More Patent Facts and Stats

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Managing the prosecution, litigation, licensing or valuation of patents is an art that can progress only so far without benefit of empirical, quantitative data. To that end, this and a future installment will list some of the more interesting but lesser known statistics, many of which were recently unearthed.

The majority of these facts and stats did not appear in the prior list of facts and stats that accompanied an earlier installment of this column. Plus, this list is clearer and better organized.

The facts and stats are provided in outline form as follows:

I. Prosecution

II. Litigation

- A. Win Rates, Forums and Causes of Action
- B. General Statistics
- C. Litigation Costs
- D. Damages and Awards

III. Licensing and Valuation

In some cases, a statistic appears in more than one main category. This installment includes Prosecution and subcategories A, B and C of Litigation. (Readers may contact Vermont directly for supporting citations or fuller explanations.)

Prosecution

1. Only 37 percent of US patents are maintained (PTO fees paid) to the end of their term.
2. About 28 percent of patentees are small entities with fewer than 500 employees and less than roughly $50 million in annual sales.
3. On average, large companies obtain one patent for every $4.26 million they spend on R&D. IP intensive companies spend $2.08 million in R&D for every patent.
4. From 1990 to 1994, a five-year period, filings increased 17 percent (meaning that the number of patents filed in 1994 was 17 percent higher than the number filed in 1990). From 1997 to 1999, a three-year period, filings increased 25 percent, and issuances increased 61 percent.
5. Filings in the European Patent Office increased 40 percent from 1990 to 1999. At least until very recently, the rate of increase has been increasing. The rate increased 10 percent from 1993 to 1995 and 22 percent from 1995 to 1997.

6. In 1997, Americans filed about 20,400 EPO patent applications in the EPO and about 130,000 U.S. patent applications in the USPTO. (Foreigners also filed about 102,000 U.S. applications in the USPTO in 1997.). Assuming that these EPO applications had a U.S. counterpart application, which would generally be the case, then at least 16 percent of the U.S. applications (20,400/130,000=.16) had an EPO counterpart application in 1997. This suggests that about 15-20 percent of U.S. patent applicants file a corresponding foreign application.

7. There are about 2.75 million U.S. patents that issued less than 20 years ago and 1.3 million of them are active, meaning their maintenance fees have been paid.

8. Applicants spend about $4.5 billion every year obtaining U.S. patents.

9. In some areas, such as software, the technology may be moving so fast that it overtakes the prosecution process--the average time in prosecution for all patents is 2.8 years; the median is 2.2 years. (For patents that end up being litigated, it's 3.6 years on average and 2.7 years at the median.)

10. Applicants spend almost twice as much prosecuting biotech, chemical and pharmaceutical patents, and the applications take almost twice as long to get through the Patent Office.

Litigation

A. Win Rates, Forums and Causes of Action

1. Patentee win rates vary dramatically across forums, and it turns out that Delaware is not good for patentees. Patentees win only 46% of the time in Delaware. They win 68% of the time in the Northern District of California, the highest of all 50 states. Massachusetts, with a patentee win rate of 30%, has the lowest patentee win rate. Other win rates include: D. Minn. 67%; C.D. Cal. 63%; S.D.N.Y. 63%; S.D. Fla. 63%; D.N.J. 61%; E.D. Va. 58%; and N.D. Ill. 48%.

2. Overall, patentees prevail 58 percent of the time *at trial*. More specifically, they prevail 51 percent of the time in a bench trial and 68 percent of the time in jury trial. Thus, alleged infringers win less than one-third of the time at trial. (Due to pre-trial losses, a patentee's overall chance of success in litigation, as opposed to "at trial" only, is about 49 percent.)

3. Before a jury, and only before a jury, a party is much more likely to win if it files suit before its opponent. Patentees win 68% of the time before a jury if they file suit first, whereas they win only 38% of the time before a jury if the accused infringer first files a declaratory action. Before a judge, there is no correlation whatsoever between filing first and victory. The implication is that jurors, but not judges, incorrigibly presume that the party that brings the action is more likely to be in the right.

4. In 15 percent of cases, alleged infringers file declaratory actions.

5. Preliminary injunctions are granted in only 5 percent of patent suits.

6. Only about 11 percent of all patent cases ultimately result in a finding of unenforceability. But this 11 percent figure applies to all patent verdicts, whether inequitable conduct was a real issue or not. In suits where inequitable conduct was tried, 27 percent of patents were held unenforceable.

7. Thirty-two percent of enforceability-related decisions are appealed and the Federal Circuit overturns one-quarter of this 32 percent.

8. At trial, plaintiffs face a 33 percent chance that their patents will be invalidated. However, about 15 percent of cases are thrown out by judges before trial, and roughly half of that 15 percent are thrown out for invalidity.

9. Thirty-eight percent of all validity-related verdicts are appealed. The Federal Circuit overturns these validity-related verdicts 22 percent of the time. About two-thirds of this 22 percent constitutes successful appeals by the patentees. When the appellate dirt settles, at best patentees face a 65 percent chance that their patents will ultimately remain valid.

10. About 54 percent of *published* decisions that invalidate patents are appealed, whereas 44 percent of published decisions that validate a patent are appealed. Also, decisions of invalidity are more likely to produce reported opinions than decisions of validity.

11. When patents are invalidated, the grounds for invalidity break down as follows: obviousness (42 percent), Sec. 102 statutory bars (31 percent), Sec. 102 substantive lack of novelty (27 percent), failure to disclose the best mode of the invention (12 percent), failure to describe or enable the invention (9 percent), indefinite claims (6 percent), double patenting (4 percent), and four rarer grounds (2.8 percent). The total exceeds 100 percent because many patents are invalidated for more than one reason.

12. Sixty-six percent of trial verdicts find infringement. Thirty-seven percent of infringement-related verdicts are appealed and the Federal Circuit overturns 20 percent of them.

13. Most patentees who lose at trial lose do so on more than one ground. When considering both validity and infringement, for example, judges rule in the same party's favor on both issues 74 percent of the time. Juries do so 86 percent of the time.

B. <u>General Statistics</u>

1. Only 1.1 percent of all U.S. patents are ever litigated.

2. The number of patent suits is growing more than three times faster than the number of non-patent civil suits. For example, in 1991 just over 1178 patent suits were filed. Throughout the 1990s, patent suits increased an average of about eight percent each year such that, in the year 2000, 2486 were filed.

3. Patent cases make up about one-half of one percent (.57%) of all civil cases in the federal courts, but they make up over 9.4 percent that require a trial of 20 days or more.

4. Only 6.9 percent of patent suits were tried in the last 20 years and only about four percent or so will be tried in the coming years. The number of patent trials is likely to stay constant at about 100 per year. In 2000, 2486 patent suits were filed. (One-hundred is four percent of 2486.)

5. Seventy-six percent of patent suits settle. Seventeen percent are transferred or thrown out on pre-trial motion.

6. In the last five years, 11,000 patent suits were filed in the U.S. More than half failed to settle within the first 12 months.

7. The average time to resolution of patent suits is 1.12 years.

8. Only about 25 percent of cases settle without any court action.

9. For the average litigated patent, final judgment is not rendered until after the mid-point of the patent's term, i.e., 12.3 years after the patent application was filed. (The median is about 7.5 years.)

10. Although 85 percent of patent attorneys claim to start valuation of a suit before filing it, they hire damage experts before filing only about 19 percent of the time. All patent litigators agree that a damage expert must be hired prior to the close of discovery. In fact, one-third generally hire more than one damage expert.

11. Fifteen percent of patent suits are declaratory actions filed by alleged infringers.

12. Plaintiffs request preliminary injunctions in only 19 percent of patent suits; only half of those requests end up being heard by the court; and only half of those hearings result in a preliminary injunction. As such, judges grant preliminary injunctions in only 5 percent of cases. However, they are more likely to grant them when the patents in suit have been successfully litigated before. Forty percent of patents in litigation have been litigated before.

13. Biotech and pharmaceutical patents are litigated almost twice as often as other types of patents.

C. Litigation Costs

1. Patent suits filed in 2000 will generate roughly $4.2 billion in legal fees before they are resolved.

2. Surprisingly, non-law firm expenses account for 45 percent of the legal costs. Such expenses include payments for such things as graphic artists, document managers, trial automation providers, mock trial and jury consultants, expert witnesses, court reporters and copy services.

3. When less than $1 million is *at stake* (not awarded), which is true about 5 percent of the time, the legal fees and expenses cost each side an average of about $500K to litigate through trial. When $1-10 million is at stake, which is true about 43 percent of the time, it costs each side about $1.3 million. When $10-100 million is at stake, which is the case

about 46 percent of the time, it costs about $2.9 million. When more than $100 million is at stake, true about 8 percent of the time, it costs about $6.5 million.

4. According to patent institution Tom Arnold, about 50 percent of the time litigation costs will exceed their estimate by more than $500K or go under the estimate by more than $250K. Similarly, in about one half of cases, the length of suit will exceed the estimated length by more than two years or go under it by more than one year.

5. Indirect costs of litigation include the bad publicity or "pitchfork effect" (as opposed to halo effect) that follows conflict and strife. For example, one study showed that biotech companies' market values dropped by an average of 3.1 percent within two days after the reporting of their involvement in a patent suit. Another study found a 2.0 percent drop and an average loss of shareholder wealth of $67.9 million and median loss of $20 million.

6. The National Academies Board on Science is sponsoring research on other indirect costs, namely the opportunity costs of patent litigation. The final results should be available very soon. It tentatively appears that, although lost opportunity costs probably do not by and large exceed direct legal costs, they are in the same ballpark.

   The next installment of this list will include subcategory "D. Damages and Awards" of "II. Litigation" and all of "III. Licensing and Valuation".