through our most recent data pull on January 14, 2021.⁴ Thus, the results that follow are based on between approximately 112 months’ data (from the pilot court with the earliest start date) and approximately 108 months’ data (from the pilot court with the latest start date).⁵ Unless noted in the text, the reported patterns are fairly consistent throughout this time period.

4. The data originate from 100 court offices throughout the United States and are captured electronically in the judiciary’s electronic filings system (known as CM/ECF). In June 2016, a new Nature of Suit (NOS) code was created to distinguish traditional patent cases from those filed under the Abbreviated New Drug Application (ANDA)—NOS 835. We include information for both NOS 830 and 835 in this report.

5. Eight of the 13 pilot courts adopted CACM’s recommendation to begin the pilot on September 19, 2011 (C.D. Cal., S.D. Cal., N.D. Ill., D. Md., D. Nev., W.D. Pa., W.D. Tenn., and E.D. Tex.). Other pilot courts selected start dates as follows: September 1, 2011 (N.D. Tex.); September 18, 2011 (D.N.J.); November 21, 2011 (S.D.N.Y.); January 1, 2012 (N.D. Cal.); and January 10, 2012 (E.D.N.Y.).

Table 1: All Judges, Judges Assigned at Least One Patent Case Since Start of PPP, and Designated Judges, as of January 14, 2021

| District | All active and senior judges | Active and senior judges assigned at least one patent case | Number of current designated judges | Percentage of district's judges serving as designated judges | All designated judges (current and former) | Percentage of district's active and senior judges ever serving as designated judges |
|-------------------------|------------------------------|--|-------------------------------------|--|--|---|
| C.D. Cal. | 45 | 39 | 6 | 13% | 11 | 24% |
| N.D. Cal. | 27 | 21 | 3 | 11% | 6 | 22% |
| S.D. Cal. | 21 | 17 | 5 | 24% | 6 | 29% |
| N.D. Ill. | 49 | 46 | 8 | 16% | 14 | 29% |
| D. Md. | 23 | 19 | 1 | 4% | 4 | 17% |
| D.N.J. | 29 | 25 | 3 | 10% | 13 | 45% |
| D. Nev. | 14 | 13 | 3 | 21% | 4 | 29% |
| E.D.N.Y. | 34 | 32 | 7 | 21% | 12 | 35% |
| S.D.N.Y. | 60 | 48 | 6 | 10% | 12 | 20% |
| W.D. Pa. ⁶ | 25 | 18 | 8 | 32% | 12 | 48% |
| W.D. Tenn. ⁷ | 10 | 4 | 2 | 20% | 3 | 30% |
| E.D. Tex. | 16 | 15 | 7 | 44% | 13 | 81% |
| N.D. Tex. | 20 | 18 | 3 | 15% | 3 | 15% |
| All pilot courts | 373 | 315 | 62 | 15% | 113 | 28% |

Designated Judges

Table 1 shows that as of January 14, 2021, there were 62 current designated judges—judges who volunteered to receive patent cases transferred to them from nondesignated judges within their districts, as well as receiving randomly assigned patent cases. Fifty-one additional judges previously served as designated judges at some point during the PPP but were not so designated as of January 14, 2021—most commonly as a result of leaving the bench.⁸ On average, 15% of pilot districts' active and senior judges currently serve as designated judges, though individual district percentages vary from a low of 4% (D. Md.) to a high of 44% (E.D. Tex.). Over the life of the pilot, districts varied in the percentage of

6. The Western District of Pennsylvania had eight designated judges, only seven of whom had patent cases assigned as of January 14, 2021.

7. The Western District of Tennessee had two designated judges, only one of whom had patent cases assigned as of January 14, 2021.

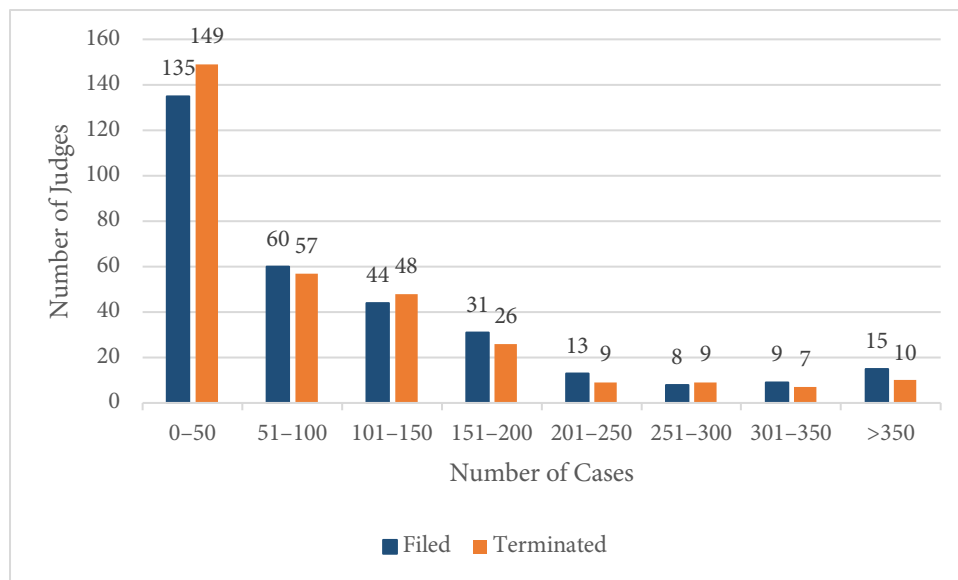
8. A number of judges left the pilot program, either for a short time or permanently. For purposes of our analysis, only cases transferred or randomly assigned to these judges during the time they were serving as designated judges are eligible to be pilot cases under our definition. The percentage of judge participation across pilot courts has varied over the life of the pilot. The analysis above does not include the former designated judges from the Southern District of Florida.

the entire bench serving as pilot judges at some point, from a low of 15% (N.D. Tex.) to a high of 81% (E.D. Tex.).

Patent Experience Among Judges

To understand the effect of the PPP on case management in the pilot courts, we must first consider how much experience judges have with patent litigation, including the experience they had at the start of the pilot. Figure 1 shows the amount of experience with patent litigation among all pilot court judges, using filed and terminated cases. Most judges have experience with no more than 50 patent cases, although there are exceptions. The judges in the highest category have experience with between 351 and 6,172 terminated patent cases, and judges of course amassed experience through the PPP.

Figure 1: District Judge Patent Experience Through January 14, 2021



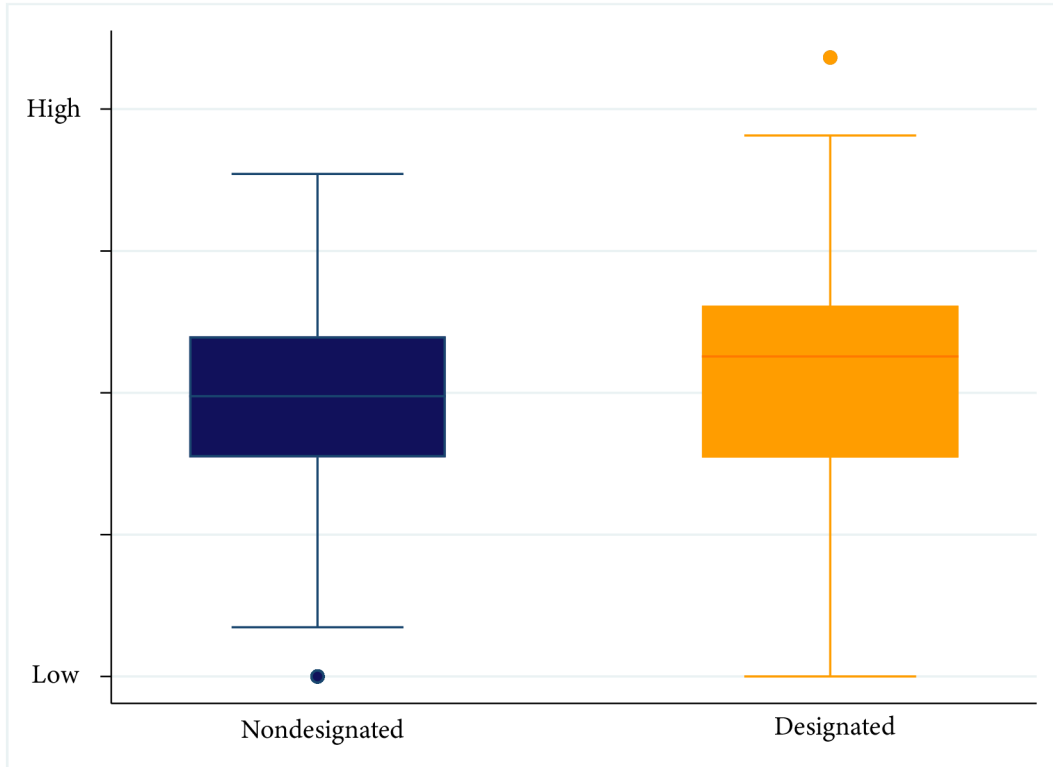
Patent Experience Among Designated and Nondesignated Judges

Because of the substantial variation in patent litigation experience among the judges serving on pilot courts, it is important to consider whether those who are participating as designated judges have considerably more patent case experience than those who are not participating in the pilot (i.e., nondesignated judges). Figure 2 shows a boxplot of patent experience, for terminated cases, for designated and nondesignated judges through January 14, 2021.⁹ The judges serving as designated judges have substantially more patent experience than their nondesignated counterparts, and the difference is statistically significant.¹⁰

9. The boxplots were compiled with a variable that rescaled patent case experience. Because the range of cases is so large, and so few judges are in the largest experience categories, the experience measures are not normally distributed. To make the experience measures approximate a normal distribution so we can compare group differences, we took the natural log of all experience measures to create the boxplots.

10. Designated judges averaged 268 filed cases and 243 terminated cases, while nondesignated judges averaged 104 filed cases and 90 terminated cases. The differences were statistically significant at the $p < 0.01$ level or higher.

Figure 2: Patent Experience of Designated and Nondesignated Judges, Through January 14, 2021



Note: Boxplots show the variation in data. The solid horizontal line in each box indicates the average number of patent cases assigned to each judge. The “whiskers” above and below the box show the maximum and minimum values that are still within the normal range of the data. The dots show judges with far above (or far below) the average amount of patent experience.

Table 1 shows that rates of designated judge participation in the PPP are not the same across the 13 pilot districts. Given this variation in participation, the variation in filing patterns of patent cases (shown in Table 3), and the differences between the patent litigation experience of designated and nondesignated judges, it is likely that the amount of patent litigation experience varies by district as well as by designation status. Table 2 shows the variation in the average amount of patent experience (filed and terminated cases) for designated and nondesignated judges by district. The table shows that designated judges in the Eastern District of Texas have a disproportionate amount of patent experience, both within their district and across all pilot courts. This level of experience is not surprising given the number of patent filings in the Eastern District of Texas, as shown in Table 3. Overall, across most districts, designated judges have more patent experience than their nondesignated counterparts.

Table 2: Patent Experience by District, Designated and Nondesignated Judges, All Patent Cases, Through January 14, 2021

| District | Designated judges | | Nondesignated judges | |
|-------------------------|---|--|---|--|
| | Average number of filed cases per judge | Average number of terminated cases per judge | Average number of filed cases per judge | Average number of terminated cases per judge |
| C.D. Cal. | 229 | 197 | 171 | 159 |
| N.D. Cal. | 193 | 157 | 236 | 208 |
| S.D. Cal. | 211 | 186 | 69 | 61 |
| N.D. Ill. | 152 | 137 | 87 | 77 |
| D. Md. | 17 | 13 | 36 | 33 |
| D.N.J. | 175 | 152 | 126 | 108 |
| D. Nev. | 75 | 64 | 33 | 29 |
| E.D.N.Y. | 26 | 22 | 35 | 33 |
| S.D.N.Y. | 96 | 87 | 46 | 39 |
| W.D. Pa. | 17 | 16 | 23 | 21 |
| W.D. Tenn. | 110 | 100 | 20 | 18 |
| E.D. Tex. | 1,317 | 1,224 | 593 | 450 |
| N.D. Tex. | 291 | 265 | 60 | 53 |
| All pilot courts | 268 | 243 | 104 | 90 |

Note: The number of judges in any given category of this table is too small to estimate statistical significance for any district relative to the national average. The average for all courts is a weighted average, given the number of judges and the amount of patent experience in each district. Therefore, this is not the same as what one would estimate by simply averaging across all rows in this column. The differences between designated and nondesignated judges as a group are statistically significant. Designated judges have more experience, on average, than nondesignated judges for filings and terminations ($p < 0.01$).

Filings by District

Between the start of the pilot program in each district and January 14, 2021, there were 22,390 unique patent case filings; some of these cases were assigned to designated patent judges and some were not.¹¹ The breakdown of filings by district is shown in Table 3. Additionally, Table 3 shows the number of pilot cases in each district (column 4) and the percentage of all patent cases that are pilot cases (column 5). The final column shows the number of cases, by district, that have left the pilot program (i.e., been transferred to a nondesignated judge).¹²

11. These 22,390 cases exclude those where the current judge is listed as “Unassigned Judge” or “Duty Judge,” where the only judge assigned to the case was not an Article III judge of the court, or where the judge assigned to the case was unclear.

12. These cases were transferred away from designated judges for a variety of reasons. On average, former cases were less than 3% of all patent cases across all courts, ranging from a low of 0% of patent cases in a district to a high just under 8%. Because former cases

As shown in Table 3, the Northern District of California has the lowest percentage of patent cases that are pilot cases (20%),¹³ while in the Eastern District of Texas, the Western District of Tennessee, and the Northern District of Texas, 90% or more of patent cases are pilot cases. The Eastern District of Texas accounts for the greatest number of filings in the PPP and the greatest number of pilot cases.

Table 3: All Patent Cases Filed, by District, from Each Court’s Pilot Start Date to January 14, 2021

| District | Number of patent cases filed | Percentage of total patent cases filed in all pilot courts | Number of pilot cases | Percentage of patent cases that are pilot cases | Former pilot cases |
|-------------------------|------------------------------|--|-----------------------|---|--------------------|
| C.D. Cal. | 3,036 | 14% | 1,668 | 55% | 142 |
| N.D. Cal. | 1,881 | 8% | 379 | 20% | 107 |
| S.D. Cal. | 863 | 4% | 667 | 77% | 65 |
| N.D. Ill. | 1,705 | 8% | 865 | 51% | 55 |
| D. Md. | 195 | 1% | 104 | 53% | 5 |
| D.N.J. | 1,779 | 8% | 739 | 42% | 48 |
| D. Nev. | 274 | 1% | 174 | 64% | 12 |
| E.D.N.Y. | 332 | 1% | 243 | 73% | 18 |
| S.D.N.Y. | 1,057 | 5% | 415 | 39% | 26 |
| W.D. Pa. | 148 | 1% | 130 | 88% | 6 |
| W.D. Tenn. | 78 | <1% | 76 | 97% | 0 |
| E.D. Tex. | 10,341 | 46% | 10,174 | 98% | 140 |
| N.D. Tex. | 701 | 3% | 629 | 90% | 18 |
| All pilot courts | 22,390 | 100% | 16,263 | 73% | 642 |

The filing patterns shown in Table 3 are generally consistent with those presented in prior interim reports.

Transfer of Patent Cases

Cases come into in the pilot program either through random assignment to a designated judge or through transfer to a designated judge. These transfers can occur within the court’s transfer window (the most common method of transfer) or from one designated judge to another designated judge outside the transfer window. (Transfers can also occur in nonpilot cases between nondesignated

are such a small part of all cases in any district, they are unlikely to affect the results discussed below. For this reason, we do not bring them back into the analysis as pilot cases.

13. The low percentage of pilot cases in the Northern District of California can be explained by two factors: the court’s use of magistrate judges to handle patent cases and the desire among nondesignated judges in the district to keep their patent cases. While the court allows magistrate judges to volunteer for additional patent cases, similar to the rules for district judge pilot participation, the PPP legislation requires pilot judges to be district judges. We therefore do not include the patent cases before magistrate judges in our analysis of the PPP.

judges, but such transfers are not included in this discussion of pilot case transfers.) The number of transfers may vary across districts for a number of reasons, including variation in the number of judges participating in the pilot program in the district (if there are more designated judges, there is a greater potential for transfers to and among designated judges), balancing caseload across judges, and the overall rate at which nondesignated judges opt to transfer their randomly assigned patent cases into the pilot program. The number of transfers of any given patent case ranges from zero to seven. The average number of transfers, as well as the modal value, is zero, meaning only one district judge typically participated in a case. This suggests the average patent case stays with its original randomly assigned judge. Of those cases that were transferred, the most common number of transfers was one.

Tables 4 and 5 show the variation in transfer activity across districts and for purposes of the pilot. Overall, we find that transfer activity is typically for purposes of the pilot. There were 6,531 cases transferred from one district judge to another (whether designated or nondesignated) from the start of the pilot through January 14, 2021 (29% of all cases in the database). Of these 6,531 transferred cases, 4,604 (70%) were transfers to a designated judge within the transfer window established by the pilot court, including transfers across multiple designated judges.

Table 4: Patent Cases and Pilot Cases Transferred, by District, from Each Court’s Pilot Start Date to January 14, 2021

| District | Number of patent cases with at least one transfer | Number of pilot cases with at least one transfer | Percentage of transferred cases that are pilot cases ¹ |
|-------------------------|---|--|---|
| C.D. Cal. | 1,797 | 1,206 | 67% |
| N.D. Cal. | 570 | 75 | 13% |
| S.D. Cal. | 741 | 626 | 84% |
| N.D. Ill. | 516 | 339 | 66% |
| D. Md. | 72 | 55 | 76% |
| D.N.J. | 373 | 232 | 62% |
| D. Nev. | 136 | 99 | 73% |
| E.D.N.Y. | 197 | 155 | 79% |
| S.D.N.Y. | 305 | 191 | 63% |
| W.D. Pa. | 91 | 80 | 88% |
| W.D. Tenn. | 22 | 20 | 91% |
| E.D. Tex. | 1,227 | 1,079 | 88% |
| N.D. Tex. | 484 | 447 | 92% |
| All pilot courts | 6,531 | 4,604 | 70% |

¹This does not include patent cases randomly assigned to a designated judge and never transferred.

Table 5: Transfers of Patent Cases Overall and Transfers for Purposes of the Pilot, from Each Court’s Pilot Start Date to January 14, 2021

| District | Number of transfers | Number of transfers to a designated judge | Percentage of transfers that are to a designated judge |
|-------------------------|----------------------------|--|---|
| C.D. Cal. | 2,053 | 1,325 | 65% |
| N.D. Cal. | 683 | 89 | 13% |
| S.D. Cal. | 1,087 | 785 | 72% |
| N.D. Ill. | 603 | 384 | 64% |
| D. Md. | 81 | 59 | 73% |
| D.N.J. | 482 | 282 | 59% |
| D. Nev. | 163 | 113 | 69% |
| E.D.N.Y. | 251 | 190 | 76% |
| S.D.N.Y. | 369 | 217 | 59% |
| W.D. Pa. | 105 | 92 | 88% |
| W.D. Tenn. | 23 | 20 | 87% |
| E.D. Tex. | 1,354 | 1,173 | 87% |
| N.D. Tex. | 604 | 555 | 92% |
| All pilot courts | 7,858 | 5,284 | 67% |

Case Terminations

Table 6 shows the variation by district in the percentage of patent cases, both pilot and nonpilot, that are terminated.

Table 6: All Patent Cases Terminated, by District, for Cases Filed from Each Court’s Pilot Start Date to January 14, 2021

| District | Number of patent cases filed | Number of patent cases terminated (percentage) | Number of patent cases that are pilot cases | Number of pilot cases terminated (percentage) | Percentage of terminations that are pilot terminations |
|-------------------------|------------------------------|--|---|---|--|
| C.D. Cal. | 3,036 | 2,819 (93%) | 1,668 | 1,538 (92%) | 55% |
| N.D. Cal. | 1,881 | 1,646 (88%) | 379 | 328 (87%) | 20% |
| S.D. Cal. | 863 | 816 (95%) | 667 | 630 (94%) | 77% |
| N.D. Ill. | 1,705 | 1,575 (92%) | 865 | 826 (95%) | 52% |
| D. Md. | 195 | 183 (94%) | 104 | 100 (96%) | 55% |
| D.N.J. | 1,779 | 1,611 (91%) | 739 | 707 (96%) | 44% |
| D. Nev. | 274 | 240 (88%) | 174 | 154 (89%) | 64% |
| E.D.N.Y. | 332 | 301 (91%) | 243 | 220 (91%) | 73% |
| S.D.N.Y. | 1,057 | 981 (93%) | 415 | 394 (95%) | 40% |
| W.D. Pa. | 148 | 138 (93%) | 130 | 124 (95%) | 90% |
| W.D. Tenn. | 78 | 73 (94%) | 76 | 71 (93%) | 97% |
| E.D. Tex. | 10,341 | 9,951 (96%) | 10,174 | 9,785 (96%) | 98% |
| N.D. Tex. | 701 | 640 (91%) | 629 | 570 (91%) | 89% |
| All pilot courts | 22,390 | 20,974 (94%) | 16,263 | 15,447 (95%) | 74% |

Method of Disposition

Given the substantial number of terminated cases, we next consider the method by which these cases are terminated, and whether it differs for pilot and nonpilot cases. Table 7 shows the disposition methods for all terminated cases and separately for pilot and nonpilot cases. Most cases are terminated by

dismissal, either through voluntary dismissal, settlement, or “other” dismissal (which includes a number of settlements), and this is true whether we look at all cases or just pilot cases. Pilot and nonpilot cases differ in the frequency with which they terminate through dismissal. Pilot and nonpilot cases also differ in the frequency with which they terminate through judgment, especially on motion before trials. Other differences include dispositions that are the result of statistical closing, frequently used by courts when the case is stayed for review by the PTO or the ITC (see more in “Patent Cases and Stays,” *infra* p. 14). Of course, these cases will eventually be reopened and given a final disposition, replacing the statistical closing, but this will occur outside the life of the pilot.

Table 7: Disposition Method, All Cases and Pilot Cases, as of January 14, 2021

| Disposition method ¹ | All pilot case terminations | | All nonpilot case terminations | | All terminations | |
|---------------------------------|-----------------------------|---------------|--------------------------------|--------------|------------------|---------------|
| | Percent | Frequency | Percent | Frequency | Percent | Frequency |
| Transferred | 5% | 817 | 5% | 266 | 5% | 1,083 |
| To another district | 5% | 737 | 4% | 226 | 5% | 963 |
| To state court | <1% | 16 | <1% | 18 | <1% | 34 |
| MDL transfer | <1% | 62 | <1% | 20 | <1% | 82 |
| Remand to agency | <1% | 2 | <1% | 2 | <1% | 4 |
| Dismissed | 78% | 12,066 | 76% | 4,218 | 78% | 16,284 |
| Want of prosecution | <1% | 40 | 1% | 43 | <1% | 83 |
| Lack of jurisdiction | <1% | 29 | 1% | 29 | <1% | 58 |
| Voluntarily | 25% | 3,866 | 36% | 1,972 | 28% | 5,838 |
| Settled | 19% | 2,900 | 26% | 1,436 | 21% | 4,336 |
| Other | 34% | 5,231 | 13% | 738 | 28% | 5,969 |
| Judgment | 6% | 964 | 15% | 822 | 9% | 1,786 |
| On default | <1% | 76 | 1% | 50 | 1% | 126 |
| On consent | 1% | 154 | 3% | 173 | 2% | 327 |
| Motion before trial | 2% | 358 | 8% | 417 | 4% | 775 |
| Jury verdict | 1% | 78 | 1% | 31 | 1% | 109 |
| Directed verdict | <1% | 1 | 0% | 0 | <1% | 1 |
| Court trial | <1% | 33 | 1% | 40 | <1% | 73 |
| Other | 2% | 264 | 2% | 111 | 2% | 375 |
| Other | 10% | 1,591 | 4% | 216 | 9% | 1,807 |
| Stayed pending bankr. | 0% | 0 | <1% | 2 | <1% | 2 |
| District court affirmed | 0% | 0 | <1% | 1 | <1% | 1 |
| Statistical closing | 10% | 1,587 | 4% | 212 | 9% | 1,799 |
| Nonreportable closing | <1% | 4 | <1% | 1 | <1% | 5 |
| Total number of cases | | 15,438 | | 5,522 | | 20,960 |

Note: Columns sum to more than 100% as a result of rounding. Codes for disposition method are from the Civil Statistical Reporting Guide (December 2016), <http://jnet.ao.dcn/civil-statistical-reporting-guide>. Fourteen cases have a termination date but no disposition code as of the date of this analysis.

¹ Differences between pilot and nonpilot cases for judgment, dismissed, and “other” categories are statistically significant at the $p < 0.01$ level or higher.

As Table 8 shows, the districts vary substantially in the percentage of cases terminated through each of the main disposition categories. These differences are important for our examination of the appeal of patent cases. Districts that terminate more cases through judgment than dismissal have more cases eligible for appeal. These differences are discussed more in the section on appeals (*infra* p. 27).

Table 8: Disposition Codes of Cases (and Percentage of District’s Terminations), by District, as of January 14, 2021

| District | Transferred | Dismissed | Judgment ¹ | Other ² | Total |
|-------------------------|----------------------|------------------------|-----------------------|----------------------|----------------|
| C.D. Cal. | 109 (4%) | 2,272 (81%) | 330 (12%) | 104 (4%) | 2,815 (13%) |
| N.D. Cal. | 50 (3%) | 1,150 (70%) | 359 (22%) | 86 (5%) | 1,645 (8%) |
| S.D. Cal. | 45 (6%) | 659 (81%) | 98 (12%) | 14 (2%) | 816 (4%) |
| N.D. Ill. | 77 (5%) | 1,346 (85%) | 138 (9%) | 14 (1%) | 1,575 (8%) |
| D. Md. | 10 (5%) | 128 (70%) | 45 (25%) | 0 (0%) | 183 (1%) |
| D.N.J. | 48 (3%) | 1,095 (68%) | 242 (15%) | 225 (14%) | 1,610 (8%) |
| D. Nev. | 31 (13%) | 167 (70%) | 39 (16%) | 3 (1%) | 240 (1%) |
| E.D.N.Y. | 23 (8%) | 251 (83%) | 27 (9%) | 0 (0%) | 301 (1%) |
| S.D.N.Y. | 64 (7%) | 740 (75%) | 175 (18%) | 2 (<1%) | 981 (5%) |
| W.D. Pa. | 14 (10%) | 93 (67%) | 5 (4%) | 26 (19%) | 138 (1%) |
| W.D. Tenn. | 58 (79%) | 13 (18%) | 1 (1%) | 1 (1%) | 73 (<1%) |
| E.D. Tex. | 499 (5%) | 7,834 (79%) | 283 (3%) | 1,331 (13%) | 9,947 (47%) |
| N.D. Tex. | 55 (9%) | 536 (84%) | 44 (7%) | 1 (<1%) | 636 (3%) |
| All pilot courts | 1,083 (5%) | 16,284 (78%) | 1,786 (9%) | 1,807 (9%) | 20,960 |

¹ Judgment types include judgment on default, on consent, on motion before trial, by jury verdict, by court trial, and “other” judgment.

² “Other” includes statistical closing, stayed pending bankruptcy, nonreportable terminations, and district court affirmed decision in its entirety. Statistical closings were by far the most frequently occurring subcategory.

Patent Cases in Multidistrict Litigation

Because patent litigation can be included in multidistrict litigation (MDL), it is important to consider how many of the patent cases included in our analysis are also part of an MDL proceeding. Table 9

shows, by district, the number of cases in our database that are included in an MDL proceeding. The table presents the results for all cases (columns 2 and 3) and separately for pilot cases (columns 4 and 5).¹⁴ Pilot cases are less likely to be included in MDL proceedings than nonpilot cases, and the difference is statistically significant. MDLs are a larger part of the patent dockets in the District of Maryland and the Western District of Pennsylvania than in other pilot districts. The MDL proceeding in the District of Nevada does not include a pilot case.

This variation in MDL participation is important to consider for two reasons. First, owing to their complex nature, cases involved in MDL proceedings may take longer to resolve than non-MDL patent cases, and this could affect case disposition times in districts with a greater-than-average number of patent cases in MDL proceedings. Second, for districts with a relatively small number of patent cases, such as the District of Maryland and the Western District of Pennsylvania, the presence of an ongoing patent MDL proceeding may limit the number of cases eligible for the pilot program—assuming at least some of the patent cases subsequently filed in the district are eligible to be included in the MDL as tag-along cases. So few patent cases are included in MDL proceedings that a separate analysis is not possible.¹⁵

14. Information on MDL participation was collected two ways. First, we considered cases flagged by court staff in CM/ECF as being in an MDL. However, since the flag can be removed from a case (because the case was severed from the MDL proceeding, for example), relying on only this flag would not capture all patent cases that were at some point included in an MDL proceeding. Second, to identify the remaining cases, we conducted a docket text search of all patent cases filed since the start of the pilot for the phrase “multidistrict litigation,” including several variations of that phrase. After collecting all the docket text with such a reference, and combining that information with the MDL flags, two coders read the docket text to determine which cases were involved in MDL proceedings. In the ten years of studying the patent pilot, we have undertaken this data collection multiple times, always using independent coders to verify case information such as inclusion in an MDL proceeding, as well as the information about stays, *Markman* hearings, summary judgment orders, third-party appointments, and serially filed cases. With each iteration, we collect new activity on older cases and all activity in newly identified patent cases to supplement the data already in the database. In our most recent data collection, the two coders agreed on new MDL events 93% of the time.

15. The 419 cases are grouped into a small number of MDL proceedings. With so few cases, grouped into an even smaller number of MDL proceedings, it would not be possible to differentiate pilot effects from proceeding effects.

Table 9: All Cases and Pilot Cases in Multidistrict Litigation Proceedings, by District, as of January 14, 2021

| District | All patent cases in MDL proceedings | | Pilot cases in MDL proceedings | |
|-------------------------|-------------------------------------|------------|--------------------------------|------------|
| | Percentage | Frequency | Percentage | Frequency |
| C.D. Cal. | <1% | 8 | <1% | 1 |
| N.D. Cal. | 6% | 122 | 6% | 22 |
| S.D. Cal. | <1% | 3 | <1% | 3 |
| N.D. Ill. | 7% | 111 | 11% | 97 |
| D. Md. | 27% | 53 | 29% | 30 |
| D.N.J. | 1% | 15 | 1% | 7 |
| D. Nev. | <1% | 1 | 0% | 0 |
| E.D.N.Y. | 2% | 7 | 2% | 6 |
| S.D.N.Y. | 3% | 32 | 6% | 25 |
| W.D. Pa. | 18% | 27 | 21% | 27 |
| W.D. Tenn. | 0% | 0 | 0% | 0 |
| E.D. Tex. | <1% | 34 | <1% | 32 |
| N.D. Tex. | 2% | 16 | 3% | 16 |
| All pilot courts | 2% | 429 | 2% | 266 |

Patent Cases and Stays

The granting of stays can affect the disposition time of cases. As is true of all civil litigation, patent cases can be stayed for a number of reasons. Stays for review by either the Patent and Trademark Office (PTO) or the International Trade Commission (ITC) are unique to patent litigation. Unlike stays for discovery, or for the resolution of a summary judgment motion, stays for review by the PTO or ITC, once granted, are outside the control of the courts. When stays for review are granted, the resolution of cases will be slower. Before we can assess the impact of review, however, we must determine the frequency of review by the PTO or ITC.

Table 10 shows the frequency of such stays by district.¹⁶ The table shows that review by the PTO or ITC is not evenly distributed across all districts. The Eastern District of Texas, for example, represents 46% of the cases in the database (Table 3, *supra*), but only 25% of all stays for PTO or ITC review (364 stays out of 1,465 total). The Northern District of California, on the other hand, represents 8% of the patent cases in the database (Table 3, *supra*), but 21% of the stays for PTO or ITC review. Pilot cases are less likely to include a stay than nonpilot cases, and the difference is statistically significant.

16. Similar to the MDL flag in CM/ECF, cases that are stayed can be given a “stayed” flag in CM/ECF. Once the stay is lifted, the flag is removed, meaning the flag indicates only currently stayed cases, not previously stayed cases. Moreover, the flag provides no information on why the case was stayed. To determine how many total cases have ever been stayed for PTO or ITC review, we conducted a docket text search for the word “stay” in those cases with activity in our most recent data pull. After gathering all the docket text entries that contained the word “stay,” two coders read through the text and coded whether or not the case was actually stayed for PTO or ITC review. The two coders agreed 83% of the time in the most recent pull of the data. To compile the information shown in Table 10, a third coder reconciled differences between the two coders, and the stays found in prior data pulls were added. Pilot cases are less likely to include a stay than nonpilot cases, and the difference is statistically significant.

Table 10: Cases Stayed for PTO or ITC Review, by District and Pilot Status, as of January 14, 2021

| District | Cases stayed for PTO or ITC review | Pilot cases stayed for PTO or ITC review | Percentage of pilot cases with a stay for PTO or ITC review |
|-------------------------|---|---|--|
| C.D. Cal. | 261 | 149 | 9% |
| N.D. Cal. | 306 | 74 | 20% |
| S.D. Cal. | 73 | 59 | 9% |
| N.D. Ill. | 96 | 29 | 3% |
| D. Md. | 18 | 4 | 4% |
| D.N.J. | 125 | 80 | 11% |
| D. Nev. | 17 | 8 | 5% |
| E.D.N.Y. | 30 | 21 | 9% |
| S.D.N.Y. | 74 | 46 | 11% |
| W.D. Pa. | 10 | 6 | 5% |
| W.D. Tenn. | 28 | 28 | 37% |
| E.D. Tex. | 364 | 352 | 3% |
| N.D. Tex. | 63 | 61 | 10% |
| All pilot courts | 1,465 | 917 | 6% |

Case Duration by Pilot Status¹⁷

One of the stated goals of the patent pilot program is to determine whether the litigation of patent cases is more efficient when handled by designated judges. One way to consider efficiency is case duration, which can be affected by a number of factors. Considered here are the effects of pilot status, use of stays, and number of transfers. Of course, not all patent cases in the pilot districts have terminated, so Table 11 reports total case time, in days, for pending cases while Table 12 reports case time for terminated cases. Both pilot cases and nonpilot cases terminated most often between 31 and 180 days after filing (see Table 12).

17. Past reports provided information on the amount of judge time cases consumed. Because cases increasingly involve multiple judges, we are no longer reporting judge time, as the available data no longer accurately capture it. While we could use the termination date of the case as a proxy for judge time, that date reflects the end date for the terminating judge only, not all judges on the case including those assigned the case after appellate review.

Table 11: Case Duration for Cases Pending as of January 14, 2021

| Case duration, in days | Number of cases | | |
|------------------------------|------------------|---------------------|--------------|
| | Pilot cases only | Nonpilot cases only | All cases |
| 1 | 0 | 0 | 0 |
| 2–7 | 9 | 3 | 12 |
| 8–30 | 30 | 21 | 51 |
| 31–180 | 264 | 148 | 412 |
| 181–365 | 185 | 104 | 289 |
| More than 365 | 328 | 324 | 652 |
| Total number of cases | 816 | 600 | 1,416 |

Table 12: Case Duration for Cases Terminated as of January 14, 2021

| Case duration, in days | Number of cases | | |
|------------------------------|------------------|---------------------|---------------|
| | Pilot cases only | Nonpilot cases only | All cases |
| 1 | 13 | 7 | 20 |
| 2–7 | 68 | 33 | 101 |
| 8–30 | 548 | 189 | 737 |
| 31–180 | 6,787 | 2,174 | 8,961 |
| 181–365 | 4,247 | 1,403 | 5,650 |
| More than 365 | 3,784 | 1,721 | 5,505 |
| Total number of cases | 15,447 | 5,527 | 20,974 |

The Effect of Stays on Case Duration

We know from Table 10 that 6% of pilot cases are stayed for PTO or ITC review, so it is important to consider the effect on overall disposition time of staying a case for PTO or ITC review. Table 13 shows the average number of days a case was open (or has been open, for pending cases) by whether or not the case was stayed for PTO or ITC review. Not surprisingly, the duration of both pending and terminated cases is much longer for cases that have experienced a stay than those that have not. The duration differences between cases that have been stayed for PTO or ITC review and those that have not are statistically significant ($p < 0.0001$).

Table 13: Average Case Duration, Terminated and Pending Cases, by Stay Status as of January 14, 2021

| Case status | Average case duration | |
|-----------------------|---|---|
| | Cases that have been stayed for PTO or ITC review | Cases that have not been stayed for PTO or ITC review |
| Pending cases only | 1,084 days | 430 days |
| Terminated cases only | 700 days | 278 days |
| All cases | 767 days | 287 days |

Note: On average, the duration of cases stayed for PTO or ITC review is longer than for nonstayed cases. Differences between stayed and nonstayed cases are statistically significant at the $p < 0.0001$ level.

The Effect of Judicial Patent Experience on Case Duration

Table 2 and Figure 2 (*supra*) show that experience with patent litigation among judges in the pilot courts varies considerably. To examine the influence of judge experience on case duration, we sorted judges into three groups: those with a below-average amount of patent litigation experience, those with an average amount of patent litigation experience, and those with an above-average amount of patent litigation experience.¹⁸ For clarity of presentation, pending and terminated cases are presented together. Table 14 shows the results. The frequency of cases across duration categories does not appear to differ across experience categories, but given the differences between designated and nondesignated judges in patent experience, we must examine case duration further (see next section).

Table 14: Frequency of Case Duration by Judicial Patent Experience, Pending and Terminated Cases, as of January 14, 2021

| Case duration, in days | Number of cases | | |
|------------------------------|--------------------------|--------------------|--------------------------|
| | Below-average experience | Average experience | Above-average experience |
| 1 | 1 | 10 | 9 |
| 2–7 | 1 | 47 | 65 |
| 8–30 | 11 | 293 | 484 |
| 31–180 | 99 | 3,337 | 5,937 |
| 181–365 | 69 | 1,929 | 3,941 |
| More than 365 | 67 | 2,544 | 3,546 |
| Total number of cases | 248 | 8,160 | 13,982 |

18. We considered judges with below-average patent experience to be those more than one standard deviation below the mean number of patent case terminations; we considered judges with average patent experience to be those within one standard deviation of the mean; and we considered those with above-average experience to be those who were more than one standard deviation above the mean. We used terminations instead of filings to capture the greatest amount of total patent case experience, from filing to case disposition. For these comparisons we consider *all* experience with patent litigation through January 14, 2021, not just the experience with which the judge began the pilot.

The Effect of Designation Status on Case Duration

Given the substantial amount of patent experience among designated judges relative to nondesignated judges, it is possible that the judicial experience categories presented in Table 14 mask a difference in the effect of experience on case-processing time that would be revealed only by comparing designated and nondesignated judges (see below). To examine this possibility, we looked at case duration by participation in the pilot program. Table 15 shows the differences in case times for designated and non-designated judges. On average, cases before designated judges take less time than those before non-designated judges, and the differences are statistically significant.¹⁹

Table 15: Average Case Duration in Days, Nondesignated and Designated Judges, as of January 14, 2021

| Case status | Average case duration | |
|-----------------------|-----------------------|-------------------|
| | Nondesignated judges | Designated judges |
| Pending cases only | 626 days | 494 days |
| Terminated cases only | 322 days | 291 days |
| All cases | 342 days | 303 days |

Case Events in Patent Litigation

Patent cases can contain a number of case events that make them distinct from other types of civil litigation. For example, patent cases often involve *Markman* hearings, where the key terms of the patent claims are construed. Moreover, the complex nature of patent litigation may lead to increased use of third-party experts, such as special masters or technical advisors. The complexity of patent cases may also lead to increased use of summary judgment as a method of case disposition. Additionally, after the America Invents Act (AIA)²⁰ changed the rules regarding joinder of patent cases, federal courts saw an increase in the number of single plaintiffs suing multiple defendants in patent cases in federal court; often these plaintiffs are nonpracticing entities, asserting patents they did not develop themselves. The changing nature of the plaintiffs in patent litigation may also be changing the nature

19. The duration differences between cases before designated and nondesignated judges are statistically significant at the $p < 0.0001$ level for terminated and all cases.

20. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified as amended in scattered sections of Title 35 of the U.S. Code).

of the cases themselves. We turn now to considering these case events and how they differ between pilot and nonpilot cases.

Markman Hearings²¹

Table 16 reports the frequency, by district, with which *Markman* hearings are held in pilot and nonpilot cases.²² As Table 16 shows, while only 6% of all pilot cases include *Markman* hearings, over 66% of all *Markman* hearings occur in pilot cases (991 hearings in pilot cases out of 1,511 hearings total), and the districts accounting for the largest percentages of all patent cases also account for the largest percentage of all *Markman* hearings (36% of all hearings are in the Eastern District of Texas). Despite the frequency with which *Markman* hearings occurred in cases filed in the Eastern District of Texas, only a small percentage of all cases from that district involve *Markman* hearings, likely because of the high percentage of settlements. Overall, pilot cases are less likely to include *Markman* hearings than nonpilot cases, and the difference is statistically significant.

21. Our analysis reports *Markman* hearings held. Due to the COVID-19 global pandemic, starting in March 2020 many courts suspended in-person hearings, including those related to *Markman*. Some courts began issuing rulings on *Markman* based on briefs filed rather than holding in-person or virtual hearings, at times giving parties the option to proceed on the briefs. Docket text sometimes reflected the change in procedure. See, e.g., Order re Joint Motion to Hold Claim Construction Hearing by Video Due to Novel Coronavirus Pandemic, *Oyster Optics, LLC v. Infinera Corp.*, Docket Entry No. 80, No. 2:19cv257, 2020 WL 4260957 (E.D. Tex. entered June 8, 2020) (“Before the Court is the Parties’ Motion to Hold Claim Construction Hearing by Video Due to Novel Coronavirus Pandemic. Dkt. No. 78. The parties seek to hold the claim construction hearing currently scheduled for June 16, 2020, by video conference. In view of the single-term dispute and the current motion, the Court is willing to waive the hearing and proceed on the briefs, unless the counsel prefer to attend the hearing as currently structured. The parties are directed to file a joint notice by June 11, 2020, indicating their decisions.”). It is clear from our most recent coding, however, that not every instance of the waiving of a *Markman* hearing is noted on the docket.

22. In CM/ECF, some districts record *Markman* hearings as an event type, while other districts docket an in-court hearing and the docket entry text indicates if it was a *Markman* or claim-construction hearing. To capture all potential hearings, we searched the docket text of all patent cases in our database for the terms “*Markman*” or “claim construction” (plus some variations) and merged the findings with the *Markman* CM/ECF events of those districts that use *Markman* event types. Two coders read both the *Markman* events and the text hits to determine if a *Markman* hearing was held, and, if so, on what date. Of the cases with potential hits in our most recent data collection, the two coders agreed 93% of the time. Differences were reconciled by a third coder using the PACER docket to create a final coding, and data were merged into the main case data. *Markman* hearings spanning multiple days were coded as occurring on the first day. Fifty-seven cases involved a second *Markman* hearing.

Table 16: Cases with *Markman* Hearings, by District and Pilot Status, as of January 14, 2021

| District | Cases with <i>Markman</i> hearings | Pilot cases with <i>Markman</i> hearings | Percentage of pilot cases with <i>Markman</i> hearings |
|-------------------------|------------------------------------|--|--|
| C.D. Cal. | 250 | 163 | 10% |
| N.D. Cal. | 235 | 25 | 7% |
| S.D. Cal. | 88 | 76 | 11% |
| N.D. Ill. | 66 | 37 | 4% |
| D. Md. | 11 | 4 | 4% |
| D.N.J. | 150 | 79 | 11% |
| D. Nev. | 20 | 11 | 6% |
| E.D.N.Y. | 15 | 13 | 5% |
| S.D.N.Y. | 61 | 20 | 5% |
| W.D. Pa. | 17 | 14 | 11% |
| W.D. Tenn. | 9 | 8 | 11% |
| E.D. Tex. | 542 | 499 | 5% |
| N.D. Tex. | 47 | 42 | 7% |
| All pilot courts | 1,511 | 991 | 6% |

Table 17 shows the average case duration for cases with and without a *Markman* hearing. Not surprisingly, cases in which a *Markman* hearing was held have longer disposition times, having reached a later stage in the life of a patent case.²³

Table 17: Case Duration, by Presence of a *Markman* Hearing, as of January 14, 2021

| Case status | Average case duration | |
|-----------------------|------------------------|---------------------------|
| | <i>Markman</i> hearing | No <i>Markman</i> hearing |
| Pending cases only | 1,048 days | 472 days |
| Terminated cases only | 800 days | 269 days |
| All cases | 830 days | 281 days |

Table 18 shows differences in disposition type based on whether or not a *Markman* hearing was held. While the number of observations is small, cases without a *Markman* hearing are less likely (as a percentage) to terminate on judgment and more likely to have “other” closings, likely because of the

23. All differences between cases with *Markman* hearings and cases without *Markman* hearings are statistically significant, $p < 0.0001$.

use of “other” closings for cases with stays. Cases without a *Markman* hearing are also more likely to be dismissed than those with such hearings.

Table 18: Frequency of Case Disposition Type, by *Markman* Hearing, as of January 14, 2021

| Disposition method | Cases with a <i>Markman</i> hearing | Cases without a <i>Markman</i> hearing | All cases |
|------------------------------|--|---|------------------|
| Transferred | 54 | 1,029 | 1,083 |
| Dismissed | 862 | 15,422 | 16,284 |
| Judgment | 336 | 1,450 | 1,786 |
| Other closing | 71 | 1,736 | 1,807 |
| Total number of cases | 1,323 | 19,637 | 20,960 |

Note: Differences between cases with a *Markman* hearing and those without for dismissals, judgment, stayed, and “other” closing are statistically significant at the $p < 0.05$ level or higher.

Special Masters and Technical Advisors

Appointment of a third-party expert, such as a special master or technical advisor, can be associated with case duration. Table 19 shows the frequency with which appointments of special masters or technical advisors are made across the pilot districts.²⁴ Only 1,096 (6%) of the patent cases in our database include such an appointment, and the vast majority of those are appointments of technical advisors. As Table 19 shows, the majority of the cases with special master or technical advisor appointments (85%) are pilot cases, largely owing to the frequency of such appointments in the Eastern District of Texas. Overall, pilot cases are more likely to involve the appointment of a third party than nonpilot cases, and the difference is statistically significant. Appointments are more likely to occur in districts where the percentage of patent cases included in the pilot is higher than average.

24. To identify appointments of special masters and technical advisors, we searched the docket text of all patent cases in our database for the phrases “special master” or “technical advisor” plus some variations on the phrases; we also searched for orders appointing such third parties. Two coders initially searched all relevant docket text to identify the presence and date of appointment. In the recent cases with third-party appointments, there was 85% agreement between the two coders. A third coder reconciled all differences between coders. Of all cases in our data, 87 included a second appointment of a third party, and 4 cases had a third appointment.

Table 19: Appointment of Special Master or Technical Advisor, by District, as of January 14, 2021

| District | All cases with special masters or technical advisors appointed | Pilot cases with special masters or technical advisors appointed | Percentage of pilot cases with special masters or technical advisors appointed |
|-------------------------|--|--|--|
| C.D. Cal. | 45 | 10 | 1% |
| N.D. Cal. | 69 | 5 | 1% |
| S.D. Cal. | 1 | 1 | <1% |
| N.D. Ill. | 4 | 2 | <1% |
| D. Md. | 1 | 0 | 0% |
| D.N.J. | 7 | 3 | <1% |
| D. Nev. | 1 | 0 | 0% |
| E.D.N.Y. | 3 | 2 | 1% |
| S.D.N.Y. | 6 | 4 | 1% |
| W.D. Pa. | 19 | 16 | 12% |
| W.D. Tenn. | 1 | 1 | 1% |
| E.D. Tex. | 874 | 827 | 8% |
| N.D. Tex. | 65 | 63 | 10% |
| All pilot courts | 1,096 | 934 | 6% |

Table 20 shows that cases with such appointments typically take longer to terminate, but it is possible that the appointment is made because of the duration of the case or that appointments are made in more complex cases that would have taken longer even without the appointment.

Table 20: Average Case Duration, by Appointment of Special Master or Technical Advisor, as of January 14, 2021

| Case status | Average case duration | |
|-----------------------|--|---|
| | Appointment of special masters or technical advisors | No appointment of special masters or technical advisors |
| Pending cases only | 810 days | 531 days |
| Terminated cases only | 610 days | 287 days |
| All cases | 625 days | 302 days |

Note: All differences are statistically significant at the $p < 0.0001$ level or higher.

Table 21 shows little variation in disposition type for cases with and without these third-party appointments, but given the low number of observations in each category, such findings should be interpreted with caution. The percentage of cases closed through “other closing” or judgment was greater for

cases with third-party appointments than those without, while cases without such appointments terminated more often through transfer or dismissal. The differences are statistically significant at the $p < 0.05$ level or higher.

Table 21: Case Disposition Type, by Appointment of Special Master or Technical Advisor, as of January 14, 2021

| Disposition method | Cases with special masters or technical advisors appointed | Cases without special masters or technical advisors appointed | All cases |
|---------------------------|---|--|------------------|
| Transferred | 71 | 1,012 | 1,083 |
| Dismissed | 657 | 15,627 | 16,284 |
| Judgment | 132 | 1,654 | 1,786 |
| Other closing | 154 | 1,653 | 1,807 |
| Number of cases | 1,014 | 19,946 | 20,960 |

Note: The proportion of cases disposed of by transferred, dismissal, judgment, or “other” closing termination codes differs significantly between cases with a special master or technical advisor appointed and those without such appointments. The differences are statistically significant at the $p < 0.05$ level or higher.

Summary Judgment

Table 22 shows the variation by district in the number of cases with one or more orders for summary judgment.²⁵ As the table shows, summary judgment orders are exceedingly rare in the cases in our database. While the differences in case duration (Table 23) and disposition method (Table 24) are statistically significant at the $p < 0.05$ level or higher, the small number of cases within any single category urges caution in reading too much into the differences.

25. To identify orders regarding summary judgment, we searched the cases’ dockets two ways. First, we identified all orders in the patent cases in our database where the phrase “summary judgment” (plus some variations on the phrase) appeared in the docket text. Second, we looked for summary judgment case events. In our latest data collection, the two coders who read the text to determine if there was indeed an order for summary judgment agreed 66% of the time. A third coder reconciled differences in coding. Cases were coded as having an order resolving a summary judgment motion irrespective of whether the motion was for full or partial summary judgment, for all parties or some parties, or granting or denying the motion. In past years, we also examined Reports and Recommendations on issues of summary judgment but found no additional information about summary judgment activity. Overall, pilot cases are less likely to include orders on summary judgment than nonpilot cases, and the difference is statistically significant.

Table 22: Cases with an Order for Summary Judgment, by District, as of January 14, 2021

| District | Cases with summary judgment orders | Pilot cases with summary judgment orders | Percentage of pilot cases with summary judgment orders |
|-------------------------|------------------------------------|--|--|
| C.D. Cal. | 196 | 97 | 6% |
| N.D. Cal. | 141 | 14 | 4% |
| S.D. Cal. | 63 | 49 | 7% |
| N.D. Ill. | 81 | 38 | 4% |
| D. Md. | 14 | 5 | 5% |
| D.N.J. | 56 | 34 | 5% |
| D. Nev. | 16 | 10 | 6% |
| E.D.N.Y. | 12 | 10 | 4% |
| S.D.N.Y. | 64 | 23 | 6% |
| W.D. Pa. | 11 | 8 | 6% |
| W.D. Tenn. | 4 | 4 | 5% |
| E.D. Tex. | 157 | 137 | 1% |
| N.D. Tex. | 31 | 27 | 4% |
| All pilot courts | 846 | 456 | 3% |

Table 23: Average Case Duration, by Summary Judgment Order, as of January 14, 2021

| Case status | Average case duration | |
|-----------------------|-------------------------|----------------------------|
| | Summary judgment orders | No summary judgment orders |
| Pending cases only | 1,449 days | 496 days |
| Terminated cases only | 879 days | 281 days |
| All cases | 930 days | 294 days |

Note: All differences in case duration are statistically significant at the $p < 0.0001$ level or higher.

While cases with summary judgment orders are clearly of a longer duration than those without, we cannot tell from these data if the terminated cases were disposed of on the summary judgment order. To answer that question, we investigated the cases with summary judgment orders by type of disposition. Not surprisingly, cases with orders on summary judgment are more likely to terminate on judgment, on average, and the difference is statistically significant. Interestingly, however, pilot cases are less likely to terminate on judgment after controlling for such orders, and the result is statistically significant.

Table 24: Case Disposition Type, by Summary Judgment Order, as of January 14, 2021

| Disposition method | Cases with summary judgment orders | Cases without summary judgment orders | All cases |
|------------------------------|---|--|------------------|
| Transferred | 14 | 1,069 | 1,083 |
| Dismissed | 376 | 15,908 | 16,284 |
| Judgment | 359 | 1,427 | 1,786 |
| Other closing | 19 | 1,788 | 1,807 |
| Total number of cases | 768 | 20,192 | 20,960 |

Note: All differences are statistically significant at the $p < 0.05$ level or higher for all termination methods.

Serially Filed Cases

While much has been written about the impact on patent litigation of nonpracticing entities (NPEs), sometimes called “patent trolls,” there is little agreement on how NPEs should be defined or who constitutes an NPE. While the general definition of an NPE is a person or group who holds a patent but has no intention to develop it, this broad definition lumps universities and individual inventors together with large organizations who purchase patents solely to assert them. While we make no claims or judgments about the role one type of plaintiff serves over another for economic development, one conclusion can be reached: A plaintiff asserting a patent in federal court today often files multiple cases against multiple defendants instead of using joinder rules to combine cases. So, while there are many more patent cases today than before the passage of the AIA, the management of multiple cases filed by a single plaintiff may not be the same as that used for multiple unrelated cases.

To gain a sense of the impact of serially filed cases in the pilot courts, we begin with an examination of the frequency of serially filed cases by district.²⁶ Table 25 reports the results of this analysis, breaking out serially filed cases included in the pilot program from all cases. Serially filed cases are a greater percentage of pilot cases than of all cases. This is in large part because of the greater representation of serial filers in the Eastern District of Texas, combined with the fact that the Eastern District of Texas has, as of our January 14, 2021, data pull, a high percentage of all patent filings and of pilot cases in our data.

²⁶ For purposes of this analysis, we define serial filers as plaintiffs filing cases against different defendants across consecutive days in the same court.

Table 25: Serially Filed Cases, by District (Pilot Cases and All Cases), as of January 14, 2021

| District | Pilot cases | | All cases | |
|-------------------------|---|---|---|---|
| | Number of pilot cases that are serially filed | Percentage of pilot cases that are serially filed | Number of all cases that are serially filed | Percentage of all cases that are serially filed |
| C.D. Cal. | 655 | 39% | 1,067 | 35% |
| N.D. Cal. | 114 | 30% | 611 | 32% |
| S.D. Cal. | 280 | 42% | 350 | 41% |
| N.D. Ill. | 396 | 46% | 694 | 41% |
| D. Md. | 23 | 22% | 44 | 23% |
| D.N.J. | 186 | 25% | 458 | 26% |
| D. Nev. | 48 | 28% | 69 | 25% |
| E.D.N.Y. | 47 | 19% | 70 | 21% |
| S.D.N.Y. | 138 | 33% | 265 | 25% |
| W.D. Pa. | 21 | 16% | 21 | 14% |
| W.D. Tenn. | 31 | 41% | 33 | 42% |
| E.D. Tex. | 8,275 | 81% | 8,383 | 81% |
| N.D. Tex. | 220 | 35% | 245 | 35% |
| All pilot courts | 10,434 | 64% | 12,310 | 55% |

Table 26 shows the average case duration for cases involving, and not involving, a serial filer. Cases without a serial filer take more time, on average, than those with a serial filer. These differences are statistically significant for terminated and all cases.²⁷

Table 26: Average Case Duration, by Presence of a Serial Filer, as of January 14, 2021

| Case status | Average case duration | |
|-----------------------|-----------------------|-----------------|
| | Serial filer | No serial filer |
| Pending cases only | 586 days | 530 days |
| Terminated cases only | 282 days | 329 days |
| All cases | 293 days | 349 days |

Table 27 explores the differences in method of disposition for cases with and without a serial filer. As a percentage, nonserially filed cases are more often terminated through transfer and judgment, while cases with a serial filer are more often terminated through dismissal and statistical closure, often

²⁷ The differences between cases with and without a serial filer are statistically significant for terminated and all cases at the $p < 0.0001$ level or higher.

used for PTO or ITC review. The differences between cases with and without a serial filer are statistically significant at the $p < 0.05$ level or higher for all dispositions.

Table 27: Case Disposition Type, by Presence of a Serial Filer, as of January 14, 2021

| Disposition method | Serially filed cases | Nonserially filed cases | All cases |
|------------------------------|-----------------------------|--------------------------------|------------------|
| Transferred | 519 | 564 | 1,083 |
| Dismissed | 9,332 | 6,952 | 16,284 |
| Judgment | 688 | 1,098 | 1,786 |
| Other closing | 1,325 | 482 | 1,807 |
| Total number of cases | 11,864 | 9,096 | 20,960 |

Note: Cases with serial filers terminated more often through “other closing” or dismissal, while cases without such filers terminated more often through transfer or judgment. The differences are statistically significant at the $p < 0.05$ level or higher.

Conclusions About Case Duration

Several factors discussed above affect the duration of patent cases, with some increasing duration (such as orders on summary judgment) and others decreasing duration (such as judicial experience with patent litigation). Moreover, the method by which cases terminate and the presence of certain case events differ between pilot and nonpilot cases and affect case duration. All these factors combined likely influence case duration. In a separate analysis that measured case duration by a case’s pilot status, the number of transfers, the judge’s experience with patent litigation (measured in the judge’s number of terminated patent cases), the presence of stays, inclusion of the case in an MDL proceeding, orders on summary judgment, *Markman* hearings, and the appointment of special masters or technical advisors, we found that pilot cases are disposed of 15% faster than nonpilot cases, all else being equal.²⁸ Thus, it appears that pilot cases are disposed of faster than nonpilot cases, and the finding is consistent across a variety of specifications for considering case disposition times within the PPP.

Not only do pilot cases terminate faster than nonpilot cases, but the finding is robust when we consider the method by which cases terminate. Pilot cases terminate, on average, through dismissal in 266 days compared to nonpilot cases (316 days), through judgment in 526 days compared to nonpilot cases (566 days), and through “other” terminations in 271 days compared to nonpilot cases (301 days). The differences in average days to termination are all significant at conventional levels, suggesting that no matter how they terminate, pilot cases terminate faster than nonpilot cases. There is no significant difference in case duration for cases terminating through transfer.

Appeals

One stated purpose of the PPP is to “encourage enhancement of expertise in patent cases among district judges.” One indication of enhanced expertise may be the rate at which decisions by pilot judges are affirmed by the court of appeals. To examine appeals and affirmances, we need to establish which cases are being appealed. Table 28 shows the frequency and percentage of appeals by district, both for

28. The model also included variables controlling for district-level effects of case duration.

all patent cases in our database and for pilot cases specifically. While pilot cases make up over 73% of patent cases in the pilot districts, they represent only 55% of appeals. In fact, as a percentage of all terminated cases, pilot cases are less likely to be involved in an appeal than nonpilot cases, though this varies by district court.²⁹

Table 28: Appeals by District (All Cases and Pilot Cases), as of January 14, 2021

| District | Cases with at least one appeal | Percentage of all cases with at least one appeal | Pilot cases with at least one appeal | Percentage of pilot cases with at least one appeal |
|-------------------------|--------------------------------|--|--------------------------------------|--|
| C.D. Cal. | 197 | 6% | 96 | 6% |
| N.D. Cal. | 243 | 13% | 35 | 9% |
| S.D. Cal. | 61 | 7% | 50 | 7% |
| N.D. Ill. | 88 | 5% | 61 | 7% |
| D. Md. | 15 | 8% | 10 | 10% |
| D.N.J. | 164 | 9% | 74 | 10% |
| D. Nev. | 18 | 7% | 8 | 5% |
| E.D.N.Y. | 10 | 3% | 7 | 3% |
| S.D.N.Y. | 86 | 8% | 30 | 7% |
| W.D. Pa. | 9 | 6% | 8 | 6% |
| W.D. Tenn. | 3 | 4% | 3 | 4% |
| E.D. Tex. | 249 | 2% | 238 | 2% |
| N.D. Tex. | 34 | 5% | 28 | 4% |
| All pilot courts | 1,177 | 5% | 648 | 4% |

Note: Percentages are based on cell values from Table 3 with the number of filings or pilot cases as the denominator.

While pilot cases are less likely to be appealed than nonpilot cases, certain districts are more likely to have cases appealed than others. One interesting pattern shown in Table 28 is the frequency with which appeals come from cases in the three pilot districts in California. Forty-three percent of cases with an appeal are from one of the three California pilot courts, and 28% of pilot cases with appeals come from these districts. The District of New Jersey saw a substantial increase in the number of appeals both for all cases and for pilot cases from its docket since the publication of the Five-Year Report.³⁰ The patterns for the California districts and the District of New Jersey do not appear to match

29. The 1,177 district court cases associated with at least one appeal can be either pending (as a result of the case reopening) or terminated in the district court record. Of the 16,263 pilot cases, 648 (4%) were associated with at least one appeal, 589 of which were terminated. Of the 6,127 nonpilot patent cases, 529 (9%) were involved in at least one appeal, 471 of which were terminated. The difference in percentage of cases involved in at least one appeal is statistically significant. This difference may be due to the higher number of terminated nonpilot cases disposed of through judgment compared with pilot cases (discussed more below).

30. Margaret S. Williams, Rebecca Eyre, & Joe Cecil, Federal Judicial Center, Patent Pilot Program: Five-Year Report (2016).

the representation of these districts in the data that we have discussed in this report. Table 29 shows each district’s proportion of filings, appeals, pilot cases, and pilot cases with appeals in our data.

Table 29: Percentage of Filings, Appeals, Pilot Cases, and Pilot Cases with at Least One Appeal, by District, as of January 14, 2021

| District | Percentage of filings | Percentage of appeals | Percentage of pilot cases | Percentage of pilot cases with at least one appeal |
|-------------------------|-----------------------|-----------------------|---------------------------|--|
| C.D. Cal. | 14% | 6% | 55% | 6% |
| N.D. Cal. | 8% | 13% | 20% | 9% |
| S.D. Cal. | 4% | 7% | 77% | 7% |
| N.D. Ill. | 8% | 5% | 51% | 7% |
| D. Md. | 1% | 8% | 53% | 10% |
| D.N.J. | 8% | 9% | 42% | 10% |
| D. Nev. | 1% | 7% | 64% | 5% |
| E.D.N.Y. | 1% | 3% | 73% | 3% |
| S.D.N.Y. | 5% | 8% | 39% | 7% |
| W.D. Pa. | 1% | 6% | 88% | 6% |
| W.D. Tenn. | <1% | 4% | 97% | 4% |
| E.D. Tex. | 46% | 2% | 98% | 2% |
| N.D. Tex. | 3% | 5% | 90% | 4% |
| All pilot courts | 22,390 | 1,177 | 16,263 | 648 |

Note: The percentages in Table 29 are from Tables 3 and 28, which use the column totals as the denominator.

Two of the three California districts have a greater percentage of appeals and pilot cases with appeals than the districts’ representation in the data generally. Conversely, the Eastern District of Texas has a much smaller percentage of appeals than the district’s representation in filings or pilot cases would predict. There can be several explanations for these patterns, but the most likely is one we have already considered—case disposition methods shown in Table 8 (*supra*). As Table 8 shows, the disposition of cases differs across districts, and this may be affecting the patterns of appeals. Forty-four percent of cases that end in judgment come from one of the three California pilot courts, and 15% of judgments are from the District of New Jersey. Because cases from these four districts are more likely to have a judgment to appeal, the representation of these districts among appeals should not be surprising. As Table 8 shows, in the Eastern District of Texas a mere 3% of cases are terminated by judg-

ment, whereas overall, cases resulting in judgment represent 9% of all terminations. The low percentage of appeals from the Eastern District of Texas may be explained in part by the infrequency of cases there ending in judgment of any type.

While looking at appellate activity across district courts highlights important differences among courts, it does not reveal how experience with patent litigation affects the appellate process. To understand this question, we must consider what happened to the district court decision after review by the appellate court. Examining the outcome of appeals is a bit more complicated than reporting the outcome of district court cases. Many district court cases may be included in a single appellate case. Likewise, a single district court case may be associated with multiple appeals. In the analysis below we consider the outcome of the district court case given the appeal. This means that appeals associated with multiple district court cases are counted more than once. For district court cases associated with more than one appeal, we looked across all appeals to code the overall outcome of the district court decision after the appellate process. Between January 2012 and January 2021, there were 1,177 district court cases associated with at least one appeal, 117 (59 pilot and 58 nonpilot cases) for which the appeal was pending at the time of this analysis.³¹ Table 30 shows the breakdown of outcomes for the appeals.

Table 30: Appellate Review of Pilot and Nonpilot Case Outcomes, Through January 14, 2021

| Appellate decision | Pilot cases | Nonpilot cases |
|--|--------------------|-----------------------|
| Affirmed, including summary affirmance | 314 | 248 |
| Affirmed in part and reversed in part (with/without remand) | 36 | 47 |
| Dismissed, including under Fed. R. App. P. 42(b) | 187 | 111 |
| Other | 1 | 3 |
| Remanded | 3 | 8 |
| Reversed | 7 | 0 |
| Reversed and remanded | 19 | 14 |
| Reversed, vacated, including in part | 16 | 30 |
| Vacated and remanded | 6 | 9 |
| Granted | 0 | 1 |
| Pending | 59 | 58 |
| Total | 648 | 529 |

As Table 30 shows, while there are slightly more substantive decisions (decisions other than “dismissed”) in nonpilot cases than pilot cases, the substantive outcomes are not significantly different between affirmance and reversal. If we interpret remanded, reversed, or vacated to mean the lower court reached an incorrect decision, and interpret affirmance to mean the lower court reached the correct outcome, pilot cases are “correct” 54% of the time while nonpilot cases are correct 56% of the time,

31. We gathered information about appeals by downloading all appeals from all courts in CM/ECF and matched the appeal back to our district court case(s), using the appellate case disposition to code the appeal outcome.

but the difference is not statistically significant. If we use a more generous definition of “correct” including affirmed in part and dismissal of the appeal (because the lower court decision remains law), lower court decisions in pilot cases stand about 83% of the time, while lower court decisions in nonpilot cases stand 77% of the time; this difference is not statistically significant.

The overwhelming affirmance of district court decisions makes it unlikely that an investigation of appellate court decisions in pilot cases would produce fruitful results. Nonetheless, we investigated how often decisions in pilot cases were affirmed relative to nonpilot cases, and we found no significant differences between the two groups.

Venue

In the 2017 Interim Report³² we noted that the Supreme Court decision that year in *TC Heartland LLC v. Kraft Foods Group Brands LLC*³³ was likely to affect the PPP, but at the time of the analysis it was unclear what the effect was likely to be. The preliminary data reported in 2017 noted the appearance of a decrease in filings in the Eastern District of Texas, likely due to plaintiffs waiting for the pending decision by the Supreme Court before filing their case and because of the subsequent decision’s holding regarding venue. Other districts, both within the pilot and outside its scope, saw an initial increase in their patent case filings as a result of *Heartland*.

The filing trends reported in 2017 continue in the analysis reported here. While the Eastern District of Texas continues to manage the bulk of patent cases included in the study, its share of the caseload declined in recent years. Table 31 shows the percentage of all patent cases filed in each pilot district since the first full year of the pilot (2012) and the percentage of the year’s filings that became pilot cases.

32. Margaret S. Williams, Rebecca Eyre, & Joe Cecil, Federal Judicial Center, Patent Pilot Program: 2017 Interim Report.

33. 137 S. Ct. 1514 (2017).

Table 31: Percentage of Filings, PPP Districts, 2012–2020

| District | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| C.D. Cal. | 18% | 14% | 12% | 7% | 9% | 14% | 16% | 23% | 18% |
| N.D. Cal. | 8% | 7% | 9% | 5% | 6% | 9% | 17% | 14% | 14% |
| S.D. Cal. | 5% | 8% | 3% | 2% | 3% | 4% | 3% | 3% | 2% |
| N.D. Ill. | 8% | 7% | 6% | 4% | 8% | 10% | 7% | 9% | 12% |
| D. Md. | 1% | 1% | 1% | 1% | <1% | 1% | <1% | 1% | 1% |
| D.N.J. | 6% | 5% | 11% | 7% | 6% | 9% | 11% | 10% | 10% |
| D. Nev. | 1% | 1% | 1% | 1% | 1% | 1% | 2% | 1% | 1% |
| E.D.N.Y. | 1% | 2% | 1% | 1% | 1% | 2% | 3% | 3% | 2% |
| S.D.N.Y. | 5% | 4% | 5% | 4% | 4% | 5% | 6% | 7% | 7% |
| W.D. Pa. | 1% | 1% | 1% | <1% | <1% | 1% | <1% | 1% | <1% |
| W.D. Tenn. | 1% | 1% | <1% | <1% | <1% | <1% | <1% | <1% | <1% |
| E.D. Tex. | 43% | 47% | 49% | 65% | 58% | 42% | 29% | 24% | 26% |
| N.D. Tex. | 2% | 3% | 2% | 3% | 2% | 3% | 6% | 4% | 6% |
| Total | 2,894 | 2,983 | 2,573 | 3,886 | 2,876 | 2,047 | 1,747 | 1,391 | 1,475 |
| Percent Pilot | 70% | 77% | 78% | 84% | 80% | 70% | 57% | 57% | 62% |

The percentage of cases filed in the Eastern District of Texas declined in 2018 but was already trending down in the years before the *Heartland* decision. While Table 31 reports only full years of data, the filings in 2020 continue to show a decline in the share of cases included in the pilot for the Eastern District of Texas, with the district consistently seeing roughly half the filings they received at the beginning of the PPP. Other pilot districts, such as the Central District of California, the Northern District of California, and the District of New Jersey, saw patent filings rise in more recent years.³⁴

The change in the choice of venue rules affected the pilot. As we noted in prior interim reports, the trends reported in the first few years of the pilot were heavily weighted by the results for the Eastern District of Texas, which had more than half of all patent cases in pilot courts and two-thirds of all pilot cases as of the 2017 analysis. However, with the share of the caseload in the Eastern District of Texas declining and the number of designated judges across pilot courts changing, the number of pilot cases included in the PPP each year is also declining (from 80% of filings in 2016, to 70% in 2017, to 62% in 2020). Though the majority of patent cases filed each year were before designated judges, the change in venue out of the Eastern District of Texas, and away from a small group of designated judges on that court who handled the majority of pilot cases, changed the way pilot cases were managed³⁵ but did not change the overall patterns reported in prior years for the PPP.

34. As we reported in the 2017 Interim Report, the most substantial effect of *Heartland* is that cases are now more likely to be filed in the District of Delaware, outside the scope of the PPP.

35. For example, the Eastern District of Texas is more likely to appoint special masters or technical advisors, less likely to issue orders on summary judgment, more likely to end in settlement, and more likely to involve serial filers than other districts, and many of these factors are related to case duration and appellate review.

Interviews with Designated Judges

In June 2017, we began conducting a series of in-depth interviews with current and former designated judges, ultimately interviewing 30 judges from the 13 pilot districts. The judges interviewed were a random stratified sample selected from the pool of all current and former designated judges. The interviews dealt with three topics: participation in the PPP, case-management practices, and whether or not the pilot is achieving the stated goals. The interviews were semi-structured, following a protocol included in the Appendix of this report, and they lasted approximately 30 minutes each, varying by respondent. Summarized below are the results of the interviews.

Participation in the PPP

The majority of the judges with whom we spoke were involved with their courts' decisions to join the pilot. Of those who were not involved, it was often because they were not a member of the court's bench when the court joined the pilot.

Courts' processes for deciding whether to join the pilot were generally consensus-based, with participating judges reporting discussions and votes at judges' meetings. "There was a lot of enthusiasm for it" one judge reported; another noted "overwhelming support." Several judges also pointed out their courts' heavy patent dockets, with one stating "we were already doing much of what the pilot program was designed to accomplish" so it was a "natural fit" to join the pilot.

Judges anticipated a number of potential benefits to their courts' participation in the pilot. "Number one, it would presumably develop a level of expertise in the pilot judges that they could, you know, make them more efficient in handling their cases and able to do a better job for . . . the litigants." (See "The Effect of Designation Status on Case Duration," *supra* p. 18.) Others mentioned wanting to be at the forefront of testing new programs and the pilot program being a natural fit for their existing patent caseload. Similarly, in terms of personal benefits, judges cited the chance to try new techniques and procedures. Several judges also mentioned the extra law clerk and educational opportunities described in early versions of the PPP legislation, and expressed disappointment that these resources were not included in the final version of the legislation. The absence of resources did not affect their willingness to participate in the pilot, however.

The most frequently mentioned drawback of courts' participation in the pilot was the loss of judges serving as "generalists" and the associated risks of "carving out certain cases for special treatment," although several judges saw "no drawbacks at all." In terms of individual participation, again, most judges noted no drawbacks, although a few were concerned about the degree to which the workload might increase, and the potential "burnout" associated with that.

We asked judges whether their participation, and their court's participation, in the pilot had thus far gone as expected. While multiple judges reported having no expectations one way or another going into the pilot, another judge captured several others' responses by saying, "Yes and no. I do find the cases that I have interesting and challenging and they involve a lot of time, so in that respect it has gone as I expected. The no is because we haven't had as many cases I expected we would have." To the latter point, several judges commented that either the court didn't receive as many patent filings as hoped, or that designated judges didn't receive as many as hoped due to nondesignated judges opting to keep their randomly assigned patent cases. (See "Filings by District," *supra* p. 6, and "Transfer of Patent Cases," *supra* p. 7.)

The most common response, when interviewees were asked why they decided to participate in the pilot, was "interest." Judges reported interest in patent cases overall, interest in the science underlying

the cases, interest in learning more about patent cases, and interest in participating in pilot projects generally and the opportunity to “advance the cause of efficient judicial administration.”

When asked if the court’s workload, or their own workload, had changed as a result of participation in the pilot, most judges said that either they weren’t sure, or that it had not had a large impact. “I would have predicted a little bit heavier filings, heavier caseload” one respondent indicated. Another said, “I just can’t say that the Patent Pilot Project had a great effect on my workload or what I saw happening in the district.” Multiple judges noted that their districts were already receiving a large number of patent cases pre-pilot, and several pointed out that patent cases tend to be “labor intensive”—with two citing Hatch-Waxman (ANDA) cases in particular.

Responses were mixed as to whether designated judges used each other as resources. Most indicated they did not do so, or did so only occasionally, or had in the past but no longer did so frequently. “No, I haven’t. We tend to work very independently,” one judge reported. Less commonly, other judges responded in the affirmative, citing informal conversations or discussions at conferences. “Absolutely” one judge replied, “that’s probably one of the most useful parts of the program . . . other patent judges around the country have been and continue to be a valuable resource for me particularly in this area of the law.”

Few judges left the pilot once they began as designated judges, and those who did tended to depart at natural segues: upon leaving the bench, upon becoming chief judge, or upon taking senior status.

Case Management

The most commonly mentioned way in which judges changed their case management practices as a result of participation in the pilot was the creation of, or greater awareness of, patent local rules. One judge indicated that participating in the pilot impacted hiring of law clerks and whether to seek a law clerk with a specialized background; one mentioned an increased likelihood of granting a temporary stay for PTO review; one said the handling of discovery changed; and one described a change in experience based on learning from others during the pilot. However, several judges indicated no change in their case management practices, including one who said, “I didn’t change my case management style at all, which probably makes me a very bad person from a test perspective.”

The majority of judges with whom we spoke indicated holding *Markman* hearings in their cases, some describing them as held “regularly” or “in every case.” Others indicated doing so “when they are called for” and “where appropriate.” Though case management practices such as holding *Markman* hearings didn’t appear to change as a result of the pilot, some judges felt their practices became more efficient. One respondent said “I think I used to ruminate a lot more over *Markman* hearings and claim constructions, and now I think I’m a little more comfortable doing it, so I mean, a little more efficient, a little faster perhaps.” (See “*Markman* Hearings,” *supra* p. 19.) Judges were more likely to report the use of technical advisors than special masters; use of the latter was reported only rarely. (See “Special Masters and Technical Advisors,” *supra* p. 21.)

Most interviewed judges’ districts had local patent rules that they used to manage cases; a few judges created their own rules. Those with local rules reported them to be helpful, and they were generally in place before the start of the pilot: “We all followed the local patent rules and there’s still a very strong consensus by the bench and the bar that those rules work...I don’t think any of the amendments pertained to the pilot as such.”

Whether or not designated judges tended to grant stays depended on the weighing of several factors: how far along the case was and how close to trial, whether the PTO had accepted the case for

review, the nature of the issues involved, and how likely it was that the stay would help get to resolution. “It’s kind of a case-by-case basis trying to decide what’s the most efficient way for this case to get resolved,” one judge remarked.

Judges tended not to see a difference in the litigation of pilot and nonpilot patent cases. A few pointed out that the district’s local rules governed all patent cases.

Pilot Goals

Interviewed judges found it difficult to say whether the pilot had any effect on the appeal of patent cases. Judges pointed out that they had limited numbers of cases on which to base a response and thus only “anecdotal evidence” on which to rely for an answer. Most commonly, judges indicated that they didn’t know or weren’t sure. (See “Appeals,” *supra* p. 27.)

Responding judges were in agreement that handling more patent cases increased their perceived expertise in handling patent cases. One said, “It certainly has in my case and it has in the case of all my colleagues that are in the program. You have a better frame of reference. You have less preparation time in getting up to speed. And you just have a general heightened level of familiarity, both with the area of the law and the procedural requirements.” Not all designated judges felt they’d received enough patent cases to fully benefit from the potential expertise increase, however. And several judges pointed out that the increase in expertise was due to the number of patent cases, not necessarily the pilot program itself. “I would attribute it more to correlation than I would causation” one judge noted. That is, as expressed by another judge, “yes, but that had nothing to do with being in the program. That had simply to do with the fact that I had so many [patent] cases.”

Judges were more divided regarding whether the pilot improved the efficiency of litigating patent cases. One felt “yes, without a doubt.” Those that agreed noted patent local rules that sped up the handling of cases and stated that with experience came efficiency. Another said, “I hate to tell you this, but I don’t think there’s been any gain or loss in efficiency.” And yet another responded, “That’s not being achieved, at least, in my case because I’m not getting enough of them to achieve those goals.” (See “The Effect of Designation Status on Case Duration,” *supra* p. 18.)

The implementing legislation asks if there is any evidence of efforts by litigants to select districts in an attempt to ensure specific outcomes. Although as one judge put it, litigants are “always jockeying . . . to get . . . a strategic advantage” and several judges mentioned the number of filings in the Eastern District of Texas, other respondents didn’t feel they had enough information to answer. And several respondents indicated that the implementation of the pilot did not have any impact on the observed filing patterns. (See “Venue,” *supra* p. 31.)

The implementing legislation also asks whether “the pilot program should be extended to other district courts, or should be made permanent and apply to all district courts.” While such a recommendation is beyond the scope of the FJC’s role conducting this study, we did ask interviewed judges: “If the pilot were implemented nationally, can you think of any changes that should be made?” The most common response was “resources”—namely, provision of a specialized patent law clerk (as mentioned in early versions of the implementing legislation), and additional conference and training opportunities. Judges also suggested the development of a better way to distribute workload, if the patent pilot

program were to be extended. Approximately the same number of judges indicated that they thought the pilot should be extended as hoped it would not.

Conclusions

Of the 315 judges with at least one patent case in our data, 62 (15%) of them were participating as designated judges as of January 14, 2021, and 28% of all judges on pilot courts served as designated judges at some point during the 10 years of the pilot. As reported previously, designated judges began the pilot with more patent litigation experience than their nondesignated counterparts, and they continued to gain more experience through the pilot. Thus, if a goal of the PPP was to assign patent cases to judges more experienced with patent litigation, we can say that goal appears to have been met. Of the over 20,000 patent cases in the data, 73% have been before designated judges who, on average, are more experienced with patent litigation.

The ability of designated judges to gain experience in the pilot is contingent on case filings, and patent filings across the districts are not evenly distributed (a subject discussed further below). In fact, just under half of all patent filings, and 63% of all pilot cases in our data, come from the Eastern District of Texas. Across the districts, the percentage of patent cases that are pilot cases ranges from a low of 20% to a high of 98%. The large number of pilot cases shows that many nondesignated judges transferred their randomly assigned cases to designated judges. Seventy percent of all case transfers were for purposes of the pilot. Cases transferred from nondesignated judges to designated judges went to judges with more patent experience on average.

Method of case disposition and time to disposition vary by pilot status, suggesting pilot participation had an effect on efficiency as well. While 94% of all cases in our data, both pilot and nonpilot, are terminated, and most cases are terminated through dismissal, pilot and nonpilot cases differ in the frequency with which they are terminated on judgment, through dismissal, and through “other” termination codes, including statistical closing. Additionally, the type of termination differs substantially by district participating in the pilot and whether or not the case was a pilot case, which affects the frequency with which case outcomes are appealed (discussed below).

Only 6% of cases are stayed for PTO or ITC review, and a mere 2% are included in an MDL proceeding, and both case events tend to increase case duration. Both types of stay for review of the patent and inclusion of the case in an MDL proceeding were less likely in pilot cases than nonpilot cases.

Other factors relevant to the evaluation of the PPP include the use of *Markman* hearings, special masters, and summary judgment. These events occur in 6% or less of pilot cases and are generally associated with longer case durations. Though the appointment of special masters (or technical advisors) is more frequent in pilot cases than nonpilot cases, *Markman* hearings and orders on summary judgment are less likely to occur in pilot cases than nonpilot cases. Summary judgment orders are more likely to result in cases terminating on judgment, overall, but pilot cases were less likely to result in termination on judgment after accounting for the presence of such orders.

Because of the lack of consensus on the definition of NPE, we focus on serially filed cases, a frequent identifier of NPE behavior and one likely to affect district caseloads. Some districts see more cases from serial filers than others, ranging from a low of 16% of pilot cases to a high of 81%. Serial filers account for a substantial part of the patent docket in some districts. These cases terminate more quickly and more often through dismissal or “other” termination than those without serial filers. Pilot cases tend to involve serial filers more often than nonpilot cases.

Just over 1,100 of the district court patent cases in our database have been involved in at least one appeal, and over 100 of those appellate cases are pending. While pilot cases are less likely to be appealed

than nonpilot cases, this finding is likely the result of the substantial number of nonpilot cases terminated through judgment, compared to the pilot cases. Among the cases that were appealed, we find no significant difference in the rates of affirmance for pilot and nonpilot cases. Decisions by the district courts tend to be upheld regardless of whether or not the case was before a pilot judge.

The Supreme Court decision in *Heartland* changed the nature of patent filings nationally, which affected the evaluation of the PPP. In the years since the Court's decision, patent filings in the Eastern District of Texas dropped substantially. While some of these filings are going to other pilot courts, especially the Central and Northern Districts of California, a district outside the pilot—the District of Delaware—is now receiving an increased share of the filings. The change in the filing patterns of patent cases is important to the evaluation of the pilot. For more than half of the PPP, the results of the evaluation were driven largely by the pattern of patent litigation in the Eastern District of Texas. Just under half of all patent cases in pilot courts, and just under two-thirds of all pilot cases, were from this district. Cases in the Eastern District of Texas were more likely to terminate through settlement and were more likely to involve serial filers than in other pilot courts. As filings in that district declined (and cases included in the PPP declined with them), these case outcomes and case events also declined. That said, though the number of cases continued to decline both in the Eastern District of Texas and in pilot courts overall in the last few years of the pilot, the results regarding case duration have not changed over the 10-year period of study.

The conclusions about the PPP based on the case-level data are consistent with the findings from the interviews we conducted with current and former designated judges in 2017. Courts participated in the pilot because they generally saw their participation as a natural fit given their dockets, or because the judges on the courts wanted to develop greater expertise in patent litigation. Interest in patent cases led judges to opt into participation as designated judges, despite some expectation that their workload would increase. Of course, over the life of the pilot, some judges saw greater changes to their workload than others, with some expecting more cases than they ultimately received (consistent with the distribution of patent and pilot cases across participating courts discussed above). Despite relatively modest increases in workload, some judges felt they were developing expertise over the life of the pilot, including in their abilities to more efficiently manage the specific tasks of patent litigation, such as *Markman* hearings. Though some noted greater efficiency in handling patent litigation, others, especially those already very familiar with patent litigation, saw fewer gains. Overall, the judges interviewed were evenly divided over whether they wanted the pilot to be extended or not, and several made suggestions for improving it should extension occur.

Overall, the PPP corresponded with small gains in the efficiency of the litigation of patent cases but larger gains in developing expertise in patent cases among designated judges. Nondesignated judges frequently transferred their patent cases to designated judges, increasing the experience of designated judges with patent litigation. Moreover, across all methods of case disposition, cases before designated judges terminated somewhat faster than those that were before nondesignated judges, and the shorter duration of patent cases lasted throughout the life of the pilot, likely due to designated judges coming into the pilot with more experience than their nondesignated counterparts. The experience of designated judges resulted in more efficient litigation, but there were no differences in affirmance by the appellate court between designated and nondesignated judges. Pilot cases were appealed less often—driven by the high rate of settlement among pilot cases. Though choice of venue changed during the 10 years of the PPP, it was due to the decision in *Heartland*, and not the pilot (or the increase in judicial experience with patent litigation). Case outcomes differed by district, with cases in the East-

ern District of Texas more likely to settle, but this was true irrespective of the designated or nondesignated status of the judge. Some judges saw benefits to their increased familiarity with patent litigation, while others did not, either because they were already familiar with patent litigation or because they did not receive as many additional patent cases as they expected when they opted to join the pilot. Thus, litigation efficiency is gained by the pilot (pilot cases are litigated 15% faster than nonpilot cases, all else being equal); the result holds across most methods of case disposition. Some judges increased in their expertise with patent litigation, but there is no difference in affirmance of decisions by designated judges, and the decision in *Heartland* affected venue more than the pilot did. The findings of this evaluation with respect to the goals of the pilot are mixed.

Appendix – Interview Protocol

In April 2017, we conducted 30 semi-structured interviews with current and former designated judges in the 13 pilot courts. The judges were selected using a stratified random sample of the pilot courts, meaning there were more judges in our interview group from courts with more judges overall. The interviews were conducted over the phone and lasted approximately 30 minutes. The questions asked are detailed below.

Participation

- Were you involved in discussions about whether your court would participate in the pilot?
 - If so, what was the process?
 - What were seen as the potential benefits/drawbacks of participating?
 - Has the court's participation in the pilot gone as expected?
- What effect has the pilot had on workload in the court?
- What made you decide to participate as a pilot judge?
- What did you see as the benefits/drawbacks of participation?
- Has your participation in the pilot gone as expected?
- Has your workload changed with participation in the pilot? Have you received the number of patent cases you expected?
- Do you use the other pilot judges as resources?
- [Judges Who Left the Pilot ONLY:] What prompted you to leave the pilot?

Case Management

- Have you changed any of your case management practices as a result of participating in the pilot?
- Do you tend to hold *Markman* hearings?
- Are there local rules affecting the management of patent cases? Summary judgment? Discovery?
- Do you tend to appoint special masters or technical advisors in patent cases?
 - If so, for what purposes are they appointed?
- Do you tend to grant stays in patent cases generally? Pilot cases?
- Is the litigation of patent cases any different for pilot and nonpilot cases?

Pilot Goals

- Has the pilot had any effect on the appeal of patent cases?
- Do you think the pilot has increased the expertise of pilot judges?
- Do you think the pilot has improved the efficiency of litigating patent cases?
- Have you noticed any effort by litigants to select districts in an attempt to ensure specific outcomes since the creation of the pilot?
- If the pilot were implemented nationally, can you think of any changes that should be made?

Anything you would like to add?