PwC Advisory
Crisis Management

2006 Patent and Trademark Damages Study*

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Overview

Damage awards increase and trial tactics change.

Intellectual property (IP) often determines the survival of a business. In light of global competition, shorter product life cycles, and easier access to information, patents and trademarks are now major barriers of entry for companies to differentiate a product or secure a niche in the market. Therefore the desire to protect IP—which also includes copyrights, trade secrets, and technical knowledge—continues to result in record numbers of infringement actions, with patent and trademark actions among the fastest growing filings in the court system.

The court-awarded damages from these infringement actions have increased in size and number, which has emboldened IP holders to enforce their rights assertively. Together with the use of injunctive relief, enforcement or the avoidance of IP litigation is an increasingly important success factor for a business.

Tactics in these disputes are changing. A jury, rather than a bench trial, provides a definite advantage to the plaintiff because of the increased chance of success and a greater likelihood of higher damage awards. Therefore there are more jury trials for patent and trademark cases than ever before.

The growth of patent and trademark damage awards has led to increased filings in nearly every industry. This is particularly true in industries where the tangible assets contribute less to the companies' market capitalization. Industries such as software development, biotechnology and pharmaceutical research, nanotechnology, entertainment, semiconductor design, and general business services are expected to continue to experience increased filings in the future.

Key indicators:

1. In the past 15 years, the number of patent infringement cases filed increased every year, from 1,171 in 1991 to 3,075 in 2004. The number of trademark cases rose from 2,220 in 1991 to 3,508 in 2004.

2. The number of damage awards in patent cases increased 59% this decade over the 1990s.

3. Since 2000, damage awards in patent cases are based on reasonable royalties claims 59% of the time and lost profits 38% of the time. This compares to the 1990s when only 24% of cases were based on reasonable royalties and 73% were based on lost profits.

4. Since 2000, 53% of patent damage awards were made by juries. Since 1994, the median amount of damages awarded by juries has been $8.0 million, compared to $1.9 million for the average bench award.

5. The median size award in trademark cases has been fairly low over the last 15 years, at around $210,000.

6. Since 1980, the shift to jury trials from bench trials for trademark litigation is much slower than for patent litigation. Bench trials remain the most frequent venue in trademark cases.

7. Appellate decisions involving damages increased, with an approximate 50% success rate for the party bringing the appeal. Nearly 30% of awards are affirmed on appeal.

8. Since 2000, the most frequent basis of prejudgment interest has been the Treasury Bill rate. Prior to 2000, prejudgment interest was more frequently based on the prime rate.

Trends

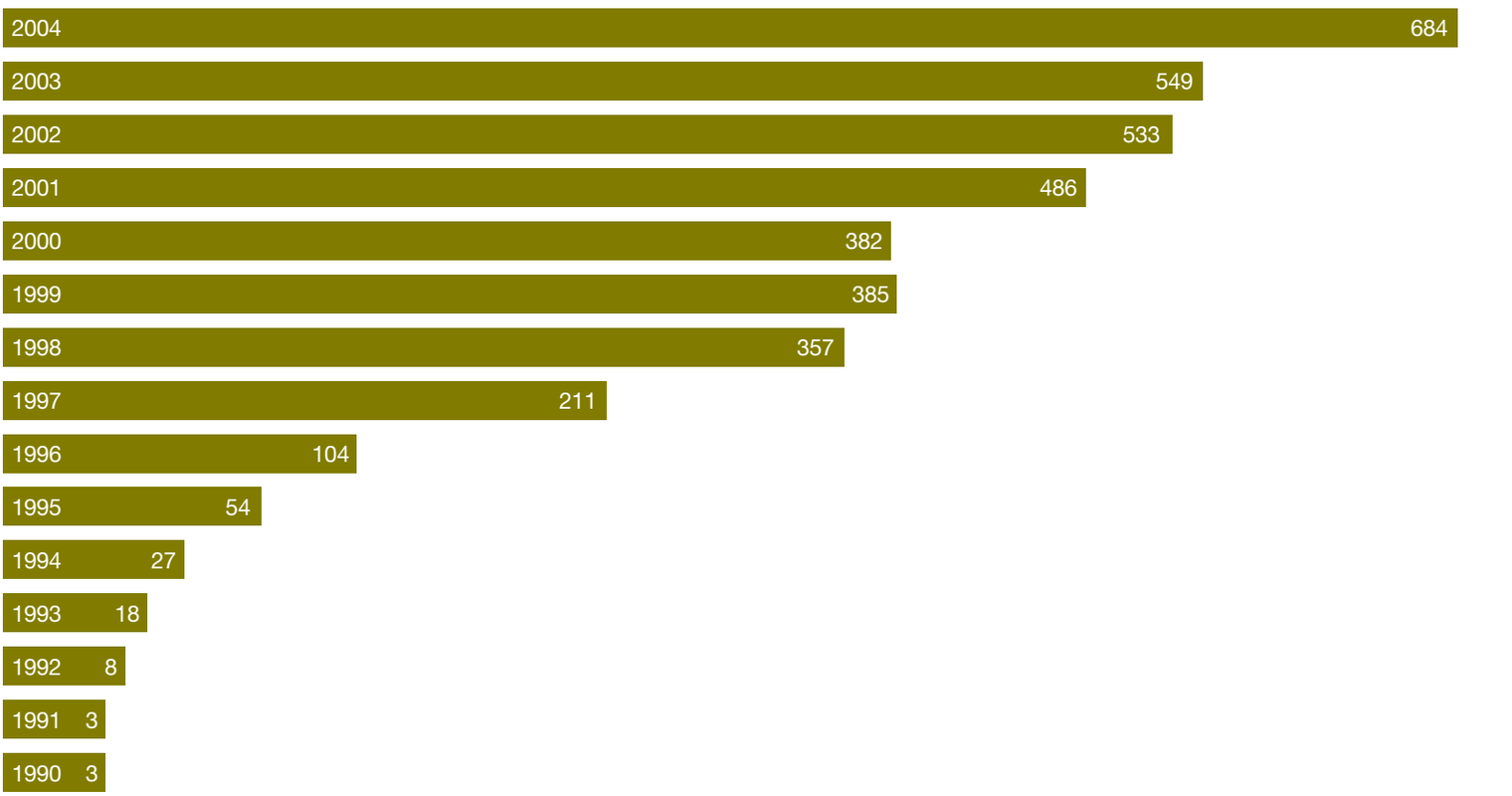
1. Companies increasingly protect and enforce their IP rights.

Companies are becoming more IP savvy, using patents and trademarks to build arsenals for both offensive and defensive purposes. As a case in point, Microsoft's active US patent portfolio has shown a dramatic increase in the number of patents issued annually over the past ten years, from 54 in 1995 to 684 in 2004. Moreover, Microsoft's US patent portfolio has grown from just a few patents in the early 1990s to over 3,800 patents today.

Changes in the legal system for patent rights have contributed to this trend. On October 1,1982, Congress established the US Court of Appeals for the Federal Circuit (CAFC). This new court focused on patent infringement cases. Since then, nearly all of these cases have been tried in US federal district courts. The decisions of these courts can be appealed to the CAFC and, if granted certiorari, to the Supreme Court of the United States, both of which can rule on patent issues. The rulings of the CAFC have led to a more consistent application of US patent laws and to a broadening of patent rights.

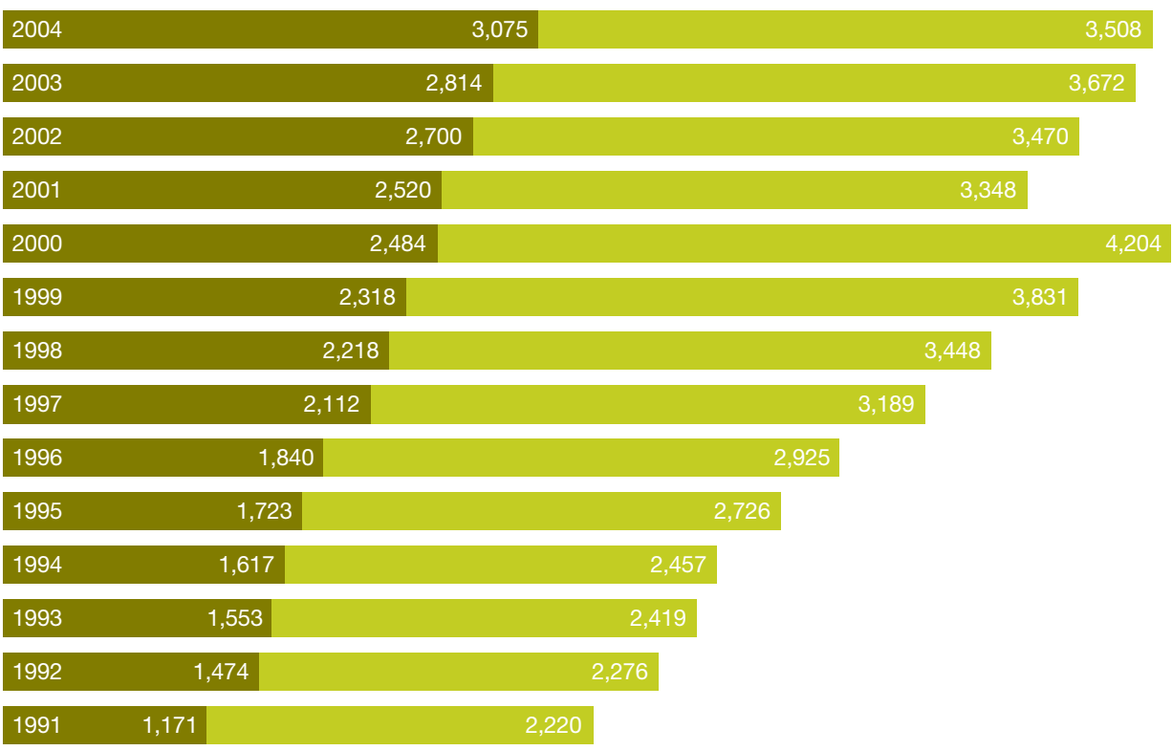
As a result, plaintiffs in patent and trademark disputes are winning cases more often. This is now causing defendant companies to tread warily in the market lest they end up having to exit a business, pay damages, or both. On average since 1983, plaintiffs in patent and trademark matters are awarded damages approximately 53% of the time.

Patents issued to Microsoft have increased dramatically since 1995.[1]



1 The trend may be exacerbated by Microsoft allowing certain patents issued in the early 1990s to expire while continuing to maintain more current patents.

Patent and trademark infringement case filings continue to soar.



Patent cases
Trademark cases

Noting this rate of success, patent and trademark holders in nearly every industry sector have increasingly protected their IP rights in court. For the past 15 years, the number of patent infringement cases filed increased every year, from 1,171 in 1991 to 3,075 cases filed in 2004. The number of trademark cases nearly doubled, from 2,220 in 1991 to 3,508 cases filed in 2004.

Certainly, a number of landmark damage awards opened the eyes of corporate management to the risks and rewards of enforcing IP rights. Below are a few examples of instances where significant damages have been awarded:

- In 1986, Hughes Tool Co. was awarded $205 million in a patent infringement suit against Smith International related to a patent for a seal ring for drill bits.
- In 1990, Polaroid obtained a $910 million judgment from the federal district court against Kodak for infringing on its instant photography patents.
- In 1994, Alpex Computer was awarded $260 million, having sued Nintendo for infringing on patents in the video game industry.
- In 1999, Trovan prevailed in its trademark infringement case against Pfizer and was awarded $143 million.
- In 2002, Igen International received a $505 million award from Roche Diagnostics in a case involving biotech patents.
- In 2003, Eolas Technologies was awarded $521 million for infringement of an internet browser patent by Microsoft.
- In 2004, Intergraph Corporation was awarded $250 million in a patent infringement suit against Gateway Inc. related to memory management technology.

Success at obtaining damage awards has increased.

Decade	Wins	Total	Cases won %
2000s	175	294	60
1990s	260	529	49
1980s (beginning in 1983)	137	266	52
Total since 1983	572	1,089	53

Percentage of decisions by decade

2. Damages awarded in patent cases increase.

Each decade, both the average number and size of patent awards have increased. The number of awards in patent cases increased 59% compared to the 1990s and 91% compared to the 1980s. The median award amount increased 54% over the 1990s and 87% over the 1980s.[1]

Not surprisingly, similar to the 1980s and 1990s, the manufacturing sector of the US economy continues to be the focal point of an overwhelming amount of patent cases that reach damages decisions.

However, industry shifts are underway due to the outcome of some court decisions. Since 2000, the top five industries, by Standard Industry Classification (SIC) code, involved in damage awards have been:

- Electronic equipment & components (Major SIC Group 36): 14.6% of cases
- Chemicals (Major SIC Group 28): 14% of cases
- Measuring instruments (Major SIC Group 38): 13.4% of cases
- Industrial and computer equipment (Major SIC Group 35): 12.2% of cases
- Business services (Major SIC Group 73): 9.8% of cases

The electronics, chemicals, and measuring instruments industries witnessed the greatest number of damage awards. Yet damages decisions involving the business services sector have been rising the most rapidly. Undoubtedly, this shift is linked to the decision in *State Street Bank & Trust Co. v. Signature Financial Group, 149 F.3d 1368 (Fed. Cir. 1998).* This matter abolished the business method exception rule and established that treatment of these claims is the same as any other patent claim. Previously, business methods were not considered to be patentable subject matter.

1 The damages referred to herein are not adjusted for inflation.

Damage awards in patent decisions have been rising since 2000.

Year of decision	Median award amount $	Average award amount $
2005	6,000,000	5,322,556
2004	2,817,345	31,781,960
2003	3,500,000	29,008,614
2002	7,400,000	16,926,366
2001	7,428,250	5,722,327
2000	762,747	3,691,788
1999	4,485,616	8,020,248
1998	1,651,034	17,639,705
1997	2,577,500	8,282,859
1996	3,096,000	16,711,035
1995	3,050,000	11,860,755
1994	4,392,156	15,253,578
1993	2,307,198	4,067,626
1992	2,057,294	2,336,638
1991	1,590,676	8,506,962

The number of patent damage awards are growing most rapidly in the business services and electronic components sectors.

Industry	1980s %	1990s %	2000s %
Electronic equipment and components	4.0	5.0	14.6
Chemicals	14.3	8.7	14.0
Measuring instruments	11.1	19.6	13.4
Industrial and computer equipment	15.1	9.6	12.2
Business services	1.6	1.8	9.8
Transportation equipment	6.3	5.0	3.7
Metal products	6.3	3.2	2.4

Percentage of decisions by decade

3. Reasonable royalties overtake lost profits in determining damages.

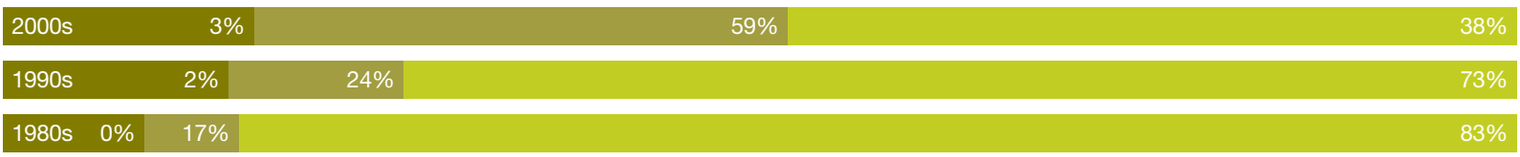
Reasonable royalties overtook lost profits as the most frequent basis of damage awards in patent cases. A reasonable royalty is the minimum level of compensation due the IP holder from an infringer. This was established in Section 284 of the Federal Code governing equitable compensation. A royalty rate typically is a percentage of the infringer's revenues or profits. The royalty may also be a lump sum or payments made over time, which may be unrelated to sales volume. Lost profits assume that the IP holder would have made all or a portion of the infringer's sales if the infringer had not been in the market with its goods or services. Accordingly, compensation to the IP holder is based on the profits it would have made on those lost sales.

Since 2000, 59% of awarded damages were based on reasonable royalties and 38% reflected lost profits. This is quite different than in the 1990s, during which 24% and 73% of damage awards were based on reasonable royalties and lost profits, respectively.

Lost profits damages are losing favor. IP holders find the process of supporting such analysis either too obtrusive to their operations or they do not want to risk disclosing proprietary cost and profit information. Typically, lost profits analysis also costs more than determining reasonable royalties. Additionally, lost profits are more difficult to prove. The proliferation of competition in each US market sector from both domestic and internationally based businesses provides greater access to substitute products. The presence of these alternatives means that even without an infringer's products in the market, consumers may not automatically buy the IP holder's products. Furthermore, the growing use of specialized distribution channels for reaching a specific consumer demographic increasingly supports an infringer's contention that its customers are different from those of the IP holder. Also, more of these suits are brought by entities that own patent rights but do not have any manufacturing or distribution capabilities. These IP holders cannot prove that the infringer actually took any sales away from them.

Since 2002, maximum and minimum royalty rates identified in litigated cases stayed within the relatively narrow range of 2% and 6% of sales, posting a three-year average of 4.6%. However, since 2000, average royalty rates fell below the average rates for the 1980s and 1990s. This decline in rates is observed across all industries. The decline can be attributed to three factors. First, the widespread use of licensing as an alternative to litigation resulted in a greater availability of licensing agreements to guide royalty rate analysis. Second, more research is outsourced to universities and non-manufacturing entities, which often operate in a less assertive licensing environment for their patents than that which exists between head-to-head competitors. And third, the greater availability of substitute products and technologies reduces the leverage of the licensor in the negotiations.

Reasonable royalties overtake lost profits in patent awards.



Lost profits
Reasonable royalties
Price erosion

4. Juries award larger damages in patent cases.

A continual shifting to juries from bench trials in patent cases has taken place since the 1980s. Juries tend to award higher damages than judges, and for this reason plaintiffs want juries to hear their cases. Prior to 2000, juries decided only 19% of the damage awards during the 1980s and 38% during the 1990s. In this decade, juries have decided 53% of the awards.

The median award of damages in patent cases by juries continues to grow as well. It is significantly larger than the median bench award.

Since 1983, the median award by judges in patent cases has only exceeded the median award by juries in eight of the 23 years. During this period, the median bench award is $1.1 million, while the median jury award is $4.8 million. Since 1994, the difference has been even greater, with the median bench award equaling $1.9 million and the median jury award equaling $8.0 million. With the increased caseload regarding patents, judges seem to be more consistent in their rulings concerning damages, and the greater number of cases reduced the volatility of the average damages awarded. The same cannot be said for juries.

This increase in damages awarded by juries in patent cases may be due to several reasons, including the increased volume of business that is at issue in such disputes; the importance of patents in driving sales of products; the increasing amounts invested in technology; the greater risks involved in reaching commercial success; and juries' reduced sensitivity to the inappropriateness of large dollar awards, given the public disclosures of larger profits and net worth from major company defendants.

Juries tend to award much higher damages than judges in patent cases.

Year of decision	Median bench award $	Median jury award $
2005	3,175,000	6,428,920
2004	908,601	24,000,000
2003	720,242	9,625,000
2002	973,963	10,000,000
2001	8,064,125	5,591,884
2000	2,222,751	762,747
1999	4,485,616	8,781,684
1998	1,493,490	2,887,508
1997	5,743,373	1,500,000
1996	2,390,882	6,336,084
1995	1,346,295	8,527,091
1994	3,362,582	25,856,017
1993	339,742	0
1992	1,478,861	3,550,256
1991	1,554,164	1,777,866
1990	2,050,000	986,000

5. Trademark infringement filings are concentrated in the services sector.

While there has been a general increase in the number of damage awards in trademark cases each year from 1980 to the early 1990s, this number has recently stabilized. In fact, the number of awards has only exceeded 20 each year on two occasions since 1982. Why? As opposed to patents, trademarks have not had the same increased level of risk and reward. Patented technologies for practical applications are increasingly complex to commercialize, often requiring higher investments and longer lead times to deliver returns from shorter product life cycles and increased competition. Meanwhile, the historical purpose of trademarks has not changed (i.e., to create a product image that will be distinctive in the market).

Since 1990, the median award size in trademark cases has remained fairly low at approximately $210,000.

Since 1980, trademark cases against companies in the services sector of the economy increased in line with the shift in the US economy to that sector. Since 2000, companies in the services sector are the most often sued for trademark infringement. Industry segments subjected to the most frequent trademark infringement suits include:

- Business services (Major SIC Group 73): 14% of cases
- Amusement and recreation services (Major SIC Group 79): 7% of cases
- Hotels (Major SIC Group 70): 5.8% of cases

Trademark damage awards have been most prevalent in the business services sector.

Description	1980s %	1990s %	2000s %
Business services	4.8	7.1	14.0
Apparel and accessory stores	1.2	5.6	3.5
Apparel products	7.2	0.5	3.5
Wholesale trade—non-durable goods	2.4	0.5	3.5
Miscellaneous manufacturing industries	2.4	0.5	3.5
Food and kindred products	9.6	0.5	2.3
Printing, publishing, and allied industries	4.8	0.5	1.2

Since 2000, companies in the overall services sector of the economy (including the business services segment) have appeared as defendants in 29% of all trademark cases. The manufacturing sectors appear less frequently because there has not been the same level of investment in industrial and consumer product trademarks as in services sector trademarks. More trademarks are being issued in the services sector than in any other sector.

In the 1980s and 1990s, four of the top five industry segments being sued were in the manufacturing sector. Since 2000, only the chemicals segment appears in the top five. However, manufacturing companies are still defendants in a significant number of trademark cases, appearing in 28% of all trademark cases since 2000. The manufacturing segments include chemicals, food, apparel, industrial machinery, measuring instruments, medical goods, and other manufacturing. In total, companies in the retail sector have appeared as defendants in 25% of trademark cases.

6. Jury trials are less prevalent in trademark cases.

Since 1980, the shift to jury trials from bench trials for trademark litigation has been much slower than for patent litigation. Bench trials remain the most frequent venue in trademark cases tried in federal courts. From 1980 to the present, juries handed down 18% of damage awards in trademark cases, compared to 82% for judges. Juries accounted for 25% of awards this decade.

The slowness of a shift to jury trials is due to the lack of significant increases in the win rate and size of damages awarded to plaintiffs at jury trials, excluding extraordinary cases, compared to those awarded to plaintiffs at bench trials. The median jury award since 1980 is about $300,000, compared to about $140,000 for the median bench award. As a rule, trademark awards are significantly less lucrative than patent awards.

Differences between trademark awards made by juries versus judges are less pronounced than in patent cases.

Year of decision	Median bench award $	Median jury award $
2000s	445,327	1,165,883
1990s	147,126	318,398
1980s	31,497	129,690
Overall (1980-2005)	137,626	303,544

7. Appellate bids are also on the rise.

As the number of damages decisions in patent and trademark cases has increased over the last 25 years, so has the number of appellate decisions made by the CAFC. Since 2000, there has been a 15% increase in the number of appellate cases compared to the 1990s and a 138% increase over the 1980s.

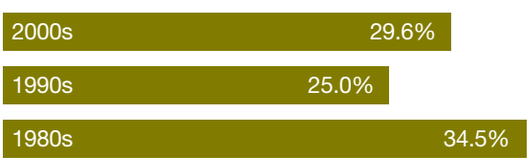
Interestingly, the party initiating the appeal has been successful in approximately 50% of the cases during this entire period, although this has declined somewhat over time. As a result, success at the US federal district court level must be tempered by the distinct possibility that the decision may be overturned or remanded back upon appeal.

In patent decisions, only about 30% of the damages decisions issued by US federal district courts during this entire period were affirmed (i.e., left unchanged) by the appellate court. The balance of the cases were overturned, adjusted, or remanded back.

The success of appellate bids is declining slightly, but is still relatively high.

Percentage of success in appealing case

In recent years, less than one-third of district court awards have been affirmed on appeal.



Percentage of patent damages affirmed on appeal

1 The US court of appeals was established in 1983.

8. Interest awards pegged to T-Bill rates are increasingly the norm.

Along with economic damages, the courts often award the IP holder prejudgment interest on the damages incurred. Throughout the 1980s and 1990s, the prime interest rate was the most frequently used benchmark for prejudgment interest, in part because the prime rate was significantly higher than it is today. However, since 2000, Treasury Bills have surpassed the prime rate as the most common benchmark because judges and juries consider them to be a more widely accepted risk-free rate and believe that the IP holder should not profit from taking risk with 20/20 hindsight.

Treasury Bills are the most common basis for prejudgment interest awards.

Prejudgment basis	1980s % of decisions	1990s % of decisions	2000s % of decisions
Treasury Bills	28.57	23.81	53.85
Prime interest rate	42.86	45.24	38.46
Statutory	28.57	21.43	7.69
Cost of capital	0.00	4.76	0.00
Borrowing rate	0.00	4.76	0.00

Methodology

To study trends in damage awards in patent and trademark cases, PricewaterhouseCoopers identified legal records in two WestLaw databases, Federal Intellectual Property - Cases (FIP-CS) and Combined Jury Verdicts and Settlements (JV-ALL), from 1980 through June 2005.

This study focused on damages decisions in US federal district courts and, when available, the associated CAFC decisions. The study excluded the results of summary judgments, motions to dismiss, and injunctions.

The study included damages decisions from both US federal district court cases and CAFC cases. Of the 1,124 unique US federal district court cases in the study, 670 were patent, 436 trademark, and 18 both patent and trademark. Of the 344 unique CAFC cases studied, 271 were patent, 67 trademark, and six both patent and trademark.

Every record reviewed did not include all of the information desired; hence, certain analyses were limited to those records where the information was available.

Jury verdict information varied by jurisdiction and was particularly limited during the early and mid-1980s.

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