MARCUM
ACCOUNTANTS ▲ ADVISORS

2024 MARCUM

PATENT LITIGATION STUDY

marcumllp.com

Exhibit 1033

Table of Contents

01 Introduction

02 Key Findings

04 Patents Issued and Cases Filed

06 Top Ten Largest Initial Adjudicated Damages Awards

08 Median Damages Award

10 Practicing and Nonpracticing Entities

12 Permanent Injunctions

14 District Court Rankings

16 Enhanced Damages

17 Methodology and Definitions

Introduction

Over the past two decades, patent rights enforcement and patent infringement litigation have undergone significant transformation. Policymakers and the Courts continue to shape the enforceability of intellectual property rights, and the corresponding legal and economic remedies available, considering the interests of patent owners, operating entities, as well as the broader innovation ecosystem.

Both competition and innovation continue to create market uncertainty. As complex technology developments dominate the U.S., and world, economies, courts are exercising enhanced diligence in assessing the value of features driving market demand for patented technologies.

Marcum's Patent Litigation Study offers a comprehensive analysis of patent infringement litigation damages and judicial rulings spanning the past twenty years. This study aims to assist clients, innovators, legal advisors, and intellectual property professionals by providing further insight into the evolving landscape of damages and other remedies in patent infringement disputes.

Key Findings

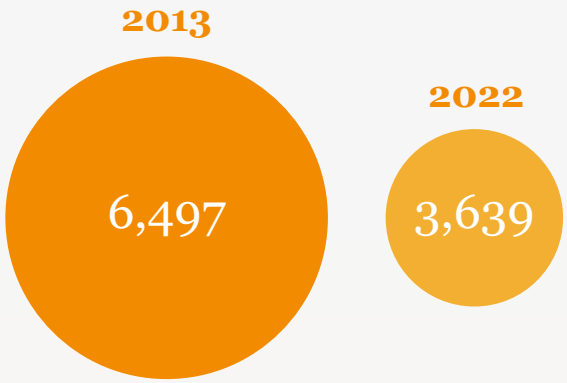
CASES FILED [1]

- Despite a consistent rise in patents granted by the U.S. Patent and Trademark Office each year, the volume of patent infringement lawsuits initiated in U.S. District Courts has demonstrated a downward trend since 2013. In fact, the number of patent litigation cases filed in U.S. District Court has trended from 6,497 cases filed in FY 2013, to 3,639 cases filed in FY 2022.
- Over the five years from FY 2018 to FY 2022, average annual cases filed was approximately 3,567. In contrast, from FY 2013 to FY 2017, average annual cases filed was approximately 5,402.

DAMAGES

- Our study shows that the median damages awards declined over the fifteen years ending in 2022.
- The overall median damages award is approximately $3.7 million for all cases and rises to $5.6 million when excluding default judgments.
- While large damages awards often make headlines, many of the so-called "mega" awards of more than $1 billion have been reversed, vacated, remanded, or reduced, in some cases to $0.
- Over the twenty-year period, our study shows disparities in the median damages awards between nonpracticing entities (NPEs) and practicing entities. While overall median damages awards excluding default judgments have remained within a relatively tight range between $3.5 to $6.4 million; for NPEs, median damages awards excluding default judgments have declined significantly from a peak of $15.5 million in the 2008 to 2012 period to $11.4 in the five years from 2018 to 2022.

Number of Patent Litigation Cases



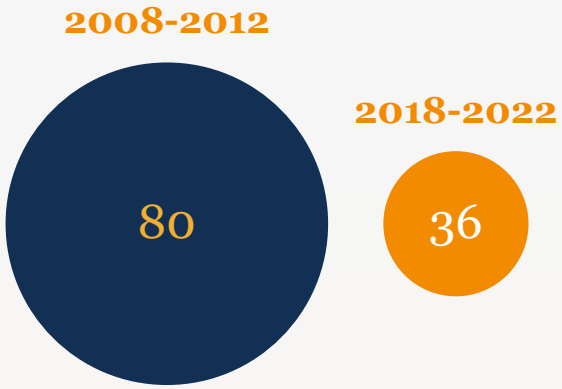
Overall Median Damages Award

[1] United States Patent and Trademark Office, "USPTO Annual Reports," accessed September 19th 2023, https://www.uspto.gov/about-us/performance-and-planning/uspto-annual-reports.

PERMANENT INJUNCTIONS

- Our study shows a declining number of permanent injunctions issued over the last twenty years, particularly following the Supreme Court's decision in *eBay Inc. v. MercExchange, L.L.C. (2006)*, which impacted the standard U.S. District Courts use for granting permanent injunctions.
- This declining trend is reflected in the number of permanent injunctions issued excluding default judgments. From 2008 to 2012, 80 injunctions were issued; from 2018 to 2022, only 36 injunctions issued.
- When looking at the permanent injunctions issued excluding default judgments, those issued to practicing entities have steadily decreased over the past fifteen years. There are significantly less injunctions issued to NPEs.

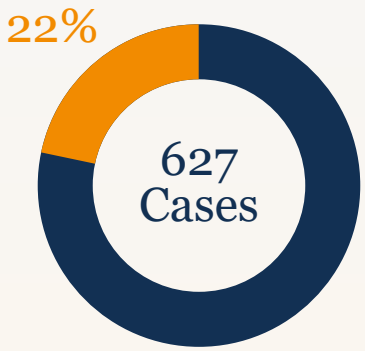
Number of Permanent Injunctions Excluding Default Judgments



ENHANCED DAMAGES

- The Supreme Court's decision in *Halo Electronics, Inc. v. Pulse Electronics, Inc. (2016)* allowed courts more discretion in awarding enhanced damages where willful infringement is evident.
- From 2003 to 2022, enhanced damages were awarded in 140 cases, accounting for 22% of all insistence where damages were awarded.
- The overall multiplier when enhanced damages are awarded was approximately 2.3x.

Enhanced Damages Awarded



PRACTICING AND NONPRACTICING ENTITIES (NPEs)

- Although NPEs continued to have a presence in patent litigation over the last twenty years, our study identified that the vast majority of remedies (77%) are awarded to operating or practicing entities.

2003 2004 2005 2006 2007 2008 2009 2010 2011 2012

Patents Issued and Cases Filed

While both the number of patents issued by the U.S. Patent and Trademark Office and the number of patent litigation case filings in the U.S. District Court have steadily increased up to 2013, a divergence has occurred over the last ten years. The number of patents issued by the USPTO has continued to grow, whereas the number of filings in U.S. District Court has declined from the peak set in 2013 of 6,497.

Over the last five years, from 2018 to 2022, cases filed have declined significantly, ranging from 3,275 to 3,802, with an average of 3,567 cases annually. In the preceding five-year period from 2013 to 2017, cases filed annually ranged from 4,182 to 6,497, averaging 5,402 cases annually.

Patent litigation cases filed in U.S. District Court as a share of the total number of U.S. patents issued annually has averaged 1.4% since 2003, yet has dropped to less than 1.0% in the five years ending in 2022 versus 1.7% in the preceding five-year period from 2013 through 2017. This decline is significant considering the 2011 America Invents Act (AIA) anti-joinder provisions, which require a separate case filing for each alleged infringer.

Average number of cases annually.

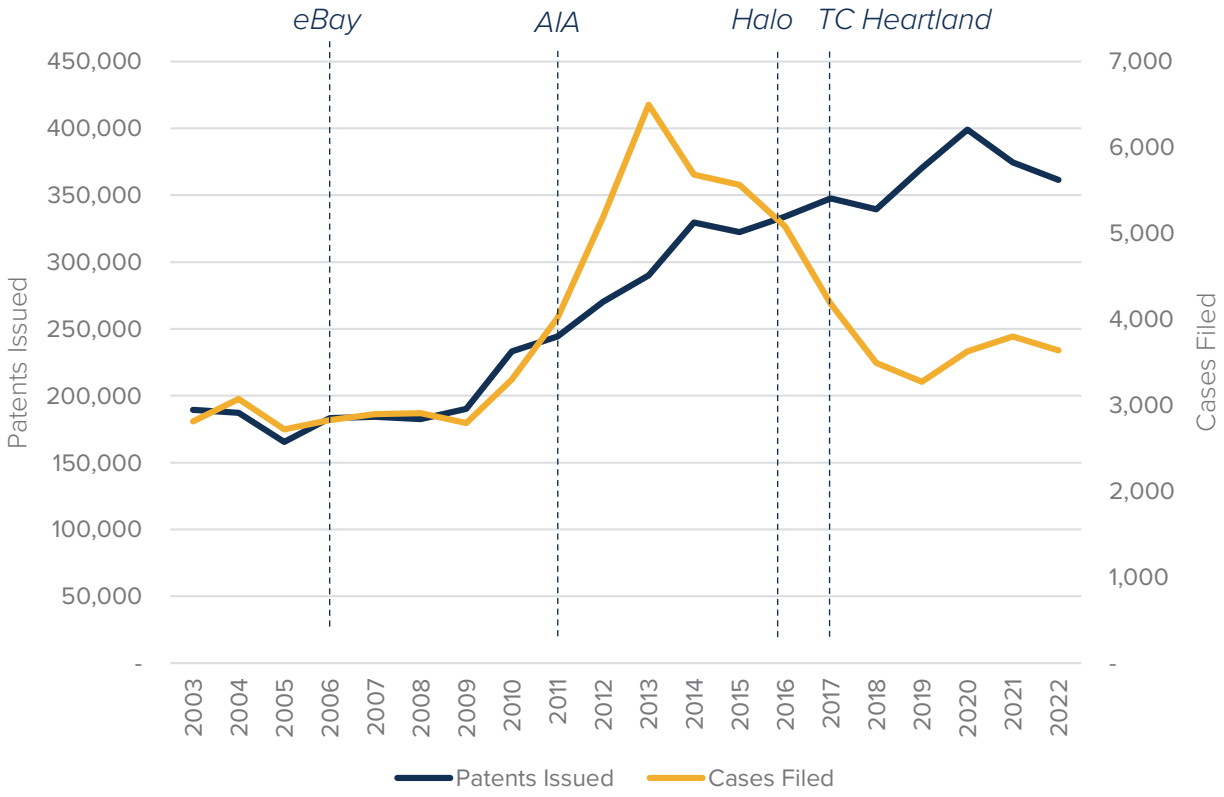
5,402 | 3,567

2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

Average of 1.7% | Average of less than 1.0%

Patent litigation cases filed in U.S. District Court vs. total number of U.S. patents issued annually.

PATENTS ISSUED AND CASES FILED



Years are based on September 30 year-end.
Source: USPTO and U.S. Courts

Top Ten Largest Initial Adjudicated Damages Awards

Over the twenty years ending in 2022, our study identified the top ten largest initial damages awards following initial adjudication at trial. Although these substantial awards frequently gain significant media attention, it is important to note that a considerable number of these "mega" awards have subsequently been reversed, vacated, remanded, or reduced, in some cases to $0. Moreover, it is not uncommon for these cases to be settled during the pendency of an appeal, often resulting in a settlement amount that is less than the damages initially awarded by the court. This observation underscores the fact that initial damages figures can undergo substantial modifications through the course of post-trial proceedings and appeals.

	Year	Plaintiff	Defendant	Technology	Award (in $M)	Status of Damages Award
1	2020	Centripetal Networks, Inc.	Cisco Systems, Inc.	Cybersecurity technology	2,750	Reversed and remanded
2	2016	Idenix Pharmaceuticals	Gilead Sciences Inc.	Hepatitis C drugs	2,540	Reversed in part
3	2022	VLSI Technology LLC	Intel Corporation	Microprocessor voltage reduction	2,175	Affirmed, reversed, vacated, and remanded in part
4	2009	Centocor Ortho Biotech Inc.	Abbott Laboratories	Arthritis drugs	1,673	Vacated
5	2012	Carnegie Mellon University	Marvell Technology Group	Noise reduction for disk drives	1,540	Reduced; settled
6	2007	Lucent Technologies Inc.	Microsoft Corp.	MP3 technology	1,538	Remanded
7	2020	Juno Therapeutics, Inc.	Kite Pharma, Inc.	T-cell therapy	1,168	Vacated in part and remanded
8	2020	California Institute of Technology	Broadcom Limited	Data transmission	1,108	Vacated in part and remanded
9	2012	Apple Inc.	Samsung Electronics Co.	Smartphone software	1,049	Reduced; settled
10	2012	Monsanto Company	E.I. Du Pont De Nemours and Co.	Genetically modified soybean seeds	1,000	Settled

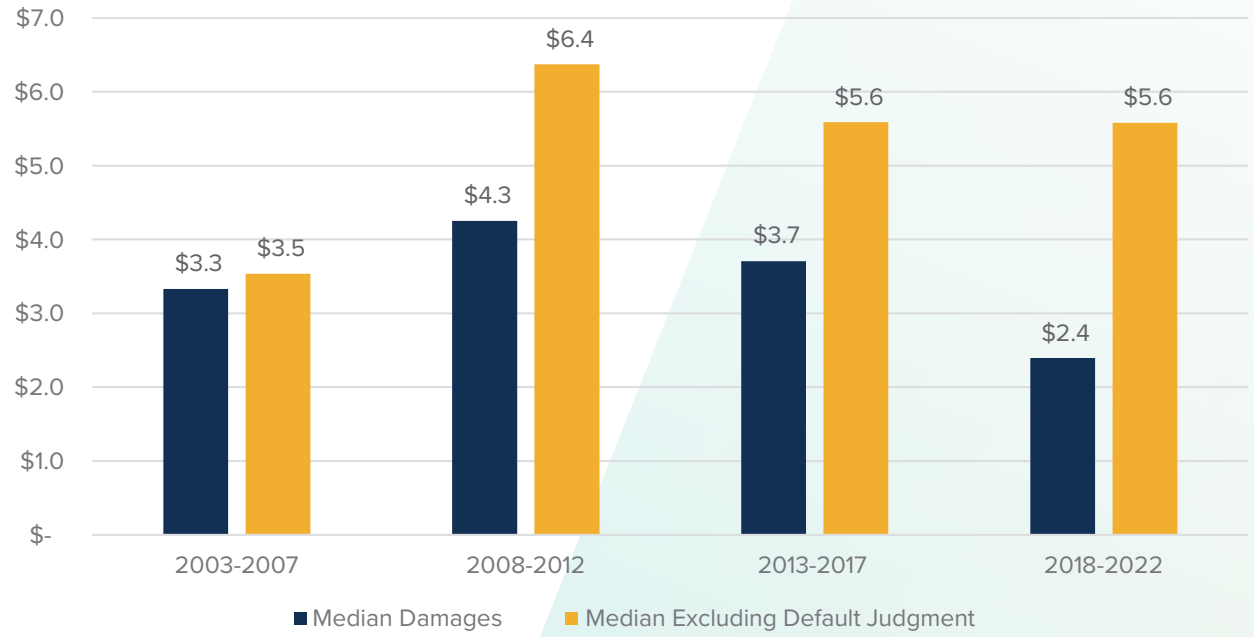
Source: United States Court of Appeals for the Federal Circuit

Median Damages Award

And while the "mega" awards often dominate the conversation, they are not representative of the damages awarded in a typical case. Our study shows that the overall median damages awarded to all entities over the twenty years ending in 2022 is approximately $3.7 million. When excluding default judgments, the median damages awarded to all entities is roughly $5.6 million.[2]

Over the span from 2003 to 2022, the annual median damages award fluctuated significantly, with the lowest at $1.2 million in 2011 and peaking at $9.0 million in 2005. Over the fifteen years ending in 2022, a general decline in the median damages award is noted, concluding with $2.4 million for the period 2018 to 2022.

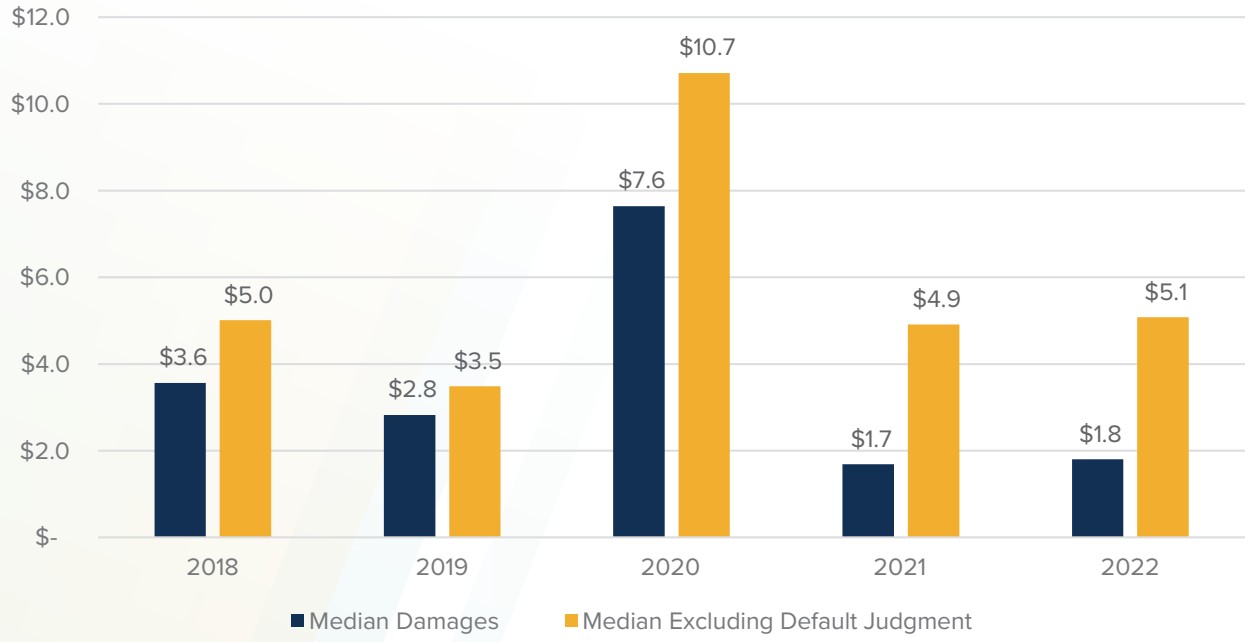
MEDIAN DAMAGES AWARD (IN $M) 2003-2022



[2] A default judgment occurs when one of the parties involved in the litigation, typically the defendant as an alleged infringer, fails to take required actions or respond to court proceedings, and the plaintiff patent holder requests the court to enter a default judgment. As a result, cases with default judgments do not typically represent contested disputes.

> Over the fifteen years ending in 2022, a general decline in the median damages award is noted, concluding with $2.4 million for the period 2018 to 2022.

MEDIAN DAMAGES AWARD (IN $M) 2018-2022



> An **NPE** is an entity that does not have the capability to commercialize products or services with features protected by the patent.

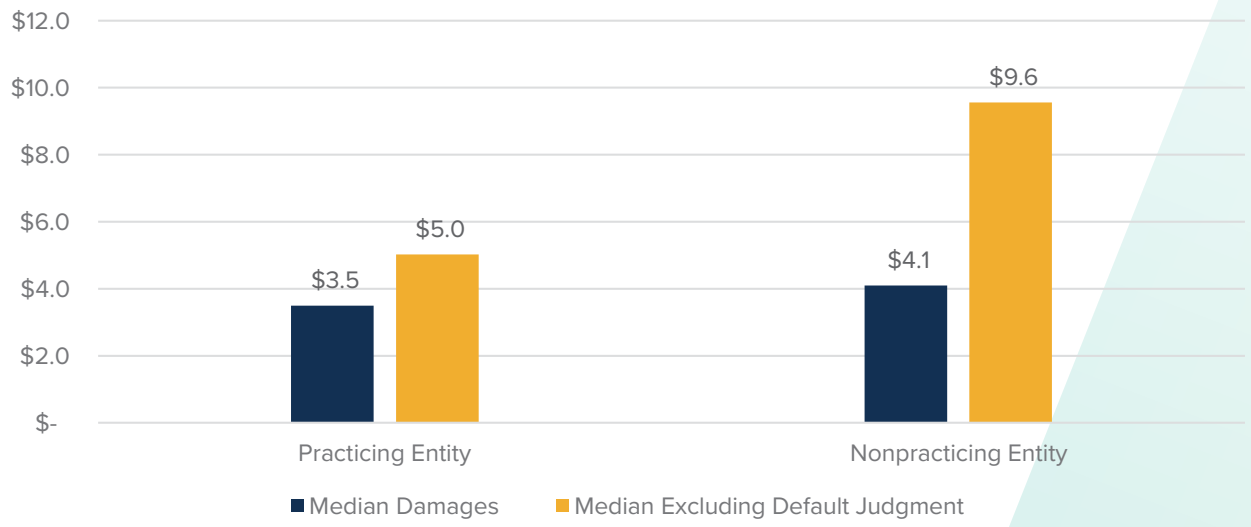
Practicing and Nonpracticing Entities

NPEs including universities, individuals, and research and assertion entities, continue to play a role in patent infringement litigation. NPEs often develop or acquire patents to license to other entities who can commercialize products or services that include the patented technology.

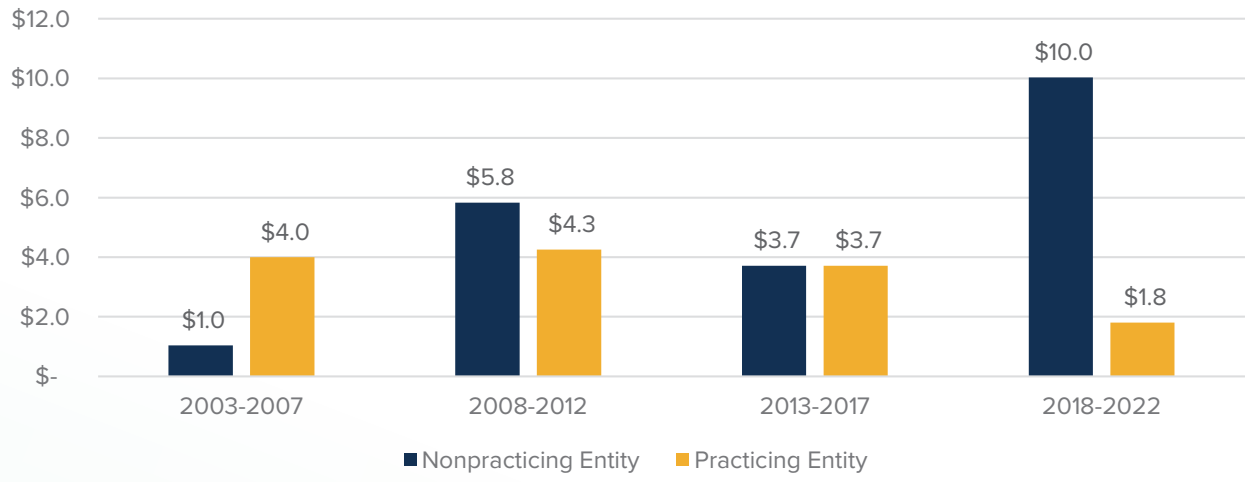
Over the twenty-year period, our study shows some disparities in the median damages awards between NPEs and practicing entities. While the median damages award excluding default judgments is significantly lower for practicing entities relative to NPEs, there is no discernable trend between practicing entities and NPEs with respect to overall median damages over time.

Overall, the median damages awards excluding default judgments have remained within a relatively tight range between $3.5 million to $6.4 million. However, for NPEs, the median damages awards excluding default judgments declined significantly from a peak of $15.5 million in the 2008 to 2012 period to $11.4 million in the five years from 2018 to 2022. While the median damages award for NPEs continues to be two to three times higher than the median damages award for practicing entities, this disparity between practicing entities and NPEs is less pronounced in the most recent five-year period when default judgments are excluded.

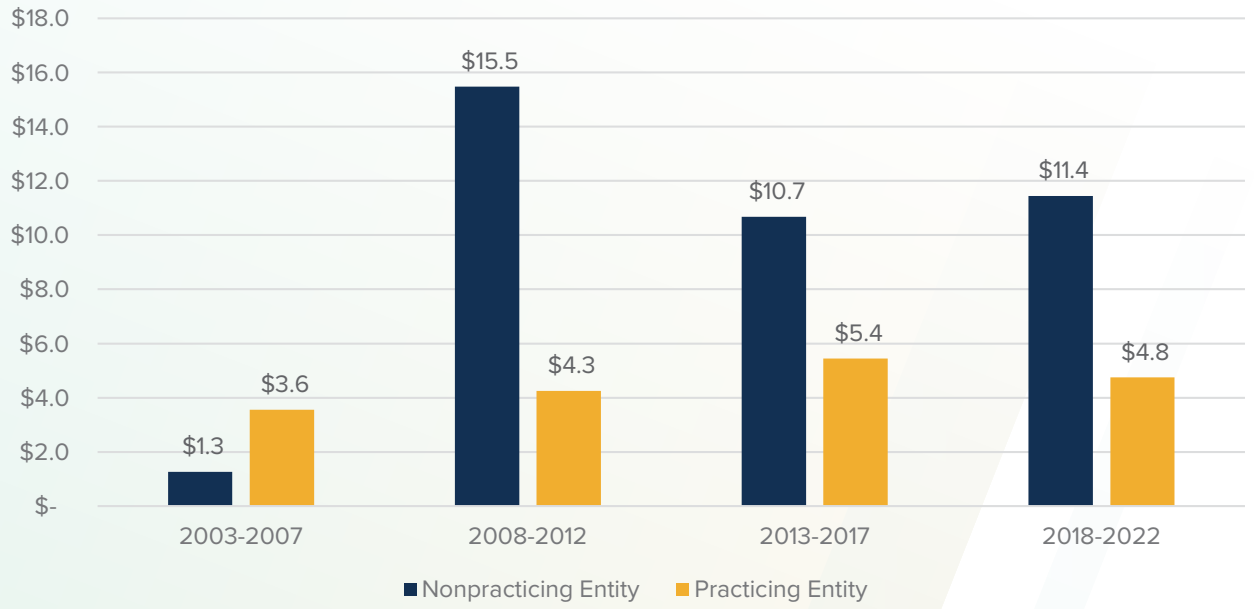
MEDIAN DAMAGES AWARD (IN $M)



MEDIAN DAMAGES AWARD (IN $M)



MEDIAN DAMAGES AWARD EXCLUDING DEFAULT JUDGMENTS (IN $M)



2003 2004 2005 2006 2007

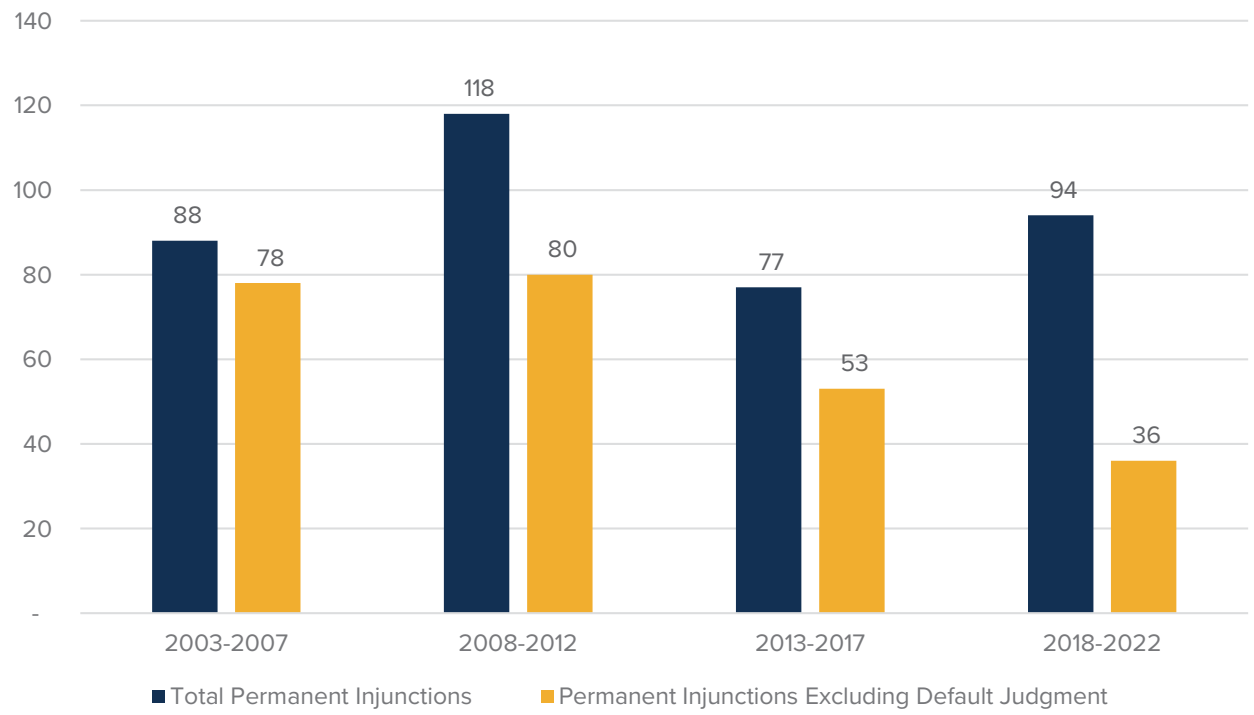
Permanent Injunctions

It is not surprising that the number of permanent injunctions has declined over the last fifteen years following the Supreme Court's decision in *eBay Inc. v. MercExchange, L.L.C. (2006)*, which impacted the standard U.S. District Courts use for granting permanent injunctions.

Furthermore, there has been a consistent reduction in permanent injunctions granted to practicing entities over the past fifteen years.

The landscape of permanent injunctions issued over the twenty years ending in 2022 has experienced a notable shift. While there is no discernible trend in the number of permanent injunctions over time, the data demonstrates a significant decline in permanent injunctions when default judgments are excluded. Excluding default judgments, our study identified the number of permanent injunctions issued has decreased significantly, from 80 in the 2008 to 2012 period to just 36 in the 2018 to 2022 period. In the most recent period, there was an average of 7 permanent injunctions per year, with 29 injunctions granted to practicing entities and 7 injunctions to NPEs.

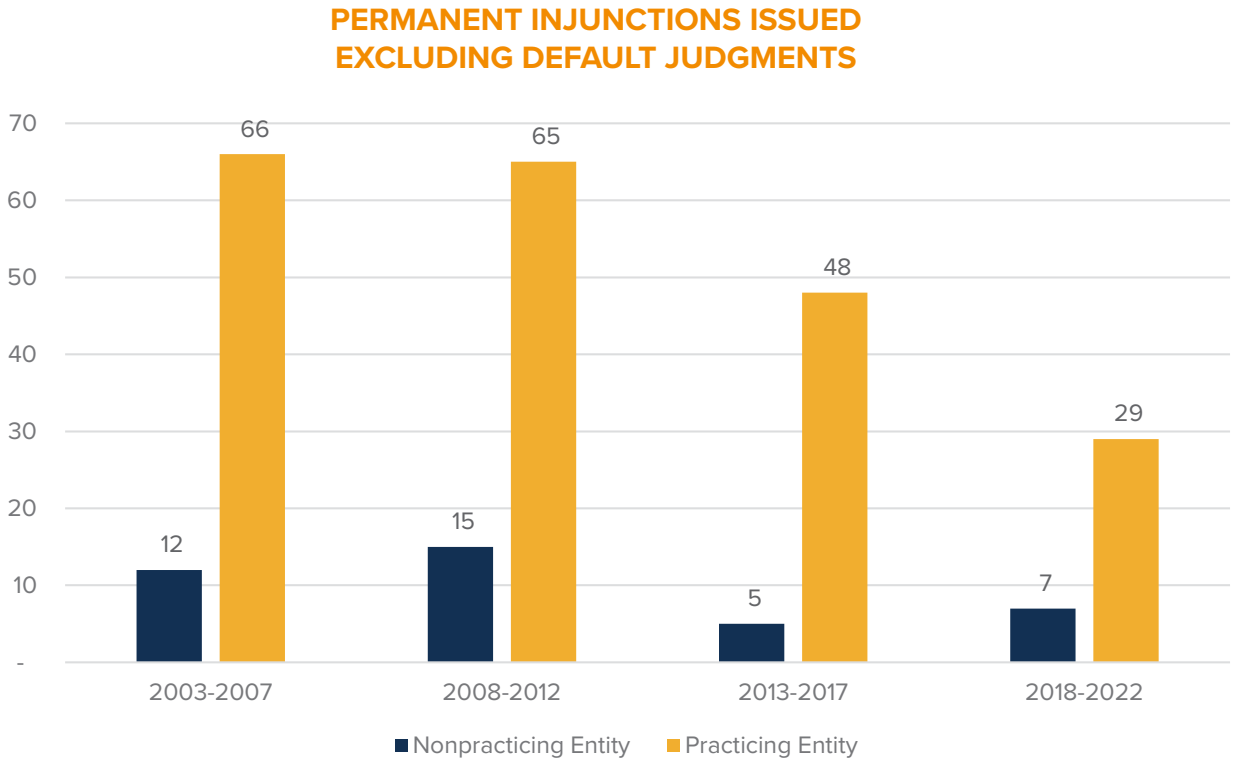
PERMANENT INJUNCTIONS ISSUED



80

36

Permanent injunctions issued excluding default judgments.

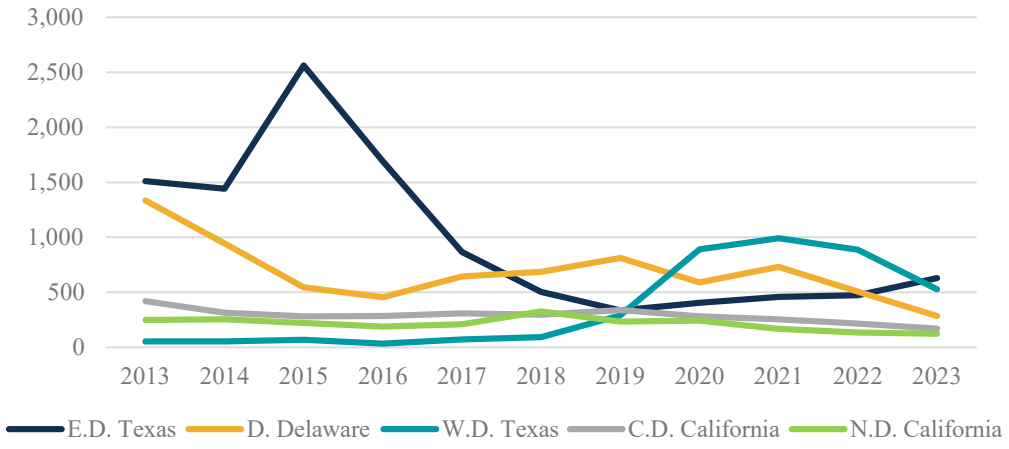


District Court Rankings

After the Supreme Court's *TC Heartland* decision in 2017, venue choices have been narrowed. Our study shows a divergence in both the number of awards and the median damages award, across the most popular venues in patent litigation.

While the District of Delaware, the Central District of California, and the Northern District of California are consistently popular venues for patent litigation, the popularity of the Eastern District of Texas has waned considerably in the wake of *TC Heartland*. The Western District of Texas has become a popular venue in recent years; however, the random assignment of judges introduced in 2022 has reduced the relative popularity of that district.

TOP 5 PATENT LITIGATION VENUES ANNUAL CASES FILED



Source: Public Access to Court Electronic Records (PACER)

> Our study shows a divergence in both the number of awards and the median damages award, across the most popular venues in patent litigation.

	Court	Cases Filed	Any Remedy Awarded [3]	Injunctions Awarded	Median Damages
1	E.D. Texas	14,293	109	33	$15,857,873
2	D. Delaware	10,094	66	21	$14,705,778
3	C.D. California	6,109	68	41	$1,142,095
4	N.D. California	4,086	52	21	$2,236,643
5	W.D. Texas	3,768	10	2	$14,171,326
6	N.D. Illinois	3,479	24	12	$6,784,603
7	D. New Jersey	2,757	20	9	$13,348,843
8	S.D. New York	2,368	29	16	$1,228,053
9	S.D. Florida	1,810	17	10	$278,372
10	S.D. California	1,513	23	13	$2,98 1,063

Source: The data presented reflects the twenty-year period, 2003 to 2022. The information for the Top 10 Patent Litigation Venues was sourced from Public Access to Court Electronic Records (PACER) while the Remedy Awarded, Injunctions Issued and Median Damages comes from our study.

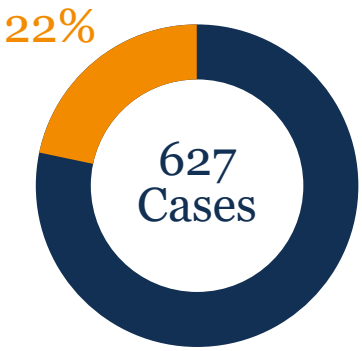
[3] Any Remedy Awarded refers to the number of cases identified in our study where a final ruling was made in favor of the patent holder to compensate for patent infringement, including monetary damage or permanent injunction.

Enhanced Damages

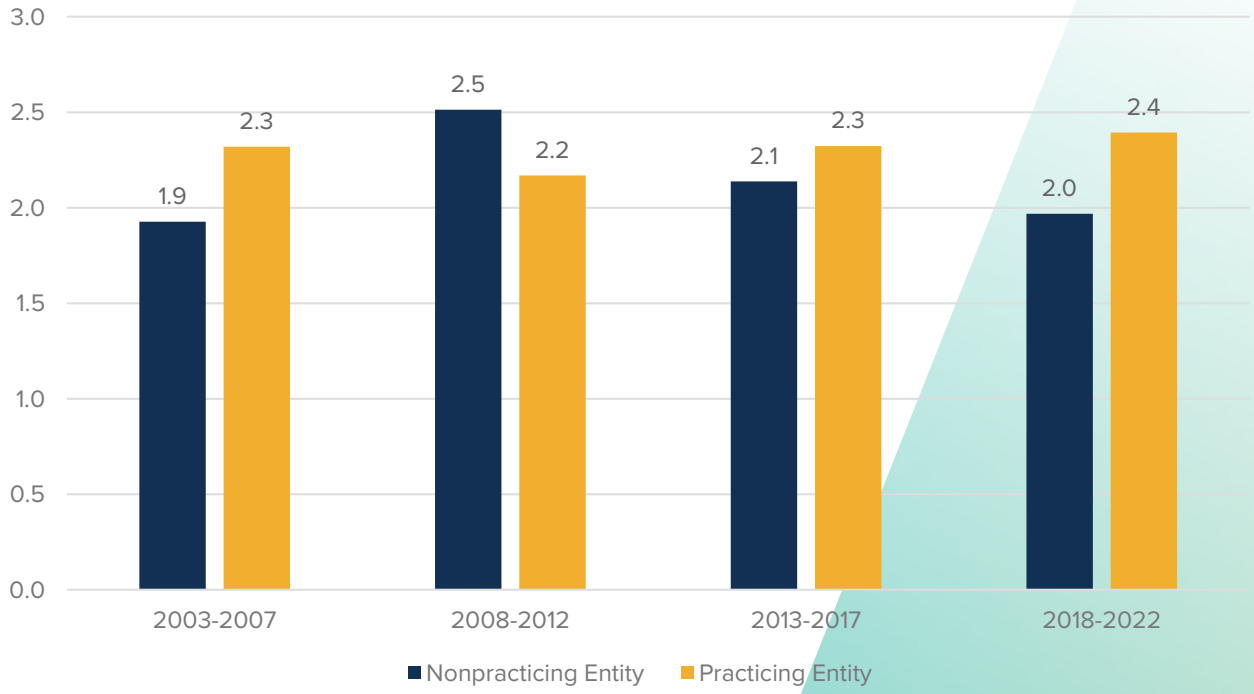
The Supreme Court's decision in *Halo Electronics, Inc. v. Pulse Electronics, Inc. (2016)* allowed courts more discretion in awarding enhanced damages where willful infringement is evident. From 2003 to 2022, enhanced damages were awarded in 140 cases, accounting for 22% of all insistence where damages were awarded.

We studied the average enhanced damages multiplier when enhanced damages were awarded. The overall multiplier was approximately 2.3x; it was 2.3x for practicing entities and 2.2x for NPEs.

ENHANCED DAMAGES AWARDED



AVERAGE ENHANCED DAMAGES MULTIPLIER



Methodology and Definitions

To study the trends related to patent litigation decisions, Marcum identified final decisions at summary judgment and trial recorded in Westlaw databases from the Federal District Courts. In addition to Westlaw, Marcum expanded the breadth of the research by also incorporating insights from Law360 and CaseText.

Marcum identified final verdicts after any appeal proceedings when the cases were closed and recorded in the Westlaw database from the Federal District Courts. Our study excludes cases in which a settlement was reached prior to a final verdict, but includes verdicts reached even though there was a later settlement negotiated. If the case was ongoing during the years of 2003 to 2022, and preliminary injunctions and verdicts prior to any appeals had been determined, these results are excluded from our study pending final verdict ruling which could be included in later years. The analyzed decisions included only those with an award of damages and/or a permanent injunction.

The study identified if the patent owner was an NPE. An NPE is an entity that does not have the capability to commercialize products or services with features protected by the patent, including universities, individuals, research, and assertion entities. These entities may engage in primary research or may acquire patents to license to other entities to commercialize products or services that include the patented technology.

The median damages were adjusted for inflation to 2022, in US dollars.

“The median damages were adjusted for inflation to 2022 in US dollars.

MARCUM
ACCOUNTANTS ▲ ADVISORS

Contact the Authors

William Scally
Partner
(617) 807-5220
william.scally@marcumllp.com

Lisa Miller
Director
(770) 401-2045
lisa.miller@marcumllp.com

Morgan Ryall
Senior
(617) 807-5394
morgan.ryall@marcumllp.com

Additionally, the following individuals contributed significantly to this study:

Victoria Crowell
Ernest Paul Jr.
Frank Paine
Kelsey Low
Giselle Rau
Neil Yang

Tim Wells
Director of Content & Communications
Editor

John Giovagnoni
Senior Graphic Designer
Design & Layout

Peter Ziello
Manager, Website Development
Digital Design & Layout