

Debugging the Trademark Laws:

The Lanham Act and Counterfeit Microelectronics

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Abstract

Counterfeit microelectronics have been a persistent threat for the last twenty years. Counterfeit electronic parts pose serious risks to human health and safety, harm the economy, and jeopardize national security. The Lanham Act provides potent civil remedies for trademark counterfeiting, including injunctive relief, treble or statutory damages, and an *ex parte* seizure mechanism to preserve evidence. However, an empirical analysis of trademark filings from 2009 through 2022 reveals that manufacturers of electronic parts almost never pursue civil actions against counterfeiters. The lack of enforcement may be due in part to misunderstandings about the scope of coverage; some industry members feel the Lanham Act does not apply to the sale of used or altered items bearing a genuine trademark. The “material alteration theory” does encompass these activities and holds that the sale of used, refurbished, and remarked goods bearing a genuine mark is nevertheless infringing if the altered state of the product is not disclosed to the purchaser. As a result, the lack of civil enforcement must be attributed to other factors such as the high costs of filing

suit, concerns about damage to brands and impact on stock value, lack of necessary evidence, and inability to reach anonymous counterfeiters (often in other countries) who sell fake products through online marketplaces. The article concludes that, to incentivize microelectronics manufacturers to bring trademark actions against counterfeiters, Congress must amend the Lanham Act to recognize contributory trademark liability by intermediaries, including e-commerce platforms and others, that facilitate infringement when they have constructive knowledge that infringing activities are taking place on their sites.

Introduction

Air Force First Lieutenant David Schmitz died tragically on June 30, 2020 when the ejection seat in his F-16 Fighting Falcon malfunctioned during a failed nighttime landing.¹ The seat was ejected 130 feet into the air above his fighter plane, but the parachutes failed to deploy. First Lt. Schmitz slammed into the ground seven seconds later, still strapped into his seat, and died on impact.² He was 32 years old. An investigation by the Air Force Research Laboratory determined that the digital recovery sequencer³ in the malfunctioning seat contained at least 10 counterfeit electronic parts, including several transistors, an accelerometer chip,⁴ and four flash memory chips.⁵ The Air Force report simply concluded, “Counterfeit components in [Department of Defense (DoD)] inventory has been an ongoing problem over the past few decades. . . . The DoD is aware of this problem and is working to eliminate these components from supply chains.”⁶

The problem of counterfeit electronic components is not limited to the Department of Defense and other government agencies, however. Recent reports have

¹ Rachel S. Cohen, *An F-16 Pilot Died When His Ejection Seat Failed. Was It Counterfeit?*, AIR FORCE TIMES (Sept. 13, 2022), <https://www.airforcetimes.com/news/your-air-force/2022/09/13/an-f-16-pilot-died-when-his-ejection-seat-failed-was-it-counterfeit/>.

² *Id.*; see also Howard Altman, *Pilot Killed in Shaw F-16 Crash ‘Loved His Family, His Country and Loved to Fly’*, AIR FORCE TIMES (July 2, 2020), <https://www.airforcetimes.com/news/your-air-force/2020/07/02/pilot-killed-in-shaw-f-16-crash-loved-his-family-his-country-and-loved-to-fly/>.

³ An electronic sequencer for an aircraft ejector seat typically contains a number of sensors which provide information to a processor that initiates various functions of the ejection seat, such as the deployment of drogue and main parachutes and the release of the seat harness. See, e.g., U.S. Patent No. 5,222,695 (filed Oct. 10, 1991).

⁴ The accelerometer chip was purportedly manufactured by Analog Devices. The AFRL report observed that the original chip mounted on the printed wiring board during First Lt. Schmitz’s incident had been removed by Teledyne (the manufacturer of the digital recovery sequencer and the first party to examine it after the incident), and Teledyne installed a replacement accelerometer in its place. Both the original chip and the replacement were suspected of being counterfeit. See *Digital Recovery Sequencer EE-59*, AIR FORCE RSCH. LAB’Y (Aug. 3, 2020) [hereinafter AFRL REPORT], <https://s3.amazonaws.com/static.militarytimes.com/assets/pdfs/1663106099.pdf>.

⁵ Amended Complaint at 10, *Valerie C. Schmitz v. Lockheed Martin Corp.*, No. 3:22-CV-02419-MGL (D.S.C. Aug. 30, 2022). Note that the electronic parts were identified as “suspect counterfeit,” consistent with industry practices that are reluctant to conclusively identify any part as a confirmed “counterfeit.” See *infra* Section III(D).

⁶ AFRL REPORT, *supra* note 4, at 15.

disclosed the presence of counterfeit parts in U.S. nuclear plants,⁷ automobiles,⁸ commercial airliners,⁹ and other critical infrastructure. Counterfeits pose serious threats to human health and safety. In addition, they harm the economy, waste taxpayer dollars, compromise product reliability, and jeopardize national security. Efforts to combat counterfeit electronics have been half-hearted at best, and the chip shortages attributed to COVID-19-related supply chain disruptions have only made the problem worse.¹⁰

In addition to contractual remedies that may be exercised by purchasers of counterfeit products and specialized laws and regulations targeting specific industries or sectors,¹¹ Congress has created a multi-faceted system of enforcement mechanisms intended to counter the trade in “fake” products, including counterfeit electronic components. These mechanisms include civil actions for trademark infringement and counterfeiting and criminal penalties for trafficking in counterfeit goods and services. Nevertheless, both civil and criminal enforcement measures are surprisingly underutilized and ineffective at reducing the trade in counterfeit electronic parts. This paper describes the author’s empirical research into trademark infringement cases filed between 2009 and 2022 and reveals that manufacturers of electronic parts are not bringing civil actions alleging trademark infringement and counterfeiting.¹² Many

⁷ U.S. NUCLEAR REGUL. COMM’N, OFF. OF THE INSPECTOR GEN., SPECIAL INQUIRY INTO COUNTERFEIT, FRAUDULENT, AND SUSPECT ITEMS IN OPERATING NUCLEAR POWER PLANTS (2022); U.S. NUCLEAR REGUL. COMM’N, OFF. OF THE INSPECTOR GEN., NO. OIG-22-A-06, AUDIT OF THE NUCLEAR REGULATORY COMMISSION’S OVERSIGHT OF COUNTERFEIT, FRAUDULENT, AND SUSPECT ITEMS AT NUCLEAR POWER PLANTS (2022).

⁸ See, e.g., *Desperate Carmakers Rush to Semiconductor Black Market as U.S. Crackdown on Selling Chips to China Induces ‘Another Round of Panic,’* FORTUNE (Oct. 19, 2022), <https://fortune.com/2022/10/19/desperate-carmakers-semiconductor-black-market-us-crackdown-selling-chips-china-induces-panic/>.

⁹ Larry Greenemeier, *The Pentagon’s Seek-and-Destroy Mission for Counterfeit Electronics*, SCI. AM. (Apr. 28, 2017), <https://www.scientificamerican.com/article/the-pentagon-s-see-and-destroy-mission-for-counterfeit-electronics/> (“Between November 2007 and May 2010 alone, U.S. Customs officials seized 5.6 million counterfeit microchips destined for military contractors and the commercial aviation industry, and the problem has only grown since then.”); *An Unnerving Reality: Counterfeit Goods Have Been Masquerading as Legitimate Products for Years. But When the Difference Means Life or Death, It’s Imperative to Have the Real Thing.*, AEROSPACE MFG. AND DESIGN (Feb. 2009), <https://www.aerospacemanufacturinganddesign.com/article/an-unnerving-reality/> (“According to an FAA estimate, about 520,000 counterfeit or unapproved parts are currently making it into planes annually . . .”).

¹⁰ Agam Shah, *Europe, US Warns of Fake-Chip Danger to National Security, Critical Systems: Scammers Exploit Global Supply-Chain Crunch*, THE REG. (Mar. 18, 2022), https://www.theregister.com/2022/03/18/eu_us_counterfeit_chips/.

¹¹ E.g., 18 U.S.C. § 38 (detailing an act for “[f]raud involving aircraft or space vehicle parts in interstate or foreign commerce”); The Fastener Quality Act, 15 U.S.C. § 5401; 48 C.F.R. § 252.246-7007 (detailing the “Contractor Counterfeit Electronic Part Detection and Avoidance System”).

¹² Existing criminal penalties for trafficking in counterfeit goods and services, along with proposals for increased enforcement and amendments to the criminal code, will be examined in a companion to this article, *Debugging the Trademark Laws II: Criminal Penalties for Trafficking in Counterfeit Microelectronics* (forthcoming). The article will show that relatively few defendants have been charged with trafficking in counterfeit electronic parts, and those who have been convicted have

practices engaged in by counterfeiters are encompassed under the “material alteration theory,” which holds that the resale of a trademarked item that is materially different from the goods sold by the trademark owner constitutes infringement. However, in the last fourteen years, only a few civil actions have been filed to stop the sale of used, refurbished, and remarked electronic parts. Manufacturers offer numerous justifications for their failure to police their marks, and they have adopted a business strategy whereby purchasers are counseled to buy exclusively from original manufacturers or their authorized distributors.

Congress must “debug” the Lanham Act to better incentivize manufacturers to pursue civil remedies against counterfeiters and the e-commerce platforms that have allowed them to prosper.¹³ That is, Congress must enact laws that will motivate trademark owners to take action against counterfeiters, thereby protecting not only the value of their brands but also, and more importantly, the safety and security of their customers. This article begins by providing background information about the nature of counterfeit microelectronics and the development of the counterfeiting problem in Section I. Section II demonstrates that the Lanham Act already provides potent civil remedies for trademark counterfeiting, including injunctive relief, awards of enhanced damages or statutory damages, and an *ex parte* seizure mechanism. Section III presents data developed by the author showing that many of these mechanisms are rarely utilized against counterfeit microelectronics, and it explores numerous reasons that trademark owners may be discouraged from filing civil actions against sellers of counterfeit microelectronics. In particular, it discusses the “material alteration theory” and misperceptions about whether the sale of used, refurbished, and remarked parts constitutes trademark counterfeiting. Section IV evaluates two proposals for reform: it argues that the Lanham Act must be amended to recognize contributory liability for e-commerce platforms that host trademark counterfeiters, but it rejects the suggestion that the failure to police marks against known counterfeiting should be deemed an abandonment of those trademarks.

received seemingly light sentences.

¹³ The term “debug” has been attributed to Admiral Grace Hopper who, while working as a computer scientist at Harvard, discovered that its Mark II computer was malfunctioning because a dead moth was stuck to one of the computer’s mechanical relays. In order to fix the problem, Hopper had to peel off the bug. Today, the term “debug” refers to the process of identifying and removing errors and other anomalies in a computer program. It also refers to identifying and removing errors in the design of a semiconductor chip. See David Kalat, *Nervous System: The Day Grace Hopper Literally Debugged a Program*, LEGALTECH NEWS (Jan. 7, 2019), https://media.thinkbrg.com/wp-content/uploads/2020/06/12115547/Kalat_Legaltech_jan19.pdf.

Section I. Technical and Economic Perspectives on Counterfeit Microelectronics

A brief background on genuine electronic parts helps to illustrate the critical threats presented by counterfeit microelectronics.

A. What are Semiconductors and Microelectronic Parts?

Semiconductor devices are often referred to as the “electronic brains” that run our world.¹⁴ They are “highly specialized components that provide the essential functionality for electronic devices to process, store and transmit data.”¹⁵ The majority of the semiconductor devices sold today are integrated circuits, colloquially referred to as computer “chips.”¹⁶ An integrated circuit is a set of miniaturized electronic circuits composed of discrete components or “parts” (including transistors, diodes, capacitors, resistors, and inductors) and the interconnections between them, layered on a thin wafer of silicon or other semiconductor material.¹⁷ Chips have become increasingly more complex; today, they pack billions of electronic components in an area that is smaller than a human fingernail. That miniaturization has occurred because advances in the manufacturing process have allowed the size of the transistor gates (measured in nanometers) to become increasingly smaller.¹⁸ Transistors, capacitors, resistors, and diodes are also produced and marketed as discrete components. For purposes of this article, “electronic parts” refers to both integrated circuits and discrete components.

Electronic parts are manufactured to exacting standards in ultra-clean, state-of-the-art facilities designed to protect against hazards such as electrostatic discharge, moisture, temperature extremes, and vibration. The air in a semiconductor chip fabrication plant (fab) clean room is reportedly over 1,000 times cleaner than the air in a hospital operating room, since even a tiny particle of dust can cause a device to be defective.¹⁹ Most people are familiar with the “bunny suits” worn by workers in

¹⁴ SEMICONDUCTOR INDUS. ASS’N, WINNING THE BATTLE AGAINST COUNTERFEIT SEMICONDUCTOR PRODUCTS 4 (2013) [hereinafter SIA ANTI-COUNTERFEITING WHITEPAPER], <https://www.semiconductors.org/wp-content/uploads/2018/06/SIA-Anti-Counterfeiting-Whitepaper-1.pdf>; *Perfectly Imperfect Silicon Chips: The Electronic Brains that Run the World*, THE GUARDIAN (Sept. 22, 2014), <https://www.theguardian.com/technology/2014/sep/22/silicon-chips-electronic-brains-of-world>.

¹⁵ SEMICONDUCTOR INDUS. ASS’N, STRENGTHENING THE GLOBAL SEMICONDUCTOR SUPPLY CHAIN IN AN UNCERTAIN ERA 9 (2021) [hereinafter STRENGTHENING THE GLOBAL SEMICONDUCTOR SUPPLY CHAIN], https://www.semiconductors.org/wp-content/uploads/2021/05/BCG-x-SIA-Strengthening-the-Global-Semiconductor-Value-Chain-April-2021_1.pdf. SIA divides semiconductors into three broad categories: logic; memory; and discrete, analog, and other.

¹⁶ Integrated circuits are also referred to as microchips, microcircuits, and ICs.

¹⁷ STRENGTHENING THE GLOBAL SEMICONDUCTOR SUPPLY CHAIN, *supra* note 15, at 9.

¹⁸ *Id.* at 17. TSMC, the world’s largest contract chip manufacturer, currently produces chips at the 4 nm node, and it has announced plans to open a cutting-edge facility in Arizona that will produce 3 nm chips. See Asa Fitch & Yang Jie, *Chip-Making Juggernaut TSMC Eyes Multibillion-Dollar Arizona Expansion*, WALL ST. J. (Nov. 9, 2022), <https://www.wsj.com/articles/chip-making-juggernaut-tsmc-eyes-multibillion-dollar-arizona-factory-expansion-11667973859>.

¹⁹ U.S. S. COMM. ON ARMED SERVICES, 112TH CONG., INQUIRY INTO COUNTERFEIT ELECTRONIC PARTS IN

the fabs, which have been featured in Intel's advertisements and numerous articles about semiconductor fabrication. Robotics are used extensively to protect against exposure to electrostatic discharge, and plants are built on intricate shock absorption systems so that vibrations are minimized.

The typical chip manufacturing process takes approximately 12 weeks to complete²⁰ and can involve as many as 1,400 steps.²¹ In the front-end process, silicon ingots are sliced into wafers, onto which thin films of materials are then deposited.²² Next, the wafer is subjected to a photolithography process, where it is alternately coated with layers of a chemical called a "photoresist," etched with light at a specific wavelength and selectively removed to create a desired pattern, and then doped with impurities to modify the physical and electrical properties of the wafer.²³ The photolithography process is repeated dozens or even hundreds of times to build up the layers of the chip's transistor array, after which metallic interconnects are deposited to form logic gates and other circuitry.²⁴ On the back end of the manufacturing process, the wafers are cut into individual die, which are then packaged and tested.²⁵ Finally, the tops of the packages are marked with the logo and other markings of the original component manufacturer (OCM), such as part number, performance grade, and production codes.²⁶

Electronic parts are manufactured and distributed through a complex, multi-tiered supply chain.²⁷ Chips and other parts that are in production may be purchased directly from the OCM or from an authorized distributor. Authorized distributors are generally required to obtain components solely from OCMs, and they are audited to ensure that products are handled properly.²⁸ Because moisture can harm the devices, special storage and shipping materials are used to keep them moisture-free; they may also be baked to remove moisture from the packages.²⁹ Additional steps are taken to

THE DEPARTMENT OF DEFENSE SUPPLY CHAIN 6–7 (2012) [hereinafter SENATE ARMED SERVICES REPORT]. SIA explains that the ambient outdoor air in a typical urban area contains 35 million particles of 0.5 microns in size for each cubic meter of air, while a semiconductor manufacturing cleanroom permits absolutely zero particles of that size. STRENGTHENING THE GLOBAL SEMICONDUCTOR SUPPLY CHAIN, *supra* note 15, at 16.

²⁰ STRENGTHENING THE GLOBAL SEMICONDUCTOR SUPPLY CHAIN, *supra* note 15, at 16. More advanced processes can take 20 weeks or longer to complete.

²¹ *Id.*

²² COREY RICHARD, UNDERSTANDING SEMICONDUCTORS 59–62 (2023).

²³ *Id.* at 62–66.

²⁴ *Id.* at 66–70.

²⁵ *Id.* at 74–76.

²⁶ SIA ANTI-COUNTERFEITING WHITEPAPER, *supra* note 14, at 10.

²⁷ See U.S. DEP'T OF COM. & DEP'T OF HOMELAND SEC., ASSESSMENT OF THE CRITICAL SUPPLY CHAINS SUPPORTING THE U.S. INFORMATION AND COMMUNICATIONS TECHNOLOGY INDUSTRY 15–17 (2022) (explaining that over the past thirty years, the computer industry has evolved from being vertically integrated to highly outsourced, resulting in major brands giving up control over the manufacturing process to specialized technology companies).

²⁸ SIA ANTI-COUNTERFEITING WHITEPAPER, *supra* note 14, at 19.

²⁹ *Id.* at 10.

protect the parts against electrostatic discharge, which could damage them.³⁰

However, electronic parts—both in and out of production—can also be purchased from independent distributors and brokers (i.e., unauthorized distributors),³¹ who are often credited as being a primary source of counterfeit electronics in the supply chain.³² Brokers and independent distributors obtain their products from sources other than original manufacturers, and parts being sold on the open market can go through many different distributors before they reach a final destination.³³ The result is a lack of provenance and traceability. Many of these unauthorized sales are conducted online through broker websites or e-commerce platforms that allow unscrupulous sellers to distribute counterfeit electronic parts to unwary or desperate buyers who are unable to obtain parts from authorized distributors due to supply chain disruptions or obsolescence. The counterfeiters typically operate under aliases (e.g., shop numbers or acronyms), or they may remain entirely anonymous.³⁴

Semiconductor chips are frequently referred to as the “oil” of the 21st Century.³⁵ They are one of the most traded commodities today, and the supply of semiconductors is said to be critical both “for commerce, and war and peace.”³⁶ Semiconductor chips and electronic parts have made possible groundbreaking advances in computing, healthcare and medical equipment, communications systems, the power grid, transportation, and defense and aerospace systems.³⁷ Yet for the last twenty years, the stability of our digital world has been threatened by counterfeit electronic

³⁰ *Id.* at 11.

³¹ SENATE ARMED SERVICES REPORT, *supra* note 19, at 10.

³² *Id.* (“Some independent distributors hold significant stocks of parts and make counterfeit avoidance and detection programs a priority in their businesses.”). The Independent Distributors of Electronics Association (IDEA) promotes quality initiatives in the supply chain, and it has created a set of standards for its member companies that do not want to be associated with unethical businesses that have given independent distributors an extremely poor reputation. *See* IDEA-STD-1010-B: ACCEPTABILITY OF ELECTRONIC COMPONENTS DISTRIBUTED IN THE OPEN MARKET (INDEP. DISTRIBS. OF ELECS. ASS’N 2011).

³³ SIA ANTI-COUNTERFEITING WHITEPAPER, *supra* note 14, at 19 (noting that, at the Senate Armed Services Committee Hearing on Counterfeit Parts in the Defense Supply Chain, Senator Levin described how one set of suspect counterfeit parts went through six different brokers and independent distributors in three countries before being assembled into an electronic system).

³⁴ *See*, Bose Corp. v. The P’ships & Unincorp. Ass’n Identified on Schedule A, 334 F.R.D. 511, 512 (2020) (“Each defendant is alleged to be located in China and is identified only by the alias it uses to sell products on eBay, because Bose has no further information about the defendants’ identities.”).

³⁵ Kirsteen Mackay, *Why Semiconductors Are “The Oil of the 21st Century”*, VALUE THE MKTS. (Dec. 13, 2021), <https://www.valuethemarkets.com/analysis/investing-ideas/why-semiconductors-are-the-oil-of-the-21st-century>; Farah Stockman, *The U.S. is Behind in the Competition for the “Oil” of the 21st Century*, N.Y. TIMES (July 25, 2022), <https://www.nytimes.com/2022/07/25/opinion/america-tech-visas.html>.

³⁶ Jeff Sommer, *How Silicon Chips Rule the World*, N.Y. TIMES (Sept. 9, 2022), <https://www.nytimes.com/2022/09/09/business/silicon-markets-china-taiwan.html>.

³⁷ SIA ANTI-COUNTERFEITING WHITEPAPER, *supra* note 14, at 4.

components³⁸ that pose serious risks to human health and safety, national security, and the resilience of critical infrastructure.³⁹

B. How are Counterfeit Microelectronics Produced, and What Risks do They Pose?

Counterfeit luxury goods such as handbags, footwear, sunglasses, and clothing are often dismissed as relatively benign items that harm no one, and consumer complicity (i.e., the desire for counterfeit products) is a major factor contributing to their prevalence.⁴⁰ Conversely, counterfeit microelectronics are not manufactured to industry standards and carry severe risks to end users.

The first patent applications claiming integrated circuits were filed by Robert Noyce of Fairchild Semiconductor⁴¹ and Jack Kilby of Texas Instruments⁴² in 1959. While the first commercially available integrated circuits began appearing on the market in the early 1960s,⁴³ counterfeit microelectronics were not reported until almost forty years later.⁴⁴ ERAI, Inc., a global services organization that monitors and reports issues affecting the electronics supply chain,⁴⁵ received its first complaint regarding counterfeit electronic parts in November 2001 against a China-based distributor known as 3A Century.⁴⁶ Although initial complaints cited obvious

³⁸ As noted above, this article is concerned primarily with counterfeit microelectronics, a term that is generally understood to include integrated circuits, discrete electronic components (i.e., transistors, capacitors, resistors, and diodes), and circuit assemblies. *See* 48 C.F.R. § 252.246-7007. This article does not specifically relate to other electronic products that are frequently counterfeited, such as consumer electronics, mobile phones, or assemblies (e.g., network switches and routers). While those products raise many of the same concerns for health, safety, and security as counterfeit electronic parts, they also invoke additional issues that are beyond the scope of this article.

³⁹ *See generally* U.S. INTELL. PROP. ENF'T COORDINATOR, ANNUAL INTELLECTUAL PROPERTY REPORT TO CONGRESS, app. at 51 (Feb. 2019).

⁴⁰ PEGGY CHAUDHRY & ALAN ZIMMERMAN, THE ECONOMICS OF COUNTERFEIT TRADE: GOVERNMENTS, CONSUMERS, PIRATES AND INTELLECTUAL PROPERTY RIGHTS 63–74 (2009).

⁴¹ U.S. Patent No. 2,981,877 (issued Apr. 25, 1961) (patenting a semiconductor device-and-lead structure).

⁴² U.S. Patent No. 3,138,743 (issued June 23, 1964) (patenting miniaturized electronic circuits).

⁴³ In 1961, Fairchild Semiconductor introduced the Micrologic, a silicon chip containing just four transistors. CHRIS MILLER, CHIP WAR: THE FIGHT FOR THE WORLD'S MOST CRITICAL TECHNOLOGY xxi (2022).

⁴⁴ A few reports of counterfeit electronic parts started appearing in popular media as early as the 1970s and 1980s. *See, e.g.,* Fenby, *Boom in Brand Name Fakes*, READER'S DIGEST 135, 137 (Sept. 1981) (reporting counterfeit transistors were discovered among parts intended for use in a test of the space shuttle).

⁴⁵ ERAI provides risk assessment tools for the electronics supply chain, including “the world’s largest database of suspect counterfeit and nonconforming electronic parts.” Its members include companies from numerous industries, along with government agencies and industry associations. *See About ERAI, Inc.*, ERAI, INC., https://www.eraí.com/aboutus_profile (last visited June 5, 2023). Both members and non-members can report nonconforming and suspect counterfeit part information to ERAI.

⁴⁶ *See Awareness Timeline*, ERAI, INC., https://www.eraí.com/ca_awareness_timeline (last visited June 5, 2023). The Timeline entry dated November 29, 2001, states, “Parts arrived in Samsung tubes (ordered TI parts). Numerous mixed date codes arrived in a single tube. Solder splash present on part leads. There were ‘wash marks’ and smears on the upper surface of the chip.” As is typical of

nonconformities and lack of sophistication, ERAI observed that “[w]ithin a few months, Chinese distributors began refurbishing and remarking parts to have consistent date and lot codes in order to pass used parts off as new.”⁴⁷ By the spring of 2003, reports of counterfeit parts were also being filed with the Government-Industry Data Exchange Program (GIDEP),⁴⁸ including complaints of improper markings and high failure rates.⁴⁹ From 2005 through 2008, 99% of GIDEP reports involved counterfeit electronic components.⁵⁰ Today, the problem persists; in 2022, ERAI received reports of 768 different counterfeit and nonconforming parts, a marked increase over the previous year.⁵¹

Simply put, counterfeit microelectronics are parts that are made to appear to be something that they are not.⁵² Industry members and academics are not always in agreement about the precise definition of “counterfeit” microelectronics.⁵³ However, an industry standard published by SAE⁵⁴ sets out seven recognized types of

counterfeiters, 3A Century sometimes also did business under other names, including Gold Advanced and JXJ. *See id.*

⁴⁷ *Id.*

⁴⁸ GIDEP characterizes itself as a cooperative activity between government and industry participants that allows for sharing of technical information between members. *About GIDEP*, GOV’T – INDUS. DATA EXCH. PROG., <https://www.gidep.org/about/about.htm> (last visited June 5, 2023). The Federal Acquisition Regulations (FAR) require government contractors to submit a report to GIDEP if they believe an item purchased for delivery to the government is a counterfeit or suspect counterfeit. 48 C.F.R. § 52.246–26(b)(4).

⁴⁹ *See Awareness Timeline*, *supra* note 46 (discussing in GIDEP Alert No. CE9-A-03-2 Submitted by Texas Instruments that “Texas Instruments has received notice of counterfeit devices bearing the TI trademark and part number being sold through various brokers who are not authorized TI distributors”); *Awareness Timeline*, *supra* note 46 (discussing in GIDEP Alert No. B8-A-03-01 Submitted by Textron Systems that “Textron Systems has experienced a high failure rate of parts marked LT1097S8 with a date code of 0103 and a Linear Technology Corp. logo. Four parts were returned to Linear Technology Corp. (LTC) for failure analysis. LTC has informed Textron Systems that the parts are counterfeit. Textron Systems had purchased the parts through a distributor that was not franchised by LTC”).

⁵⁰ Henry Livingston, *Observations from Counterfeit Cases Reported Through the Government-Industry Data Exchange Program (GIDEP)*, BAE SYS. 1 (2011), https://www.era1.com/CustomUploads/ca/wp/2013_7%20Observations%20from%20Counterfeit%20Cases%20Reported%20Through%20GIDEP.pdf.

⁵¹ DAMIR AKHOUNDOV, ERAI ANNUAL REPORT 2022: ANALYSIS OF NONCONFORMING AND SUSPECT COUNTERFEIT PARTS REPORTED BY ERAI IN 2022 1 (2023).

⁵² SENATE ARMED SERVICES REPORT, *supra* note 19, at 1 (explaining that, in some industries, the term “counterfeit” refers to an unauthorized copy of an authentic product, while in other industries it includes both unauthorized copies and previously used parts that are made to look new and are sold as new).

⁵³ *See, e.g.*, Michael H. Azarian, *An Overview of Risk-Based EEE Counterfeit Part Detection Based on SAE AS6171*, PROCS. FROM THE 44TH INT’L SYMP. FOR TESTING & FAILURE ANALYSIS 52 (2018) (discussing that tampered parts are not viewed as counterfeits by all stakeholders).

⁵⁴ AS6171A: TEST METHODS STANDARD; GENERAL REQUIREMENTS, SUSPECT/COUNTERFEIT, ELECTRICAL, ELECTRONIC, AND ELECTROMECHANICAL PARTS § 2.2.4 (SAE International 2018) [hereinafter SAE STANDARD AS6171A]. SAE is a global standards organization composed of engineers and technical experts from the aerospace, automotive, and commercial vehicle industries. *See* SAE INT’L, <https://www.sae.org/> (last visited June 5, 2023).

counterfeit parts, including (1) recycled parts,⁵⁵ (2) remarked parts,⁵⁶ (3) overproduced parts,⁵⁷ (4) out-of-specification or defective parts that have been identified as nonconforming by the manufacturer,⁵⁸ (5) cloned parts,⁵⁹ (6) parts accompanied by forged documentation or substitution of an unauthorized part for the part identified in the shipping documents,⁶⁰ and (7) tampered parts that have been intentionally modified for sabotage or malfunction.⁶¹

Traditionally, a major source of counterfeit parts was e-waste.⁶² Used parts were harvested from discarded products and resold as new, often after being relabeled and remarked with different date codes and performance characteristics. A 2013 whitepaper provided a startling account of the typical “manufacturing process” for counterfeit components:

1. Using “mountains” of scrap electronics as an input, workers remove printed circuit boards (PCBs) from old electronic systems.
2. PCBs are heated over an open flame to melt the solder used to secure components to the boards. The boards are then banged against a hard surface so that the components will fall out into buckets. The components are then sorted, typically based on the package sizes and styles, and the electrical functions of the components.
3. The original markings on the components are removed using methods of increasing sophistication ranging from sanding to chemical etching to “black-topping” to “micro-blasting.”
4. New markings, including trademarked OCM logos, are added to the components. These new markings generally are intended to make the parts more marketable and/or more expensive. For example, parts with old product codes may be marked with new product codes; packages that contain the element lead (Pb) may be marked to indicate they are lead-free (Pb-free); parts that have low performance may be marked to indicate they have high performance; and inexpensive commercial-grade parts may be marked to indicate they are

⁵⁵ A “recycled part” is a part that has been reclaimed from a discarded system and then modified and misrepresented as a new, genuine part. *See id.* § 2.2.4.1.

⁵⁶ A “remarked part” is a part from an authorized manufacturer where a legitimate marking has been replaced with a forged marking, such as a trademark, part number, or lot code, without authorization from the manufacturer. *See id.* § 2.2.4.2.

⁵⁷ “Overproduced parts” are unauthorized parts from a contracted facility which were fabricated outside of the contract. They are also referred to as “overruns.” *See id.* § 2.2.4.3. Overproduced parts are specifically excluded from the definition of counterfeiting for purposes of criminal prosecution by 18 U.S.C. § 2320(f)(1).

⁵⁸ *Id.* § 2.2.4.4.

⁵⁹ A “clone” is a reproduction that replicates an authentic part without authorization from the manufacturer. *Id.* § 2.2.4.5.

⁶⁰ *Id.* § 2.2.4.6.

⁶¹ *Id.* § 2.2.4.7.

⁶² E-waste, or electronic waste, refers to electronic products that have been discarded after use. Historically, e-waste was often exported rather than being destroyed. In 2010, the U.S. Department of Commerce concluded that the shipment of electronic waste to China for disposal “has turned into an abundance of discrete electronic components and microcircuits for counterfeit parts.” U.S. DEP’T OF COMM., BUREAU OF INDUS. AND SEC., DEFENSE INDUSTRIAL BASE ASSESSMENT: COUNTERFEIT ELECTRONICS 74 (2010) [hereinafter DEFENSE INDUSTRIAL BASE ASSESSMENT], <https://www.bis.doc.gov/index.php/documents/technology-evaluation/37-defense-industrial-base-assessment-of-counterfeit-electronics-2010/file>.

more expensive automotive-grade or military-grade parts.

5. The external pins, pads, or solder balls on the packages are reworked to make them appear new. This sometimes entails using harsh chemicals to clean these external package connections.⁶³

This is in stark contrast to the ultra-clean, environmentally-controlled, high-tech wafer fabs where the manufacturing of new semiconductor devices takes place.⁶⁴

In addition to harvesting components from e-waste, the Senate Armed Services Committee reported that entire factories are set up to produce blank chips, and counterfeit markings are later added in a “made-to-order fashion.”⁶⁵ Other counterfeiters may assemble empty packages with no die in them, or they remark used or new low-grade components to make them appear to be more expensive, high-grade components.⁶⁶ Some counterfeit parts may not function at all, while others may fail prematurely, leading to potentially catastrophic results. “Even if counterfeits made from previously used parts and salvaged from e-waste may initially perform, there is no way to predict how well they will perform, how long they will last, and the full impact of failure.”⁶⁷

More recently, clones and tampered parts with malicious insertions have become part of the counterfeiting problem, leading to national security concerns.⁶⁸ Clones, or unauthorized reproductions of authentic parts, may be produced through reverse engineering, resulting in exact duplicates of the original part, or they may be form-fit-function equivalents (i.e., conforming products, but not exact duplicates) that are

⁶³ SIA ANTI-COUNTERFEITING WHITEPAPER, *supra* note 14, at 11 n.9.

⁶⁴ *Id.* at 9–11. Tom Sharpe, president of an electronics distribution and testing facility, testified about what he saw in a Guangdong Province counterfeiting district in 2008:

I witnessed e-scrap piled outside of buildings throughout large areas of the town, throughout the outskirts of the town, used electronic parts being washed in a river, and laid on the riverbank to dry, nylon sacks with harvested components being dumped onto sidewalks and sorted by women and children, laid out there for the monsoon rains of July to wash them naturally, cardboard and plastic bins filled with expensive brand name components and harvested from scrap printed circuit boards ready for processing.

Senate Armed Services Report, *supra* note 19, at 6 (citing Hearing to Receive Information Relative to the Committee’s Investigation into Counterfeit Electronic Parts in the Department of Defense Supply Chain, Senate Armed Servs. Comm., 112th Cong. 35 (Nov. 8, 2011)).

⁶⁵ SENATE ARMED SERVICES REPORT, *supra* note 19, at 6.

⁶⁶ *Id.* at 11. See also Michael Pecht & Sanjay Tiku, *Bogus! Electronic Manufacturing and Consumers Confront a Rising Tide of Counterfeit Electronics*, IEEE SPECTRUM at 39 (May 2006) (discussing that, in 1998, 266-megahertz Intel Pentium II chips that had been relabeled as 300-MHz chips were discovered in computers. Operating the lower-speed chip at higher speeds, known as “overclocking,” resulted in reduced reliability because the chip ran hotter and was less likely to process instructions correctly).

⁶⁷ SENATE ARMED SERVICES REPORT, *supra* note 19, at 7.

⁶⁸ Mark Tehranipoor, Ujjwal Guin & Swarup Bhunia, *Invasion of the Hardware Snatchers*, IEEE SPECTRUM 36, 39–40 (May 2017).

passed off as authentic products.⁶⁹ In either case, one concern is that the clone might function in ways that the original product did not, potentially leading to extremely dangerous results. For example, a timer could be inserted that would cause the chip to fail at a certain time, or it could be programmed to fail in response to certain stimuli.⁷⁰

Tampered parts, on the other hand, are parts which have been intentionally modified for sabotage or malfunction.⁷¹ Tampered parts pose advanced threats to critical infrastructure and national security:

Parts of this category would likely be state sponsored by adversary countries and could have dangerous or catastrophic consequences for systems that incorporate them. Consequences include but are not limited to denial of service of a critical function of the system, side-channel attacks that enable loss of sensitive or critical information, premature or latent failure, or unauthorized access to proprietary data or system functionality.⁷²

It is somewhat unclear whether tampered microelectronics have already infiltrated the supply chain,⁷³ or whether the current dangers associated with tampering are still limited to software residing on more complicated assemblies and equipment such as servers.⁷⁴

The U.S. government recently acknowledged that it faces potentially catastrophic risks from all types of counterfeit electronic parts:

Counterfeits are not produced to meet higher-level quality standards required in mission critical applications and are a significant risk in causing failure to systems vital to an agency's mission. For weapons, space flight, aviation, and satellite systems, these failures can result in the [sic] death, severe injuries, and millions of dollars in system damage or loss. For example, if counterfeits are installed in a missile's guidance system, such missile

⁶⁹ PATRICIA E. CAMPBELL, MACHINE VISION PILOT COUNTERFEIT MICROELECTRONICS POLICY ANALYSIS 178 (2020) [hereinafter COUNTERFEIT MICROELECTRONICS POLICY ANALYSIS], https://web.calce.umd.edu/articles/Counterfeit_Microelectronics_Policy_Analysis.pdf. See also Dr. Brian Cohen Interview Summary, *id.* at app. 19, 2.

⁷⁰ COUNTERFEIT MICROELECTRONICS POLICY ANALYSIS, *supra* note 69, at 178. See also Dan Deisz Interview Summary, *id.* at app. 19, 4 n.2 (“Mr. Deisz noted that counterfeiters could potentially insert random failures or data dependent failures into parts. He commented that the worst malicious insertion would be an unpredictable failure.”).

⁷¹ SAE STANDARD AS6171A, *supra* note 54, § 2.4.4.7.

⁷² Daniel DiMase et al., *Traceability and Risk Analysis Strategies for Addressing Counterfeit Electronics in Supply Chains for Complex Systems*, 36 RISK ANALYSIS 1834, 1837–38 (2016).

⁷³ See, e.g., Jordan Robertson & Michael Riley, *The Big Hack: How China Used a Tiny Chip to Infiltrate U.S. Companies*, BLOOMBERG BUSINESSWEEK (Oct. 4, 2018), <https://www.bloomberg.com/news/features/2018-10-04/the-big-hack-how-china-used-a-tiny-chip-to-infiltrate-america-s-top-companies> (reporting that a microchip was implanted on the motherboards of servers used by U.S. companies, allowing the attackers to create a stealth doorway into any network that included the altered machines); Jordan Robertson & Michael Riley, *The Long Hack: How China Exploited a U.S. Tech Supplier*, BLOOMBERG (Feb. 12, 2021), <https://www.bloomberg.com/features/2021-super-micro/>.

⁷⁴ Cybersecurity risks are well known. For the last ten years, the technical literature has predicted cyber-physical security risks posed by tampered chips, but to date they have only been documented in the popular literature. See *supra* note 73.

may not function at all, may not proceed to an intended target, or may strike a completely unintended location resulting in catastrophic losses. Critical nonconforming and counterfeit items may cause failures in navigation or steering control systems, planes and flight control. Counterfeits can create “backdoors” into supposedly secure programmable devices which could be exploited to insert circuit functions to steal information and relay it to third parties or command or prevent the device from operating as designed. Defense, space, and aviation systems in particular must meet rigorous component specifications: failure of even a single one can be catastrophic causing serious problems and placing personnel and the public in harm’s way.⁷⁵

In addition to the risks they pose to human health and safety, the resiliency of infrastructure, and national security, counterfeit microelectronics exact a huge economic toll as well. Economic impacts of counterfeiting include not only lost sales revenues but also damage to brand reputation, increased customer service and warranty expenses, and costs associated with implementing an anti-counterfeiting program.⁷⁶ Exact figures detailing the overall magnitude of the counterfeiting problem are difficult to find,⁷⁷ but a few published estimates hint at its scope.⁷⁸ By 2006, it was already feared that legitimate electronics companies were missing out on at least \$100 billion of global revenue every year because of counterfeiting.⁷⁹ A 2014 analysis concluded that 1% of all semiconductor sales involved counterfeit products.⁸⁰ More recently, the counterfeiting of electronic parts was estimated to have cost U.S. semiconductor manufacturers approximately \$7.5 billion in 2018.⁸¹ Integrated circuits accounted for nearly 70% of those fake parts, valued at \$5.24 billion.⁸²

⁷⁵ Federal Acquisition Regulation: Reporting of Nonconforming Items to the Government-Industry Data Exchange Program, 84 Fed. Reg. 64680, 64681 (Nov. 22, 2019).

⁷⁶ See LIBR. OF CONG., U.S. INTELLECTUAL PROPERTY AND COUNTERFEIT GOODS – LANDSCAPE REVIEW OF EXISTING/EMERGING RESEARCH 10–12 (2020).

⁷⁷ See *id.* at 4 (“However, three decades after the release of the U.S. International Trade Commission’s report, studies of the overall magnitude of the domestic and international counterfeit markets are still limited.”).

⁷⁸ For information on the scope of the counterfeiting problem across all industries, see Danny Grajales Pérez-y-Soto, *Counterfeiting and Piracy – The Global Impact*, WORLD TRADEMARK REV. (Apr. 15, 2022), <https://www.worldtrademarkreview.com/global-guide/anti-counterfeiting-and-online-brand-enforcement/2022/article/counterfeiting-and-piracy-the-global-impact> (“[I]nternational trade in counterfeit and pirated products could have amounted to as much as \$509 billion in 2016, estimated to be 3.3% of world trade . . .”).

⁷⁹ Pecht & Tiku, *supra* note 66, at 38. That figure takes into account only the profits counterfeiters divert from manufacturers, and it ignores the added repair and maintenance costs necessitated by defective counterfeit parts, along with the expenses of attempting to identify suspected counterfeiters.

⁸⁰ See Ujjwal Guin et al., *Counterfeit Integrated Circuits: A Rising Threat in the Global Semiconductor Supply Chain*, 102 PROC. IEEE 1207, 1207 (2014).

⁸¹ Marti McCurdy, *Counterfeit Components: Risky Business*, MILITARY EMBEDDED SYSTEMS (Sept. 11, 2020), <https://militaryembedded.com/comms/power-electronics/counterfeit-components-risky-business>.

⁸² *Id.* (citing data supplied by ERAI).

C. Counterfeiting is a Lucrative Proposition

Numerous explanations for the counterfeit electronics problem have been discussed. Profit has long been identified as the “primary incentive” for the sale of counterfeit parts.⁸³ The internet and the rise of e-commerce platforms has made counterfeiting even more lucrative; “production costs are low, millions of potential customers are available online, transactions are convenient, and listing on well-branded e-commerce platforms provides an air of legitimacy.”⁸⁴ In addition, when the sellers of counterfeit goods are in another country, as is often the case, they are largely outside the jurisdiction of criminal prosecution by U.S. law enforcement and may be immune from civil liability to private parties.⁸⁵ Thus, the perceived risk is low.⁸⁶

Further, the supply chain disruptions and chip shortages caused by the Covid-19 pandemic have only intensified the problem. Counterfeiters have “stepped up their game to swindle enterprises in dire need of the critical components.”⁸⁷ Reputable firms in need of chips have been enticed to order hard-to-find parts from risky sources, and they have received shipments that are improperly packaged, defective, or even nonoperational.⁸⁸ According to the Wall Street Journal, “[t]he global chip shortage has created a gold mine for bad actors.”⁸⁹ Counterfeit semiconductors, including diodes, are being incorporated into mobile phones, tablets, and other privately used electronic devices, creating risks for consumers.⁹⁰ Long manufacturing lead times for semiconductor chips have increased the willingness of distributors to go to the open market to obtain parts for customers in order to prevent manufacturing lines from sitting idle.⁹¹

⁸³ AEROSPACE INDUSTRIES ASSOC., COUNTERFEIT PARTS: INCREASING AWARENESS AND DEVELOPING COUNTERMEASURES 7 (Mar. 2011); *see also* H.R. REP. NO. 104-556, at 1 (1996) (“Because of the high profit potential and low risk of meaningful prosecution, criminal counterfeiting has grown tremendously over the past several years and has been increasingly tied to organized crime.”).

⁸⁴ U.S. DEP’T OF HOMELAND SEC., COMBATTING TRAFFICKING IN COUNTERFEIT AND PIRATED GOODS 10 (2020).

⁸⁵ *Id.* at 11.

⁸⁶ *See* Greg Nighswonger, *Pursuing Counterfeit Medical Devices*, MED. DEVICE AND DIAGNOSTIC INDUS. (Jan 1, 2003) (quoting Darren Pogoda of the International Anticounterfeiting Coalition) (“[C]ounterfeiting is a good business to get into: it has very low risk of getting caught, very low risk of getting punished severely if you do get caught, and very high reward in terms of profit with low overhead.”).

⁸⁷ Eric Allen Been, *Knockoff Semiconductor Chips Flood the Enterprise Market*, TECHREPUBLIC (Aug. 19, 2021), <https://www.techrepublic.com/article/knockoff-semiconductor-chips-flood-the-enterprise-market/>.

⁸⁸ Stephanie Yang, *What’s Worse Than a Chip Shortage? Buying Fake Ones*, WALL ST. J. (July 15, 2021), <https://www.wsj.com/articles/chip-shortage-has-spawned-a-surplus-of-fraudsters-and-fake-parts-11626255002>.

⁸⁹ *Id.*; *see also* EUROPEAN UNION INTELL. PROP. OFF. & EUROPOL, INTELLECTUAL PROPERTY CRIME THREAT ASSESSMENT 13 (Mar. 2022) (“Counterfeiters may try to exploit this demand and supply shortages by introducing counterfeit semiconductors such as diodes to the market.”).

⁹⁰ U.S. CUSTOMS & BORDER PROT., INTELLECTUAL PROPERTY RIGHTS SEIZURE STATISTICS, FISCAL YEAR 2021 6 (2022).

⁹¹ Agam Shah, *Europe, US Warns of Fake-Chip Danger to National Security, Critical Systems: Scammers Exploit Global Supply Chain Crunch*, THE REG. (Mar. 18, 2022),

Government contractors and the DoD present a particularly attractive—and oftentimes willing—market for counterfeiters, largely due to the obsolescence of necessary replacement parts.⁹² Unlike commercial products such as cellphones and laptop computers, defense systems are typically designed for long lifecycles.⁹³ Production of the parts contained in those systems will be discontinued when it is no longer cost-effective for the manufacturer, usually long before the systems themselves are taken out of service, leading to diminishing manufacturing sources and material shortages (DMSMS) issues.⁹⁴ When production ends, parts may no longer be available from the original component manufacturer, an authorized aftermarket manufacturer, or an authorized distributor.⁹⁵ If sufficient end-of-life purchases were not made,⁹⁶ the DoD and defense contractors may be forced to purchase replacement parts from outside the authorized supply chain, including from brokers and independent distributors.⁹⁷ The DoD estimated that as much as 15% of all spare and replacement parts for military electronics are determined to be counterfeit.⁹⁸ The military’s emphasis on using the lowest cost suppliers rather than focusing on the quality of parts obtained is another contributing factor.⁹⁹

Economic gain is not the sole motive for dealing in counterfeit electronics. As noted above, malicious counterfeits are making their way into the supply chain.¹⁰⁰ As an increasing number of devices are connected to the Internet of Things (IoT), “the potential for extensive economic and health and safety losses due to deliberately corrupted components increases by orders of magnitude.”¹⁰¹

https://www.theregister.com/2022.03/18/eu_us_counterfeit_chips/ (“Counterfeiters are making the most of the ongoing electronics supply crunch by peddling sham semiconductors to desperate buyers.”). See also Rob Spiegel, *Supply Chain* (Mar. 3, 2011).

⁹² Stewart Thompson, *Battling Fraudulent Product Substitution*, FRAUD MAG. (Feb. 2023), <https://www.fraud-magazine.com/article.aspx?id=4295020059>.

⁹³ AEROSPACE INDUS. ASS’N, COUNTERFEIT PARTS: INCREASING AWARENESS AND DEVELOPING COUNTERMEASURES 7–8 (2011).

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ The DoD attempts to purchase a lifetime supply of product for long life cycle systems, including through end-of-life buys, and it has stockpiles of parts in its warehouses. In addition, the DoD may purchase intellectual property rights along with parts or systems, so that the IP will be available for future reference if needed. Interview with Anonymous Source (notes in possession of author).

⁹⁷ Kirsten Koepsel, COUNTERFEIT PARTS AND THEIR IMPACT ON SUPPLY CHAINS 29 (2nd ed., 2019). Other sources have suggested that the DoD would prefer to purchase parts of unknown provenance rather than buying newer substitutes from OEMs or their authorized distributors, because the lengthy qualification process for an assembly or its component parts can take years, and potentially hundreds of thousands of dollars, to complete.

⁹⁸ McCurdy, *supra* note 81.

⁹⁹ See DEFENSE INDUSTRIAL BASE ASSESSMENT, *supra* note 62, at 157–58.

¹⁰⁰ Mark Tehranipoor, Ujjwal Guin & Swarup Bhunia, *Invasion of the Hardware Snatchers: Cloned Electronics Pollute the Market*, 54 IEEE SPECTRUM 36, 36 (2017).

¹⁰¹ Rich Fitzgerald, *Counterfeit Components: The Stakes are Rising*, MIL. EMBEDDED SYS. 16 (Aug. 2016).

Section II. Laws Addressing Trademark Infringement and Counterfeiting

A. Congress Has Enacted Several Pieces of Legislation to Combat Counterfeiting

Initially, trademark counterfeiting was treated like other cases of infringement. The Trademark Act of 1870 provided for damages and injunctive relief for trademark counterfeiting and infringement, but it did not impose criminal penalties for trafficking in counterfeit goods.¹⁰² An 1876 amendment criminalized knowingly using counterfeit trademarks,¹⁰³ but the 1870 Act was held to be unconstitutional just a few years later.¹⁰⁴ The Trademark Acts of 1881 and 1905 barely provided civil remedies for infringement,¹⁰⁵ and the Lanham Act originally contained no criminal penalties for trademark counterfeiting.¹⁰⁶ However, Congress eventually recognized that counterfeiting poses unique concerns, including risks to human health and safety, and it has acted several times to criminalize trademark counterfeiting and to provide enhanced remedies to the owners of registered marks.

Well before counterfeit microelectronics made their appearance in the marketplace, Congress passed the Trademark Counterfeiting Act of 1984 in order to provide tools “for combatting this insidious and rapidly growing form of commercial fraud.”¹⁰⁷ Existing remedies under the Lanham Act were found to be too small—and too infrequently imposed—to deter counterfeiters.¹⁰⁸ The Act amended the Lanham Act to allow trademark owners to collect treble damages in civil counterfeiting cases, and it created procedures for ex parte seizures by trademark owners.¹⁰⁹ It also created criminal penalties, codified at 18 U.S.C. § 2320, for anyone who “intentionally traffics or attempts to traffic in goods or services and knowingly uses a counterfeit mark on or in connection with such goods or services.”¹¹⁰

Just twelve years later, Congress passed the Anticounterfeiting Consumer Protection Act (“ACPA”) of 1996,¹¹¹ because it recognized that the Trademark Counterfeiting Act had “proven to be an inadequate remedy for the explosive growth

¹⁰² Jed S. Rakoff & Ira B. Wolff, *Commercial Counterfeiting and the Proposed Trademark Counterfeiting Act*, 20 AM. CRIM. L. REV. 145, 156–57 (1982) (citing Act of July 8, 1870, ch. 230, § 79, 16 Stat. 198, 210 (1870)).

¹⁰³ Act of Aug. 14, 1876, ch. 274, 19 Stat. 141 (1876); *see also* Rakoff & Wolff, *supra* note 102, at 157–59.

¹⁰⁴ *In re Trade-Mark Cases*, 100 U.S. 82 (1879).

¹⁰⁵ *See* Rakoff & Wolff, *supra* note 102, at 160 (characterizing the 1905 Act as “a crazy-quilt of irrational provisions”).

¹⁰⁶ *See generally* S. REP. NO. 79-1333 (1946).

¹⁰⁷ S. REP. NO. 98-526, at 1 (1984).

¹⁰⁸ *Id.* at 5. The Senate Report noted that other criminal laws, such as mail fraud and wire fraud, could sometimes apply, but prosecutors brought few cases under these provisions.

¹⁰⁹ *Id.* at 2180–82.

¹¹⁰ Pub. L. No. 98-473, 98 Stat. 2178 (1984). An individual could be imprisoned for up to five years or fined up to \$250,000. A business entity could be fined up to \$1,000,000 for a first offense. *Id.*

¹¹¹ Pub. L. No. 104-153, 110 Stat. 1386 (1996).

in criminal commercial counterfeiting.¹¹² Both the House and Senate Reports accompanying the act noted that U.S. businesses lost \$200 billion every year due to illegal counterfeiting, the equivalent of 750,000 jobs.¹¹³ In hearings before the Senate Committee, Senator Leahy detailed IBM's struggle with counterfeit products:

Another example is our IBM factory in Essex Junction, which makes 16 and 64 megabyte memory chips, known as DRAMs, or dynamic random access memory chips. These memory chips – and I might say, Mr. Chairman, it doesn't cost that much to make the chip, but it costs hundreds of millions, sometimes billions of dollars, to get to the step where you can make the first one because of all the work that goes into it. They end up being bootlegged, and IBM has estimated their annual losses to bootleg computer software [sic] at \$1 billion.¹¹⁴

The new act created statutory damages as an alternative to actual damages and profits in a civil action for counterfeiting.¹¹⁵ In addition, it imposed additional criminal penalties for trafficking in counterfeit goods and services. Principally, it made trafficking in counterfeit goods or services a RICO predicate act,¹¹⁶ and it also permitted law enforcement officials to seize not only the counterfeit products themselves but also any property, equipment, or facilities associated with the criminal enterprise.¹¹⁷

Subsequently, the Stop Counterfeiting in Manufactured Goods Act of 2006¹¹⁸ attempted to address remaining problems following the ACPA, given that the counterfeiting industry continued to grow exponentially and the volume of imported counterfeit goods was skyrocketing.¹¹⁹ The scope of § 2320 was expanded to prohibit trafficking in labels, patches, stickers, wrappers, and packaging to which a counterfeit mark had been applied.¹²⁰ In 2008, the Prioritizing Resources and Organization for Intellectual Property Act¹²¹ (the Pro-IP Act) raised the stakes again by increasing the criminal penalties for trafficking in counterfeit goods or services,¹²² and it also increased the maximum statutory damages available in civil counterfeiting actions from \$1,000 to \$200,000 per counterfeit mark, per type of goods sold.¹²³ In addition, the Pro-IP Act created new penalties for criminal defendants who knowingly or

¹¹² H.R. REP. NO. 104-556, at 2 (1995); S. REP. NO. 104-177 (1995).

¹¹³ *Id.*

¹¹⁴ *Trademark Counterfeiting: Hearing on S. 1136, Before the Comm. on the Judiciary*, 104th Cong. 3–4 (1995) (referring to the statement of Hon. Patrick J. Leahy, U.S. Senator from the State of Vermont). Surprisingly, this was still six years before ERAI received its first complaint about counterfeit microelectronics.

¹¹⁵ Anticounterfeiting Consumer Protection Act of 1996, Pub. L. No. 104-153, 110 Stat. 1386, 1388 (1996).

¹¹⁶ *Id.* at 1386.

¹¹⁷ *Id.* at 1389.

¹¹⁸ Stop Counterfeiting in Manufactured Goods Act, Pub. L. No. 109-181, 120 Stat. 285 (2006).

¹¹⁹ See H.R. REP. NO. 109-68, at 3 (2005).

¹²⁰ Stop Counterfeiting in Manufactured Goods Act, *supra* note 118, at 285.

¹²¹ Prioritizing Resources and Organization for Intellectual Property Act of 2008, Pub. L. No. 110-403, 122 Stat. 4256 (2008).

¹²² *Id.* at 4258.

¹²³ *Id.* at 4259.

recklessly caused serious bodily injury or death, such as trafficking in counterfeit pharmaceuticals.¹²⁴

The risks associated with counterfeit electronic parts were finally addressed by Congress in 2012, after a Senate Armed Services Committee investigation uncovered “overwhelming evidence of large numbers of counterfeit parts making their way into critical defense systems.”¹²⁵ The National Defense Authorization Act for Fiscal Year 2012¹²⁶ instructed the Secretary of Defense to conduct an assessment of DoD acquisition policies and to make substantial revisions to the Defense Federal Acquisition Regulation Supplement (DFARS) to address the detection and avoidance of counterfeit electronic parts.¹²⁷ It also amended 18 U.S.C. § 2320 to include enhanced criminal penalties for trafficking in counterfeit military goods or services.¹²⁸ Subsequent Defense Authorization Acts made substantive changes to the rules regarding detection and avoidance of counterfeit electronic parts, but in each case they applied only to DoD acquisitions and did not extend to other industries.¹²⁹

While Congress has enacted multiple pieces of legislation intended to curb counterfeiting, there is a clear disconnect between the existing legal remedies and the technical and economic realities surrounding counterfeit microelectronics. Both the civil and criminal enforcement mechanisms are largely underutilized against persons who engage in the sale of counterfeit electronic parts,¹³⁰ and the remedies provided by the Lanham Act provide little motivation for manufacturers to pursue civil actions against counterfeiters.

B. The Lanham Act Creates Civil Liability for Using a Counterfeit of a Registered Mark

The Lanham Act allows for the federal registration of trademarks and service marks with the United States Patent and Trademark Office.¹³¹ In addition, it creates civil causes of action for trademark infringement and counterfeiting, false advertising, dilution, and other claims.¹³² When it adopted the Lanham Act, Congress recognized

¹²⁴ *Id.* at 4258.

¹²⁵ SENATE ARMED SERVICES REPORT, *supra* note 19, at i.

¹²⁶ National Defense Authorization Act, Pub. L. No. 112-81, 125 Stat. 1298 (2011).

¹²⁷ *Id.* at 1493–1500, § 818.

¹²⁸ *Id.* at 1497, § 818(h).

¹²⁹ *See, e.g.*, National Defense Authorization Act for Fiscal Year 2013, Pub. L. No. 112-239, § 833, 126 Stat. 1623, 1844–45 (2013) (relating to allowable costs for contractors); Carl Levin and Howard P. “Buck” McKeon National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113-291, § 817, 128 Stat. 3292, 3432 (2014) (resourcing requirements for defense contractors); National Defense Authorization Act for Fiscal Year 2017, Pub. L. No. 114-328, § 815, 130 Stat. 2000, 2271-72 (2016) (replacing “trusted supplier” with the term “suppliers meeting anticounterfeiting requirements”).

¹³⁰ Utilization of criminal enforcement mechanisms will be addressed in a companion article. *See supra* note 12.

¹³¹ 15 U.S.C. § 1051.

¹³² 15 U.S.C. §§ 1114, 1125.

that trademarks perform two critical functions. “One is to protect the public so it may be confident that, in purchasing a product bearing a particular trade-mark which it favorably knows, it will get the product which it asks for and wants to get.”¹³³ In addition, trademarks protect their owners. “[W]here the owner of a trade-mark has spent energy, time, and money in presenting to the public the product, he is protected in his investment from its misappropriation by pirates and cheats.”¹³⁴

Trademarks function as indicators of source and quality. They protect the public from confusion by accurately indicating the source of a product.¹³⁵ They preserve a producer's good will “in order that the purchasing public may not be enticed into buying A's product when it wants B's product.”¹³⁶ Trademarks also create quality expectations and tell the public that the trademark owner is controlling the quality of the goods sold under the mark.¹³⁷ Courts have observed that the public interest is served by “[p]reventing consumer confusion,” and that “there is a strong policy in favor of protecting rights to trademarks.”¹³⁸ The trademark acts as “a kind of ‘warranty’ to purchasers” that when they purchase goods bearing the mark, they will receive goods of the same character and source as other goods previously purchased that already gave them satisfaction.¹³⁹ “In an ever more complex commercial economy, it is increasingly important to preserve standards of quality and confidence.”¹⁴⁰

The Lanham Act empowers trademark owners to take action against trademark counterfeiting and infringement. Section 32 provides a civil remedy for the infringement of a registered mark by any person who, without the consent of the trademark owner, shall:

- (a) use in commerce any reproduction, counterfeit, copy, or colorable imitation of a registered mark in connection with the sale, offering for sale, distribution, or advertising of any goods or services on or in connection with which such use is likely to cause confusion, or to cause mistake, or to deceive; or
- (b) reproduce, counterfeit, copy or colorably imitate a registered mark, and apply such reproduction, counterfeit, copy or colorable imitation to labels, signs, prints, packages, wrappers, receptacles or advertisements intended to be used in commerce upon or in connection with the sale, offering for sale, distribution, or advertising of goods or services on or in connection with which such use is likely to cause confusion, or to cause mistake, or to deceive.¹⁴¹

¹³³ S. REP. NO. 79-1333, at 3 (1946).

¹³⁴ *Id.*; see also 92 CONG. REC. 7524 (1946) (stating the act's purpose is to protect legitimate business and consumers).

¹³⁵ *State of Idaho Potato Comm'n v. G&T Terminal Packaging, Inc.*, 425 F.3d 708, 715 (9th Cir. 2005).

¹³⁶ *Id.*

¹³⁷ *El Greco Leather Prods. Co., Inc. v. Shoe World*, 806 F.2d 392, 395 (2d Cir. 1986).

¹³⁸ See, e.g., *Stark v. Diageo Chateau & Estate Wines Co.*, 907 F. Supp. 2d 1042, 1067 (N.D. Cal. 2012).

¹³⁹ *Nitro Leisure Prods., LLC v. Acushnet Co.*, 341 F.3d 1356, 1370 (Fed. Cir. 2003) (Newman, J., dissenting).

¹⁴⁰ *Id.* at 1369.

¹⁴¹ 15 U.S.C. § 1114.

Note that the remedy is by way of a civil action brought by the owner of the mark. Section 32 explicitly states that the infringer shall be liable in a civil action *by the registrant*; consumers who are confused, mistaken or deceived by the unauthorized use of the mark have no standing to bring an action for trademark infringement. Instead, the trademark owner is expected to protect the public against deception and confusion about the source of the products bearing its mark.¹⁴² The trademark owner has been characterized as the “vicarious avenger” of consumer interests.¹⁴³

In order to prove infringement, the trademark owner must show that it owns a protectable mark, that the defendant used the mark in commerce without plaintiff’s authorization, and the defendant’s use of the mark is likely to confuse consumers.¹⁴⁴ Courts consider a number of different factors in order to determine whether confusion is likely to occur.¹⁴⁵ In a case involving the use of a counterfeit mark, there is a presumption of confusion.¹⁴⁶

C. The Lanham Act Provides an Ex Parte Seizure Mechanism and Enhanced Damages in Cases Involving Use of a Counterfeit Mark

The Lanham Act provides a valuable tool for trademark owners in a case alleging use of a counterfeit mark in connection with the sale of goods; it allows for seizure of both the goods and counterfeit marks involved.¹⁴⁷ Before serving the complaint, the trademark owner is permitted to make ex parte application to the court, without putting the accused counterfeiters on notice of the proceeding.¹⁴⁸ The application must be based on an affidavit or verified complaint supporting the request,¹⁴⁹ and the trademark owner must provide adequate security for payment of damages in the event of a wrongful seizure.¹⁵⁰ The seizure order must include a particular description of the items to be seized, as well as a description of the place where the seizure is to occur.¹⁵¹ The order is served by a federal law enforcement officer, such as a U.S.

¹⁴² See, e.g., *Guthrie Healthcare System v. ContextMedia, Inc.* 826 F.3d 27, 50 (2d Cir. 2016) (“An important beneficiary of the trademark system is the public. The public has a great interest in administration of the trademark law in a manner that protects against confusion.”).

¹⁴³ J. THOMAS MCCARTHY, 1 MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 2:22 (5th ed.) [hereinafter MCCARTHY ON TRADEMARKS].

¹⁴⁴ See, e.g., *dmarcian, Inc. v. dmarcian Europe BV*, 60 F.4th 119, 140 (4th Cir. 2023).

¹⁴⁵ See *RiseandShine Corp. v. PepsiCo, Inc.* 41 F.4th 112, 119 (2d Cir. 2022) (“To evaluate claims of consumer confusion, this court employs the eight factors set out in *Polaroid Corp. v. Polarad Electronics Corp.*, 287 F.2d 492 (2d Cir. 1961).”).

¹⁴⁶ LOUIS ALTMAN & MALLA POLLACK, CALLMANN ON UNFAIR COMPETITION, TRADEMARKS AND MONOPOLIES § 22:36 (4th ed. 2022) [hereinafter CALLMANN ON UNFAIR COMPETITION].

¹⁴⁷ 15 U.S.C. § 1116(d)(1)(A). Note that a more specific definition of “counterfeit mark” is provided in 1116(d)(1)(B).

¹⁴⁸ *Id.* However, notice must be given to the U.S. attorney for the judicial district where the order is sought. 15 U.S.C. § 1116(d)(2).

¹⁴⁹ 15 U.S.C. § 1116(d)(3)(A).

¹⁵⁰ *Id.* § 1116(d)(4)(A).

¹⁵¹ *Id.* § 1116(d)(5)(B).

marshal or a Customs & Border Protection agent, who then carries out the seizure.¹⁵² Any items seized are held by the court, which enters a protective order covering discovery and the use of any records or other information seized.¹⁵³ The court must hold a hearing ten to fifteen days after issuance of the seizure order, where the trademark owner shows that the seizure and retention of goods and records is still necessary.¹⁵⁴ When successfully utilized, the seizure mechanism serves the dual purpose of removing counterfeit goods from the marketplace and preserving important evidence for trial.

When the trademark owner prevails and the defendant is found to have engaged in use of a counterfeit mark, enhanced damages and other remedies are available. Under § 35(b) of the Act, willful use of a counterfeit mark subjects the user of the infringing mark to treble damages.¹⁵⁵ The trademark owner also has the option to elect an award of statutory damages instead of actual damages and profits.¹⁵⁶ The purpose of § 35 is “to take all the economic incentive out of trademark infringement.”¹⁵⁷

However, under the Lanham Act, not all trademark infringement rises to the level of counterfeiting. Counterfeiting is “the act of producing or selling a product with a sham trademark that is an intentional and calculated reproduction of the genuine trademark.”¹⁵⁸ It is “‘hard core’ or ‘first degree’ trademark infringement and is the most blatant and egregious form of ‘passing off.’”¹⁵⁹ It has been characterized as an aggravated form of trademark infringement “that seeks to trick the consumer into believing that he or she is getting the genuine article.”¹⁶⁰

The term “counterfeit” is defined as “a spurious mark which is identical with, or substantially indistinguishable from, a registered mark.”¹⁶¹ A “spurious” mark is one that is “fake” and “[d]eceptively suggest[s] an erroneous origin.”¹⁶² To be “substantially indistinguishable, two marks must be nearly identical . . . with only

¹⁵² *Id.* § 1116(d)(9).

¹⁵³ *Id.* § 1116(d)(7).

¹⁵⁴ *Id.* § 1116(d)(10)(A).

¹⁵⁵ 15 U.S.C. § 1117(b).

¹⁵⁶ *Id.* § 1117(c). Section 1117(c) provides that in a case involving the use of a counterfeit mark, the plaintiff may elect to recover:

- (1) not less than \$1,000 or more than \$200,000 per counterfeit mark per type of goods or services sold, offered for sale, or distributed, as the court considers just, or
- (2) if the court finds that the use of the counterfeit mark was willful, not more than \$2,000,000 per counterfeit mark per type of goods or services sold, offered for sale, or distributed, as the court considers just.

¹⁵⁷ *Rolex Watch USA, Inc. v. Meece*, 158 F.3d 816, 824 (5th Cir. 1998).

¹⁵⁸ 4 MCCARTHY ON TRADEMARKS, *supra* note 143, § 25:10.

¹⁵⁹ *Id.*

¹⁶⁰ *UL LLC v. Space Chariot, Inc.*, 250 F. Supp. 3d 596, 607–08 (C.D. Cal. 2017) (counterfeiting is a “more specialized case” of trademark infringement).

¹⁶¹ 15 U.S.C. § 1127.

¹⁶² *Spurious*, BLACK’S LAW DICTIONARY (11th ed., 2019).

minor differences which would not be apparent to an unwary observer.”¹⁶³ A “counterfeit mark” is a non-genuine mark identical to the registered, genuine mark of another, where the genuine mark was registered for use on the same goods to which the infringer applied the mark.¹⁶⁴ “[T]he essence of counterfeiting under the Lanham Act is that the use of the infringing mark seeks to trick the consumer into believing that he or she is getting the genuine article, rather than a colorable imitation.”¹⁶⁵

Trademark owners who bring civil actions for counterfeiting under § 32 also frequently include other Lanham Act claims as well. Section 43(a)¹⁶⁶ provides multiple causes of action to the owners of both registered and unregistered marks, including false association,¹⁶⁷ false advertising,¹⁶⁸ dilution by blurring or tarnishment,¹⁶⁹ and cybersquatting.¹⁷⁰ Cybersquatting allegations may be particularly useful where a commercial website uses or incorporates a trademark in bad faith in order to confuse purchasers and entice them to buy counterfeit products.¹⁷¹ The court may order the forfeiture or cancellation of the domain name, or the transfer of the domain name to the owner of the mark.¹⁷² However, claims for false association, false advertising, and dilution do not carry with them the enhanced damages, statutory damages, and seizure provisions of cause of action for counterfeiting under § 32(a).

Section III. Despite Strong Statutory Protections, Trademark Owners Are Not Using the Lanham Act to Protect Against Proliferation of Counterfeit Microelectronics

Lanham Act §§ 32–36 provide a potent remedy against acts of counterfeiting. A lawyer at a leading IP firm has even suggested that by “asserting their rights in court, . . . trademark owners can create a financially oppressive marketplace for counterfeiters, making their activities unprofitable and unattractive.”¹⁷³ Nevertheless,

¹⁶³ *Louis Vuitton Malletier, S.A. v. Sunny Merch. Corp.*, 97 F. Supp. 3d 485, 499 (S.D.N.Y. 2015).

¹⁶⁴ *Louis Vuitton Malletier, S.A. v. Akanoc Solutions, Inc.*, 658 F.3d 936, 946 (9th Cir. 2011).

¹⁶⁵ *Coty, Inc. v. Excell Brands, LLC*, 277 F. Supp. 3d 425, 468 (S.D.N.Y. 2017).

¹⁶⁶ See 15 U.S.C. § 1125(a). Only § 43(a) creates a cause of action for unregistered marks. Note that Lanham Act § 32 and the criminal provisions in 18 U.S.C. § 2320 (trafficking in counterfeit goods or services) both require that a mark be registered with the USPTO.

¹⁶⁷ 15 U.S.C. § 1125(a)(1)(A) (using in commerce “any word, term, name, symbol, or device, or any combination thereof, or any false designation of origin, false or misleading description of fact, or false or misleading representation of fact, which . . . is likely to cause confusion, or to cause mistake, or to deceive as to the affiliation, connection, or association of such person with another person, or as to the origin, sponsorship, or approval of his or her goods, services, or commercial activities by another person”).

¹⁶⁸ *Id.* § 1125(a)(1)(B).

¹⁶⁹ *Id.* § 1125(c).

¹⁷⁰ *Id.* § 1125(d).

¹⁷¹ A person is liable to a trademark owner for cybersquatting if that person (1) has a bad faith intent to profit from that mark, and (2) registers, traffics in, or uses a domain name that is identical or confusingly similar to that mark. *Id.*; see also S. REP. NO. 106-140, at 6 (“[C]ybersquatters target distinctive marks to defraud consumers, including to engage in counterfeiting activities . . .”).

¹⁷² 15 U.S.C. § 1125(d)(1)(C).

¹⁷³ See Mark Sommers, *Taking an Aggressive Stance Against Counterfeiters: An Overview of Trademark*

a Lex Machina report concluded that, while trademark infringement case filings generally held steady between 2016 and 2019,¹⁷⁴ the lowest number of trademark case filings of the last decade occurred in 2020 (with only 3,778 cases filed, a 14% decrease from 2019).¹⁷⁵ Mass counterfeiting cases increased drastically during that period, from 151 cases filed in 2015 to 592 cases filed in 2020 (16% of all trademark cases filed that year).¹⁷⁶

Despite the large number of filings, an analysis of counterfeiting cases from the last thirteen years reveals that these remedies are seldom used by manufacturers of electronic parts. Numerous searches conducted in Lex Machina's database of federal trademark cases¹⁷⁷ disclosed only a few counterfeiting cases filed by owners of trademarks used in connection with semiconductor chips and other microelectronic parts. Keyword searches were conducted in the entire database of all cases identified as "trademark,"¹⁷⁸ using the keywords "counterfeit" or "counterfeiting" and various terms including "semiconductor," "chip," "microchip," "integrated circuit," "microprocessor," "capacitor," "transistor," "diode," and others. Initially, cases tagged as "mass counterfeiting" were excluded, but in subsequent searches they were added for the sake of inclusivity. A second set of searches were conducted on the names of the top manufacturers' brands reported by ERAI in 2021 and 2022.¹⁷⁹ All trademark cases retrieved for these companies were briefly examined to discern their subject matter. This search was then augmented by including the names of numerous other electronic parts manufacturers, including members of the Semiconductor Industry Association.¹⁸⁰

Counterfeiting Litigation Under the Lanham Act, IP LITIGATOR (Oct. 1999), <https://www.finnegan.com/en/insights/articles/taking-an-aggressive-stance-against-counterfeiters-an-overview.html>.

¹⁷⁴ LEX MACHINA, COPYRIGHT AND TRADEMARK LITIGATION REPORT 2021 6 (June 2021). During this period, trademark litigation filings ranged between 3,949 in 2017 and 4,375 in 2019.

¹⁷⁵ *Id.* Lex Machina data indicates that by 2022, the total number of trademark infringement cases filed had declined to 3,445.

¹⁷⁶ *Id.* A "mass counterfeiting case" alleges counterfeiting against a large number of defendants identified on an attached schedule. Often the defendants are anonymous or are identified only by a URL. Many mass counterfeiting cases are filed in the Northern District of Illinois, and most are filed by owners of luxury brands.

¹⁷⁷ Lex Machina provides a continually updated database of federal district court cases, including access to dockets and individual documents, for the period 2009 to the present. Cases are separated into practice areas, such as Trademark Litigation, and are further tagged to identify particular characteristics (e.g., mass counterfeiting cases). Keyword searches can be conducted across the federal district court dockets.

¹⁷⁸ Cases are identified as "Trademark" based on the preliminary filing codes "Nature of Suit (NOS) 840" and Cause of Action codes for "Trademark Infringement." BRYAN C. HOWARD & JASON MAPLES, LEX MACHINA TRADEMARK LITIGATION REPORT 2016 iii (2016).

¹⁷⁹ See DAMIR AKHOUNDOV, ERAI ANNUAL REPORT 2022: ANALYSIS OF NONCONFORMING AND SUSPECT COUNTERFEIT PARTS REPORTED BY ERAI IN 2022 4 (2023) (listing 24 companies). The top five manufacturers' brands reported in 2022 were Texas Instruments Inc., Xilinx Inc., Analog Devices Inc., Altera Corp., and Microchip Technology Inc.

¹⁸⁰ *Members*, Semiconductor Industry Association, <https://www.semiconductors.org/about/members/> (last visited June 10, 2023).

Two disclosed cases involved allegedly counterfeit chips that were being provided as part of a larger product or service offered by the defendants. In one case, Philips filed an action for trademark and copyright infringement in 2008 against BC Technical, Inc., an independent organization owned by a former employee that was involved in servicing Philips's nuclear medical imaging systems.¹⁸¹ Philips alleged that as part of its service operations, BC Tech replaced outdated or nonfunctioning chips in the circuit boards of the imaging system machines with new chips that it copied from functioning chips, along with infringing software.¹⁸²

Samsung faced a somewhat different problem: it sued a group of former employees for selling “build kits” containing all parts necessary to assemble certain Samsung mobile devices, including proprietary PBAs (i.e., printed board assemblies, the “brains of the device”) and OCTAs (touchscreen components).¹⁸³ Samsung alleged that the kits were ultimately assembled into 16,318 counterfeit mobile devices that were sold under the Samsung trademark.¹⁸⁴ After pending for over seven years, the case is now set for jury trial on August 7, 2023.¹⁸⁵ Again, both Philips and Samsung were focused on activity beyond the mere sale of counterfeit electronic parts.

A mere handful of related-type cases were disclosed. For example, in 2009, Intel filed a civil action against Intelop, Inc.,¹⁸⁶ alleging that Intelop's tradename and the use of the INTELOP mark in connection with computer hardware and software services (including custom IP development, microprocessors, semiconductors, chip designs, board designs, network security, and network equipment) amounted to trademark infringement, false association, and dilution under the Lanham Act.¹⁸⁷ In 2011, Analog Devices, Inc. brought a civil action against 4 Star Electronics, Inc., an independent distributor of electronic components, for willful trademark infringement, unfair competition, and related claims based on language on 4 Star's website that allegedly suggested it was an authorized distributor of Analog Devices.¹⁸⁸ More recently, in 2017, Silicon Laboratories Inc. (also known as “Silabs”) sued Silab Tech Private Limited, a company located in Bangalore, India, for trademark infringement,

¹⁸¹ Complaint at ¶¶ 4, 18, 45, 55, Philips Elec. N. Am. Corp. v. BC Technical, Inc., No. 2:08-CV-00068 (W.D. Wash. Jan. 16, 2008).

¹⁸² *Id.* at ¶ 21. The case was dismissed on April 1, 2011, on stipulation of the parties, indicating a likely settlement.

¹⁸³ Complaint at ¶¶ 31–32, Samsung Elec. Am., Inc. v. Chung, No. 3:15-CV-04108-L-BN (N.D. Tex. Dec. 31, 2015).

¹⁸⁴ *Id.* at ¶ 34.

¹⁸⁵ Eighth Amended Scheduling Order at 1, Samsung Elec. Am., Inc. v. Chung, No. 3:15-CV-04108-L-BN (N.D. Tex. July 18, 2022).

¹⁸⁶ Complaint at 1, Intel Corp. v. Intelop Inc., No. 4:09-CV-04535 (N.D. Cal. Sept. 25, 2009).

¹⁸⁷ *Id.* at ¶¶ 22–24. The complaint also included claims for breach of contract and unfair competition under state law.

¹⁸⁸ Complaint at ¶¶ 19–39, Analog Devices, Inc. v. 4 Star Electronics, Inc., No. 1:11-CV-01351-VM (S.D.N.Y. Feb. 28, 2011).

unfair competition, and cybersquatting.¹⁸⁹ It alleged that defendant's use of the SILABS mark in connection with providing intellectual property designs (i.e., IP cores) for semiconductor and integrated circuit companies was in bad faith and constituted "willful, deliberate, and intentional acts of infringement"¹⁹⁰ by Silab Tech, as well as use of a counterfeit mark.¹⁹¹ None of these cases were concerned primarily with the sale of counterfeit electronic parts; instead, the focus was on the confusing or unauthorized use of a trade name.

By way of comparison, suppliers at other levels of the supply chain make more frequent use of the trademark laws to combat counterfeiting. Numerous cases have been filed alleging that counterfeit parts have been included in finished products distributed to the public. Cree, Inc., a developer and manufacturer of LEDs, has filed over a dozen actions for trademark infringement and counterfeiting against unauthorized sellers of LED flashlights and other lighting products bearing the CREE mark.¹⁹² In one particularly tragic case, Cree alleged that a counterfeit flashlight caught fire while it was being charged, causing the purchaser's house to burn to the ground and killing the family dog.¹⁹³ SanDisk, the well-known manufacturer of memory cards and flash drives, has commenced at least nine mass counterfeiting cases in the last six years to combat the sale of counterfeit SANDISK products in e-commerce stores.¹⁹⁴

Cisco Systems, Inc. has a robust anti-counterfeiting program and has filed at least twenty-two anti-counterfeiting cases in the U.S. since 2010. Cisco is a leading developer and manufacturer of computer and telecommunications networking equipment, including network switches, transceivers, routers, and other devices. It is also the owner of numerous registrations for the CISCO mark. In order to combat widespread counterfeiting of Cisco products, it works with law enforcement, and it files civil actions to enforce its trademark rights. For example, in late 2018, Cisco sued a group of individuals and business associations for importing and selling a broad range of counterfeit Cisco products dating back to at least 2013.¹⁹⁵ The action was commenced after U.S. Customs and Border Protection seized hundreds of counterfeit Cisco products and labels in California.¹⁹⁶ Cisco alleged that the

¹⁸⁹ Complaint at ¶¶ 44–64, *Silicon Laboratories, Inc. v. Silab Tech Private Ltd.*, No. 1:17-CV-00592 (W.D. Tex. June 19, 2017).

¹⁹⁰ *Id.* at ¶ 51.

¹⁹¹ *Id.* at ¶ 53.

¹⁹² *See, e.g.*, *Cree, Inc. v. Tomtop Group Ltd.*, No. 2:15-CV-09169 (C.D. Cal. Nov. 11, 2015) (noting flashlights offered for sale on eBay). Cree's successor company, CreeLED, Inc., has filed at least 32 mass counterfeiting cases in 2022 and 2023, all alleging sale of counterfeit LED components through anonymously operated websites. *See, e.g.*, *Complaint, CreeLED, Inc. v. Individuals, P'ships and Unincorp. Ass'ns Identified on Schedule A*, No. 1:23-CV-20163 (S.D. Fla. Jan. 13, 2013).

¹⁹³ *Cree, Inc. v. Linemart, Inc.*, No. 2:17-CV-07150 (C.D. Cal. Sept. 27, 2017).

¹⁹⁴ *See, e.g.*, *Complaint, SanDisk LLC v. The P'ships and Unincorp. Ass'ns Identified on Schedule "A,"* No. 1:21-CV-02692 (N.D. Ill. May 18, 2021).

¹⁹⁵ *Complaint at ¶¶ 33–54, Cisco Systems, Inc. v. Sheikh*, No. 4:18-CV-07602 (N.D. Cal. 2018).

¹⁹⁶ *Id.* at ¶ 34.

defendants were operating a massive international counterfeiting operation and that, despite demands from Cisco and a criminal action against their operation in the United Arab Emirates, they were not deterred from continued counterfeiting.¹⁹⁷ The case ended with a consent judgment in favor of Cisco, and the defendants were permanently enjoined from further acts of trademark infringement and counterfeiting.¹⁹⁸

Cisco has experienced similar success in several other counterfeiting cases,¹⁹⁹ with one case ending in a consent judgment and permanent injunction after just ninety-eight days.²⁰⁰ In fact, based on docket searches conducted using the Lex Machina database, it appears that Cisco has obtained consent judgments and permanent injunctions in nine trademark counterfeiting cases filed since 2010, and another eight cases have likely settled. One noteworthy case resulted in a stipulated final judgment by one group of defendants in favor of Cisco in the amount of \$37 million.²⁰¹ Subsequently, a default judgment was entered against the remaining defendants in excess of \$20 million.²⁰² Clearly, then, civil actions for trademark infringement and counterfeiting can be used with great effect against counterfeiters.

What is missing from the search results are cases where manufacturers of integrated circuits or discrete electronic parts (e.g., capacitors, diodes, and transistors) have filed actions against sellers of counterfeit microelectronics in an effort to stop those sales or to recover money damages. While the Lanham Act provides seemingly valuable tools that brand owners can utilize to address counterfeiting, including the seizure mechanism and provisions for treble and statutory damages, they are instruments that are seldom used against microelectronics counterfeiters by original component manufacturers. Various reasons have been advanced for the infrequent utilization of civil lawsuits to address counterfeiting of electronic parts, including business motivations and a lack of legal coverage for such conduct.

¹⁹⁷ *Id.* at ¶¶ 1, 36. In its complaint, Cisco alleged that counterfeit products bearing marks similar to the Cisco marks provide customers with a false assurance that the products they have purchased are reliable and conform to Cisco's standards, come with applicable warranties, and can be placed under a Cisco service support contract; substandard counterfeit products could also have disastrous impacts on health, safety, and national security. *Id.* at ¶¶ 29–32.

¹⁹⁸ Order Granting Permanent Injunction, *Cisco Systems, Inc. v. Sheikh*, No. 4:18-CV-07602 (N.D. Cal. Dec. 16, 2020).

¹⁹⁹ *See, e.g.*, Consent Judgment and Permanent Injunction, *Cisco Systems, Inc. v. Wuhan Wolon Comm'n Technology Co., Ltd.*, No. 5:21-CV-04272 (N.D. Cal. Oct. 18, 2021); Order Granting a Permanent Injunction, *Cisco Systems, Inc. v. Beccela's Etc., LLC*, No. 18-CV-00477 (N.D. Cal. Mar. 16, 2020).

²⁰⁰ Stipulation for Entry of Consent Order for Permanent Injunctive Relief, *Cisco Systems, Inc. v. Tech Data Reseller LLC*, No. 2:18-CV-00880 (D. N.J. Apr. 30, 2018).

²⁰¹ Stipulated Final Judgment Against the Dang Defendants, *Cisco Systems, Inc. v. Dang*, No. 5:14-CV-01789 (N.D. Cal. Nov. 3, 2015).

²⁰² Order Granting Plaintiffs' Motion for Default Judgment, *Cisco Systems, Inc. v. Dang*, No. 5:15-CV-01789 (N.D. Cal. Feb. 20, 2018). Permanent injunctions were also entered against all defendants.

A. Trademark Owners Are Not Bringing Civil Suits to Combat Counterfeiting Due to Misperceptions About the Law

Many government and industry members complain that it is not worthwhile to file actions against microelectronics counterfeiters because the Lanham Act does not provide a broad enough range of relief for brand owners.²⁰³ They believe the Lanham Act does not apply to situations where products bear a genuine trademark, but instead it applies where other markings on the product have been changed in order to deceive purchasers or where the underlying product itself has been altered in some way.²⁰⁴ Concerns have also been raised about whether used or refurbished parts sold as new are covered by the Lanham Act. These misunderstandings apparently arise from some criminal prosecutions, where a few circuits have held that it does not constitute trafficking in counterfeit goods when the defendant is a product bearing a genuine and authentic mark which has been altered to be a different product than the one to which the mark was originally affixed.²⁰⁵

It is a fundamental principle of trademark law that a trademark owner's rights are generally exhausted after the first sale of a product bearing the mark, and subsequent resellers have no liability for trademark infringement.²⁰⁶ Trademark law is intended to prevent sellers from confusing or deceiving consumers about the origin or make of a product, and that type of confusion ordinarily does not occur when a genuine article is resold under its original trademark.²⁰⁷ Otherwise, "the marketplace would be 'shaded by a legal cloud,' and commercial resale markets would be obliterated as trademark rights would follow products indefinitely."²⁰⁸

However, this does not mean that counterfeiters can escape liability for selling used, refurbished, remanufactured, or remarked parts as new and genuine products. The first sale doctrine does not apply when a defendant sells trademarked goods that are materially different from those sold by the owner of the mark.²⁰⁹ Numerous courts have held that a materially different product is not genuine, and therefore its unauthorized sale constitutes trademark infringement. Instead, the "material alteration theory" encompasses many commonly used counterfeiting techniques and could provide a potent remedy against counterfeit electronic parts.

²⁰³ COUNTERFEIT MICROELECTRONICS POLICY ANALYSIS, *supra* note 69, at 221.

²⁰⁴ *Id.*

²⁰⁵ U.S. v. Cone, 714 F.3d 197, 206 (4th Cir. 2013).

²⁰⁶ Cole Parmer Instrument Co. LLC v. Pro. Lab'ys, Inc., 568 F. Supp. 3d 1307, 1315 (S.D. Fla. 2021).

²⁰⁷ NEC Elecs. v. CAL Cir. Abco, 810 F.2d 1506, 1509 (9th Cir. 1987); Prestonettes, Inc. v. Coty, 264 U.S. 359, 368 (1924).

²⁰⁸ *Id.* (citing Impression Prods., Inc. v. Lexmark Intern., Inc., 137 S.Ct. 1523, 1534 (2017) (discussing the first-sale doctrine in the context of patent law)).

²⁰⁹ Davidoff & CIE, S.A. v. PLD Int'l Corp., 263 F.3d 1297, 1302 (11th Cir. 2001).

1. *Origins of the Material Alteration Theory*

The material alteration theory originated in the *Champion Spark Plug*²¹⁰ case from 1947, where Champion sued the Perfect Recondition Spark Plug Company and its owners for trademark infringement. The defendants repaired and reconditioned used spark plugs, retained the word “Champion” on the plugs, and resold them.²¹¹ The packaging for the used plugs contained language indicating they had been renewed, and each individual plug had the word “renewed” stamped on it, although it was often illegible.²¹² The district court found the defendants had infringed Champion’s trademark, and the court of appeals agreed; although the district court ordered that defendants must remove the Champion mark from the reconditioned plugs, the appellate court held that the trademark could be retained so long as the words “repaired” or “used” were stamped on the plugs in a manner that was clearly and distinctly visible.²¹³ The Supreme Court granted certiorari to consider whether the defendants should be required to remove the Champion mark from the repaired and reconditioned spark plugs they offered for sale.²¹⁴

The Supreme Court ultimately held that disclosure of the used or repaired condition of the plugs was adequate protection for the trademark owner, and defendants could retain the Champion mark on the reconditioned plugs.²¹⁵ While the reconditioned plugs would not measure up to the specifications of new spark plugs, as would be expected from second-hand goods, they were nevertheless Champion plugs and not those of another manufacturer.²¹⁶ The court observed that inferiority is immaterial so long as the article is clearly and distinctively sold as repaired or reconditioned rather than as new.²¹⁷ It stated:

The result is, of course, that the second-hand dealer gets some advantage from the trade mark. But . . . that is wholly permissible so long as the manufacturer is not identified with the inferior qualities of the product resulting from wear and tear or the reconditioning by the dealer. *Full disclosure gives the manufacturer all the protection to which he is entitled.*²¹⁸

Although it did not consider this to be such a case, the court further commented that “[c]ases may be imagined where the reconditioning or repair would be so extensive or so basic that it would be a misnomer to call the article by its original name, even though the words “used” or “repaired” were added.²¹⁹ That language gave rise to the material alteration theory, where some courts have held that the original trademark cannot be retained where a reconditioned item has been altered to the point where it

²¹⁰ *Champion Spark Plug Co. v. Sanders*, 331 U.S. 125 (1947).

²¹¹ *Id.* at 126.

²¹² *Id.*

²¹³ *Id.* at 127.

²¹⁴ *Id.* at 128.

²¹⁵ *Id.* at 130.

²¹⁶ *Id.* at 128–29.

²¹⁷ *Id.* at 130.

²¹⁸ *Id.* (emphasis added) (citing *Prestonettes, Inc. v. Coty*, 264 U.S. 359 (1924)).

²¹⁹ *Id.* at 129.

is only partially composed of materials provided by the original manufacturer or where the rebuilt goods are of exceptionally poor quality.²²⁰ Using the original mark would constitute trademark infringement.

2. *Extent of Repairs Required*

Subsequent cases have considered just how extensively a product must be altered before it would be “a misnomer” to retain the original trademark on the item. In the *Nitro Leisure* case,²²¹ the Federal Circuit was confronted with a situation involving refurbished golf balls being resold under the original “Titleist” mark. Nitro obtained used balls with stains, scuffs, and blemishes. It then refurbished them by removing the paint, the trademark, and the model markings, repainting the balls, and reaffixing the original Titleist trademark.²²² Each refurbished ball was clearly marked with the legend “USED & REFURBISHED BY SECOND CHANCE.” The packaging also contained a disclaimer indicating that refurbished balls might be subject to performance variations from new ones, and it described the steps in the refurbishing process. It also stated that the balls were not approved or endorsed by the original manufacturer and were not covered by the original manufacturer’s warranty.²²³ Despite those extensive disclaimers, Acushnet (the trademark owner) brought suit for trademark infringement, arguing that the refurbishing process was so extensive that the resulting golf ball “bears no resemblance to a genuine Acushnet product in performance, quality or appearance” and that the refurbishing so alters the basic composition of the ball that Nitro must be precluded from using the original Titleist mark.²²⁴

On appeal from the denial of a preliminary injunction, the Federal Circuit agreed that Acushnet was unlikely to succeed on the merits of its trademark claims because it was unlikely consumers would be confused by Nitro’s refurbished golf balls.²²⁵ The Federal Circuit followed *Champion* and noted that consumers do not expect used or refurbished goods to be in the same condition as new products. Instead, consumers understand such products will be degraded or will show signs of wear and tear, and they will not perform at the same level as new products.²²⁶ The district court had already determined that any differences in the refurbished balls were nothing more than would be expected for used golf balls,²²⁷ and it concluded Acushnet failed to present evidence to support its claim that the balls were so extensively repaired they could no longer be labeled with the Titleist mark.²²⁸ The use of numerous disclaimers stating the golf balls were used and refurbished meant the customer was getting a

²²⁰ See 6 CALLMANN ON UNFAIR COMPETITION, *supra* note 146, § 22:53.

²²¹ *Nitro Leisure Prod. v. Acushnet Co.*, 341 F.3d 1356 (Fed. Cir. 2003) (applying Eleventh Circuit law).

²²² *Id.* at 1358.

²²³ *Id.*

²²⁴ *Id.*

²²⁵ *Id.* at 1363.

²²⁶ *Id.* at 1362 (citing *Champion Spark Plug Co. v. Sanders*, 331 U.S. 125, 129 (1947)).

²²⁷ *Id.* at 1363.

²²⁸ *Id.* at 1365.

product with the expected characteristics, and the inferior quality, of the refurbished balls would not erode the goodwill built up by Acushnet.²²⁹

Disclosure of the used or reconditioned nature of the article is critical then because it avoids damage to the reputation and goodwill of the trademark owner.²³⁰ Consumers are not likely to be confused by differences in used goods as compared to new goods when they are informed in advance that the items are used or reconditioned, and as a result, the reputation of the trademark owner is unlikely to be harmed.²³¹ However, in the absence of warnings and disclaimers about the refurbishing process, purchasers could be seriously misled about the nature of used or refurbished products.

3. *Used Products Sold as New*

A number of courts have held that selling used or reconditioned goods as new, without appropriate notices and disclaimers, constitutes trademark infringement and counterfeiting. In the *Joy Manufacturing* case,²³² the defendant CGM was in the business of buying used and surplus valves, which it then reconditioned and repaired before reselling them.²³³ Many of the valves had undergone substantial wear and deterioration, and they required extensive re-machining and replacement parts before they could be resold.²³⁴ CGM cleaned and repainted the valves using the original manufacturer's colors, then it affixed new, unauthorized nameplates bearing the plaintiff's marks, making the valves appear to be new. The valves were not marked as reconditioned, and on at least some occasions, they were explicitly represented to

²²⁹ See *id.* at 1362 (“[S]o long as the customer is getting a product with the expected characteristics, and so long as the goodwill built up by the trademark owner is not eroded by being identified with inferior quality, the Lanham Act does not prevent the truthful use of trademarks, even if such use results in the enrichment of others.”).

²³⁰ In Judge Newman's vigorous dissent in *Nitro Leisure*, she argues that while the law permits the resale of used and refurbished products, it does not require the trademark owner to permit use of its mark on inferior goods with concealed damage, simply by marking the goods as “used” or “refurbished.” She states:

I can think of nothing more destructive of the value of a famous trademark than for the law to permit unauthorized persons to re-affix the mark to a product that is so badly cut, scarred, dented, discolored, and bruised that its defects have to be concealed before it can be resold as “used” – and then, with the scars hidden and the surface repainted to look new, the product is resold with the benefit of the re-affixed trademark and its reputation for quality and performance.

Id. at 1366. She protests that “[t]he presence of a famous trademark on such goods is not an indication of origin and quality, but a trap for the consumer.” *Id.* at 1367.

²³¹ See *Champion Spark Plug Co. v. Sanders*, 331 U.S. 125, 130 (1947); *Davidoff & CIE, S.A. v. PLD Int'l Corp.*, 263 F.3d 1297, 1302 (11th Cir. 2001).

²³² *Joy Mfg. Co. v. CGM Valve & Gauge Co., Inc.*, 730 F. Supp. 1387 (S.D. Tex. 1989).

²³³ *Id.* at 1391.

²³⁴ *Id.*

purchasers as new and unused.²³⁵ However, the evidence showed that after the reconditioning process, many of the valves no longer met the plaintiff's specifications, thereby posing an unreasonable risk of property damage or even injury or death to persons in the area.²³⁶ Some valves even misrepresented the metal from which they were made.²³⁷

The district court had no difficulty in finding that CGM's actions constituted willful trademark infringement and counterfeiting.²³⁸ It observed that "[i]t is well settled that repaired or reconditioned goods bearing the original trademark must be clearly marked to show that they have been repaired or reconditioned."²³⁹ The court's holding appeared to be motivated by the lack of control the plaintiff could exercise over the quality of the reconditioned valves marketed by defendant CGM, which resulted in immediate and irreparable harm. "The injury lies in the fact that the plaintiff no longer can control its own reputation and goodwill."²⁴⁰

More recently, in *Karl Storz Endoscopy-America, Inc. v. Surgical Technologies, Inc.*, the Ninth Circuit similarly found that the commercial repair and refurbishment of Storz's rigid endoscopes, without any visible notice that the goods had been altered, could constitute a "use in commerce" of Storz's trademark. The defendant, Surgi-Tech, received broken endoscopes directly from hospitals and doctors as well as from independent agents. It repaired the endoscopes, returned them to their owners, and received payment for the repairs. At least 20% of Surgi-Tech's business involved "complete rebuilds," where Surgi-Tech replaced essentially all of the endoscope's functional parts except for a base or "block element" bearing the Storz trademark.²⁴¹ Replacement parts were obtained from various manufacturers. Because the repaired endoscopes were not marked with Surgi-Tech's name, Storz received numerous complaints from doctors about the quality and performance of endoscopes, which

²³⁵ *Id.* at 1391–92.

²³⁶ *Id.* at 1391 (showing that if a valve was used at a working pressure for which it was not suited, it could lead to an explosive valve failure).

²³⁷ *Id.* at 1392.

²³⁸ *Id.* at 1395–96 (holding that the plaintiff was entitled to an injunction, treble damages, and attorney's fees).

²³⁹ *Id.* at 1395 (citing *Champion Spark Plug Co. v. Sanders*, 331 U.S. 125, 130 (1947)).

²⁴⁰ *Id.* at 1394; *see also Singer Mfg. Co. v. Briley*, 207 F.2d 519 (5th Cir. 1953) (defendants enjoined from acquiring used Singer sewing machines and making material alterations to modernize them using non-Singer parts, unless the rebuilt machines were plainly labeled to alert purchasers to the modifications); *Singer Mfg. Co. v. Am. Appliance Co.*, 86 F. Supp. 737 (N.D. Ohio 1949) (finding trademark infringement where defendants purchased old treadle Singer sewing machines and transformed them into electric sewing machines with a modern appearance, using non-Singer parts, causing purchasers to believe they were newer than their actual age); *Green v. Elec. Vacuum Cleaner Co.*, 132 F.2d 312 (6th Cir. 1942) (defendant reconditioned vacuum cleaners and sold them under plaintiff's trademarks); *Gen. Signal Corp. v. Donallco Inc.*, 214 U.S.P.Q. 306 (D. Conn. 1982) (granting a preliminary injunction restraining the defendant from selling counterfeit aviation equipment, containing counterfeit serial numbers, as new parts or parts repaired in conformance with the plaintiff's specifications).

²⁴¹ *Id.* at 852.

turned out to be endoscopes repaired or rebuilt by a third party.²⁴²

The Ninth Circuit recognized that property owners have a right to repair or alter trademarked goods without incurring liability under the Lanham Act.²⁴³ However, in this instance, the reconstructed products still bearing the Storz trademark were so extensively altered that they constituted a different product from that of the original manufacturer.²⁴⁴ As a result, the repair transaction constituted a “use in commerce” of the Storz mark, and Surgi-Tech was improperly trading on the goodwill of, or association with, the trademark holder.²⁴⁵ The court conceded there was no bright-line test for determining whether a company that repairs products and retains the original manufacturer’s trademark on those products is using the mark in commerce.²⁴⁶ Instead, it listed a number of factors that should be taken into consideration, including the “nature and extent of the alterations, the nature of the device and how it is designed (i.e., whether some components have a shorter useful life than the whole), whether a market has developed for service and spare parts,” and, most importantly, “whether end users of the product are likely to be misled as to the party responsible for the composition of the product.”²⁴⁷

In those cases where courts have refused to find liability for trademark infringement, it has generally been the case that the identity of the party making the repairs or the used nature of the product was clearly disclosed. In *Hamilton International Ltd. v. Vortic LLC*, Vortic took old Hamilton watches and remade them into new “Lancaster” watches, but the Hamilton marks were still clearly visible on the fronts of the watches.²⁴⁸ Hamilton sued for trademark infringement and counterfeiting but, after a bench trial, the court entered judgment in favor of Vortic.²⁴⁹ The Second Circuit affirmed, finding extensive support in the record for the district court’s conclusion that Vortic disclosed in print advertisements and on its website that the Lancaster watches contained refurbished original parts and that it was not affiliated with Hamilton. In addition, the appearance of the watch itself alerted consumers that it was a restored antique watch movement that had been incorporated into a new wristwatch.²⁵⁰

²⁴² *Id.* at 853. Surgeons who were using the repaired endoscopes only saw the Storz mark and did not know that the endoscopes had been repaired by Surgi-Tech or another third-party repair service.

²⁴³ *Id.* at 856.

²⁴⁴ *Id.*

²⁴⁵ *Id.*

²⁴⁶ *Id.*

²⁴⁷ *Id.* at 856–57; *see also* *Motorola, Inc. v. Pick*, 2005 WL 5918849 (C.D. Cal. 2005) (finding that there were material issues of fact as to whether the refurbished radios constituted rebuilds and thus rose to the level of trademark infringement where the defendants engaged in a scheme to build and sell counterfeit two-way radios (typically used by first responders and government agencies) by fraudulently obtaining replacement parts from Motorola).

²⁴⁸ 13 F.4th 264, 268 (2d Cir. 2021).

²⁴⁹ *Id.* at 270.

²⁵⁰ *Id.* at 275–76 (finding that alterations resulted in new products, and that as a result, no disclosure could eliminate the likelihood that consumers would be confused by the modifications).

Similarly, the Ninth Circuit found no liability for trademark counterfeiting where a group of circuit breaker reconditioners were reconditioning and reselling used Westinghouse circuit breakers with original Westinghouse labels.²⁵¹ The defendants argued that they did not intend to deceive anyone but were merely attempting to comply with regulations requiring the circuit breakers to have labels describing their electronic characteristics.²⁵² In addition, they alleged that Westinghouse actually knew they were selling reconditioned breakers under the Westinghouse mark, because Westinghouse was one of their major clients and resold the reconditioned circuit breakers without labeling them as “reconditioned.”²⁵³

4. *Relabeled or Remarked Products*

Relabeled and remarked products also result in violations of the Lanham Act, even if the parts retain their original trademarks. Notably, in *Intel Corp. v Terabyte International, Inc.*, the Ninth Circuit affirmed the trial court’s determination that Terabyte, a broker, was liable for willful trademark infringement for distributing Intel math coprocessors which had been relabeled from slower chips to faster and more expensive math coprocessors.²⁵⁴ Terabyte argued that its actions did not constitute trademark infringement because it was selling real Intel math coprocessors and only the model designations had been changed.²⁵⁵ As a result, Terabyte contended there was no confusion as to the *source* of the product (i.e., Intel) and any confusion about the capability of the products was irrelevant to liability for trademark infringement, but the court disagreed.²⁵⁶

The Ninth Circuit observed that Terabyte’s interpretation of the Lanham Act focused only on the “identification function” of a trademark and improperly ignored the good will, reputation, and consumer protection functions associated with a particular mark.²⁵⁷ Further, Terabyte’s position ignored the very purpose of trademark protections. The public relies upon the trademark so that “it will get the product which it asks for and wants to get.”²⁵⁸ As a result, full disclosure about the condition of a product is required in order to avoid liability for trademark infringement.²⁵⁹ The court commented:

²⁵¹ *Westinghouse Elec. Corp. v. Gen. Cir. Breaker & Elec. Supply Inc.*, 106 F.3d 894, 896–97 (9th Cir. 1997).

²⁵² *Id.* at 897.

²⁵³ *Id.*; see also *In re Cir. Breaker Litig.*, 852 F. Supp. 883, 885 (C.D. Cal. 1994).

²⁵⁴ 6 F.3d 614 (9th Cir. 1993). The court explained that Intel labeled its math coprocessors by laser etching the model number on the chip itself. On the infringing chips, those markings were either physically removed or covered and replaced with different markings, including the Intel logo. See *id.* at 616, n.1.

²⁵⁵ *Id.* at 614.

²⁵⁶ *Id.* at 619.

²⁵⁷ *Id.* (citing *Two Pesos, Inc. v. Taco Cabana, Inc.*, 505 U.S. 763, 774 (1992) (“[T]rademarks foster competition and the maintenance of quality by securing to the producer the benefits of good reputation.”)).

²⁵⁸ *Id.*

²⁵⁹ *Id.* (citing *Champion Spark Plug Co. v. Sanders*, 331 U.S. 125 (1947)).

Intel's math coprocessors were modified, i.e., relabeled, to deceive the public. Intel did not perform or authorize the chip modifications, and only the most formalistic of approaches could lead to a conclusion that Intel was the "source" of those chips once they were relabeled. The relabeling was so basic that "it would be a misnomer to call the article by its original name." . . . The modified math coprocessors exhibited a significantly higher failure rate compared to genuine Intel math coprocessors of the same model. *In essence, the modified math coprocessors were counterfeit copies of the faster and more expensive models.* By distributing those products as particular genuine Intel math coprocessors, Terabyte threatened Intel's reputation and good will and deceived its customers who believed they were purchasing those particular models of math coprocessors.²⁶⁰

The court instructed that "[o]ne of the most valuable and important protections afforded by the Lanham Act is the right to control the quality of the goods manufactured and sold under the holder's trademark."²⁶¹ Intel marked the chips with its name only in connection with the slower processing speed, and therefore the chips became counterfeits when they were remarked with a speed designation that Intel would not have given them. As a result, Terabyte's conduct was prohibited by the Lanham Act.²⁶²

Other courts have reached similar conclusions. In *Cutler-Hammer, Inc. v. Universal Relay Corp.*, Universal Relay purchased Cutler's electrical relays at a government surplus sale, removed the labels, and replaced them with new labels indicating the relays were current models, not an earlier design.²⁶³ The new labels also made it appear that the relays met military specifications, although they had never been qualified under the military standard in question. The court determined a purchaser would assume the labels had been placed on the relays by Cutler and would rely on Cutler's reputation for the accuracy of the information on the labels.²⁶⁴ It, therefore, held that the relabeling of the relays, without Cutler's consent, to indicate that they met current standards, constituted "a material alteration of the product and a misuse of plaintiff's trademark."²⁶⁵

5. Removing Markings from Authentic Products

Removing markings from genuine products and then reselling them without warranties and other services can also constitute a material difference that confuses consumers and impinges on the trademark owner's good will. In the *Beltronics* case,²⁶⁶ the Tenth Circuit affirmed the entry of a preliminary injunction where the district court found Beltronics had a substantial likelihood of prevailing on its claims for trademark infringement and counterfeiting.²⁶⁷ Beltronics manufactured

²⁶⁰ *Id.* at 619–20 (emphasis added) (citations omitted).

²⁶¹ *Id.* at 618 (citing *El Greco Leather Prod. Co., Inc. v. Shoe World, Inc.*, 806 F.2d 392, 395 (2d Cir. 1986), *cert. denied*, 484 U.S. 817 (1987)).

²⁶² *Id.* at 620.

²⁶³ *Id.* at 638.

²⁶⁴ *Id.* at 639.

²⁶⁵ *Id.*

²⁶⁶ *Beltronics USA, Inc. v. Midwest Inventory Distrib., LLC*, 562 F.3d 1067 (10th Cir. 2009).

²⁶⁷ *Id.* at 1076.

aftermarket electronics, including radar detectors. Its authorized distributors (in violation of their distribution agreements) sold Beltronics radar detectors to the defendant, Midwest, which then resold them on eBay as new products. However, the distributors had either removed the serial number label from each radar detector or replaced the original label with a fake label before sending the devices to Midwest in order to prevent Beltronics from discovering that the authorized distributors were the source of Midwest's inventory.²⁶⁸ The radar detectors themselves were apparently unchanged; however, because the products sold by Midwest did not have an original serial number, the purchasers were not eligible to receive warranties, software upgrades, recalls, product information, and other service assistance from Beltronics.²⁶⁹ The Tenth Circuit adopted the material difference test and concluded that material differences could include the lack of warranties and other services normally accompanying Beltronics's products.²⁷⁰ It noted that "physical material differences are not required to establish trademark infringement."²⁷¹ The lack of nonphysical characteristics associated with a product can also confuse or deceive a consumer and can damage the trademark owner's goodwill.²⁷²

Merely removing markings from genuine products which are then resold may also amount to the unauthorized resale of a materially different product and constitute trademark infringement.²⁷³ Davidoff manufactured and sold fragrance products under the mark DAVIDOFF COOL WATER. PLD acquired Davidoff fragrances intended for sale overseas, then sold them to discount retail stores in the U.S.²⁷⁴ When PLD received the products from its supplier, the batch codes on the bottles had already been obliterated with an etching tool in order to prevent Davidoff from discovering who sold the fragrances to PLD.²⁷⁵ The district court found that PLD's distribution of the Davidoff fragrances constituted infringement by creating a likelihood of consumer confusion.²⁷⁶

The Eleventh Circuit agreed. It adopted the material differences test and held that the resale of a materially different product can constitute trademark infringement.²⁷⁷ A material difference is "one that consumers consider relevant to a decision about whether to purchase a product."²⁷⁸ The court observed that "every

²⁶⁸ *Id.* at 1069.

²⁶⁹ *Id.*

²⁷⁰ *Id.* at 1072–73.

²⁷¹ *Id.* at 1073 (citing *SKF USA, Inc. v. Int'l Trade Comm'n*, 423 F.3d 1307, 1312 (Fed. Cir. 2005)).

²⁷² *Id.*

²⁷³ *Davidoff & CIE, SA v. PLD Int'l Corp.*, 263 F.3d 1297, 1302 (11th Cir. 2001).

²⁷⁴ *Id.* at 1299.

²⁷⁵ *Id.*

²⁷⁶ *Id.* at 1299–1300. Etching the glass to remove the batch code constituted an alteration of the product and might cause consumers to believe the product had been harmed or tampered with. Removal of the batch code also interfered with Davidoff's quality control system. *Id.* at 1300, n. 4.

²⁷⁷ *Id.* at 1302.

²⁷⁸ *Id.* (observing that a myriad of considerations may influence consumer preferences, and therefore the threshold of materiality must be kept low to include even subtle differences between products).

product is composed of a bundle of special characteristics,” and consumers who purchase a particular product expect to receive the same special characteristics every time.²⁷⁹ Even though there was no indication the contents of the bottles had been altered in any way, the obliteration of the batch code on PLD’s bottles constituted a material difference. The court believed that a consumer’s decision to purchase a fragrance is based, in part, on the “commercial magnetism” of the trademark affixed to the bottle, and the district court had concluded that the etching had degraded the appearance of the stylized bottle.²⁸⁰ Such an alteration could adversely affect Davidoff’s goodwill and was sufficient to satisfy the material difference exception to the first sale doctrine.²⁸¹

6. *Other Material Alterations to New Products*

Other types of alterations to new products can also constitute material alterations that are confusing to consumers. In *Bulova Watch Co., Inc. v. Allerton Co., Inc.*, the defendants used Bulova watch movements (bearing the BULOVA mark) which were transferred from their original cases into diamond-decorated cases purchased from a watch case manufacturer.²⁸² The watches were then sold through catalogs under the tradename “Treasure Mates,” but the catalog pages prominently feature the BULOVA mark in connection with the diamond-decorated watches.²⁸³ The district court concluded customers would likely believe they were buying Bulova watches in diamond cases, given the prominence of the BULOVA mark on the page.²⁸⁴

The Seventh Circuit agreed that the defendants’ recasing operation resulted in a new construction.²⁸⁵ It commented:

The case of a wrist watch is a necessary and integral part of the complete product. The substitution of a different crown and case by defendants results in a different product. The watch is no longer a Bulova watch. It is a new and different ‘watch’ albeit one containing a ‘movement’ manufactured by Bulova. The case is not Bulova’s and its fitting does not represent Bulova workmanship.²⁸⁶

As a result, the court determined any use of the trademark in connection with the defendants’ product must be done in such a way that the public is not deceived. If the defendants wanted to make any use of the BULOVA trademark in the catalogs, it was required to make a full disclosure including the recasing process, that they were not

²⁷⁹ *Id.* at 1301 (citing *Societe Des Produits Nestle, S.A. v. Casa Helvetia, Inc.*, 982 F.2d 633, 636 (1st Cir. 1992)).

²⁸⁰ *Id.* at 1302–03.

²⁸¹ *Id.* at 1303; *see also* *John Paul Mitchell Sys. v. Pete-N-Larry’s Inc.*, 862 F. Supp. 1020, 1027 (W.D.N.Y. 1994) (determining that the removal of batch codes from bottles of hair care products constitutes a material difference, where it left noticeable marks on the bottle and erased some of the printed consumer information).

²⁸² 328 F.2d 20, 21 (7th Cir. 1964).

²⁸³ *Id.*

²⁸⁴ *Id.* at 21–22.

²⁸⁵ *Id.* at 23.

²⁸⁶ *Id.*

connected to Bulova, and that the watch did not carry a Bulova warranty.²⁸⁷

Compare another case involving watches, where the defendant, Meece, sold new Rolex watches but added non-Rolex parts to them, including diamond bezels.²⁸⁸ Meece only sold his products to jewelers, and his advertising clearly disclosed that the parts he added to the watches were not genuine Rolex parts, that he was not affiliated with Rolex, and that the addition of the non-Rolex parts voided the Rolex warranty.²⁸⁹ The district court held that Rolex had established a substantial likelihood of confusion regarding Meece's sale of the reconstructed watches, and it entered an order enjoining Meece from selling the reconstructed watches—an order that the Tenth Circuit affirmed.²⁹⁰ However, the district court determined that Meece's infringing conduct was not deliberate and it declined to enter an award of treble damages and attorney's fees.²⁹¹ On appeal, the Tenth Circuit observed that while there was considerable evidence that Meece's activities constituted trademark counterfeiting, the district court did not clearly err by finding no deliberate infringement. Meece was saved by the fact that he sold his watches only to retail jewelers, not to consumers, and his advertising materials disclosed that he was not affiliated with Rolex and that his modifications voided the Rolex warranty.²⁹²

7. *Placing Fake Products Inside Genuine Packages*

Placing fake products into packaging bearing genuine trademarks can also result in liability under the Lanham Act. For example, in *General Electric Co. v. Speicher*, GE manufactured inserts (i.e., blades) for industrial cutting tools, including the "570" insert made with a specific substrate and coated with a trade secret coating.²⁹³ Defendant Speicher supplied phony inserts made from a different substrate and coated them with a different formula, etched them with the "570" code, and packaged them in GE boxes supplied to him by an authorized GE distributor.²⁹⁴ The district court concluded these were not counterfeits, since the GE mark had been placed on the boxes by GE (i.e., they were not counterfeits in the "literal sense" because the marks on boxes were genuine).²⁹⁵

Judge Posner, writing for the Seventh Circuit, disagreed. He pointed out that the aim of the Lanham Act is broader than merely preventing unauthorized copying of a trademark. Instead, the Act is intended "to prohibit the use of your trademark on

²⁸⁷ *Id.* at 23–24.

²⁸⁸ *Rolex Watch USA, Inc. v. Meece*, 158 F.3d 816, 819 (5th Cir. 1998).

²⁸⁹ *Id.*

²⁹⁰ *Id.* at 821–22, 831.

²⁹¹ *Id.* at 824.

²⁹² *Id.* at 828.

²⁹³ 877 F.2d 531, 533 (7th Cir. 1989) (noting that the distributor hoped to undercut GE's pricing and win a contract to supply inserts to Chrysler).

²⁹⁴ *Id.*

²⁹⁵ *Id.* at 534.

someone else's product without your authorization."²⁹⁶ Sometimes an infringer has a genuine trademark, but he is an infringer for using it without authorization.²⁹⁷ Here, there was no difference between placing non-GE goods in genuine GE boxes and making a reproduction of GE's trademark. The court stated that "the purpose of trademark law is not to guarantee genuine trademarks but to guarantee that every item sold under a trademark is the genuine trademarked product, and not a substitute."²⁹⁸

8. *Goods Not Subjected to Appropriate Quality Controls*

Trademark infringement may also be found when a distributor resells goods without observing appropriate quality control procedures. For example, reselling bulk oil purchased from an authorized distributor under the original trademark, without observing the stringent quality control standards the producer imposed on its trademark licensees, resulted in a likelihood of customer confusion as to the quality and source of the bulk oil.²⁹⁹ The court stated that "a product is not truly 'genuine' unless it is manufactured and distributed under quality controls established by the manufacturer."³⁰⁰ In another instance, a wholesaler purchased Coors beer from an authorized distributor in another state without making any effort to maintain the quality control standards of Coors.³⁰¹ The beer was not refrigerated and was sold well beyond its expiration date, resulting in deterioration in its flavor and quality. The court concluded the acts of the defendant posed a threat to the quality assurance function of the Coors trademarks, even though the defendant did nothing deliberately to alter the beer itself or its packaging.³⁰² The defendant was permanently enjoined from unauthorized distribution and sale of Coors beer, and the court ordered that all Coors beer in the defendant's possession was to be destroyed.³⁰³

²⁹⁶ *Id.*

²⁹⁷ *Id.* Judge Posner pointed out that the most common cases involve distributors. A distributor licensed to sell one trademarked product may decide to sell a different product in the trademarked containers he received from his supplier, or a distributor may continue using a trademark after his license has expired. Both types of activity have been held to violate 15 U.S.C. § 1114(1)(a).

²⁹⁸ *Id.*; see also *Mobil Oil Corp. v. Auto-Brite Car Wash, Inc.*, 615 F. Supp. 628, 631 (D. Mass. 1984) (finding that selling non-Mobil gasoline under the Mobil trademark, without informing customers the gas was not from Mobil, established a likelihood of confusion); *Franchised Stores of N.Y. v. Winter*, 394 F.2d 664, 668 (2d Cir. 1968) (finding that selling ice cream products not manufactured by Carvel in containers bearing the "Carvel" mark was likely to produce consumer confusion).

²⁹⁹ *Shell Oil Co. v. Com. Petroleum, Inc.*, 928 F.2d 104, 108 (4th Cir. 1991). The district court found the quality control standards imposed by Shell, the producer, were necessary to maintain the quality of its bulk oil and were an integral part of the product identified by Shell's trademarks.

³⁰⁰ *Id.* at 107.

³⁰¹ See *Adolph Coors Co. v. A. Genderson & Sons, Inc.*, 486 F. Supp. 131, 133 (D. Col. 1980).

³⁰² *Id.* at 135-36.

³⁰³ *Id.* at 137. See also *J.C. Penney Co. v. Charbeth's Little General Store*, 185 U.S.P.Q. 254 (E.D.N.Y. 1975); *J.C. Penney Co. v. Parrish Co.*, 339 F. Supp. 726 (D. Idaho 1972) (finding trademark infringement where defendants acquired and resold Penney's merchandise that was damaged, several years old, or out of style).

9. *Overruns, Surplus and Rejected Goods*

Civil trademark actions have also found that production overruns, surplus goods, and rejected goods can give rise to actions for infringement.³⁰⁴ Even though goods are initially produced under the authority of the trademark owner, they are nevertheless not genuine products when distributed without the authorization of the mark's owner. In the *El Greco Leather Products* case, El Greco canceled a contract with its manufacturer, Solemio, when it became dissatisfied with Solemio's performance, but Solemio continued to produce shoes under El Greco's CANDIE'S mark.³⁰⁵ Solemio sold over 7,000 pairs of unauthorized CANDIE'S shoes to Shoe World at approximately half its contract price with El Greco, and Shoe World resold them to the public for substantially less than El Greco's sale price.³⁰⁶ The court decided El Greco was entitled to relief under § 32 of the Lanham Act. The shoes sold by Shoe World were not genuine CANDIE'S shoes, and El Greco never consented to the use of its trademark on those shoes.³⁰⁷

A trademark owner may be less successful at asserting its rights where the trademark owner failed to control the distribution of its products. Analog Devices, Inc. was denied a preliminary injunction against a reseller of computer chips bearing Analog's mark, where Analog inspected the chips, rejected them due to inferior quality, and then sold them without removing its trademark or placing any restrictions on their resale.³⁰⁸ The Ninth Circuit held that the district court did not abuse its discretion in finding the chips to be "genuine" goods to which the first sale doctrine very well might apply, since Analog did not take adequate measures to ensure that the rejected chips were destroyed and the defendants sold them "as is" to sophisticated purchasers.³⁰⁹

Several cases about gray market goods have produced similar results.³¹⁰ The Second Circuit held that importing and selling Cabbage Patch Kids dolls manufactured in Spain constituted trademark infringement, where the dolls were only

³⁰⁴ Cf. 15 U.S.C. § 2320(f)(1)(A) (criminalizing trafficking in counterfeit goods and services, and expressly providing that the term "counterfeit mark" does not include any mark used in connection with goods where the manufacturer or producer was, at the time of the manufacture or production in question, authorized to use the mark—this language has been construed to include overruns, surplus, and gray market goods).

³⁰⁵ 806 F.2d 394 (2d Cir. 1986).

³⁰⁶ *Id.*

³⁰⁷ *Id.* at 396. Further, even though Shoe World was not involved in the manufacture of the shoes or placing the CANDIE'S mark on them, sale of the shoes was a sufficient use of the mark to subject it to liability. *Id.*

³⁰⁸ *Analog Devices, Inc. v. W. Pac. Indus.*, No. 97-56329, 1998 WL 405865, *1-2 (9th Cir. 1998).

³⁰⁹ *Id.* at *3.

³¹⁰ If gray market goods are not "genuine," then a trademark owner can sue an importer for trademark infringement. Such goods are considered to be "genuine" when they do not materially differ from the trademark owner's product. See *Hokto Kinoko Co. v. Concord Farms, Inc.*, 738 F.3d 1085, 1093 (9th Cir. 2013).

authorized for distribution in Spain and Andorra.³¹¹ The dolls manufactured in Spain were materially different from dolls intended for sale in the U.S. because they were accompanied by Spanish-language birth certificates and adoption papers and were not entitled to various services available to dolls manufactured for sale in the U.S., thereby resulting in consumer confusion.³¹² Similarly, in two cases involving food products, courts have held that gray market goods are “genuine” only if they are not materially different from the trademark owner’s products offered for sale in the U.S. Material differences existed where products intended for sale in Mexico had Spanish-language labels, different information on the nutrition labels, and different sugar and fat content.³¹³ Material differences were also found where the authorized distributor of PERUGINA chocolates (made in Italy) in Puerto Rico purchased Venezuelan-made chocolates from a middleman, imported them into Puerto Rico, and sold them under the PERUGINA mark.³¹⁴ The court concluded that any difference between the trademark owner’s product and the gray market goods that consumers would likely consider to be relevant when purchasing a product creates a presumption of consumer confusion sufficient to support an action for trademark infringement.³¹⁵ Differences in quality control and the quality of the goods, as well as differences in presentation, ingredients, and price, were all relevant to determining whether material differences existed between the Italian and Venezuelan chocolates.³¹⁶

As a result, the problem isn’t that the Lanham Act does not provide a cause of action for trademark infringement and counterfeiting that would apply where a broker sells parts bearing the trademark of the actual manufacturer but where the model numbers, date codes, serial numbers, or other markings have been changed. Instead, it seems more likely that trademark owners are either unwilling or unable to bring civil actions against counterfeiters. There are a number of reasons why they might be reluctant to do so.

B. Parts Manufacturers May Be Concerned that Filing Trademark Infringement Suits Will Damage Their Brands

Trademark owners are frequently concerned about negative publicity generated by filing a lawsuit. Researchers at Texas A&M found that filing a trademark infringement suit often has a negative impact on a company’s stock price, apparently because this is the first point at which investors learn of the problem and have an

³¹¹ Original Appalachian Artworks, Inc. v. Granada Elec., Inc., 816 F.2d 68, 70–74 (2d Cir. 1987).

³¹² *Id.* at 73.

³¹³ Nestle USA, Inc. v. Best Foods LLC, 562 F. Supp. 3d 626, 631 (C.D. Cal. 2021).

³¹⁴ Societe des Produits Nestle, S.A. v. Casa Helvetica, Inc., 982 F.2d 633 (1st Cir. 1992).

³¹⁵ *Id.* at 641.

³¹⁶ *Id.* at 642–44; *see also* TracFone Wireless, Inc. v. Pak China Group Co. Ltd., 843 F. Supp. 2d 1284, 1296–97 (S.D. Fla. 2012) (finding that prepaid mobile phones that defendants subsequently unlocked and sold in foreign countries were materially different because their warranties were voided). *But see* NEC Elecs. v. Cal Cir. Abco, 810 F.2d 1506, 1510 (9th Cir. 1987) (deciding that, where two entities are commonly controlled, control over the quality of the products is not a concern).

opportunity to reassess expected future cash flows.³¹⁷ Based on a review of 1,918 trademark infringement cases filed by U.S. companies between 2009-2014, they determined that the average cumulative abnormal return (CAR) at the time of filing across all types of trademark infringement cases was both negative and at least marginally significant.³¹⁸ Firms filing cases involving allegations of counterfeiting experienced the strongest negative stock market reaction.³¹⁹ Allegations of online infringement were perceived to cause more damage to a brand than those taking place in traditional brick-and-mortar stores, and they also resulted in a more negative stock market reaction. In addition, the study showed that investors react more negatively to multiple cases of infringement, and the impact on share price was more severe for companies that did not frequently file trademark lawsuits.³²⁰

The researchers hypothesized that investors may consider the damages already incurred by the company, the high legal costs that will be incurred upfront, and the lack of any assurance that those costs will eventually be recouped.³²¹ While filing the lawsuit demonstrates that the company wants to protect its brand, investors apparently give more weight to the perceived downsides of litigation than to the prospect of potential relief from infringement.³²² Investors reacted even more negatively when a company *won* a trademark infringement suit—apparently winning the case confirmed the validity of the threat, and it caused investors to downgrade their expectations for the future since uncertainty remained about the long-term impact of infringement.³²³ The researchers did document more positive trends six months after winning a suit, suggesting that, “in the long run, firms are again able to exceed expectations, although not by as much as they did before the filing.”³²⁴

The House Report accompanying the Anticounterfeiting Consumer Protection Act observed that consumer awareness of counterfeiting can also damage a company’s reputation and reduce its sales.³²⁵ Trademark owners are aware customers may be “reluctant to buy a particular brand that is known to be counterfeited for fear that they may mistakenly purchase a substandard copy rather than the genuine

³¹⁷ Larisa Ertekin, Alina Sorescu & Mark B. Houston, *Hands Off My Brand! The Financial Consequences of Protecting Brands Through Trademark Infringement Lawsuits*, 82 TEX. A&M UNIV. J. MKTG. 45, 47 (2018). Filing a patent infringement case, on the other hand, has a slightly positive effect. *Id.* at 46 (citing T.S. Raghu et al., *Market Reaction to Patent Infringement Litigations in the Information Technology Industry*, INFO SYS. FRONTIERS 61–75 (2008)).

³¹⁸ *Id.* at 53. An abnormal return is the difference between the realized rate of return of the stock and the expected rate of return in the absence of the event (here, the filing of the lawsuit). The average CARs calculated using two different models were -0.12% and -0.13%, corresponding to an average loss of millions of dollars in firm value. *Id.* at 53–54.

³¹⁹ *Id.* at 58.

³²⁰ *Id.* at 58–60.

³²¹ *Id.* at 47.

³²² *Id.* at 50.

³²³ *Id.* at 51. Higher damage awards actually resulted in a more negative stock market reaction, although for larger companies the negative effect was less severe. *Id.* at 61.

³²⁴ *Id.* at 62.

³²⁵ H.R. REP. NO. 104-556, at 2 (1996).

article.”³²⁶ Indeed, the report noted that the House experienced difficulty in finding companies willing to testify at a subcommittee hearing. “Some companies that had experienced significant counterfeiting problems were reluctant to testify because their testimony might have generated publicity, and past acknowledgment of counterfeiting had historically led to significant sales losses.”³²⁷ Victims are equally concerned about negative perceptions and are “reluctant to publicly admit that they have been duped.”³²⁸

C. Any Potential Recovery May Not Be Justified by The Costs, Or the Counterfeiters May Be Beyond the Reach of the Courts

In addition to concerns about the negative impacts on brand value and sales, manufacturers may also feel that any potential recovery is not justified by the costs of filing a case alleging trademark infringement and counterfeiting. First, the amount of money at stake may be relatively insignificant in the eyes of the trademark owner, particularly in a case involving only a few counterfeit parts. The market value of the authentic parts could be only a few thousand dollars, or even less.

In comparison, trademark actions can be expensive to maintain, and it would not be unusual to incur legal fees and other costs totaling hundreds of thousands of dollars.³²⁹ Based on data collected by the American Intellectual Property Law Association, in 2020 the average cost of litigating a trademark infringement action through trial ranged between \$325,000 and \$1 million, depending upon the amount in dispute.³³⁰ The Lanham Act authorizes a court to enter an award of attorney’s fees to a prevailing party in an exceptional case³³¹ (i.e., one in which the infringing party acts in a malicious, fraudulent, deliberate, or willful manner,³³² such as willful infringement or using vexatious litigation tactics). However, the amount of the award is discretionary, and no award of attorney’s fees or costs will be made until the case has successfully concluded in favor of the trademark owner. As discussed above, in a case involving the use of a counterfeit mark, Lanham Act § 35 also allows the plaintiff to elect to recover statutory damages instead of actual damages and profits. Again, the amount is entrusted to the discretion of the court.³³³

³²⁶ *Id.*

³²⁷ *Id.*

³²⁸ Yang, *supra* note 88 (concluding that in most instances, counterfeit parts go unreported); *see also* Rob Spiegel, *Counterfeiting Continues to Grow but the Industry Fights Back*, ERAI (Mar. 3, 2011) (“Companies are reluctant to reveal that they’ve run into counterfeit parts because it may be bad for business.”).

³²⁹ In the 1992 *Intel* case, the district court entered an order directing Terabyte to pay Intel’s attorney’s fees in the amount of \$206,410. However, on appeal, that order was set aside and returned to the district court for further consideration. *See Intel Corp. v. Terabyte Int’l, Inc.*, 6 F.3d 614, 621–23 (9th Cir. 1993).

³³⁰ AMERICAN INTELL. PROP. L. ASS’N, AIPLA REPORT OF THE ECONOMIC SURVEY 63 (2021).

³³¹ 15 U.S.C. § 1117(a).

³³² *Securacomm Consulting, Inc. v. Securacom, Inc.*, 224 F.3d 273, 281 (3d Cir. 2000); *Burger King Corp. v. Pilgrim’s Pride Corp.*, 15 F.3d 166, 168 (11th Cir. 1994).

³³³ 15 U.S.C. § 1117(c).

Trademark owners may also be concerned that even if they are able to secure a judgment against a counterfeiter (including compensatory damages, attorney's fees, and costs), the defendant may be judgment-proof because it lacks the economic means to satisfy any judgment. Further, if the counterfeiter is located in another country, U.S. courts may be unable to exercise jurisdiction over them in the first place. Two trademark litigators explained:

The foreign or judgment-proof defendant has long been the bane of counterfeit litigation. Companies have exhausted entire legal budgets chasing defendants in mainland China with little or no chance of recovery. While foreign strategies are not without merit, they are expensive and transform the enforcement/legal department into an expensive cost center within a company.³³⁴

In many instances, the trademark owner may not be able to identify the original counterfeiter and will be required to pursue other participants in the supply chain under a theory of joint and several liability.

Moreover, if parts were purchased on e-commerce platforms, the online marketplace or service provider is typically immune from suit under the rule created in *Tiffany (NJ) Inc. v. eBay Inc.*³³⁵ There, the court held that for contributory trademark infringement liability to exist, a service provider must have more than a general knowledge or reason to know that its service is being used to sell counterfeit goods. "Some contemporary knowledge of which particular listings are infringing or will infringe in the future is necessary."³³⁶ The requirement of actual knowledge has created a safe harbor for e-commerce platforms.

Mass counterfeiting cases developed as a reaction to the *Tiffany* ruling, as a way to potentially reach the entities responsible for infringing listings, and mass counterfeiting litigation has proliferated during the past ten years.³³⁷ Mass counterfeiting cases allege trademark counterfeiting against a large number of defendants who are typically listed on an attached "Schedule A."³³⁸ Schedule A, and therefore the identity of the defendants, may be held under seal for at least part of the case's pendency. In some instances, the plaintiffs themselves remain anonymous for some amount of time.³³⁹ The defendants are usually websites, Paypal accounts, store I.D. numbers, and other aliases and anonymous entities; in many cases, their identities

³³⁴ See Christopher S. Finnerty & Morgan T. Nickerson, *Business as Usual: Think of the Battle Against Counterfeiting Simply as a Normal Expense*, CC CORPORATE COUNSEL (May 1, 2011), <https://www.bloomberglaw.com/document/XDLS9A8C000000?jsearch=1202489517918>.

³³⁵ 600 F.3d 93 (2d Cir. 2010).

³³⁶ *Id.* at 107. See also discussion *infra* Section IV(A).

³³⁷ RACHEL BAILEY, LEX MACHINA COPYRIGHT AND TRADEMARK LITIGATION REPORT 6 (2021). Mass counterfeiting cases accounted for only 3% of trademark filings in 2015, but by 2020 they made up 16% of cases filed. *Id.* In 2022, the number had increased to 22% (919 out of 4,193 cases filed).

³³⁸ *Id.* at 6.

³³⁹ See, e.g., Complaint, XYZ Corp. v. The P'ships & Unincorp. Ass'ns Identified on Schedule A, No. 1:22-CV-02604 (N.D. Ill. May 17, 2022). The Complaint states, "[s]ince it is unknown when Plaintiff's forthcoming Motion for a Temporary Restraining Order will be ruled on, Plaintiff's name has been removed to prevent Defendants from getting advance notice." *Id.* at 1 n.1.

overlap to an extent that may be difficult to determine.³⁴⁰ Often the individuals responsible for these websites and accounts are located in another country, but they are subject to personal jurisdiction in the filing district because they target the U.S. as a market for their counterfeit products.³⁴¹

Currently, the vast majority of mass counterfeiting cases are filed in the Northern District of Illinois (approximately 62%).³⁴² A large number of cases are also brought in the Southern District of Florida (approximately 19%), with a smaller group being filed in the Southern District of New York (9%).³⁴³ The high concentration of cases in these jurisdictions may be due to permissive joinder rules. Federal Rule of Civil Procedure 20(a)(2) allows joinder of defendants in one action if:

- (A) Any right to relief is asserted against them jointly, severally, or in the alternative with respect to or arising out of the same transaction, occurrence, or series of transactions or occurrences; and
- (B) Any question of law or fact common to all defendants will arise in the action.³⁴⁴

Some courts have interpreted “transaction or occurrence” broadly and have allowed multiple defendants selling the same counterfeit products online in a coordinated fashion to be joined in one action. For example, the Northern District of Illinois observed that counterfeiters take advantage of the anonymity and mass reach of the internet, along with the cover afforded by international borders, to violate companies’ trademarks “with impunity.”³⁴⁵ The court also recognized that the defendants may even understand that “their ability to profit through anonymous internet stores is enhanced as their numbers increase, even though they do not engage in direct communication or coordination.”³⁴⁶ Since most defendants in mass counterfeiting cases do not make an appearance and the cases end in default judgment, joinder becomes a practical and efficient solution.³⁴⁷

³⁴⁰ BRIAN C. HOWARD & JASON MAPLES, LEX MACHINA TRADEMARK LITIGATION REPORT 10 (2016).

³⁴¹ *See, e.g.*, Complaint ¶ 7, CreeLED, Inc. v. The Individuals, P’ships, & Unincorp. Ass’ns Identified on Schedule A, No. 0:23-CV-60114 (S.D. Fla. Jan. 22, 2023) (“Defendants are subject to personal jurisdiction in this District because they direct business activities toward and conduct business with consumers throughout the United States, including the State of Florida and this District through at least the internet based e-commerce stores and fully interactive commercial internet websites accessible in Florida and operating under the Seller IDs.”).

³⁴² Based on data obtained from Lex Machina and last verified on Feb. 25, 2023.

³⁴³ *Id.*

³⁴⁴ Fed. R. Civ. P. 20(a)(2).

³⁴⁵ *Bose Corp. v. The P’ships & Unincorp. Ass’ns Identified on Schedule A*, 334 F.R.D. 511, 516 (N.D. Ill. 2020).

³⁴⁶ *Id.*

³⁴⁷ *Id.* at 517–18 (stating that the court was no longer particularly concerned with the joinder of multiple defendants alleged to be counterfeiters); *Cf. Restoration Hardware, Inc. v. Sichuan Wei Li Tian Xia Network Tech. Co., Ltd.*, 2023 WL 1769189 (N.D. Cal. Feb. 3, 2023) (denying joinder despite efficiency concerns because each defendant has a right to mount an individualized defense). Other courts have objected that joining multiple defendants in one case undermines judicial economy. *See Estee Lauder Cosmetics Ltd. v. The P’ships & Unincorp. Ass’ns Identified on Schedule A*, 334 F.R.D. 182, 189–90 (N.D. Ill. 2020).

Courts have the power to enter injunctions seizing control of various assets of the defendants, including internet sites and financial accounts. In one case in Florida, Louis Vuitton alleged that a named defendant and numerous unknown associates residing in the People's Republic of China were engaged in counterfeiting activities over the internet, involving the sale of handbags, wallets and other items bearing counterfeit Louis Vuitton marks.³⁴⁸ The court granted a preliminary injunction restraining defendants from further use of the marks; it also placed domain names in trust and ordered Western Union to hold all money transfers to the named defendant from U.S. consumers.³⁴⁹ In another situation, the court initially entered an asset restraint as part of a preliminary injunction; after entering a default judgment, it then ordered that defendants' online marketplace accounts, web hosts, sponsored search engine and ad-word providers, credit cards, banks, merchant account providers, payment processing service providers, and internet search engines were required to disable and cease providing services to the defendants.³⁵⁰ The court also awarded statutory damages in the amount of \$1 million per defendant, and it ordered that any third party providers holding funds for the defendants (such as PayPal, Alipay, and Amazon Pay) should restrain funds held in defendants' accounts and transfer them to the plaintiff.³⁵¹

Litigation data analyzed by Lex Machina confirms that most mass counterfeiting cases end in default judgments with large damage awards.³⁵² The damages are "awarded as a rate (e.g., \$2,000,000 per defendant, where each defendant is separately liable) instead of as a lump sum (e.g., \$10,000,000 against all defendants, where defendants are jointly and severally liable)."³⁵³ However, the data also shows that even though the amount of damages awarded in a mass counterfeiting case is often very high, those damages are almost never collected.³⁵⁴ Instead, the plaintiff must be satisfied with an injunction. Even if the defendants never appear and the plaintiff is awarded a default judgment, a mass counterfeiting action is expensive to prepare and prosecute, and it is an ongoing distraction that diverts the plaintiff's attention from its real business of running a company and producing innovative technologies. It is unclear whether the costs justify the results.

³⁴⁸ *Louis Vuitton Malletier, S.A. v. Yanling Feng*, 2011 WL 13217567 (S.D. Fla. May 11, 2011).

³⁴⁹ *Id.* at *1 (noting that the court had already granted a temporary restraining order to the same effect).

³⁵⁰ Final J. Order at 1, 5, 7, *Western Digital Tech., Inc. v. Xiaolong1988*, No. 18-CV-03453 (N.D. Ill. Sept. 6, 2018).

³⁵¹ *Id.* at 7–8.

³⁵² LEX MACHINA TRADEMARK LITIGATION REPORT 2016, *supra* note 340, at 10.

³⁵³ *Id.* Other cases end in consent judgments, likely indicating that the parties reached a settlement.

³⁵⁴ *Id.*

D. There May Be Inadequate Evidence to Support a Case Alleging Trademark Infringement or Counterfeiting

Parts manufacturers may be hampered in their ability to bring actions for trademark counterfeiting due to a lack of evidence necessary to support their cases. There is a long-standing industry practice of simply labeling chips and other electronic parts as “suspect counterfeit,” rather than “counterfeit,” and independent test labs are sometimes prevented from concluding that parts are “counterfeit.” A “suspect counterfeit electronic part” has been defined as “an electronic part for which credible evidence (including, but not limited to, visual inspection or testing) provides reasonable doubt that the electronic part is authentic.”³⁵⁵ That means a “suspect counterfeit” has not been confirmed to be a counterfeit part; instead, there is just reasonable doubt about its authenticity. The practice of characterizing electronic parts as “suspect counterfeit” rather than “counterfeit” had been attributed to a fear of incurring liability for defamation if a part is erroneously identified as a counterfeit.³⁵⁶ As a result, parts manufacturers may not have sufficient confidence or supporting evidence to support an action for counterfeiting.

Developing that evidence could be extremely expensive in some situations. Industry standards suggest a suite of inspection and testing techniques to determine whether a part is counterfeit, including a detailed physical examination (consisting of a visual inspection, solvent tests, and a mechanical inspection) followed by advanced inspection techniques, some of which involve destructive testing (e.g., solderability testing, fluorescent dye penetrant, X-ray fluorescence analysis, X-ray examination, acoustic microscopy testing, and decapsulation).³⁵⁷ SAE’s Standard AS6171 requires that the amount of testing be based on the level of assessed risk for the part, which takes into account the risk that the part is counterfeit and the potential impact that part failure could have on the system into which it is incorporated.³⁵⁸ At a moderate level of risk (the default level), AS6171 recommends, at a minimum: general and detailed visual inspection, DC electrical testing, solvent testing for remarking and resurfacing, evaluation of part dimensions, X-ray fluorescence spectroscopic analysis of the composition of leads or terminations and other materials of construction, X-ray inspection of part construction, and inspection of internal construction through

³⁵⁵ 48 C.F.R. § 252.246-7007. Industry standards have adopted a similar definition. *See, e.g.*, SAE STANDARD AS6171A, *supra* note 54, at 7 (defining a “suspect counterfeit part” as a part “for which there is objective, credible evidence indicating that the part is likely a Counterfeit Part”).

³⁵⁶ This concern was addressed directly when the federal government created reporting requirements for government contractors, who are required to submit a report to GIDEP within 60 days of becoming aware that an item purchased on behalf of the government is a counterfeit or a suspected counterfeit. The rule created a safe harbor that provides that a contractor will not be subject to civil liability for reporting, provided that the contractor made a reasonable effort to determine that the report was factual. 48 C.F.R. § 52.246-26(f).

³⁵⁷ IDEA-STD-1010-B: ACCEPTABILITY OF ELECTRONIC COMPONENTS DISTRIBUTED IN THE OPEN MARKET §§ 10–11 (INDEP. DISTRIB. OF ELECS. ASS’N 2011).

³⁵⁸ SAE STANDARD AS6171, *supra* note 54, § 3.1.

destructive physical analysis.³⁵⁹ Testing must be performed on a minimum quantity of samples based on the overall size of the lot under evaluation.³⁶⁰ The associated cost could be \$3,400.³⁶¹

In addition to cost concerns, parts manufacturers may also be concerned that they will be accused of anticompetitive behavior if they pursue counterfeiters. Any discussion of counterfeiting legislation almost immediately evokes concerns that brand owners will use the trademark laws to engage in anticompetitive behavior ranging from price fixing to driving competing sellers out of the market.³⁶² In a recent debate about liability for contributory infringement,³⁶³ some groups expressed concern that trademark owners will pursue sellers of genuine, but competitive, goods and will destroy the secondary market for legitimate products, resulting in harm to consumers.³⁶⁴ Others complained that it is “unfortunately common for purported trademark owners to overreach” and to engage in bullying behaviors.³⁶⁵

E. Parts Manufacturers Rely on Cease-and-Desist Letters When Dealing with Brokers and Unauthorized Distributors

Some parts manufacturers choose to rely on cease-and-desist letters rather than filing civil actions alleging trademark infringement. This strategy may be particularly effective when dealing with a broker that is not an authorized distributor and is using an original manufacturer’s marks without permission.³⁶⁶ Commentators have also suggested that targeted use of demand letters to the registrants and internet service providers for infringing websites is “a more cost-effective means of deterring low-priority counterfeit behavior.”³⁶⁷

³⁵⁹ *Id.* § 3.4.

³⁶⁰ *Id.* § 3.5. For example, on lots of more than 200 parts, a minimum of 116 parts must be subjected to electrical testing.

³⁶¹ *SAE Counterfeit Defect Coverage Tool*, SAE INT’L, <http://cdctool.sae.org/> (last visited June 11, 2023).

³⁶² S. REP. NO. 98-526, at 3 (1984).

³⁶³ See *infra* Section IV(A).

³⁶⁴ U.S. PATENT AND TRADEMARK OFFICE, SECONDARY TRADEMARK INFRINGEMENT LIABILITY IN THE E-COMMERCE SETTING 7 (2021).

³⁶⁵ Trevor Little, *Suggestion of Applying Contributory Liability for Counterfeit Sales to E-Commerce Platforms Proves Divisive*, WORLD TRADEMARK REVIEW (2021), <https://www.worldtrademarkreview.com/article/suggestion-of-applying-contributory-liability-counterfeit-sales-e-commerce-platforms-proves-divisive>.

³⁶⁶ See COUNTERFEIT MICROELECTRONICS POLICY ANALYSIS, *supra* note 69, at 224. Andrew Olney, the General Manager of Technology Development at Analog Devices, Inc., indicated that if Analog sees a broker using the Analog logo, it will send a cease-and-desist letter to that broker. He noted that, upon receipt of a cease-and-desist letter, the vast majority of brokers in the U.S. will stop displaying the Analog logo. The strategy is not always effective, though, and a few brokers may simply set up another company with a new name and then continue using the Analog logo and trademarks.

³⁶⁷ Finnerty & Nickerson, *supra* note 334 (recognizing that while this does not stop the manufacturer of the counterfeits, it forces sellers to rehost their website and to face the threat of having it constantly removed by the ISP).

Relying on cease-and-desist letters may result in unintended negative consequences, however. If a parts manufacturer sends a cease-and-desist letter to an accused counterfeiter, it may lose any right to obtain an ex parte seizure order from the court, thereby forfeiting one of the valuable tools provided by Lanham Act.³⁶⁸ Sending a cease-and-desist letter could also result in the commencement of a declaratory judgment action by the prospective defendant, potentially in a district where the manufacturer would prefer not to litigate, or it could result in the goods or the counterfeiter disappearing from the jurisdiction.³⁶⁹ The recipient of an aggressive demand letter may also use social media to post the letter and subject the trademark owner to public scorn.³⁷⁰ “Being perceived as a trademark bully does not help the brand’s reputation.”³⁷¹

In addition, some parts manufacturers may avoid filing lawsuits for trademark counterfeiting (or even for breach of contract) because the distributors of counterfeit parts are their own customers or distributors, and suing one’s customers is almost never a sound business strategy.³⁷² Authorized distributors are only “authorized” for certain parts, not for all parts originating from an OCM. That means they might be functioning as both authorized and unauthorized distributors. Many authorized distributors of electronic parts also sell unauthorized products, and distributors will sometimes seek out parts for a particular customer, essentially acting as a broker in those transactions.³⁷³

F. Parts Manufacturers Pursue a Business Strategy Rather Than a Legal Strategy

Perhaps due in part to these concerns, manufacturers of chips and other electronic parts typically pursue a strategy that places responsibility for avoiding counterfeit parts on the purchaser rather than on manufacturers and suppliers. They

³⁶⁸ 15 U.S.C. § 1116(d)(4)(B) (stating that the court may not grant an application for a seizure order unless it clearly appears that the applicant has not publicized the requested seizure).

³⁶⁹ Bradley J. Olson et al., *The 10 Things Every Practitioner Should Know About Anti-Counterfeiting and Anti-Piracy Protection*, 7 J. HIGH TECH. L. 106, 115 (2007).

³⁷⁰ Peter Sloane, Chelsea Russell & Christina Sauerborn, *Trademark Vigilance in the Twenty-First Century: An Update*, 30 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1197, 1222–23 (2020) (“An overly aggressive letter may find its way to Lumen, formerly known as Chilling Effects, a database which collects legal complaints and requests for removal of online materials. Many cease-and-desist letters can also be found in the searchable database of the Electronic Frontier Foundation.”).

³⁷¹ *Id.* at 1223.

³⁷² Even in the *Beltronics* case, *supra* note 270, at 1325, Beltronics’ authorized distributors were not named as defendants, despite the fact that they were selling Beltronics products to defendant Midwest Inventory Distribution outside the geographic area in which they were supposed to be selling Beltronics merchandise to dealers. The serial number labels on the Beltronics radar detectors were either removed or replaced with fake labels, allegedly to prevent Beltronics from detecting the unauthorized distribution.

³⁷³ See SIA ANTICOUNTERFEITING WHITEPAPER, *supra* note 14, at 19 (noting that a given distributor may carry a very broad line of components and may only be an authorized distributor for a subset of those components).

contend that “[t]he key to winning the battle against counterfeit semiconductors is elegantly simple: [e]xclusively buy semiconductor products either directly from the Original Component Manufacturer (OCM) or directly from the OCM’s Authorized Distributors/Resellers.”³⁷⁴ They argue that purchasing exclusively through authorized sources will eliminate the need for expensive, time-consuming testing, which they believe is often prone to error.³⁷⁵ Purchases from outside the authorized supply chain do not come with warranties or other services, and manufacturers explain that even if parts are authentic, there is no way to prove that they have not been improperly stored or mishandled, thereby compromising their quality and reliability.³⁷⁶ Parts manufacturers also recognize that the purchasers are sophisticated buyers acting on behalf of manufacturers in numerous industry sectors and not ordinary consumers casually shopping in a store or on the internet. Others apparently deny that counterfeiting continues to be an ongoing concern today. Filing lawsuits against counterfeiters conflicts with these established business practices.

Semiconductor manufacturers have frequently been criticized for refusing to make authenticity determinations on suspect parts bearing their trademarks. Manufacturers acknowledge that they can often quickly make authenticity determinations if they are supplied with high-quality photos of parts or with physical samples,³⁷⁷ and many companies will conduct inspections and testing for law enforcement and CBP.³⁷⁸ However, original manufacturers generally do not provide these services to purchasers of parts. SIA explains:

This is because many billions of suspect components are available on the open market, and OCMs would need to staff large departments to try to respond to tens of thousands of authenticity requests from independent distributors and brokers as well as individuals or companies buying from these non-authorized sources. . . . [A]s with other industries, there is no viable business model for OCMs to provide free support on suspect products that may not have been manufactured by the OCM. Again, as with other industries, OCMs support products they sell through authorized channels; OCMs are not in the business of supporting counterfeits and other suspect products available on the open market.³⁷⁹

While that strategy may make sense in many instances, it fails to account for situations where parts are no longer in production and cannot be obtained from authorized distribution channels³⁸⁰ or where there is an unanticipated supply chain shortage and customers are suddenly being advised that there will be a lengthy wait for products from the OCM or an authorized distributor. In those instances, purchasers may be forced to look for alternative sources of supply in order to avoid having their manufacturing lines come to a halt.

³⁷⁴ *Id.* at 24.

³⁷⁵ *Id.*

³⁷⁶ *Id.* at 7, 17.

³⁷⁷ *Id.* at 17.

³⁷⁸ See, e.g., COUNTERFEIT MICROELECTRONICS POLICY ANALYSIS, *supra* note 69, app. 19, at 2.

³⁷⁹ SIA ANTICOUNTERFEITING WHITEPAPER, *supra* note 14, at 17.

³⁸⁰ SIA addresses this concern in its Whitepaper. It states that legacy components can often be purchased from authorized aftermarket distributors that maintain extensive inventories and, in many cases, are

Section IV. Proposals for Reform

Congress has attempted to make the Lanham Act an increasingly attractive tool for trademark owners as a way to encourage them to file civil actions for trademark infringement and counterfeiting, thereby fulfilling their duties as protectors of the public. The Act now provides for treble damages, statutory damages, injunctive relief, and ex parte seizure orders to preserve critical evidence. Given the dearth of civil actions filed against sellers of counterfeit chips and microelectronic parts and the potentially less-than-satisfying reasons trademark owners sometimes offer for not commencing such actions, it is apparent that the current law does not adequately incentivize trademark owners to bring actions for the sale of counterfeit electronic parts. A few reforms are worthy of discussion.

A. Recognize Contributory Liability for e-Commerce Platforms that Host Counterfeiters

Congress should amend the Lanham Act to specifically recognize contributory liability on the part of intermediaries that facilitate infringement. A large number of sales of counterfeit electronic parts take place through online marketplaces,³⁸¹ and that trend has only been exacerbated by the supply shortages following the Covid-19 pandemic.³⁸² Some counterfeiters purchase ads for chips on search engines as a way to attract buyers that then receive large shipments of counterfeit parts; others demand payment in advance and then never ship the fake parts.³⁸³ The Wall Street Journal reported that after one company could not source microchips from any of its usual vendors, it turned to an unknown seller on AliExpress, an online sales platform operated by Alibaba Group Holding Ltd.³⁸⁴ Many of the chips did not work, and the seller disappeared after the buyer received the defective parts.³⁸⁵ Similar stories are not infrequent.

The Supreme Court has confirmed that liability for trademark infringement can certainly extend beyond those who actually mislabel goods with the mark of another.³⁸⁶ The court stated:

authorized to manufacture discontinued products. *Id.* at 21.

³⁸¹ See U.S. GOVT. ACCOUNTABILITY OFF., REPORT TO THE COMMITTEE ON ARMED SERVICES: SUSPECT COUNTERFEIT ELECTRONIC PARTS CAN BE FOUND ON INTERNET PURCHASING PLATFORMS, GAO-12-375 (2012). The GAO created a fictitious company and gained access to two internet platforms with vendors selling military-grade electronic parts. GAO requested quotes for authentic parts, authentic parts with date codes after the last date the parts were manufactured, and fictitious parts with part numbers not associated with any authentic parts. It received numerous quotes for parts in all three categories, including the fictitious parts.

³⁸² Eric Allen Been, *Knockoff Semiconductor Chips Flood the Enterprise Market*, TECHREPUBLIC (Aug. 19, 2021), <https://www.techrepublic.com/article/knockoff-semiconductor-chips-flood-the-enterprise-market/>.

³⁸³ *Id.*

³⁸⁴ Yang, *supra* note 88.

³⁸⁵ *Id.*

³⁸⁶ *Inwood Labs., Inc. v. Ives Labs., Inc.*, 456 U.S. 844, 853 (1982).

Even if a manufacturer does not directly control others in the chain of distribution, it can be responsible for their infringing activities under certain circumstances. Thus, if a manufacturer or distributor intentionally induces another to infringe a trademark, or if it continues to supply its product to one whom it knows or has reason to know is engaging in trademark infringement, the manufacturer or distributor is contributorily [sic] responsible for any harm done as a result of the deceit.³⁸⁷

Under the *Inwood* test, then, a manufacturer or distributor will be liable for contributory infringement if (1) it induces another to infringe the trademark, or (2) it knows or has reason to know that another is engaging in trademark infringement and continues to supply its product to that person or entity.

Although the *Inwood* court only considered products provided by manufacturers and distributors, other courts applied the same standard in other contexts. For example, the owner of a flea market was in a landlord-tenant relationship with the operator of a stand selling counterfeit merchandise and, as a result, the flea market owner could be contributorily liable for trademark violations by the stand operator if it knew or had reason to know of them.³⁸⁸ The *Inwood* test was also expanded to apply to services, with the focus being placed on the extent of control exercised by the defendant over the third party's means of infringement.³⁸⁹ For contributory liability to exist, there must be "[d]irect control and monitoring of the instrumentality used by a third party to infringe the plaintiff's mark."³⁹⁰

Subsequently in *Tiffany (NJ) Inc. v. eBay, Inc.*, the Second Circuit considered contributory liability for infringement in the context of an online marketplace. Tiffany alleged that eBay facilitated the sale of counterfeit Tiffany products on its website, making eBay liable for contributory trademark infringement.³⁹¹ Specifically, Tiffany alleged that after it became aware counterfeit Tiffany merchandise was being sold on eBay's site, it conducted two buying programs where it purchased items on eBay and then inspected them to determine how many were counterfeit.³⁹² Over 73% of items purchased in the first program and over 75% of items purchased in the second program, were counterfeit.³⁹³ eBay claimed it took numerous steps to address

³⁸⁷ *Id.* at 853–54 (citing *William R. Warner & Co. v. Eli Lilly & Co.*, 265 U.S. 530, 531 (1924) (“One who induces another to commit a fraud and furnishes the means of consummating it is equally guilty and liable for the injury from unfair competition.”)).

³⁸⁸ *Hard Rock Café Licensing Corp. v. Concession Servs., Inc.*, 955 F.2d 1143, 1149 (7th Cir. 1992); *see also Fonovisa, Inc. v. Cherry Auction, Inc.*, 76 F.3d 259, 265 (9th Cir. 1996) (holding that a flea market can be contributorily liable for infringement where it supplies the necessary marketplace for the sale of infringing products); *Luxottica Group, S.P.A. v. Airport Mini Mall, LLC*, 932 F.3d 1303, 1313 (11th Cir. 2019).

³⁸⁹ *Lockheed Martin Corp. v. Network Sols., Inc.*, 194 F.3d 980, 984 (9th Cir. 1999) (finding registrar of domain names not liable for contributory infringement as a matter of law).

³⁹⁰ *Id.*; *see also Perfect 10, Inc. v. Visa Int’l Service Ass’n*, 494 F.3d 788, 807 (9th Cir. 2007) (holding Perfect 10 failed to allege facts sufficient to show direct control and monitoring of credit card payment network through which payments for infringing material was processed).

³⁹¹ *Id.* at 101.

³⁹² *Id.* at 97.

³⁹³ *Id.*

counterfeiting on its site, including establishing buyer protection programs, implementing a fraud engine designed to ferret out counterfeit listings, and administering a notice-and-takedown system, allowing trademark owners to report listings containing potentially infringing items.³⁹⁴ Nevertheless, eBay contended it never inspected the merchandise in its listings and had no knowledge of which particular items might be counterfeit.³⁹⁵

The district court concluded that “while eBay clearly possessed general knowledge as to counterfeiting on its website, such generalized knowledge is insufficient under the *Inwood* test to impose upon eBay an affirmative duty to remedy the problem.”³⁹⁶ Instead, Tiffany would have to show eBay knew or had reason to know of specific instances of actual infringement beyond those identified by third parties.³⁹⁷ The Second Circuit agreed and held that for contributory infringement liability to lie, “a service provider must have more than a general knowledge or reason to know that its service is being used to sell counterfeit goods.”³⁹⁸ “Some contemporary knowledge of which particular listings are infringing or will infringe in the future is necessary.”³⁹⁹

The Second Circuit rejected Tiffany’s proposed interpretation of *Inwood*, whereby eBay could be liable for contributory infringement if it knew or should have known its service was being used to further illegal counterfeiting activity.⁴⁰⁰ Tiffany’s general complaints to eBay about the presence of counterfeit products on its site failed to provide eBay with the level of knowledge required.⁴⁰¹ The court went on to acknowledge that willful blindness would be sufficient to satisfy the knowledge requirement.⁴⁰² A service provider cannot simply look the other way when it has reason to suspect that counterfeit goods are being sold on its website; that would be equivalent to actual knowledge.⁴⁰³ However, the district court found eBay was not willfully blind to sales of counterfeit Tiffany products, and the Second Circuit determined that finding was not clearly erroneous. Although eBay conceded it knew that counterfeit Tiffany products were listed and sold through its website, that knowledge was insufficient to create liability for contributory infringement.⁴⁰⁴

³⁹⁴ *Id.* at 98–99.

³⁹⁵ *Id.* at 98. Indeed, eBay argued that even if it had inspected the merchandise, in many instances it would not have had the expertise to determine if it was counterfeit.

³⁹⁶ *Id.* at 107 (citing *Tiffany (NJ) Inc. v. eBay, Inc.*, 576 F. Supp. 2d 463, 508 (S.D.N.Y. 2008)).

³⁹⁷ *Id.* (citing *Tiffany*, 576 F. Supp. 2d at 510).

³⁹⁸ *Id.*

³⁹⁹ *Id.*

⁴⁰⁰ *Id.*

⁴⁰¹ *Id.* at 109.

⁴⁰² *Id.* (citing *Hard Rock Café Licensing Corp. v. Concession Servs., Inc.*, 955 F.2d 1143, 1149 (1992) (“To be willfully blind, a person must suspect wrongdoing and deliberately fail to investigate.”)).

⁴⁰³ *Id.* at 110.

⁴⁰⁴ *Id.*

For the last several years, there has been an ongoing effort to adopt legislation that would effectively overturn *Tiffany v. eBay*, but to date, it has not been successful. In early 2020, the Department of Homeland Security issued a report observing that the rapid growth of e-commerce platforms and third-party online marketplaces has not only revolutionized the way products are bought and sold, but it has also facilitated online trafficking in counterfeit and pirated goods.⁴⁰⁵ The report determined that online platforms were successfully avoiding civil liability for contributory trademark infringement,⁴⁰⁶ and therefore DHS recommended that the federal government should assess the state of liability for trademark infringement. The report also proposed that e-commerce platforms should implement a number of “best practices,” including the enhanced vetting of third-party sellers, enacting efficient notice and takedown procedures, establishing marketplace seller IDs, and imposing indemnity requirements for foreign sellers.⁴⁰⁷ Limitations on high-risk products (i.e., items where counterfeit versions pose increased risks to the health and safety of US residents or to national security) were also urged.⁴⁰⁸

The Stopping Harmful Offers on Platforms by Screening Against Fakes in E-commerce Act⁴⁰⁹ (the SHOP SAFE Act) was subsequently introduced in March 2020 as a bipartisan effort to amend the Lanham Act to create contributory liability for online platforms. It was then reintroduced in both the Senate and the House in 2021.⁴¹⁰ The proposed bills provided that an electronic commerce platform would be deemed contributorily liable in a civil action by the trademark owner “where a third-party seller uses in commerce a counterfeit mark in connection with the sale, offering for sale, distribution, or advertising of goods that implicate health and safety on the platform,”⁴¹¹ unless the platform took a number of measures to prevent the use of the mark on the platform before the infringing acts began. The bills then set out no less than twelve different steps a platform would be required to take in order to avoid liability, including *inter alia* verifying the identity, principal place of business, and contact information of a third-party seller; requiring third-party sellers to take reasonable steps to verify the authenticity of goods; imposing contractual requirements that third-party sellers agree not to use counterfeit marks; implementing “reasonable proactive technological measures for screening goods” before they are displayed to the public; and implementing a program to expeditiously disable or

⁴⁰⁵ U.S. DEPT. OF HOMELAND SEC., COMBATING TRAFFICKING IN COUNTERFEIT AND PIRATED GOODS 7 (2020).

⁴⁰⁶ *Id.* at 33.

⁴⁰⁷ *Id.* at 34.

⁴⁰⁸ *Id.* at 36–37.

⁴⁰⁹ H.R. 6058, 116th Cong. (2020).

⁴¹⁰ S. 1843, 117th Cong. (2021). The equivalent bill was introduced by the House of Representatives as H.R. 3429 (2021).

⁴¹¹ S. 1843, 117th Cong. § 2(a). “Goods that implicate health and safety” was defined broadly and included “goods, the use of which can lead to illness, disease, injury, serious adverse event, allergic reaction, or death” if they were produced without compliance with applicable health and safety regulations and industry-designated testing, safety, and other standards.

remove any listing if the platform is reasonably aware that it uses a counterfeit mark.⁴¹² The America COMPETES Act⁴¹³ was introduced later in 2021 with SHOP SAFE provisions, but when America COMPETES eventually passed as the Chips and Science Act of 2022,⁴¹⁴ the SHOP SAFE provisions had been removed.⁴¹⁵

The SHOP SAFE Act had a laudable goal (to reduce or eradicate the use of counterfeit marks in connection with the sale and distribution of goods that implicate health and safety on e-commerce platforms), but the Act simply went too far. Rather than addressing the real question—the level of knowledge required for any third party accused of contributory infringement—SHOP SAFE was limited to e-commerce platforms, and it attempted to impose on the platform the burden of demonstrating that it took twelve separate steps to verify the identity of the listing party and the authenticity of marks used in connection with the sale of goods, in order to avoid liability. The processes to be implemented were not gauged to any perceived risk that the items offered for sale might be counterfeit or could potentially cause a level of harm to purchasers or end users. Further, many of the terms in the act were ill-defined, and there was much ambiguity about precisely what was required from the e-commerce platforms in order for them to avoid contributory liability. For example, the proposed act required “reasonable proactive technological measures for screening goods before displaying the goods to the public” in order to prevent use of a counterfeit mark,⁴¹⁶ but it was unclear whether this was intended to require screening of the actual goods themselves, images depicting the goods, descriptions of the goods, or something else entirely. “Reasonable technological measures for screening third-party sellers” were also required, in order to ensure that terminated sellers do not later rejoin the platform under an alias,⁴¹⁷ but again no further details were provided.

Instead, Congress must enact legislation that more generally addresses the level of knowledge required for a finding of contributory infringement by any party that facilitates acts of counterfeiting and trademark infringement; it should not be limited to e-commerce platforms. The new legislation should overturn the *Tiffany* requirement (the *de facto* standard throughout the U.S.) whereby a service provider must have contemporary knowledge of which particular listings are infringing before

⁴¹² S. 1843, 117th Cong. § 2(a) (2021).

⁴¹³ America Creating Opportunities for Manufacturing, Pre-Eminence in Technology, and Economic Strength (America COMPETES) Act, H.R. 4521, 117th Cong. (2021).

⁴¹⁴ CHIPS and Science Act, Pub. L. No. 117-167, 136 Stat. 4171 (2022). The CHIPS and Science Act was signed into law by President Biden on August 9, 2022.

⁴¹⁵ A group of law professors wrote to leaders of the Senate and House of Representatives, protesting that the SHOP SAFE Act “would curtail many existing online marketplace offerings that currently give consumers greater choices and spur price competition that reduces consumer costs.” They also argued that the bill “puts many small online entrepreneurs, and the jobs they provide for Americans, at risk. Letter from Professors Eric Goldman, Betsy Rosenblatt & Rebecca Tushnet to the Honorable Chuck Schumer, Majority Leader, U.S. Senate, et al. (Mar. 8, 2022), <https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=3634&context=historical>.

⁴¹⁶ S. 1843, 117th Cong. § 2(a) (2022).

⁴¹⁷ *Id.*

contributory infringement can be found.⁴¹⁸ Constructive knowledge of infringement should be sufficient to give rise to a duty to investigate and stop the infringing conduct.

In *Luxottica Group, SPA v. Airport Mini Mall, LLC*, the Eleventh Circuit recently affirmed a jury verdict finding defendants liable for contributory trademark infringement where they knowingly facilitated infringement by others. Luxottica and its subsidiary Oakley alleged that the defendants operated a shopping mall in Georgia containing approximately 130 booths leased to vendors, many of which sold counterfeit products including the plaintiff's sunglasses.⁴¹⁹ Despite three law enforcement raids, two letters from Luxottica, and a meeting with local police, the defendants took no steps to determine which tenants were selling counterfeit sunglasses or to evict the infringing tenants.⁴²⁰ The district court found the defendants liable for contributory infringement and awarded \$1.9 million in damages, and the Eleventh Circuit affirmed. The court determined that contributory infringement could be found where "the defendant ([a]) supplies a product to the direct infringer whom it 'knows' is directly infringing (actual knowledge); or ([b]) supplies a 'product' to a direct infringer whom it 'has reason to know' is directly infringing (constructive knowledge)."⁴²¹

The *Luxottica* court explained that constructive knowledge can be demonstrated in several ways. Willful blindness is only one form of constructive knowledge for contributory trademark infringement.⁴²² The defendants argued that under *Tiffany*, they could only be liable for contributory infringement if Luxottica provided them with notice of which particular vendors were selling counterfeit products, but the court disagreed. It found that *Tiffany* did not categorically shift the burden onto trademark owners to provide notice to defendants.⁴²³ Instead, both "actual [and] constructive knowledge of the direct infringers' identities could arise from many sources, including steps the defendants could have taken to investigate . . . infringement . . . after being put on notice . . . that [unidentified vendors] may have been selling counterfeit Luxottica products."⁴²⁴ The court concluded the trial evidence was sufficient to prove the defendants had at least constructive knowledge of specific instances of infringement, since Luxottica's letters might have prompted a reasonable landlord to conduct at least a cursory inspection.⁴²⁵ In addition, evidence of serious and widespread infringement (in this case, three law enforcement raids) made it far more likely defendants knew about the infringement.⁴²⁶ Following *Luxottica*, even

⁴¹⁸ *Tiffany (NJ) Inc. v. eBay Inc.*, 600 F.3d 93, 107 (2d Cir. 2010)

⁴¹⁹ 932 F.3d 1303, 1309–10. (11th Cir. 2019).

⁴²⁰ *Id.*

⁴²¹ *Id.* at 1312.

⁴²² *Id.* at 1313.

⁴²³ *Id.* at 1314.

⁴²⁴ *Id.*

⁴²⁵ *Id.* at 1313–15.

⁴²⁶ *Id.* at 1315 (citing *Mini Maid Servs. Co. v. Maid Brigade Sys., Inc.*, 967 F.2d 1516, 1522 (11th Cir.

the Second Circuit has agreed that actual knowledge of a specific infringer is not required in all cases.⁴²⁷ A defendant may be willfully blind to particular transactions or to the identities of infringers, and a defendant may be liable for contributory infringement despite not knowing the identity of a specific vendor who was selling counterfeit goods.⁴²⁸

The *Tiffany* standard for contributory liability—requiring contemporary knowledge of which particular listings are infringing—improperly allows e-commerce platforms to insulate themselves from liability. Online marketplaces organize their operations in such a way as to avoid contemporary knowledge and then essentially suggest that they are too large to know which listings are infringing, all the while profiting from every sale by their sellers.⁴²⁹ The burden is disproportionately placed on brand owners to continually screen platforms, seek out listings that are potentially counterfeit, and send takedown notices to the platforms.⁴³⁰ It has been repeatedly described as a game of “whack-a-mole.”⁴³¹ Further, by the time the infringing listings are removed, the items may have already been sold, and new listings may have appeared. That is out of touch with today’s world.⁴³² It has led to a flood of counterfeit products, including counterfeit microelectronics, being sold on the internet, and the result is lost sales by original manufacturers, damage to brands, and threats to public health and safety.

The Lanham Act should be amended to specifically recognize contributory liability for anyone who knowingly facilitates direct infringement by a third party. That should include an online marketplace that “continues to supply its [service] to

1992)).

⁴²⁷ *Omega SA v. 375 Canal, LLC*, 984 F.3d 244, 254 (2d Cir. 2021).

⁴²⁸ *Id.* at 254–55 (“Canal had a history of turning a blind eye toward counterfeiting . . . and . . . had taken insufficient steps to root out conduct it knew or should have known was occurring . . .”).

⁴²⁹ In the *Tiffany* case, the court noted that at any given time eBay contained some 100 million listings, and more than six million new listings were posted daily. *Tiffany (NJ) Inc. v. eBay Inc.*, 600 F.3d 93, 97 (2d Cir. 2010).

⁴³⁰ See, e.g., Letter from June M. Besek, Chair, ABA Section of Intell. Prop. L. to Hon. Andrei Iancu, Under Sec’y of Com. For Intell. Prop. & Dir., U.S. Pat. & Trademark Off. 6 (Dec. 21, 2020), https://downloads.regulations.gov/PTO-T-2020-0035-0004/attachment_1.pdf (noting that “the burden of addressing and preventing the sale of counterfeit goods is disproportionately placed on trademark owners and consumers,” while e-commerce platforms continue to profit from the sale of counterfeit goods).

⁴³¹ See, e.g., Spencer Kimble, *US Small Businesses are Fighting an Uphill Battle Against Counterfeiters in China: “It’s Like Whack-a-Mole”*, CNBC (Oct. 6, 2019, 1:53 PM), <https://www.cnbc.com/2019/10/06/how-us-small-businesses-are-fighting-counterfeiting-in-china.html>; Gaston Kroub, *Mass Counterfeiting Whack-a-Mole*, ABOVE THE LAW (Jan. 21, 2020, 10:00 AM), <https://abovethelaw.com/2020/01/mass-counterfeiting-whack-a-mole/>.

⁴³² See Letter from Kari Kammel & Jay Kennedy, Ctr. For Anti-Counterfeiting & Prod. Prot., Mich. State Univ., to U.S. Pat. & Trademark Off. 1–4 (Jan. 25, 2021), <https://www.regulations.gov/comment/PTO-T-2020-0035-0023> (arguing that e-commerce is a law disruptive technology that “has changed so rapidly that existing law cannot be applied in the same way that it was conceptualized,” and suggesting that e-commerce platforms create an opportunity for counterfeiters instead of fulfilling a guardianship role of protecting consumers and the goodwill of a brand).

one whom it knows *or has reason to know* is engaging in trademark infringement.”⁴³³ “Reason to know” (i.e., constructive knowledge) of infringing activity should be context-dependent and could be demonstrated in multiple ways, including sample purchases that were identified as counterfeit, unusually large numbers of listings for an item, unexpectedly low prices, suspicious images, law enforcement raids, and other indicators. Requiring actual knowledge of specific infringing acts is not the correct standard. Imposing liability when an intermediary has constructive knowledge that infringing activity is occurring will redistribute the burden and force e-commerce platforms to bear partial responsibility for identifying and curtailing that activity. It could also encourage electronic parts manufacturers to pursue civil actions against online purchasing platforms hosting vendors of counterfeit parts.

B. Abandonment and Cancellation of Marks Due to the Failure to Police Against Infringement

Frustrated representatives from the government and other industry sectors have sometimes argued that a more forceful strategy to motivate the filing of civil counterfeiting actions is needed: imposing negative consequences on trademark owners when they fail to police their trademarks in a meaningful way. For instance, they suggest that Congress might adopt a definition of trademark abandonment that clearly includes the failure to police one’s marks against infringement and counterfeiting.

Abandonment of a trademark is defined in § 45 of the Lanham Act. It states that a mark shall be deemed to be “abandoned” when “its use has been discontinued with intent not to resume such use” or when “any course of conduct of the owner, including acts of omission as well as commission, causes the mark to become the generic name for the goods or services on or in connection with which it is used or otherwise to lose its significance as a mark.”⁴³⁴ Presumably, this group would have Congress redraft § 45, which already mentions “acts of omission,” to specifically include situations where a trademark owner fails to police its mark against known acts of counterfeiting and infringement. That approach is not the right answer and should not be contemplated by lawmakers.

It is true that courts have often said the law imposes on trademark owners a duty to be vigilant and to police the relevant market for infringers.⁴³⁵ “[T]he corporate owners of trademarks have a duty to protect and preserve the corporation’s trademark

⁴³³ *Inwood Labs., Inc. v. Ives Labs., Inc.*, 456 U.S. 844, 854 (1982) (emphasis added).

⁴³⁴ 15 U.S.C. § 1127.

⁴³⁵ Peter S. Sloane, Chelsea A. Russell & Christina M. Sauerborn, *Trademark Vigilance in the Twenty-First Century: An Update*, 30 *FORDHAM INTELL. PROP. MEDIA & ENT. L.J.* 1197, 1255 (2020); *see, e.g., Procter & Gamble Co. v. Johnson & Johnson Inc.*, 485 F. Supp. 1185, 1207 (S.D.N.Y. 1979) (“[T]he trademark law not only encourages but requires one to be vigilant on pain of losing exclusive rights.” The court remarked that in going to war to protect its Sure antiperspirant, “P&G was entitled to use all the ammunition it had.”).

assets through vigilant policing and appropriate acts of enforcement.”⁴³⁶ In her dissent in *Nitro Leisure Products*, Judge Newman similarly observed that “the law requires the holder of the trademark to control both the use of the mark and the quality of the goods to which it is affixed, on pain of losing the mark as a trademark.”⁴³⁷ However, it is far from clear precisely what is required of trademark owners (if anything) and what results might follow if the trademark owner fails to live up to those expectations.

On several occasions, courts have found that trademarks became generic, and thus unprotectable, when too many parties were using the same mark on the same type of product.⁴³⁸ In those instances, though, the finding of genericness came about, not simply because the trademark owner failed to file a sufficient number of lawsuits against infringers, but because the public’s perception of the mark had changed.⁴³⁹ The Ninth Circuit explained that “genericide” occurs “when the public appropriates a trademark and uses it as the generic name for particular types of goods or services irrespective of its source.”⁴⁴⁰

For example, ASPIRIN, CELLOPHANE, and ESCALATOR were once protectable as arbitrary or fanciful marks because they were primarily understood as identifying the source of certain goods. But the public appropriated those marks and now primarily understands aspirin, cellophane, and escalator as generic names for those same goods. . . . The original holders of the ASPIRIN, CELLOPHANE, and ESCALATOR marks are thus victims of genericide.⁴⁴¹

As a result, a mark becomes generic when its principal significance to the public is a reference to the underlying product itself, not to a specific source.⁴⁴² Further, when a mark becomes the generic name of the product to which it is applied, grounds exist for canceling the owner’s federal trademark registration.⁴⁴³

The duty to police trademark usage is often discussed in the context of trademark licensing and franchising, where the trademark owner does have an affirmative obligation to exercise quality control over the licensee. “Naked licensing,” (i.e.,

⁴³⁶ MCCARTHY ON TRADEMARKS, *supra* note 143, §11:91.

⁴³⁷ *Nitro Leisure Prods., LLC v. Acushnet Co.*, 341 F.3d 1356, 1366 (Fed. Cir. 2003) (Newman, J., dissenting).

⁴³⁸ *See generally, e.g., Boston Duck Tours v. Super Duck Tours*, 531 F.3d 1 (1st Cir. 2008) (litigating the widespread use of the word “duck” in connection with sightseeing tours); *Stuhlbarg Int’l Sales Co. v. John D. Brush & Co.*, 240 F.3d 832 (9th Cir. 2001) (noting that at least thirteen companies were using the term “fire safe” to refer to a type of safe).

⁴³⁹ *See Sloane, supra* note 435, at 1255–56 (“[I]f a trademark owner lets enough time and enough infringers carry on unchecked, the trademark will be destroyed, as happens with trademarks that are now generic terms, like aspirin and cellophane, that once were able to function as marks but no longer do.”).

⁴⁴⁰ *Elliott v. Google, Inc.*, 860 F.3d 1151, 1156 (9th Cir. 2017).

⁴⁴¹ *Id.* (first citing *Bayer Co. v. United Drug Co.*, 272 F. 505, 510 (S.D.N.Y. 1921); and then citing *DuPont Cellophane Co. v. Waxed Prods. Co.*, 85 F.2d 75, 82 (2d Cir. 1936)).

⁴⁴² *See Abercrombie & Fitch Co. v. Hunting World, Inc.*, 537 F.2d 4, 9 (2d Cir. 1976) (“A generic term is one that refers, or has come to be understood as referring, to the genus of which the particular product is a species.”).

⁴⁴³ *Id.* at 13.

licensing a mark without exercising control over the quality of products produced by the licensee) can result in a trademark losing its ability to function as a symbol of quality and source, resulting in abandonment.⁴⁴⁴ The failure to control the actions of a licensee, the party that is contractually authorized to use the mark, is a fundamentally different situation from failing to police unauthorized use of trademarks by third parties, such as counterfeiters.

A lengthy failure to sue a particular defendant for infringement may also give rise to a laches defense.⁴⁴⁵ In a few cases, the failure to object to the use of a mark by a third party for an extended period of time eventually precluded the trademark owner from stopping its use by a particular junior user.⁴⁴⁶ More recently, courts have recognized that even if the affirmative defense of laches applies, thereby precluding an award of compensatory damages, injunctive relief may still be appropriate to prevent future infringement.⁴⁴⁷

In most situations, the failure to sue a large number of infringers merely goes to the strength of the mark,⁴⁴⁸ not to abandonment, and a mark may be weakened by widespread use.⁴⁴⁹ In a typical case, the proper question asks what impact the failure to prosecute others had on the strength of the plaintiff's mark. "[D]id it cause the marketplace to become so crowded by similar marks used by competitors that the mark is alive, but weakened? The mark might then be so weak that the challenged use is not likely to cause confusion."⁴⁵⁰ However, it would be inappropriate to find that a mark has been abandoned based on the failure to prosecute others for infringement.⁴⁵¹ In one case, accused counterfeiters claimed that "Hermés abandoned its trademarks by failing to police infringement of those marks," thereby allowing them to "become generic and unenforceable."⁴⁵² Not only did the court reject the abandonment argument, but it observed that "[t]he best evidence that Hermés'

⁴⁴⁴ See *FreecycleSunnyvale v. Freecycle Network*, 626 F.3d 509, 515–16 (9th Cir. 2010).

⁴⁴⁵ Laches is a passive failure to protect trademark rights. Acquiescence, on the other hand, may result where the trademark owner affirmatively consents to use of the mark by the junior party. See *Hyson USA, Inc. v. Hyson 2U, Ltd.*, 821 F.3d 935, 940 (7th Cir. 2016).

⁴⁴⁶ See *Anheuser-Busch, Inc. v. DuBois Brewing Co.*, 175 F.2d 370, 374 (3d Cir. 1949) (noting the reuse of the term "Budweiser").

⁴⁴⁷ See *Pinnacle Advert. & Mktg. Grp., Inc. v. Pinnacle Advert. & Mktg. Grp., L.L.C.*, 7 F.4th 989, 1011 (11th Cir. 2021).

⁴⁴⁸ The strength of the plaintiff's mark is one factor courts consider as part of the "likelihood of confusion" test. See *Polaroid Corp. v. Polarad Elecs. Corp.*, 287 F.2d 492, 495 (2d Cir. 1961), *cert. denied*, 368 U.S. 820 (1961).

⁴⁴⁹ See *Herman Miller, Inc. v. Palazzetti Imps. & Exps., Inc.*, 270 F.3d 298, 317 (6th Cir. 2001) (holding that abandonment would occur only in extreme circumstances, where failure to prosecute others for infringement causes a mark to lose its significance as an indication of source).

⁴⁵⁰ MCCARTHY ON TRADEMARKS, *supra* note 143, § 17:17.

⁴⁵¹ See *Sweetheart Plastics, Inc. v. Detroit Forming, Inc.*, 743 F.2d 1039, 1048 (4th Cir. 1984); *Bd. Of Governors of Univ. of N.C. v. Helpingstine*, 714 F. Supp. 167, 171 (4th Cir. 1984) ("[N]either UNC's failure to prosecute infringers nor its allowance of uncontrolled use of its marks from 1795 to 1982 established that the university abandoned its marks.").

⁴⁵² *Hermés Int'l v. Lederer de Paris Fifth Avenue, Inc.*, 219 F.3d 104, 110 (2d Cir. 2000).

products indicate their source may, in fact, be defendants' own direct copying."⁴⁵³ Thus, widespread counterfeiting can be impactful evidence of the strength and desirability of a mark.

Trademark owners are also permitted to exercise reasonable business judgment about whether and when to bring civil actions against infringers.⁴⁵⁴ The owner of a mark is not required to police every conceivably related use to maintain the effectiveness of the mark.⁴⁵⁵ A district court in Louisiana remarked:

The owner of a mark is not required to constantly monitor every nook and cranny of the entire nation and to fire both barrels of his shotgun instantly upon spotting a possible infringer. Lawyers and lawsuits come high and a financial decision must be made in every case as to whether the grain of prosecution is worth the candle.⁴⁵⁶

If Congress were to redefine abandonment to specifically include situations where a trademark owner fails to police its mark against known acts of counterfeiting and infringement, the courts would then be faced with the burdensome task of determining whether a given mark had ceased to identify the source or quality of goods bearing the mark. That determination would involve a "highly factual analysis of consumer perception and identification" of the trademark at issue,⁴⁵⁷ and the defendant would be forced to prove that by failing to sue others, the trademark owner caused the mark to lose its significance. The result would be increased uncertainty for trademark owners about the extent to which they are required to police the marketplace against infringers, and counterfeiters would ultimately be rewarded for their own bad acts.

Weakening or canceling trademark registrations of electronic parts manufacturers makes little sense and would be ineffective at addressing the problem of counterfeit electronic parts. First, there is no evidence that, despite widespread counterfeiting, the marks of any electronic parts manufacturers have become generic terms that should be subject to cancellation. To the contrary, it may actually confirm their strength. Sophisticated purchasers typically understand the risks associated with buying on the open market, but they choose to do so anyway. Further, imagine a world in which TEXAS INSTRUMENTS,⁴⁵⁸ XILINX,⁴⁵⁹ LINEAR,⁴⁶⁰ and INTEL⁴⁶¹ were

⁴⁵³ *Id.* (citing *T. Anthony, Ltd. v. Malletier*, 30 U.S.P.Q.2d 1214, 1217 (S.D.N.Y. 1993) ("[E]vidence that a mark is copied widely acts as persuasive evidence that it has become distinctive as a source identifier."); *Saxlehner v. Eisner & Mendelson Co.*, 179 U.S. 19, 36–37 (1900).

⁴⁵⁴ *Saxlehner*, 179 U.S. at 31 (1900).

⁴⁵⁵ *See Playboy Enters., Inc. v. Chuckleberry Publ'g, Inc.*, 486 F. Supp. 414, 422–23 (S.D.N.Y. 1980).

⁴⁵⁶ *Engineered Mech. Servs., Inc. v. Applied Mech. Tech., Inc.*, 584 F. Supp. 1149, 1160 (M.D. La. 1984).

⁴⁵⁷ *Hermés Int'l*, 219 F.3d at 110.

⁴⁵⁸ TEXAS INSTRUMENTS is a registered trademark of Texas Instruments Incorporated, along with the TI logo.

⁴⁵⁹ XILINX is a registered trademark of Xilinx, Inc.

⁴⁶⁰ LINEAR was a registered trademark of Linear Technology Corporation and is now owned by Analog Devices International.

⁴⁶¹ INTEL is a registered trademark of Intel Corporation.

no longer protected and were being used on semiconductor devices and other electronic parts by multiple companies.⁴⁶² The level of consumer confusion would escalate exponentially, and every part would be suspect. Having been stripped of their property rights, the former owners of those trademark registrations would have little incentive to authenticate their own products or to cooperate with law enforcement. The “abandonment” approach also ignores other proactive measures by the manufacturers, including developing innovative product features to combat counterfeiting, participating in standards setting organizations, engaging in discussions with industry members and government representatives, and cooperating with law enforcement on criminal prosecutions. Redefining abandonment is not the solution, and “policing” a trademark should take into account more than just the number of infringement suits filed by the trademark owner.

Conclusion

Counterfeit microelectronics have been a persistent threat for the last twenty years. Counterfeit electronic parts pose serious risks to human health and safety, harm the economy, and jeopardize national security. Although the Lanham Act provides potent civil remedies for trademark counterfeiting, an analysis of trademark filings from 2009 through 2022 reveals that manufacturers of electronic parts almost never pursue civil actions against counterfeiters. The “material alteration theory” encompasses many types of activity engaged in by counterfeiters, including the sale of used, refurbished, and remarked parts. As a result, the lack of civil enforcement must be attributed to factors such as the cost of filing suit, concerns about the impact on stock values, and the inability to reach anonymous counterfeiters (often in other countries) who sell fake products through online marketplaces. Congress must amend the Lanham Act to recognize contributory liability by intermediaries, including e-commerce platforms and others, that facilitate infringement when they have actual or constructive knowledge that infringing activities are taking place on their sites. Ultimately, however, an enhanced enforcement of criminal penalties may be an even more essential part of the solution to counterfeit microelectronics. *Debugging the Trademark Laws II: Criminal Penalties for Trafficking in Counterfeit Microelectronics* will explore the apparent underutilization of criminal sanctions against counterfeiters, and it will propose amendments to the federal criminal code that intend to circumscribe their activities.

⁴⁶² While the companies might retain common law rights in the marks, they would be relegated to filing state court actions or (at best) filing actions for false association under Section 43(a), with less desirable remedies.