Resolving American Semiconductor Challenges through Making the ITC a Preferred Forum

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This Comment demonstrates the need in United States' semiconductor policy for the United States to establish itself as a preferred IP litigation forum. The paper notes three obstacles to be solved in current semiconductor IP policy: IP Theft, Semiconductor Counterfeiting, and Balanced Licensing. The paper next argues why the International Trade Commission (ITC) is an ideal United States forum for these concerns and addresses general benefits and shortcomings of ITC litigation. Lastly, this paper evaluates potential policy changes to ITC procedure and application to entrench the ITC as the premier legal forum for semiconductor policy. The paper argues that changes including allowing for ITC patent rulings to preempt Federal District Courts, diversifying "semiconductor intellectual property" (SIP) protection in the ITC through clarified ITC Trade Secret procedures and a suis generis IP for semiconductors, and considering statutory anti-anti-suit injunctions to be used in tandem to ITC prioritization would make the ITC a more effective and preferred forum.

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I. INTRODUCTION

A. What Is a Semiconductor?

i. Basic Semiconductor Facts and Uses

Semiconductors are materials that help control electric current. However today, when people discuss semiconductors, they

are normally referring to semiconductor chips. "These chips are typically made from thin slices of silicon with complex components laid out on them in specific patterns."[1] The patterns are used to control the flow of electric current by implementing multiple electrical switches. "[T]he chips contain tens of billions of switches in an area not much larger than the size of a fingernail."[2]

Semiconductor chips are central to most of our modern-day devices. Electronic devices use semiconductors to receive, process, and store information. Different types of chips are used to achieve different functions.[3] Chips may be used for storing, receiving, and using data within and amongst devices.[4] Essentially, any "smart" technology we use relies on chips because chips are a critical component for any device that communicates with other devices. This means any smart aspects to your car, kitchen devices, computer, lights, and more all rely on chips.[5]

On a larger scale, devices that use semiconductors have also become critical for industries of geopolitical and international significance. Almost all modern intelligence devices used by our military rely on chips. When a nation falls behind in chip technology development or production, its military capabilities will be reduced.[6]

B. Understanding the Importance of the Semiconductor Market to the United States

i. Economic and Security Effects

The regularity of semiconductor use for most modern devices makes the success of the American semiconductor industry even more important. There is large economic profitability, job creation, and growth to be gained by succeeding against international semiconductor competition. McKinsey has estimated that revenues of the global semiconductor industry will grow to $1 trillion by 2030.[7]

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1 *See* Trevor Thornton, *What Is a Semiconductor? An Electrical Engineer Explains How These Critical Electronic Components Work and How They Are Made*, THE CONVERSATION (Aug. 10, 2022), https://perma.cc/52ZV-AFFJ.

2 *Id.*

3 *Id.*

4 *Id.*

5 *See What Is a Semiconductor?*, MCKINSEY & COMPANY (May 15, 2023), https://perma.cc/PS8M-F5FC.

6 *See* CHRIS MILLER, CHIP WAR: THE FIGHT FOR THE WORLD'S MOST CRITICAL TECHNOLOGY (1st ed., Scribner, 2022).

7 *See supra* note 5.

The United States' market share of the semiconductor industry also has implications beyond the economic success of United States firms. If other countries dominate the market, it could pose national security threats or ripple effects on other American industries. A demonstration of this power struggle has already been demonstrated in recent years when "US sanctions on China caused many Chinese companies to hoard chips, which led to political tensions and increased market pressure."[8] Because so much modern technology for military and national security relies on chips to function, decreased access to chips, or access to less advanced chips than other countries, could severely hamper United States policy goals.

ii. What is Growing the Market, Globally and Nationally?

The exponential profitability of the semiconductor market and the dominance of American semiconductor firms are staked in the continuation of intensive research and design (R&D). R&D is critical because "[t]he semiconductor industry is one of the most R&D intensive industries where 15 to 20% of sales are spent" on R&D.[9] Over the past decades, the semiconductor industry has developed at an exceptionally rapid rate. This rate was initially predicted by Gordon Moore, the then leader of Fairchild Semiconductor's R&D team, in 1965.[10] Moore "predicted that every year for at least the next decade, Fairchild would double the number of components that could fit on a silicon chip."[11]

While Moore initially hypothesized that this rate of development would continue for a decade, the semiconductor industry continues to meet Moore's rate of development nearly 60 years later.[12] To quantify just how exponential Moore's rate is consider that the rate predicted that "by 1975, integrated circuits would have sixty-five thousand tiny transistors carved into them."[13] Now, as of 2023, Apple's M1 Ultra chip has pushed the boundaries of Moore's law again with 114 billion transistors on a single chip.[14] While this level of exponential optimization likely will not

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8 *See id*.

9 Antonio Varas et al., *Government Incentives and US Competitiveness in Semiconductor Manufacturing,* BCG AND SEMICONDUCTOR INDUSTRY ASSOCIATION, (Sept. 2020), https://perma.cc/QRV6-CKKV.

10 MILLER, *supra* note 6, at 30.

11 *Id.* at 31.

12 *Id.*

13 *Id.*

14 *How Many Transistors In a Computer Chip?*, DREX BLOG (Apr. 25, 2023), https://perma.cc/JS3G-YJAL.

continue at Moore's predicted rate forever,[15] R&D will still be essential to ensure America's access to the most efficient and effective semiconductors.

And, as modern semiconductor products become more complex, R&D needs are expanding into all parts of semiconductor technology. R&D needs include "materials, electrical properties, electronic circuitry, manufacturing or applications."[16] Necessary R&D requires substantial amounts of funding from both firms and the government. For the United States to retain a strong share in the global semiconductor industry, it is essential that United States semiconductor firms continue to invest heavily in research and design. Firms are incentivized when they can turn R&D into profitable SIP. But, competition to capitalize and secure IP rights to each piece of a semiconductor product is fierce and rapidly progressing on an international scale.[17]

Importantly, lower grade semiconductors can negatively impact the efficiency and accuracy of any technology they are used in. Therefore, having access to premier semiconductors is also essential for all other United States industries that have semiconductors as a component of their technology. With this call to action, the Biden administration focused on protecting and growing the United States chip market share with the Creating Helpful Incentives for Producing Semiconductors (CHIPS) and Science Act of 2022[18] "The CHIPS Act directs $280 billion in spending over the next ten years. The majority—$200 billion—is for scientific R&D and commercialization."[19] This demonstrates that supporting American semiconductor R&D is a policy priority.

While the CHIPS Act is a good start for supporting the semiconductor industry, many within the American semiconductor industry feel that there are other ways that the industry needs to be better supported, particularly through aggressive SIP protection.[20]

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15 MILLER, *supra* note 6, at 348–50.

16 *Intellectual Property*, EUROPEAN SEMICONDUCTOR INDUSTRY ASSOCIATION, https://perma.cc/2KWB-NXKN.

17 *Id.*

18 *FACT SHEET: CHIPS and Science Act Will Lower Costs, Create Jobs, Strengthen Supply Chains, and Counter China*, THE WHITE HOUSE (Aug. 9th, 2022), https://perma.cc/WP58-6W2B; The Chips and Science Act, H.R. 4346, 117th Congress.

19 Justin Badlan et al., *The CHIPS and Science Act: Here's What's in It,* MCKINSEY & COMPANY (Oct. 4, 2022), https://perma.cc/4LEP-A23R.

20 *Intellectual Property*, SEMICONDUCTOR INDUSTRY ASSOCIATION, https://perma.cc/4TDV-HRRB.

Past legal scholarship has taken note "that patents could play an important role in encouraging semiconductor device innovation" because the "[c]osts of development are extremely high, and patent incentives might serve to attract needed capital."[21] However, current legal scholarship lacks discussions surrounding how United States legal institutions can better support semiconductor firms' intellectual property needs.

C. Understanding Semiconductor Intellectual Property

i. The Division Between Soft IP and Hard IP

Within the semiconductor industry, valuable intellectual property related to semiconductors is split up into two categories: soft IP and hard IP. To understand the differences between soft and hard IP, it is first necessary to understand that "intellectual property" has a semiconductor-industry specific meaning, different than the theoretical intellectual property regime that most people would initially think of. "Semiconductor intellectual property, or SIP, is the design specifications of the logic, cell, or ship layout of part or all of a microprocessor."[22] SIP often includes specifications required for properly manufacturing a given semiconductor.[23]

One half of SIP is the hard IP. Hard IP is the intellectual property that can be directly reproduced and distributed.[24] This includes prepared documents, design specifications, instructional information, and completed blocks of code for use in the semiconductor.[25] When hard IP is distributed, other organizations can easily plug the hard IP into their systems and use it to reproduce the same functions. Therefore, hard IP has a clear revenue stream because a firm can get a patent on hard IP and sell that proprietary information for revenue.[26]

The other half of IP in the semiconductor industry is soft IP. Soft IP is less transferable from firm to firm. The use of soft IP is to show how hard IP is realistically used and implemented in the day-to-day of a firms work. Soft IP may include information like maintenance logs, records of when certain software was run, or

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21 Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575 (2003).

22 *See What Is Semiconductor IP?*, UNITEDLEX, https://perma.cc/L5TF-T5LF.

23 *See id.*

24 *See id.*

25 *See id.*

26 *See id.*

user manuals and other instructional documents.[27] While soft IP is very internally useful to a firm, to be used productively outside of a firm, soft IP must be "hardened" into a physical reference.[28] Oftentimes, soft IP is "hardened" by a firm to prove use or nonuse of a patent. If a firm has infringed on another firm's IP, the infringing firm's soft IP products like maintenance logs or other internal documents will likely reference the infringed hard IP. While soft IP is functionally necessary within a firm, it lacks the same direct path to revenue. Instead, outside use of soft IP is often for prosecution or defense in a lawsuit.[29] For example, if firm one accused firm two of infringing a patent, firm one could present something like a maintenance log to help prove that they were not using firm two's SIP in their processes.

The balance between soft and hard IP is important to understand if we want to consider how the United States can best protect its semiconductor industry through current legal systems. The results of increased research and design funding in the United States semiconductor industry can be evaluated by tracking what hard IP American semiconductor firms create. This hard IP can be protected by patents and trade secrets. However, to enforce the protection of hard IP, United States legal institutions must be set up to understand the implications of soft IP. For example, if an international firm is accused of infringing on an American firm's patent, the legal forum managing the dispute needs to be equipped to synthesize the soft IP of both companies to reach an accurate holding on infringement.[30]

ii. Turning Semiconductor IP into Profit

Another piece in the semiconductor industry puzzle is understanding how a firm's semiconductor IP can be best utilized across the entire American industry. When we look at the semiconductor industry within the United States as a dynamic group of firms, it makes sense that the United States government would hope to see collaboration amongst United States firms. Collaboration strengthens the sharing of ideas and accelerates development in

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27 *See id.*

28 *See id.*

29 *See id.*

30 *Industry Focus: Semiconductors - Innovation and IPR*, AALBUN LLC (2021), https://f.hubspotusercontent00.net/hubfs/7060856/Content/Industry%20Focus-%20Innovation%20%26%20IPR%20%E2%80%93%20The%20Semiconductor%20Industry%20(final).pdf.

the United States, giving the United States' firms a competitive edge.

While some semiconductor companies carefully guard their SIP as proprietary, internal information, only for employees' eyes, others' main business model relies on licensing their designs to other companies.[31] Often, whether a firm frequently shares their SIP depends on the firm's place within the greater industry. In the United States, chip design companies have become increasingly popular.[32] These companies are often called fabless companies. A fab is where chips are manufactured; therefore, a fabless company is a firm that designs chips but does not produce those chips themselves.[33] Fabless companies profit by licensing their chip designs to other companies, so their SIP is shared throughout the industry rather than kept internal to the firm. SIP protection through patent or trade secret enables fabless firms to both protect their design from a competitor's infringement and license those designs to create a revenue stream.

Many United States companies, outsource the fabrication of chips to production fabs in Asia which have built up an expertise and efficiency necessary for proper and cheap chip production.[34] Therefore, while soft IP is certainly central for some semiconductor firms in the United States, like Intel, that fabricate their own chips.[35] Soft IP is less central to the model of fabless, design companies. However, having legal forums proficient in Soft IP is still critical when a fabless company's designs are being infringed and produced. Again, for example, if a company in Europe stole a chip design that was patented by a United States company, that United States company would need a court with technical expertise for soft IP to parse through the proof that infringement was occurring.

iii. How Semiconductor IP is Protected by United States Institutions

In the United States, international intellectual property disputes are primarily resolved through federal laws and

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31 *See id.*

32 Thornton, *supra* note 1.

33 *See id*.

34 *See* MILLER, *supra* note 6.

35 Agam Shah, *Intel Looks to Regain Semiconductor Chip Leadership from TSMC; Separates Manufacturing and Fabless Units*, HPC WIRE (June 27, 2021), https://perma.cc/LU5D-ZVG8.

international agreements.[36] The U.S. legal system provides various avenues for resolving these disputes, with federal courts playing a central role. Parties involved in intellectual property conflicts may choose to file lawsuits in federal courts, such as the U.S. District Courts, to enforce their rights or defend against infringement claims. Additionally, the International Trade Commission (ITC) plays a significant role in addressing intellectual property disputes related to unfair trade practices, including the importation of infringing goods.[37]

Of these resources, the ITC is becoming increasingly popular for fast-paced resolutions to semiconductor problems.[38] Because the ITC manages unfair international trade practices, it is useful for resolving infringement by international actors. For example, counterfeit cases are often resolved using the ITC.[39] When a United States firm wants to ensure that counterfeited chips or chips that infringe on some portions of their SIP are not imported into the United States, the ITC can resolve quick importation disputes.

However, the ITC has limitations. First, the ITC cannot enforce past harm monetary damages, so it is primarily used for injunctions.[40] Additionally, under current Federal Circuit precedent, ITC patent rulings are not preemptive or ruling precedent in other courts.[41] But, an initial ITC ruling can still be useful because many federal district courts will view the ITC's reasoning and holdings as persuasive precedent.[42]

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36 Daniel C. Cooley, Mareesa A. Frederick & Jonathan J. Fagan, *ITC Basics: What Makes the ITC a Unique and Desirable Forum*, FINNEGAN IP LITIGATOR BLOG (Sept./Oct. 2019), https://perma.cc/52GD-T8HW.

37 *Id.*

38 *Id.*

39 *Why the International Trade Commission Is Your Best Bet for Stopping Counterfeits*, HUGHES HUBBARD CLIENT ADVISORIES (May 25, 2023), https://perma.cc/J3EW-8DCF.

40 *See* Doris Johnson Hines & J. Preston (J.P.) Long, Ph.D., *The Continuing (R)evolution of Injunctive Relief in the District Courts and the International Trade Commission*, IP Litigator (Jan./Feb. 2023), https://perma.cc/5SN8-AQLG.

41 *See id.*

42 Matthew J. Rizzolo, Matthew R. Shapiro & Brendan McLaughlin, *Talkin' Trade: The Interplay Between the ITC and District Courts*, ROPES & GRAY, (Sept. 1, 2021), https://perma.cc/5Y3J-W8Q6.

II. ISSUE: WHAT ARE CURRENT IP PROBLEMS FOR THE UNITED STATES SEMICONDUCTOR INDUSTRY?

A. Three Central Hurdles

With the importance of the chip industry now clear, we can now consider what IP based hurdles the United States may face to maintain market share within the semiconductor industry.

Industry members recognize that intellectual property protection is important for success.[43] In particular, the Semiconductor Industry Association has put forth comments asking for policies like greater trade secret enforcement and greater measures to stop chip counterfeiting.[44] Because much of the competition concerning the American semiconductor industry is international competition, greater predictability and enforcement of international IP case outcomes could help to benefit American firms.[45] This paper identifies three key areas of challenge for semiconductor IP in the United States.

i. IP Theft

IP theft is normally quantified through analysis of IP infringement. Until a company's IP has been used in an act of infringement, tracking the stolen information, and judicially punishing this theft, is unlikely. Although IP infringement can occur via patents, trademarks, copyrights, and trade secrets, the current focus for semiconductor IP is patent and trade secret theft.[46]

Because semiconductor IP requires so much investment into R&D, the information stolen through IP theft is extremely valuable. Although SIP theft occurs both nationally and internationally, international theft has emerged as a major policy concern for the United States. With increased investments from the government into semiconductor R&D, ensuring that the benefits of that R&D remain with US ownership is essential to capitalizing on the benefits of the CHIP Act.[47]

While there are not currently industry specific statistics for the current cost of IP theft, we can assume that the theft is quite

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[43] *Supra* note 20.

[44] *Id.*

[45] Todd Ross, *What's Up with All the Trade Secret Action in the ITC? Two Latham IP Litigators Weigh In*, THE AMLAW LITIGATION DAILY (Mar. 1, 2021), https://perma.cc/QS3C-KN6H.

[46] Gopal Ratnam, *After Funding Tech Research, Lawmakers Look at Risk of Theft*, ROLL CALL (Sept. 27, 2022), https://perma.cc/K3DM-4JTH.

[47] *Id.*

costly based off the coupling of two factors: current data on overall IP theft costs to the United States and frequent reports and controversies over IP theft targeting U.S. firms. In 2022, the Senate intelligence committee released a report finding that as much as $600 billion worth of United States intellectual property is stolen every year.[48] Because of the global significance of the semiconductor industry, we can assume, that semiconductor IP theft makes up a substantial portion of this. Particularly, American policymakers are concerned that China may target U.S. semiconductor IP to accelerate their own semiconductor industry.[49] Semiconductor IP theft is not just a firm versus firm battle. Government endorsed theft by countries like China is also a major concern.[50]

Because many United States semiconductor firms focus on chip design. Targeted IP theft can essentially cripple a company. Estimated infringement damages can be billions of dollars. For example, in 2018 U.S. courts saw "indictments of Chinese chipmaker Fujian Jinhua Integrated Circuit and Taiwan's United Microelectronics Corp. for stealing an estimated $8.75 billion worth of intellectual property from U.S.-based Micron Technology's Taiwan operations."[51]

Punishment of IP theft can occur in three ways: monetary damages, trade restrictions, and criminal sanctions. Monetary damages and trade restrictions are the most frequently employed responses. Currently, the United States does not have criminal sanctions for patent infringement. However, the United States does offer criminal sanctions for trade secret theft through the economic espionage act which criminalizes stealing trade secrets "when the information relates to a product in interstate or foreign commerce . . . or when the intended beneficiary is a foreign power."[52] And, willful copyright infringement, particularly in violation of the SCPA which provides copyright like protection to the chip designs, can lead to imprisonment.[53] These sanctions parallel the responses of other central players in the semiconductor

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48 *Id.*

49 *See id.*

50 *Id.*; *see also* Mark Muro & Robert Maxim, *The Chip Shortage Won't Be Fixed Without Major Federal Investment*, BROOKINGS (Feb. 1, 2022), https://perma.cc/4TC8-L8BW.

51 Chris Horton, *US Hits Back at China Over IP Theft in Chip Case*, NIKKEI ASIA (Dec. 5, 2018), https://perma.cc/2VB2-6HKM.

52 18 U.S.C. § 1832 (theft of trade secrets); 18 U.S.C. § 1831 (economic espionage); see also, *Stealing Trade Secrets and Economic Espionage: An Abridged Overview of the Economic Espionage Act*, Congressional Research Service, Updated Oct. 29, 2024.

53 *See* Department of Justice, Criminal Resource Manual: 1852. Copyright Infringement -- Penalties -- 17 U.S.C. 506(a) and 18 U.S.C 2319.

industry, like Taiwan, that have harsh criminal sanction in place for IP theft.[54]

Strict monetary damages are essential for deterring theft and repairing the damages to companies who have been the victims of theft. Additionally, trade restrictions are important for protection in international markets. If international firms are thought to be illegally using American SIP in their chips, prohibiting these chips from entering and being sold in the United States can cut off infringers from a major market. Additionally, the non-infringing firm will not have to compete with infringers within the United States marketplace, securing more opportunities for profit.

To receive trade injunctions, a victim of IP theft must allege theft in a U.S. federal court or the ITC.[55] For monetary damages or criminal penalties, a plaintiff will need to go to a federal court, not the ITC; however, failure to properly adhere to an ITC cease and desist order can be the basis for criminal liability or monetary fines.[56] Therefore, it is essential for multiple United States legal bodies to have a strong SIP background so that they can efficiently parse through soft and hard IP evidence and make swift determinations to protect U.S. IP companies who were the victims of theft.

Stealing impacts both patent and trade secret protected intellectual property. However, the international theft of trade secrets poses a unique threat. Theft of trade secrets requires a deeper level of espionage. Because trade secrets are, as the name suggests, a secret, less firms are privy to them. Therefore, theft of trade secrets may require more corruption of a cyber security system or a firm's workforce. This means that protection from trade secret theft can be more costly because it can add additional costs to a firm's development of cyber security and workforce discretion and loyalty. Additionally, there is also often less clear documentation of what the secret is because it has never been formalized in an application process like a patent. Theft of trade secrets may be more complex and costly to protect in court. Because a trade secret is something a firm has gone at lengths to keep secret, when a trade secret is stolen, the firm has also sunk lost costs on extra protection.

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54 *See* James Morrison, Intellectual Property & National Security, 6 IPCLJ 1 (2021), (noting that Taiwan has up to 12 year prison punishment for IP theft).

55 *See id.* (Notably, the ITC cannot enforce past monetary damages).

56 18 U.S.C. § 1001; 18 CFR § 701.313 - Penalties.

ii. Counterfeit Chips

Another SIP issue is counterfeited chips. Counterfeiting is a SIP violation because counterfeited semiconductors include the patent or trade secret protected IP of a semiconductor firm without its consent.

Prevention of counterfeiting has been an ongoing concern of the Semiconductor Industry Association (SIA).[57] In 2011, the President of the SIA explained the magnitude of the industry's counterfeiting problem. He noted that:

> "Experts have estimated that as many as 15 percent of all spare and replacement semiconductors purchased by the Pentagon are counterfeit. Overall, [the SIA] estimate[s] that counterfeiting costs US based semiconductor companies more than $7.5 billion per year, which translates into nearly 11,000 lost American jobs."[58]

Since 2011, counterfeiting has continued to be a major concern for the SIA and other organizations.[59] In 2019, the SIA submitted a comment "in response to the Request for Public Comments on Report on the State of Counterfeit and Pirated Goods Trafficking and Recommendations."[60] This comment raised safety concerns related to counterfeiting. Because counterfeited CHIPS are much less reliable, they pose a risk to any device that utilizes them.[61] This harm can become quite consequential when the devices utilizing chips include the likes of airplanes or military nuclear submarines.[62]

Unlike IP theft, counterfeiting in the United States can result in criminal sanctions. For example, one seller of counterfeited semiconductors plead guilty and was sentenced to 46 months in prison after his counterfeited product ended up in a classified weapon system used by the United States Air Force.[63] However, while monetary damages and criminal fines are certainly an

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57 SEMICONDUCTOR INDUSTRY ASSOCIATION, *Comment Letter on State of Counterfeit and Pirated Goods Trafficking and Recommendations* 84 FR 32861 (July 10, 2019).

58 *Detecting and Removing Counterfeit Semiconductors in the U.S. Supply Chain*, SEMICONDUCTOR INDUSTRY ASSOCIATION (June 2018), https://www.semiconductors.org/wp-content/uploads/2018/06/ACTF-Whitepaper-Counterfeit-One-Pager-Final.pdf.

59 *See id*; *see also* Combatting a Growing Global Threat - Counterfeit Semiconductor Products, EUROPEAN ANTI-FRAUD OFFICE (Dec. 14, 2022), https://perma.cc/4CSZ-VGWG.

60 *Supra* note 57.

61 *Id.*

62 *Id.*

63 Semiconductor Industry Association, *Semiconductor Counterfeiter Sentenced to 46 Months in Prison*, SIA BLOG (June 5, 2019), https://perma.cc/LCT2-WAK2.

incentive not to counterfeit, American firms are most broadly aided against counterfeiters by trade restrictions and seizures.

Specifically, the ITC is an essential forum for firms hoping to resolve counterfeiting of their good. The ITC can enforce seizures at the border of any products containing counterfeited chips. Once again, strong understanding of hard and soft SIP is essential for quick deliberation by the ITC. Although ITC suits can be costly, they are effective at quickly resolving counterfeiting matters to seize goods before they cross the border into the United States.[64]

Additionally, as supply chains for semiconductors remain in limbo, preventing counterfeited chips becomes more important because the demand for chips is less easily met. With increased demand, costs rise, and counterfeiters have a greater incentive to knock off chips. Although use of counterfeited chips may seem to quickly solve a lack of supply, the risk of these counterfeits failing is simply too great.[65] As demand for chips grows, centralized and transparent information about which chip companies may have previously had fraud concerns should be publicly available to prevent the usage of counterfeited chips.[66] At the very least, government agencies should be careful to track potential fraud to ensure that counterfeited chips are not being used in extremely sensitive aerospace or military technology. Lastly, swift punishment for counterfeiters is essential to minimize the damage done by counterfeits.

iii. Licensing Levers

One final and more expansive policy issue within the semiconductor market is licensing. Licensing is an essential part of the semiconductor industry because of the prevalence Standard Essential Patents (SEPs) in the industry.[67] SEPs cover inventions that are so foundational to current semiconductor technology that the patent must be reasonably purchasable by other firms to avoid a monopoly.[68] Without regulation of SEPs, firms with patents over foundational information could force competitors to pay highly overvalued prices on the SEP with each invention. This

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64 *See supra* note 39.

65 Mike Borza, *What Are Counterfeit Chips?*, SYNOPSYS BLOG (Nov. 1 2021), https://perma.cc/8HTV-7R2L.

66 *Id.*

67 Shriya Ghosh, *What Are SEPs and How Do They Affect Efficiency in the Tech Industry?*, SYRACUSE UNIVERSITY – NEW YORK STATE SCIENCE & TECHNOLOGY LAW CENTER (May 11, 2023), https://perma.cc/LDL7-G546.

68 *Id.*

would cause unreasonable expenses to non-SEP owning firms, leading to a semiconductor market with only a few key powerful firms, and a lack of R&D driving competition.

To avoid this, owners of SEPs are regulated to license these patents at fair rates.[69] This regulation is often self-enforced by firms. Groups of firms in the sector will form Standard Setting Organizations (SSOs) that determine SEPs for different facets of the industry.[70] Once an innovation is determined to be a SEP, firms who have agreed to the SSOs terms are contractually bound to license the SEP under Fair, Reasonable, and Nondiscriminatory (FRAND) terms.[71] Both the licensor and the licensee can be sued for contractual violation if they do not attempt to negotiate the licensing fee in a FRAND way.[72]

In the past, there has been concern that broad patenting regulation has led to a patenting thicket in the semiconductor industry that has caused too many defensive patenting tactics and limited possibility of collaboration.[73] However, because SEPs are such an industry norm, recent scholarship has turned away from critique on over licensing.[74] Interests have instead begun to focus on how the United States can best support American firms who are licensing their SEPs.

Additionally, the licensing of non-SEP, but still useful technology, amongst United States firms may signal efficient use of R&D costs across firms through collaboration. On the other end of the spectrum from active licensing schemes are more siloed trade secret protection regimes by individual firms. While the Semiconductor Industry Association often calls for increased trade secret protection, U.S. legal institutions may be wary of over incentivizing trade secret reliance within the semiconductor IP regime. Increased reliance on trade secrets as a form of SIP protection could limit collaboration in the American CHIP industry because a trade secret is protected by efforts to keep new

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69 *Id.*

70 *Id.*

71 *Id.*

72 *See* Niels van Velde, *The Tech Terms You Need to Know to Understand Standard-Essential Patents (SEPs)*, THE APP ASSOCIATION, (Sept. 14, 2021), https://perma.cc/WG87-9UYX.

73 *See* Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575 (2003).

74 *See* Jonathan M. Barnett*, Intellectual Property and Transactional Choice: Rethinking the IP/Antitrust Dichotomy*, CPI ANTITRUST CHRONICLE (July 18, 2022), https://perma.cc/VFB2-TYBL; *see also* Jonathan M. Barnett, *How IP Rights Keep Markets Free, Forum for Intellectual Property*, HUDSON INSTITUTE (June 2021), https://perma.cc/5YA2-D7U4.

technological advancements under wrap. Therefore, as policy efforts are implemented to protect trade secrets, policy makers should be careful to simultaneously carve legal paths that encourage the voluntary licensing of trade secrets across American firms.

Incentivized licensing and proper license enforcement can help to accelerate shared information which decreases the value of counterfeiting and increases the payoff of R&D. However, particularly for SEPs, how licensing is enforced is important. If SEP licensing fees are set too low, major United States semiconductor firms may be at a disadvantage because they could be required to license their IP at rates below the actual market value.[75] Alternatively, if licensing is not enforced enough, then a patent thicket could form, stifling innovation.[76] Because newer firms are often less likely to own foundational IP, they would need to purchase the use of that IP from more longstanding firms.

SEP helps newcomers have a fair path to enter the market through. "As the industry migrates to the next level of complexity with chiplets, even more models, deliverables, and collateral will be required, especially as the IP and chiplets become more opaque."[77] Proper licensing schemes, particularly in international commerce are necessary because current level of detail and information sharing "takes increasing amounts of trust between developer and integrator."[78]

The Vice President of technology, Raymond Nijssen, at Achronix, a fabless semiconductor company in the United States, noted that with increased reliance on artificial intelligence in the chip design phase, licensing requires more trust and communication between the licenser and licensee than ever before.[79] This increased need for trust could increase the effort required for semiconductor IP to be shared, tested, and incorporated by exchanging companies. Together, this increased transactional expense may decrease licensing. Because reliable licensing is becoming more challenging, the government should consider how other friction in the licensing process can be reduced.

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75 Gregory C. Allen, *China's New Strategy for Waging the Microchip Tech War*, CENTER FOR STRATEGIC & INTERNATIONAL STUDIES (May 3, 2023), https://perma.cc/GS74-TNRP.

76 *See* Burk & Lemley, *supra* note 73.

77 Brian Bailey, *IP Becoming More Complex More Costly*, SEMICONDUCTOR ENGINEERING (May 25, 2023), https://perma.cc/73SH-P87T.

78 *Id.*

79 *Id.*

However, there is a careful balance to strike. If licensing is over enforced, time and money spent on research and design may not be properly rewarded. This could incentivize sellers in the IP marketplace for chips may sell incomplete or inefficient designs. This would lead to an over licensing problem where small companies are licensing beyond their research and design capacities. Creating a strong reward for licensing is necessary to reward time spent on research and design. In surveys of chip companies, key stakeholders noted that repeated R&D processes are essential to the success of chip IP.[80] Safe chips require repeated testing, and testing often needs to be specialized to the technology the chip will be applied in. If licensing values are not being enforced at a high enough value, a company's licensing may exceed their own capabilities to turn a profit.[81] This will ultimately create spending on ineffective chip designs which will limit the benefits and success of research and design in the American marketplace. For example, if a toaster with a chip in it begins to malfunction ten percent of the time because of a failure in the chip, then a lack of research and design into that chip has affected not only the maker of the chip, but also any toaster producers that have included that chip in their product.

B. Many of These Issues in the Semiconductor Industry Hinge on International Standards and Practices

i. Stealing and Counterfeiting Are Both Heavily Perpetrated by International Actors

Intellectual property theft in the semiconductor industry often occurs through targeted espionage. For example, Micron, an American memory chip country, has been the victim of theft by Chinese actors.[82] In 2018, a state-owned Chinese company stole design plans so that China could replicate Micron's memory chips.[83] This theft often occurs through cyber espionage or by paying employees of United States companies to systematically steal and share the information.

International theft is extra worrisome because international theft can be perpetrated or encouraged by other countries. Different countries have an incentive to target the IP of foreign firms

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80 *See id.*

81 *See id.*

82 Allen, *supra* note 75.

83 Adam Rogers, *US Accuses Chinese Company of Stealing Micron Trade Secrets*, WIRED (Nov. 1, 2018), https://perma.cc/284D-Z5JJ.

because if a state is not privy to the newest innovations in chips, all their technology that implements chips can be negatively impacted. Throughout history, international state actors have committed targeted semiconductor IP theft to ensure that their state does not fall behind.[84] This changes the playing field of firm versus firm to firm versus country.

To manage these occurrences of theft and counterfeiting, the ITC must be equipped to handle international actors and the complexity of semiconductor cases. American companies, in particular smaller firms, may be better suited to bring suits to the ITC or federal courts rather than other international forums. Additionally, the ITC can prevent imports from international actors which can be a way to prevent theft and counterfeiting from entering the United States market. Although use trade into the United States is not the only market, it is the world's largest importer.[85] Therefore, the ITC's control on imports can pose a significant threat to international infringers.

ii. Inefficiently Cheap Licensing May Be a Result of Unfair International Practices, Which in Turn Damage the United States Semiconductor Industry

Beyond theft, international actors may use unfairly low SEP licensing rates to access the benefits of American R&D. International forums may differ in set cost of SEP licensing. Sometimes, setting a lower cost can allow other companies to access another firm's innovation at an unfairly low rate. There has been international criticism that Chinese enforce SEPs to be licensed at a cost below a fair market price.[86] Mark Cohen from the Berkeley Center for Law and Technology has argued that:

> "China is keen to set prices for U.S., European, and Japanese technology worldwide, thus reducing the price for foreign technology inputs in Chinese manufactured products. For example, a German court case awarded a royalty rate eighteen times the rate of a Chinese court in a parallel litigation matter."[87]

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84 *See* MILLER, *supra* note 6.

85 Statista Research Department, *Imports in the U.S. - Statistics & Facts*, STATISTA, (July 3, 2023), https://perma.cc/9VGL-WLYW.

86 *U.S.-China Intellectual Property Issues in a Post-Phase-One Era: Interview with Mark Cohen*, THE NATIONAL BUREAU OF ASIAN RESEARCH, (Jan. 29, 2022), https://perma.cc/YJ6C-UJTX.

87 *Id.*

However, if the United States wants to protect the value of American firms' SEPs, the focus should go beyond a singular worry about Chinese forums. Instead, the United States should focus on getting cases about enforcing what is a FRAND SEP licensing rate is in American legal forums. More frequent and fast decisions about FRAND licensing within American forums allows the United States to set the tone on what FRAND licensing should look like. Although not binding on international courts, preexisting decisions are persuasive. Additionally, decisions by American forums do legally govern what firms do and trade within the United States, which is on its own a major market. When enforcement of SEPs occurs outside of American forums, then countries get to set the tone. And, this could increase the chances that international firms may be able to purchase and use technologies developed in the United States at a significantly undervalued price.[88] This in turn will mean that United States semiconductor firms will become undervalued and that expenditures on strong research and design from these United States firms will go unrewarded.

To avoid these results in the United States semiconductor industry, it is imperative that the United States patent regime remains a prominent and frequently used venue for SEP disputes. Increased legal action in non-United States venues may result in the devaluing of United States research and design and hurt the market share of key United States semiconductor firms.

III. HOW CAN THE UNITED STATES REMAIN A PRIORITIZED VENUE FOR SEMICONDUCTOR IP DISPUTES?

A. Where Are International Semiconductor Disputes Handled in the United States?

As discussed in the introduction, semiconductor IP disputes are often managed in the ITC or federal courts in the United States. Therefore, to make the United States a prioritized venue for firms, targeting legal policy to these forums is essential. In particular, the ITC's singularity and targeted focus on international trade makes it ripe for policy change.

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[88] *Id.*

B. What Makes the ITC an Attractive Venue?

The ITC in the United States plays a crucial role in handling intellectual property disputes related to semiconductors, particularly through investigations under Section 337 of the Tariff Act of 1930. "What is now Section 337 was first introduced as part of the Tariff Act of 1922, and then modified as Section 337 of the Smoot-Hawley Tariff Act of 1930."[89] The ITC's involvement is primarily focused on unfair trade practices involving imported goods, including those that may infringe upon semiconductor-related intellectual property rights.

Matt Shapiro from Ropes and Gray explains that ITC has not always been as utilized for litigation as we currently see today.[90] When we look at investigations are the ITC since 1974, around half of these investigations occurred in the last decade, meaning that the ITC has exponentially heated up in the past ten years.[91] A clear majority of these cases are over patent infringement, meaning that while the ITC is formally a trade focused forum, much of this trade legal action occurs through the means of patent litigation.[92] The ITC's heavy focus on IP, in particular patent enforcement, additionally demonstrates that much of the important United States trade policy is impacted through intellectual property levers. IP is central to managing trade and ensuring that trade is equitable and beneficial to American firms.

As previously noted, the ITC's role in SIP disputes is significant because it can provide a swift and effective remedy by excluding infringing products from entering the U.S. market. This contributes to the protection of domestic industries and encourages fair competition in the semiconductor sector. Using the ITC is a speedy process, which enables trade disputes to be handled in a time frame that really impacts the market instead of just remedial support later. For the ITC, there are "roughly 18 months from the time an ITC complaint is filed up through the pre-hearing briefing all the way to the Commission's final determination."[93]

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89 Matthew J. Rizzolo, Matthew R. Shapiro, Brendan McLaughlin & Nancy Attalla, *Talkin' Trade: How to "Fix" Section 337 and the ITC*, ROPES & GRAY, (Feb. 7, 2023), https://perma.cc/PXP8-XCW7.

90 *Id.*

91 *Id.*

92 *Id.*

93 Matthew J. Rizzolo, Matthew R. Shapiro & Brendan McLaughlin, *Talkin' Trade: The Interplay Between the ITC and PTAB*, ROPES & GRAY, (Sept. 1, 2021), https://perma.cc/HZ8H-QN6Q.

Lastly, the ITC may naturally become a more frequented forum as there is a possibility that use of the ITC for semiconductor disputes will grow following the CHIPS Act. This is because "this campaign of industrial policy will not only support existing domestic manufacturers, but also lure foreign companies to build production facilities in the United States."[94] These new investments may lead to a shift in ITC litigation dynamics, allowing companies without a prior domestic industry to utilize the ITC to enforce intellectual property rights. The ITC, viewed as protective of domestic investment rather than domestic companies, encourages more use of the ITC by international firms with production facilities in the United States. Foreign-based complainants, including well-known companies, have already utilized the ITC successfully. ITC use by international complainants is an overall good for the ITC's validity. International use and respect are essential to maintain priority over other possible forums.

C. Initial Drawbacks to the ITC Can Be Resolved to Benefit American Firms

While there are some current policy drawbacks to the ITC, tweaking these issues makes the ITC even more useful to American firms. Some industry members and legislators feel that the ITC has "has strayed from its original intent, and it's inadequate to fulfill its original objective to protect domestic industries"[95] Common complaints focus on the use of the ITC by NPEs, non-producing entities, commonly referred to as patent trolls. "Others think that the ITC should be strengthened to address somewhat novel forms of unfair competition employed by countries such as China."[96]

i. The ITC Should Aim to Limit NPE-Based Litigation

Complaints with the ITC being used as a forum for NPEs arise because of the loophole that NPE's must use to access the ITC as a forum.[97] NPEs cannot access the ITC on their own because access to the ITC requires proof of a domestic industry. NPEs function like a shell company where the entity owns patents and leverages them in lawsuits for capital but does not

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94 *CHIPS and IRA Subsidies Could Spur More Frequent Use of the ITC*, DENTONS (Sept. 20, 2023), https://perma.cc/QT7T-LAA7.

95 Rizzolo et al., *supra* note 89.

96 *Id.*

97 *Id.*

actually use those patents for the manufacture or design of its own goods. NPEs lack of their own domestic industry means that NPEs rely on a licensee having tangible domestic products to bring a suit to the ITC. This means that if a licensee has used a patent from an NPE, which is often necessary to their development process if that patent is foundational like a SEP, then that licensee gets roped into the ITC process as well. This "typically involves the licensee spending the time and resources responding to a subpoena and disclosing highly confidential business information, potentially sitting for a deposition, etc. And in most of these cases, the licensee has little, if any, interest in seeing the requested exclusion order issue."[98]

Therefore, allowing NPEs to use the ITC as a forum harms United States licensees by forcing them to become involved in expensive and fast-paced lawsuits, when the legal complaint at hand is unhelpful and undesired by them. These issues add litigation costs where practicing firms in the semiconductor industry do not seek them. Moreover, licensing by NPEs becomes more costly due to this practice which may decrease share of important information from NPEs to practicing firms which would more fully utilize that information.

Generally, the existence of NPEs does little to support practicing, productive members of the semiconductor industry in the United States, so excluding NPEs' access to the ITC could save costs for both the ITC itself and for American semiconductor firms. One policy option would be to limit NPEs from ITC legislation unless the licensee American firm with a tangible industry voluntarily accepts involvement in the legal action. We likely would not want to ban all actions by NPEs because there is a chance that an American firm with domestic injury wants to protect the IP that they are licensing from an NPE and needs the NPE involved in the litigation as the IP owner to do so. If NPEs are statutorily restricted from accessing the ITC without licensee agreement, then the ITC could save court resources for managing cases with more tangible impacts. Additionally, American licensees who are applying the technology could license more freely to speed up innovation without concerns of being roped in to a lawsuit.

However, a policy change in this area should be careful not to further cut off SIP fabless design firms from access to the ITC, as these firms are actively benefitting growth to the American

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98 *Id.*

semiconductor industry. One such policy option to couple with a restriction to NPEs would be to:

> "[r]everse the Federal Circuit's *ClearCorrect* decision, which limited Section 337's jurisdiction of physical articles, to allow the ITC to address unfair acts in a cross-border transfer of digital data. According to ITIF, this would make Section 337 stay apace with modern technology and industry."[99]

For fabless semiconductor design firms, their product may be better protected if the product does not need to exist in a physical article to be addressed. So, if NPE led actions are banned without licensee consent, simultaneously employing a policy that addresses cross-border digital data transfers could ensure that fabless design companies still have useful access to the ITC.

ii. The ITC Could Specially Punish More Egregious Unfair Trade Practices

The other issue with the ITC arises in handling of particularly unfair international trade practices. A recent policy paper by the Information and Technology Innovation Foundation argued that the ITC should develop a way to distinguish and specially punish more egregious unfair trade practices from more run-of-the-mill disputes.[100] This paper, by Robert Atkinson, focused on what it deemed to be unfair Chinese trade practices. Atkinson argued that the ITC currently focuses too much on issues related to United States multinational corporations and should instead home in on what it believes are Chinese specific offenses of recurring IP theft and forced technology transfer.[101] China has faced allegations of employing various tactics to pressure or force technology transfers from foreign companies as a condition for doing business in the country.

Perhaps one option would be to statutorily create increased ITC punishments, like an injunction to all of a firm's products rather than just an infringing product. These injunctions could be enforced for when a state-owned actor is found to have engaged in repeated IP theft of forced technology transfer. As we have discussed, SIP is particularly at risk when it is targeted by a state

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99 Rizzolo et al., *supra* note 89 (citing Clearcorrect Operating, LLC v. International Trade Commission, 819 F.3d 1334 (Fed. Cir. 2016)).

100 Robert D. Atkinson, *How to Mitigate the Damage from China's Unfair Trade Practices by Giving USITC Power to Make Them Less Profitable*, INFORMATION TECHNOLOGY & INNOVATION FOUNDATION (Nov. 21, 2022), https://perma.cc/NXZ4-HFWS.

101 *Id.*

rather than a firm. Therefore, one option could be creating specific punishments for violations by state-owned actors. This Comment does not have the capacity to fully evaluate whether a punishment like this would be unduly prejudicial, but if such a policy was to be further considered, policymakers should be careful not to make the ITC look generally biased against state-owned actors. Although state enforced unfair trade is especially problematic, assuming that all state-owned actors are engaging in unfair trade would also be problematic to the ITC's validity.

D. How Can the ITC and Other United States Venues Properly Impact IP Policy Levers?

i. Policy Makers Should Prioritize Paths for Efficient Dispute Resolution

First, efficient dispute resolution is key. The ITC already helps to streamline the dispute resolution process to ensure quicker and more predictable outcomes. This helps to reduce the time and costs associated with IP litigation. However, reoccurring litigation without preemption may make United States venues less attractive. Preemptive effects of the ITC should be expanded in two ways.

First, returning to and potentially reversing Federal Circuit precedent that keeps patent cases from having preemptive effect in federal district courts could help to overall streamline United States IP litigation. Because the ITC mainly enacts injunctive penalties, and cannot give any monetary damages for past harms,[102] most companies will seek monetary damages at a federal court in addition to the ITC suit. These ITC lawsuits will normally conclude earlier on because of their sped-up timeline.[103] Normally, federal district courts give heavy persuasive value to ITC holdings; however, a federal district court is not bound to ITC holdings, and may often seek additional discovery, briefing, and argument to help reach their conclusions.[104] All this additional work becomes expensive for a semiconductor firm that must hire highly specialized counsel with a background in semiconductor inventions. To avoid this costly double expense, the U.S. should return to legal questions about preemption from the ITC.

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[102] Michael Gershoni & Philip Marsh, *How Preclusion at ITC Is Affecting District Court Litigants*, LAW360 (Feb. 11, 2021), https://perma.cc/Q9TB-PE7N.

[103] *See* Rizzolo et al., *supra* note 42.

[104] *See id.*

The federal circuit should reevaluate its holding in *ClearConnect*.[105] Perhaps, it would not be an over delegation to the executive branch to have ITC patent cases hold preemptive weight. To make this change, the court would need to rule in favor of preemptive effect of ITC holdings, or, more simply, Congress could specify that ITC patent holdings are preemptive. A major basis for not giving the ITC preemptive status in this area is because in the Trade Reform Act of 1974, Congress expressly noted that "that any disposition of a Commission action by a Federal Court should not have res judicata or collateral estoppel effect in cases before such courts."[106] Reversing this statutory backing would enable the ITC to have preemptive impacts on patent litigation.

Second, even if preemptive effects are not implemented for patent cases, they should be for trade secret cases. As discussed, trade secret protections are becoming increasingly popular due to the exponential complexity of semiconductor innovations. There has not been a conclusive decision on the preemptive effect of ITC trade secret cases, but recent United States District Court rulings lean in favor or preemptive effect.[107] Ideally, this preemptive weight will be further formalized through legislative action.

But, if the ITC cannot have preemptive weight in patent or trade secret cases, then standardized sharing and regulation of discovery between the ITC and Federal District Courts must become further entrenched. Creating procedural rules to avoid duplicative discovery could help to better streamline the sharing of discovery between the ITC and federal judicial forums. Ultimately, the goal should be to decrease litigation costs for those utilizing the American forums. Because a second round of litigation in a judicial forum will be necessary for parties seeking monetary damages, avoiding unnecessary repetition of discovery in that second round of litigation will make potential litigants view the ITC as a tool rather than a hindrance. Of course, preemption most cleanly removes unnecessary repetition, but streamlined discovery and communication between forums can also make an impact.

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105 Rizzolo et al., *supra* note 89 (citing *Clearcorrect Operating*, LLC, 819 F.3d 1334).

106 Rizzolo et al., *supra* note 42 (citing 19 U.S.C. §§ 2101–2495 (2022)).

107 *See* Elizabeth Ranks, *ITC Litigation: Introduction to Trade Secret Protection at the ITC*, Fish & Richardson P.C. (May 29, 2024), https://perma.cc/2HA4-XW29; *see also* Mahindra & Mahindra Ltd. v. FCA US LLC, 503 F.Supp.3d 542, 550–51 (E.D. Mich., 2020); Manitowoc Cranes LLC v. Sany Am. Inc., 125 U.S.P.Q.2d 1325, 1327, 2017 WL 6327551, at *3 (E.D. Wis. Dec. 11, 2017).

ii. The United States Should Diversify SIP Protection Options by Building Out Trade Secret Protection or Considering a Suis Generis Protection

Beyond policy surrounding preemption, the United States should also work to create more standardized trade secret protection in the ITC. Trade secret rulings are increasingly becoming more popular in the ITC.[108] Therefore, focusing on streamlining trade secret litigation could have a large impact on ITC functionality. Trade secrets can be more complex and riskier to license because protection of the secret is much harder to maintain the more eyes have access to that proprietary information.[109] The ITC has less standardized rules for trade secret suits than for patent suits; therefore, the forum is less transparent and predictable for potential users.[110] But, if trade secret rulings become more standardized and predictable, the benefits could be two fold.

First, firms may be more likely to seek out the ITC as a forum to protect trade secrets because they can readily evaluate whether the ruling would be favorable. Second, if firms feel confident that their trade secret licensing agreements will not harm the privilege of a trade secret, then firms can feel more comfortable licensing trade secrets going forward.[111] It is efficient for American firms to share the knowledge from semiconductor R&D with each other. If this knowledge is being protected as a trade secret, we want to make firms comfortable in licensing those trade secrets. Therefore, maintaining license-friendly stances in trade secret holdings could show firms that licensing of trade secrets is less risky and an opportunity for profit. Moreover, establishing more clear guidelines within this emerging IP form could be helpful to make the ITC a prioritized venue for multinational companies when they want to address cases that touch on trade secrets. If trade secrets continue to rise in popularity, then a more tailored trade secret litigation process in the ITC could have wide effects on ITC popularity as a venue.

Beyond the ITC, the United States could also look at potential incentive mechanisms, such as tax credits or other financial

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108 Ross, *supra* note 45.

109 Benjamin C. Stasa, *The Fear of Partnering in Semiconductor Manufacturing: How to Mitigate Risk and Protect Your Intellectual Property*, BROOKS KUSHMAN (Dec. 5, 2024), https://perma.cc/X5NT-GD3E.

110 *See* Matthew J. Rizzolo, Cassandra B. Roth & Matthew R. Shapiro, *Talkin' Trade: Trade Secrets, False Advertising, Antitrust, Oh My! — Non-Statutory Claims at the ITC*, ROPES & GRAY, (July 17, 2023), https://perma.cc/5PV9-8YBF.

111 *See supra* note 116.

benefits, to encourage semiconductor companies to engage in IP licensing activities. The United States could play off the recent CHIPS Act and prioritize research and design investments to companies who have successful track record of licensing. Additionally, rewarding licensing may help to overcome some of the concerns firms may have about engaging in slightly riskier licensing schemas like trade secret licensing. Moreover, we can hope to see that the CHIPS Act will more broadly support trends towards licensing because subsidized research and design enables companies to be slightly less stretched to achieve profits when licensing their design.

Another consideration for the United States would be to take a second attempt at a suis generis protection for semiconductor IP.[112] One option would be to attempt a trial of a suis generis IP in the ITC enforcement only. This would initially limit the effects of the IP to injunctions on trade rather than potential monetary damages. Previous mask focused coverage of previous suis generis protection from the SCPA did not hold up well under technological developments.[113] However, with some scholars beginning to question how long Moore's law will hold up, more stability in the semiconductor space could make a suis generis protection more appropriate for the current industry needs.[114]

Additionally, lacking suis generis protection in other forums might mean that a well-tailored protection in the United States could be a catalyst to firms prioritizing United States IP registration and litigation within the ITC. Perhaps a tailored suis generis approach could address new reliance on AI in the semiconductor research and development process. Creating a suis generis protection for AI aided innovation that lasts for a shorter period of protection than a patent but has more formalized and protected measures than a trade secret could help to bridge a gap in the market. The details of a new IP protection are beyond the scope of this Comment, but I want to highlight that the use of AI as an innovation tool is creating a gap in our current IP regime that may demand a new form of IP protection.

Creating a suis generis protection that the ITC is specialized to enforce could also help to strengthen ITC use internationally. Moreover, if the new protection was deemed useful after a trial period and was expanded to monetary damages, the suis generis

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[112] Adam Novak, *Semiconductor Topography IP Rights: Is There Possibility for Revival?*, LUND UNIVERSITY GRADUATE THESIS, MASTER OF LAWS PROGRAM (2022).

[113] *Id.*

[114] *See* MILLER, *supra* note 6, at 348–50 (noting the potential slowing of Moore's Law).

form of protection need not be limited in the same way patent cases are in the ITC. Therefore, the ITC could have preemptive effect over this form of protection making protection in the United States more streamlined. Lastly, if a new IP form offers more likelihood of court enforcement than trade secrets, firms may license the innovation more leniently since getting protection for that IP in court could be more structured. This would help incentivize efficient sharing of innovation across American firms.

iii. If Forums Become Attractive, Then Prioritizing Anti-Anti-Suit Injunctions Over Anti-Suit Injunctions Will Better Align With American Policy Goals

Additionally, to limit blocks to ITC usage, the United States should try to limit the anti-suit injunctions by international forums. Anti-suit injunctions prevent United States forums from addressing international semiconductor IP matters while concurrent litigation is occurring in another international forums.[115] An anti-suit injunction (ASI) is a legal remedy issued by a court to prevent a party from pursuing parallel legal proceedings in another jurisdiction.[116] In the context of intellectual property or patent litigation, an ASI may be sought when one-party initiates or threatens legal action in a foreign court that may impact the ongoing proceedings or decisions of the original court.[117] For example, if two parties are involved in a patent dispute, and one-party files a lawsuit in a foreign jurisdiction that seeks to adjudicate the same or related issues, the other party may seek an anti-suit injunction. The purpose is to restrain the party from continuing the foreign legal proceedings, ensuring that the original court retains control over the resolution of the dispute.

In a best-case scenario anti-suit injunctions are employed to maintain the efficiency of legal proceedings and prevent inconsistent or contradictory decisions from different jurisdictions. However, the use of anti-suit injunctions use has become contentious because they interference with the sovereignty of another jurisdiction's legal system.[118] Many countries have raised concerns about China's use of anti-suit injunctions in international intellectual property litigation. The issuance of what is referred to as "global ASIs" by Chinese courts, preventing foreign courts

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[115] *See* Jorge L. Contreras, *A Statutory Anti-Anti-Suit Injunction for U.S. Patent Cases?*, UTAH LAW DIGITAL COMMONS (Apr. 14, 2022).

[116] *Id.*

[117] *Id.*

[118] *See id.*

from adjudicating matters related to the validity and licensing rates for patents, has sparked concerns that China might be using ASIs to artificially lower the rates at which standard essential patents must be licensed.[119]

ASIs are particularly contentious when applied to SEP cases because SEP cases can transcend borders. Because SEPs are governed by the FRAND standards of international Standard Setting Organizations (SSOs), when licensing negotiations devolve, there are often concurrent litigations in many international forums. For a FRAND case, if the firm "seeking to license" wins the suit, then the owner of the SEP must license to the licensee at a lower cost. Moreover, the firm "seeking to license" can get away with what would otherwise be viewed as infringement since they can argue that they were forced to infringe due to the SEP owner's refusal to FRAND license. If the owner wins the suit, then the licensee, who failed to agree to a higher rate of licensing will be liable for IP infringement, which could lead to trade injunctions or monetary damages.

Firms seeking to delay injunctive penalties for infringing sometimes try to use ASIs to delay concurrent suits in other forums that could lead to more expansive trade restrictions. For example, if Firm A wants to use an SEP from Firm B, but does not want to pay fair value for it, Firm A can begin fake negotiations with Firm B to license the SEP. When the negotiations inevitably fall through, Firm A continues to use the SEP without paying the licensing fee. Then, Firm A can preemptively sue Firm B, claiming that negotiations fell through because Firm B was refusing FRAND licensing rates. And, in the forum that Firm A chose to sue Firm B in, Firm A can ask for an ASI, preventing Firm B from concurrently suing Firm A in other venues over the same SEP. So, if Firm A initially brough suit in France, an ASI granted by a French court could prevent Firm B from suing Firm A for infringing that same SEP with products sold in America because an ASI like this could prohibit Firm B from concurrently utilizing the ITC. Therefore, Firm B could be left without a remedy to restrict trade of Firm A products that use the SEP infringing chip within the United States. Knowing that this profit-costing trade will continue in other countries as the initial suit wears on, Firm B may be forced to license their SEP at a much lower rate than they would have previously agreed to in order to recoup some profit. This type of scheme is imperfect for a suit like Firm A, but firms

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[119] *See id.*

seeking to license SEP have been frequently using these hold-out schemes to the disadvantage of SEP owning firms.[120]

Anti-suit injunctions are often misused to gain an upper hand in SEP licensing negotiations, and they can block the use of American forums, like the ITC. Of course, American forums can also implement ASI's banning litigation in other international forums. But, if policy makers favor increased ITC use as a central policy for SIP support, then they should parallel policy actions to bulk up the ITC with policy actions that get rid of potential restrictions to ITC use.

One option is to have statutory anti-anti-suit injunctions, which disadvantage companies who ask for anti-suit injunctions in other forums.[121] Previous literature has raised the concern that anti-anti-suit injunctions are somewhat hypocritical because the United States also uses anti-suit injunctions.[122] If the United States heavily leans on ASIs to keep litigation in American forums, then statutorily enforcing anti-anti-suit injunctions could be problematic. However, if the United States focuses on other paths to increase the attractiveness of its legal forums, rather than forcing use through ASIs then anti-anti-suit injunctions would be in alignment. Consider policies that increase the efficiency and predictability of American legal forums like a carrot, and ASIs like a stick. If we focus on 'carrot' policy, coupled with quick decisions, then using ASI's to force American forums on litigants would become less necessary. With reliance on ASIs lessened, automatic statutory anti-anti-suit injunctions could streamline use of American forums without raising concerns of hypocrisy. Additionally, for the ITC to be most effective, it must respond to unfair trade practices with speed. ASIs are especially damaging to the mission of the ITC because they delay when a firm can use the ITC. Therefore, increasing use of the ITC and statutory anti-anti-suit injunctions go hand in hand.

IV. CONCLUSION

This paper has covered potential changes to the current IP litigation schema in the United States, with a central focus on the ITC as a forum. Focus on the ITC aims to catalyze reliance and preference for the United States IP forums over the forums of

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120 Daniel B. Weinger et al., *Another Implementer Hold Out Door Closes: The Death of the Anti-Suit Injunction?*, MINTZ (Feb. 28, 2024), https://perma.cc/729Y-TFNJ.

121 *See* Contreras, *supra* note 115.

122 *See id.*

international actors. Additionally, ensuring regular use of United States forums helps to ensure that the United States can interject when unfair trade practices are being entrenched by other international judicial action.

The first policy change focuses on a reversal of the current legal standard that the ITC does not have preemptive holdings on issues of patent enforcement on federal district courts. The lack of preemption causes increased legal costs and resources spent on litigation when a litigant chooses the United States as a forum for patent enforcement. Therefore, competing international forums may have an easy path to providing preferred treatment to litigants as long as those forums offer a more streamlined litigation process than the need for two separate suits in the United States. Additionally, the ITC has a more concentrated set of actors than all federal district courts, meaning that utilizing the ITC as a basis for patent litigation is beneficial to semiconductor firms who can expect a more reliable and predictable application of IP rules and regulations to often challenging semiconductor fact patterns.

Second, this paper suggests further diversification of SIP protection using the ITC through regularity in trade secret cases and considering a suis generis protection for semiconductors. With trade secrets' emerging force in IP litigation, the United States has an opportunity to provide a specialized forum for semiconductor trade secret litigation than other current international forums provide. The ITC can attempt more friendly rulings on licensers of trade secrets to both incentivize licensing in different IP methods than patent licensing and to create more consistency in its rulings for firms who hope to use the ITC for trade secret protection. Additionally, because the United States is concerned about international theft of American firm trade secrets, better protection of trade secrets by the ITC may help to limit the negative impacts of intellectual property theft.

While considering the suis generis IP consideration, this paper argues that although semiconductor development is currently still on an accelerated path of Moore's law, many experts feel that this development will begin to slow in the coming decades. This expected slow in innovation, coupled with new AI reliance, makes timing ripe for suis generis protection. Patent and copyright protection for some semiconductor designs may be too lengthy of a protection period to efficiently reward AI-based innovation. Therefore, a shorter IP protection that is more publicized and easily protectable than a trade secret could help to bridge multiple needs in the semiconductor space.

Lastly, this paper considers statutory anti-anti-suit injunctions as a parallel policy action to enable ITC use. The paper explains why anti-suit injunctions are especially problematic in the semiconductor industry which frequently applies SEPs. Then, this paper suggests that because the strengthening of the ITC is a persuasive rather than a punitive policy, furthering heavy ASI use by American forums is a contradictory punitive rather than persuasive policy. Instead, focusing on policies which expand party options, like statutory anti-anti-suit injunctions is in better alignment.

With these policy levers, reliance on United States legal forums for semiconductor IP enforcement would become more entrenched. On a soft power level, this would decrease validity and strength of international forums, particularly in places where we have an emergence of semiconductor policy dispute. With the United States as a premier forum for semiconductor IP enforcement, America will have a greater opportunity to set standards for licensing practices and the expenses emerging from standard essential patent licensing.

A trustworthy IP litigation enforcement in the backyard of American firms makes it more likely that these firms can seek out proper legal protection, increasing expected return for research and design. Moreover, if competing firms, specifically non-American competing firms continue to engage in unfair trade practices, counterfeiting, and theft, the United States will be better equipped to swiftly manage and stop these infringements. Reducing and punishing this theft will help to increase profitability of American firms and decelerate profitability of international semiconductor competitors. In summation, making the ITC a prioritized venue can help the United States to best handle current issues in the semiconductor industry of IP theft, counterfeiting, and licensing.