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Enhancing Efficiency and Accessibility for Federal Trademark Protection: Leveraging Blockchain Technology for Prosecution, Maintenance, and Enforcement Processes.

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INTRODUCTION

The implementation of blockchain technology for use beyond cryptocurrency is gaining more popularity. City and state governments around the United States are in the process of implementing blockchain for public use/benefit. This implementation is to make various procedures more efficient and accessible, such as voting and other governance purposes.¹ While the federal government has not administered blockchain for public use in any capacity, when (not if) it does, it should be used for protecting intellectual property. Specifically, the processes related to the prosecution, maintenance, and enforcement of federal trademark rights should be made more efficient and accessible through the use of blockchain technology. Importantly, current processes and the Lanham Act are inadequate for carrying out that purpose.

Section I of the paper gives an overview of blockchain technology in general, as well as federal trademark law in the United States. Section II evaluates blockchain technology that can be used to make federal trademark prosecution, maintenance, and enforcement processes more efficient and accessible. Section III recommends that the use of blockchain technology should be encouraged by including it in the language of the Lanham Act. Section IV provides concluding thoughts and remaining questions.

¹ Joeri Cant, *Two More US Jurisdictions Launch Blockchain-Based Mobile Voting*, COINTELEGRAPH <https://cointelegraph.com/news/two-more-us-jurisdictions-launch-blockchain-based-mobile-voting> (October 18, 2019).

I. BACKGROUND

A. *Blockchain Technology*

The core concepts behind blockchain technology date as far back as the 17th century to the Island of Yap, where giant unmovable stones were used as a form of currency.² However, blockchain as we know it today did not emerge for public use until 2009, when the first cryptocurrency – known as “Bitcoin” – was launched. Modern blockchain technology is thought to be “tamper evident and tamper resistant digital ledgers implemented in a distributed fashion (i.e., without a central repository) and usually without a central authority (i.e., a bank, company, or government).”³ While all blockchains are distributed ledger systems, not all distributed ledger systems are blockchains.

Put differently, blockchain technology is a distributed database of records or an open-access network of every transaction or digital event which has been executed and shared among participants.⁴ Importantly, each transaction is not only immutable – meaning it can never be erased or changed, but each transaction is also verified by a consensus of a majority of participants. Every node (device) part of the distributed network has a copy of the ledger, which generates input data into a fixed size through hash functions.⁵ In other words, decentralization of the ledger provides an added level of security because it allows for simultaneous access, verification, and updating throughout the network's database on each node.⁶

² *The Rai-se and Fall of the First Distributed Ledger – Yap Stones*, Finance Magnates <https://www.financemagnates.com/thought-leadership/the-rai-se-and-fall-of-the-first-distributed-ledger-yap-stones/> (November 22, 2021).

³ Dylan Yaga, et al., *Blockchain Technology Overview*, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY: U.S. DEPARTMENT OF COMMERCE (October 2018).

⁴ Michael Crosby, et al., *Blockchain Technology Beyond Bitcoin*, SUTARDJA CENTER FOR ENTREPRENEURSHIP & TECHNOLOGY TECHNICAL REPORT <https://scet.berkeley.edu/wp-content/uploads/BlockchainPaper.pdf> (October 16, 2015).

⁵ Scott Nevil, *Distributed Ledger Technology (DLT): Definition and How it works*, INVESTOPEDIA <https://www.investopedia.com/terms/d/distributed-ledger-technology-dlt.asp> (May 31, 2023).

⁶ *Id.*

The use of blockchain in modern times has mostly been limited to cryptocurrency or local government endeavors, but use by the federal government has the potential to substantially change the way in which our nation works. More specifically, implementation of blockchain by the federal government for certain sectors, such as for intellectual property protection, can make current processes more efficient and accessible.

B. Trademark Law and Related Processes in the United States

1. The Lanham Act

Codified as 15 U.S.C § 1051 et seq., the Lanham Act was passed by Congress in 1946 and is the statutory basis of federal trademark law.⁷ A trademark is a distinctive identifying source for goods or services, which can encompass a symbol, word, phrase, or any combination of these elements.⁸ The Act outlines rules and requirements for trademark registration eligibility through the national trademark registration system.⁹ The government agency maintaining the registration system is the United States Patent and Trademark Office (“USPTO”).¹⁰ The Act also outlines rights related to infringement and other prohibited activities.¹¹ Although it has been amended by other statutes since its enactment, the Lanham Act itself still remains the main federal trademark statute in the United States.¹²

⁷ *Lanham Act*, WIKIPEDIA https://en.wikipedia.org/wiki/Lanham_Act (last accessed November 02, 2023).

⁸ *What is a trademark?*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/basics/what-trademark> (last accessed January 10, 2024).

⁹ 15 U.S.C § 1051-1096

¹⁰ *Id.* at § 1051.

¹¹ *Id.* at § 1111-1129

¹² Theodore H. Davis Jr., *Changes to Federal Trademark Law Under the Trademark Modernization Act, its Implementing Regulations, and Beyond: Recent Developments in the Battle Against Bad Actors in Trademark Registration Practice*, KILPATRICK TOWNSEND <https://ktslaw.com/en/Insights/Alert/2022/3/Trademark-Modernization-Act-and-Final-Implementing-Regulations> (March 30, 2022).

2. Trademark Prosecution: The Prosecution Process

Trademark “prosecution” is another way of referring to the process of applying for a trademark with the USPTO. More specifically, this process typically involves preparing for submission of an application, actual submission of an application to the USPTO, application examination by the USPTO, and possible refusal responses to the USPTO.¹³ While it can be a long and strenuous process, federal trademark registration is highly sought over geographically limited common law rights, because federal registration grants ownership rights nationwide.¹⁴

Trademark prosecution begins by preparing a trademark application for submission to the USPTO. This usually includes (but is not limited to) determining eligibility of the trademark for federal registration and conducting a clearance search. Determining eligibility considers whether the “use-in-commerce” and “distinctiveness” requirements are met.¹⁵ The Lanham Act requires the trademark be used in commerce or registered with a bona fide intent to do so.¹⁶ Additionally, the Act requires a trademark to be distinctive for “identifying and distinguishing particular goods as emanating from one producer or source and not another.”¹⁷

Trademarks are traditionally divided into four categories of distinctiveness: arbitrary/fanciful, suggestive, descriptive, and generic.¹⁸ Arbitrary/fanciful and suggestive trademarks are considered strong and inherently distinctive. Descriptive trademarks are only registerable upon showing acquired distinctiveness through extensive use in commerce. Lastly,

¹³ *Trademark Process: An Overview of a Trademark Application and Maintenance Process*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/basics/trademark-process#step2> (last accessed November 12, 2023).

¹⁴ *Why Register Your Trademark: Common Law Rights; State Trademark Registration; and Federal Trademark Registration*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/basics/why-register-your-trademark> (last accessed November 24, 2023).

¹⁵ Cornell Law School, *Lanham Act*, CORNELL LAW SCHOOL: LEGAL INFORMATION INSTITUTE https://www.law.cornell.edu/wex/lanham_act (last accessed November 02, 2023).

¹⁶ *Id.*

¹⁷ Cornell Law School, *Trademark*, CORNELL LAW SCHOOL: LEGAL INFORMATION INSTITUTE <https://www.law.cornell.edu/wex/trademark> (last accessed January 24, 2024).

¹⁸ *See Zatarain's, Inc. v. Oak Grove Smoke House, Inc.*, 698 F.2d 786 (5th Cir. 1983).

generic trademarks can never be federally registered. If the trademark is inherently distinctive or is thought to have acquired distinctiveness, a clearance search is conducted to ensure the mark has not already been registered or applied-for by someone else with the USPTO. Prior to submission of the trademark application, a clearance search can be conducted by the applicant or an attorney. Although artificial intelligence is slowly emerging as a tool for conducting these searches, they still involve manually looking for similar marks registered or applied-for similar goods or services on the USPTO's database and the internet.¹⁹ Depending on the results of the clearance search, the next step is either settling for common law rights or submitting an application.

Submitting a trademark application is a tedious process for trademark attorneys and a confusingly tedious process for those filing an application without legal representation (an option if not foreign domiciled). One of the first steps requires the applicant to choose a filing basis indicating whether they are using the mark in commerce (in the U.S) already or have a bona fide intent to do so in the near future.²⁰ If the mark is already in use, the application requires providing the first date of use in commerce and first use anywhere, as well as evidence (also known as "specimens") for each applied-for class of goods or services. If the mark is not yet in use, the applicant is not required to provide evidence of use in the initial application, but rather has 6 months after approval to submit a Statement of Use and provide evidence of use in commerce for each applied-for class of goods or services. If after 6 months the mark is still not in use, the applicant/attorney can file a 6 month extension request, which can be done a total of 5 times. This means that the applicant has a total of 36 months to begin using their mark in

¹⁹ *Trademark Electronic Search System (TESS)*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://tmsearch.uspto.gov/bin/gate.exe?f=tess&state=4806:zt22g4.1.1> (last accessed November 12, 2023).

²⁰ *Application Filing Basis: Use-in-Commerce vs. Intent-to-Use*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/basics/application-filing-basis> (last accessed November 12, 2023).

commerce in the U.S. and provide evidence of such to the USPTO, otherwise the application will be abandoned. There are also options to file based on a foreign registration or pending application. Furthermore, among various steps requiring general information, the application may include submitting actual evidence of acquired distinctiveness for trademarks that have become an identifying source through extensive use in commerce.²¹ While the application does not end there, the aforementioned portions are the most relevant for purposes of this paper.

After submitting the application and paying the required fees, it is assigned a serial number and a USPTO examining attorney.²² The examining attorney reviews the application to ensure it meets all legal requirements and is registrable.²³ If all requirements are met and the mark is in use, the trademark registration will be published for opposition for 30 days.²⁴ If all requirements are met and the mark is not yet in use, the application will be approved, but the trademark will not be registered until after a Statement of Use is filed and the required opposition period.²⁵ The opposition period allows anyone from the public to oppose registration of the mark based on an alleged harm from doing so.²⁶

If all legal requirements are not met, the application is refused and the applicant receives an Office Action from the examining attorney outlining the reason(s) why, which they have 3

²¹ *How to Claim Acquired Distinctiveness Under Section 2(f)*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/laws/how-claim-acquired-distinctiveness-under-section-2f-0> (last accessed November 02, 2023).

²² *Examination of Your Application*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/basics/examination-application#:~:text=After%20you%20submit%20your%20initial,that%20your%20trademark%20is%20registrable> (last accessed November 02, 2023).

²³ *Id.*

²⁴ *Approval for Publication*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/basics/approval-publication> (last accessed November 12, 2023).

²⁵ *Id.*

²⁶ *Id.*

months to respond to.²⁷ If the response is accepted, the mark will be published for opposition.²⁸ If the response is not accepted and the refusal remains, a Final Office Action will be issued by the examining attorney, which the applicant can decide not to respond to – effectively abandoning the mark – or appeal to the Trademark Trial and Appeal Board (“TTAB”).²⁹ If the applicant wins their TTAB appeal of the registration refusal, the application will be approved and go through the opposition period explained above.³⁰ After the 30 day opposition period is over, and assuming no oppositions were filed, the trademark will officially be registered.³¹

3. Maintenance of a Trademark After Registration

Once registered, the trademark owner has nationwide rights for as long as the mark is used in commerce and properly maintained through the USPTO. To maintain registration, the USPTO requires that the trademark continue to be used in commerce, renewed through the USPTO and payment of fees when required, and updating correspondence information as needed.³²

Between years 5-6 after registration, the trademark owner is required to file a Statement of Use, as well as specimens and fees for each class; at this time (between 5-6 years of use), the owner is not required but has the option to also file a Declaration of Incontestability.³³

Furthermore, between years 9-10 after registration, the applicant must again submit a Statement

²⁷ *Responding to Office Actions: Deadline for Filing a Timely Response*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/maintain/responding-office-actions#:~:text=An%20office%20action%20is%20an%20can%20register%20your%20trademark>. (last accessed November 12, 2023).

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.*

³¹ *Section 1(a) Timeline*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/trademark-timelines/section-1a-timeline-application-based-use-commerce> (last accessed November 12, 2023).

³² *Maintaining Your Federal Registration*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/basics/maintaining-registration> (last accessed November 03, 2023).

³³ *Incontestable Trademark: Everything You Need to Know*, UPCOUNSEL <https://www.upcounsel.com/incontestable-trademark> (last accessed November 03, 2023).

of Use, including specimens and fees for each class.³⁴ Afterwards, the trademark must be renewed every 10 years, using the same process. Importantly, trademarks are valid for a limited time and properly keeping up with the renewal process is required in order for a registration to stay active (or not go abandoned).

4. Enforcement of Trademark Rights

Federal registration grants owners the right to “legally prevent others from using the same or a similar trademark for related goods or services without [] permission.”³⁵ Unless an exception applies (i.e., fair use, first sale doctrine, or parody), using a valid and protectable trademark without permission from the owner, in a confusingly similar way, is considered infringement under the Lanham Act.³⁶

Counterfeiting is one way a trademark may be infringed upon. Anti-counterfeiting regulations are enforced through both the Lanham Act which provides civil remedies, as well as the Trademark Counterfeiting Act which makes counterfeiting a federal offense.³⁷ The Lanham Act provides that a counterfeit is a fraudulent “mark which is identical with, or substantially indistinguishable from, a *registered* mark.”³⁸ Counterfeiting typically occurs through the fraudulent copying of a trademark on fake goods that were produced by a party other than the original manufacturer.³⁹ Goods from luxury brands, such as Louis Vuitton, are among the most

³⁴ UNITED STATES PATENT AND TRADEMARK OFFICE, *supra* note 12.

³⁵ *Trademark Scope of Protection*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/basics/scope-protection#:~:text=By%20being%20specific%20about%20the.or%20services%20without%20your%20permission>. (last accessed November 03, 2023).

³⁶ 15 U.S.C. § 1114, 1125(a).

³⁷ Kristina Montanaro Schrader, et al., *Procedures and strategies for anti-counterfeiting: United States*, WORLD TRADEMARK REVIEW (REPOSTING FROM ADAMS AND REESE LLP) <https://www.worldtrademarkreview.com/global-guide/anti-counterfeiting-and-online-brand-enforcement/2021/article/procedures-and-strategies-anti-counterfeiting-united-states> (May 11, 2021).

³⁸ 15 USC § 1127.

³⁹ *Counterfeit Goods: A Danger to Public Safety*, U.S. IMMIGRATION AND CUSTOMS ENFORCEMENT <https://www.ice.gov/features/dangers-counterfeit-items> (August 04, 2022).

affected by counterfeit products made overseas.⁴⁰ Currently, more manual based procedures are in place to combat the trafficking of counterfeit goods into the United States. This includes reporting from the trademark owner and/or consumers to applicable government agencies, as well as detection during border inspections.⁴¹

While trademark owners have a right to legally prevent others from using their mark, they also have the right to legally allow others to use their mark.⁴² More specifically, under the Lanham Act, trademarks can be validly licensed by the owner (licensor) to another (licensee) to use in commerce, but only if the licensor exercises control over the quality of the goods or services sold by the licensee under the trademark.⁴³ If the licensor does not fulfill their duty of exercising and maintaining control over the licensee's use of the mark in commerce, the licensor could potentially lose all rights in the mark.⁴⁴

Being a federal trademark owner comes with various costs and benefits. Current federal trademark prosecution, maintenance, and enforcement processes involve a lot more manual labor and money than one might think, but efficiency and accessibility of these processes can be enhanced through the use of blockchain technology.

⁴⁰ Felix Richter, *Product Piracy: The Industries Most Affected by Counterfeit Products*, STATISTA <https://www.statista.com/chart/17410/counterfeit-and-pirated-products-by-category/#:~:text=Among%20the%20most%20counterfeited%20brands,billions%20of%20dollars%20every%20year>. (March 19, 2019).

⁴¹ *Buying Counterfeit Goods: Laws and Resources*, FINDLAW <https://www.findlaw.com/consumer/consumer-transactions/buying-counterfeit-goods-laws-and-resources.html#:~:text=If%20you%20suspect%20that%20someone,U.S.%20Consumer%20Product%20Safety%20Commission> (June 20, 2016).

⁴² *Assignments, Licensing, and Valuation of Trademarks*, INTERNATIONAL TRADEMARK ASSOCIATION <https://www.inta.org/fact-sheets/assignments-licensing-and-valuation-of-trademarks/> (last accessed January 10, 2024).

⁴³ 15 U.S.C. §1055; 3 MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 18:38 (5th ed.).

⁴⁴ *Id.*

II. HOW BLOCKCHAIN TECHNOLOGY CAN BE USED TO MAKE TRADEMARK PROSECUTION, MAINTENANCE AND ENFORCEMENT PROCESSES MORE EFFICIENT AND ACCESSIBLE.

In the United States, the current processes related to trademark prosecution, maintenance, and enforcement implement the bare minimum amount of modern technology. While trademark law is moving in the right direction in terms of implementing (somewhat) modern technology through the use of electronic filing systems, these processes could be made even more efficient and accessible by using blockchain technology. Specifically, the implementation of blockchain technology would substantially enhance each process by providing a system for immutable record keeping and decentralized verification, as well as enhanced security and simplified enforcement.

A. Immutable Record Keeping and Decentralized Verification for Trademark Prosecution and Maintenance

As previously explained, blockchain technology is a source for immutable record keeping and decentralized verification. Immutable record keeping means that any information placed on the blockchain is part of it permanently and its record cannot be changed or deleted. Decentralized verification is the process by which any new information entered onto a blockchain is automatically distributed to each node in the network. The nodes (or devices) maintain a copy of the blockchain ledger, validate information, and assist in reaching a consensus about accuracy.⁴⁵ These are both highly valued features of blockchain technology, as they provide authenticity, traceability, and security to every blockchain user.⁴⁶ In terms of

⁴⁵ INVESTOPEDIA, *supra* note 23.

⁴⁶ *Authenticating Trademarks with Blockchain*, TRADEMARKROOM APP <https://trademarkroomapp.com/> (last accessed November 04, 2023).

trademarks, immutable record keeping and decentralized verification would be extremely beneficial during the prosecution and maintenance processes in particular. Specifically, the implementation of a *blockchain-based record storage and authentication system for public use* in order to satisfy the “use-in-commerce” and “acquired distinctiveness” requirements, would be invaluable for ensuring one obtains and maintains federal trademark protection.

While providing evidence for use-in-commerce and acquired distinctiveness sounds easy enough, it can be a time consuming and tedious task. Specifically, this process requires a lot of back-and-forth between attorneys and clients to ensure that the evidence being submitted to prove use-in-commerce or acquired distinctiveness is sufficient and likely to be accepted by the USPTO.⁴⁷ Rather than wasting an attorney’s time and a client’s money, evidence of use-in-commerce and acquired distinctiveness can be made more efficient and accessible through the utilization of reliable and tamper-proof blockchain.

Currently, use-in-commerce must be demonstrated when applying-for and renewing registration.⁴⁸ For goods, use can be shown through photographs of the trademark affixed to labels, packaging, or a purchasing website.⁴⁹ For services, use can be shown through photographs of advertising materials, business signs, or an inquiry website.⁵⁰ This requires individually uploading or attaching evidence for each class of goods or services to the application or renewal form. The exact dates of first use in commerce and first use anywhere must also be provided in the application, which requires manual confirmation and input of these dates. In the application, applicants/attorneys must verify that all the information/evidence they are providing is true and

⁴⁷ *Frequently Asked Questions: What is An Acceptable Specimen of Use?*, TRADEMARK FACTORY <https://trademarkfactory.com/faq/what-is-an-acceptable-specimen-of-use> (last accessed November 12, 2023).

⁴⁸ *Specimens: When Do I Submit a Specimen?*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/laws/specimen-refusal-and-how-overcome-refusal> (last accessed November 12, 2023).

⁴⁹ *Id.* at *Examples of Acceptable Specimens*.

⁵⁰ *Id.*

accurate, but that does not always mean it is. For this requirement, blockchain technology should be used to automatically provide the USPTO with an all-in-one reliable and readily available source for verified immutable evidence of use and dates of use. Assuming the USPTO implements its own blockchain-based record storage and authentication system for public use, the USPTO could then partner with a government trusted software system designed to automatically authenticate and time-stamp any photograph or document evidence. While the encrypted data would be distributed among the network of nodes, only the applicant/attorney would have the encryption key and access control. When filing an in-use application, the required evidence could be uploaded onto, then automatically authenticated and stored by the blockchain while the rest of the application is being filled out. Prior to submitting the application, the applicant could be given their encryption key and would be able to grant the USPTO access to the blockchain for review. When filing a Statement of Use form for an intent-to-use application, the required evidence could also be uploaded onto, then automatically authenticated and stored by blockchain. After receiving an encryption key and verification of authentication, the applicant/attorney would be able to grant the USPTO access to the information for review.

This same “upload, authenticate, and grant access to the USPTO” process can be used when renewing a trademark. Granting access to the blockchain data when submitting a Statement of Use or renewing a registration would allow the USPTO to be “notified virtually immediately on the occurrence of a verified event of this use.”⁵¹ Once the application, Statement of Use, or Renewal form are accepted by the USPTO (meaning blockchain authenticated evidence has been accepted), the applicant/registrant can go as far as granting access to the information of actual

⁵¹ Birgit Clark, et al., *Crypto-Pie in the Sky? How Blockchain Technology is Impacting Intellectual Property Law*, STANFORD JOURNAL OF BLOCKCHAIN LAW & POLICY <https://stanford-jblp.pubpub.org/pub/blockchain-and-ip-law/release/1> (June 28, 2019).

use to the general public through the official trademark register.⁵² This could be used to stop frivolous attempts of a party seeking to register an already federally registered and in-use trademark from claiming non-use of the mark, even if it is limited or not as evident. In other words, while federal registration is prima facie evidence of the validity of the registered mark, blockchain authentication could potentially be used as prima facie evidence of actual use.⁵³

Currently, acquired distinctiveness may be demonstrated when applying for an descriptive mark.⁵⁴ Acquired distinctiveness can be shown through advertising material, dollar amount spent on such advertisements, and evidence indicating consumer recognition of the applied-for mark.⁵⁵ Similar to the use-in-commerce requirement, the applicant is required to individually upload or attach evidence proving acquired distinctiveness through extensive use. For this requirement, blockchain technology should be used to automatically provide the USPTO with an all-in-one reliable and readily available source for verified evidence of substantially exclusive and continued use for at least five years. Again, assuming the USPTO implements its own blockchain-based record storage system for public use, the USPTO could partner with a government trusted software system designed to automatically authenticate and time-stamp any photograph or document evidence. Similar to the procedures outlined above, the applicant would be able to upload evidence of acquired distinctiveness onto a blockchain for authentication. The applicant would then receive an encryption key and access control. Once the evidence of extensive use is authenticated, the applicant would grant the USPTO access to the data, which the USPTO would be notified immediately. The applicant could grant the public access to this information through the official trademark register.

⁵² *Id.*

⁵³ 15 U.S.C. § 1115.

⁵⁴ *How to Claim Acquired Distinctiveness*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/laws/how-claim-acquired-distinctiveness-under-section-2f-0> (last accessed November 05, 2023).

⁵⁵ *Id.*

In conclusion, the implementation of blockchain technology into the trademark prosecution and maintenance processes would be highly beneficial not only for applicants and attorneys, but the USPTO as well. The current procedures in place for demonstrating use-in-commerce and acquired distinctiveness are time-consuming and potentially unreliable, as it could be subject to human error or fraud. By utilizing immutable record keeping and decentralized verification through a blockchain-based record storage and authentication system for public use, efficiency and accessibility would be enhanced for everyone. This is because trademarks and blockchain “have a complementary nature: a trademark acts as a source identifier, and a blockchain can validate a source.”⁵⁶

B. Enhanced Security and Simplified Enforcement of Trademark Rights

As described earlier, immutable record keeping and decentralized verification are highly valued foundational features of all blockchain technology. Immutable record keeping and decentralized verification ensures that any information placed on the blockchain cannot be changed or removed and are copied on a ledger to each node in the network, which then can validate and verify the information. While these features can be used to implement a public record storage and authentication system, they can also be used privately and/or publicly to enhance security and simplify enforcement of legal rights. In terms of trademarks, enhanced security would be extremely beneficial when enforcing the owners right to exclusively use the mark in commerce. Specifically, the implementation of a ***blockchain-based supply chain tracking, verification, and authentication system for identifying genuine goods*** in order to enhance security and prevent the trafficking/distribution of counterfeits would be invaluable for

⁵⁶ Susan Kayser and Anna Raimer, *Blockchain Can Change Everything: Even Trademark Transactions*, AMERICAN BAR ASSOCIATION https://docs.google.com/document/d/1jss8SGDNDbX56qAkF47SK5dzs7n_0FQ1HO8SN9JsScQ/edit (September/October 2018).

ensuring a federally protected trademark is secure against infringement. Additionally, in terms of trademarks, simplified enforcement of trademark rights would be extremely beneficial when enforcing the owners licensing rights. Specifically, the implementation of a ***blockchain-based automated system for the execution and enforcement of agreements when licensing a trademark*** would be invaluable for ensuring the simplified enforcement of basic rights for federal trademark owners.

While preventing the trafficking or distribution of counterfeited goods seems straightforward, it can be difficult to even detect such items in the first place. Specifically, detection/reporting of trafficked or distributed counterfeit goods is typically a manual process, which can be entirely unreliable. Moreover, while entering into a licensing agreement sounds easy enough, it can be burdensome for licensors and licensees to uphold the terms and legal requirements. Specifically, at the very least, licensors are responsible for exercising control over use of the mark and quality of the goods (or services), while licensees are responsible for providing an accurate accounting of their use and paying subsequent royalties, which are unnecessarily laborious processes for both parties. Rather than relying on an unreliable counterfeit detection or an unnecessarily laborious license agreement enforcement, both of these processes can be made more efficient and accessible through the utilization of reliable and tamper-proof blockchain.

Currently, preventing the trafficking and distribution of counterfeit goods is essential to ensuring a federally protected trademark is exclusively used and secured against infringement. For luxury goods in particular, this prevention is essential because inferior-quality products that have the same or a similar trademark as higher-quality products can weaken the strength of a

trademark over time by decreasing consumer confidence in a luxury brand.⁵⁷ At this time, preventing the trafficking and distribution of counterfeit goods is mostly done manually by customs, trademark owners, or consumers. For instance, some affluent federal trademark owners hire private investigators to identify the counterfeit manufacturer, which goes even further to prevent the illegal production of a fraudulent product in the first place.⁵⁸ Moreover, the USPTO suggests that federal trademark owners of popular/high-demand products who are targeted by international counterfeiting monitor the internet for any e-commerce sites selling fraudulent goods.⁵⁹ Federal trademark owners are also encouraged by the USPTO to submit an application to record their registration with United States Customs and Border Protection (“CBP”).⁶⁰ CBP then has the manual responsibility of physically detecting, detaining, and seizing imported products that violate the rights of any recorded trademark.⁶¹ CBP is also in the process of implementing an anti-counterfeit strategy for e-commerce shipments, which (in part) emphasizes “leveraging enforcement partnerships with partner government agencies and foreign governments, and improving data collection from CBP targeting systems and field personnel.”⁶² Consumers can also help prevent the trafficking and distribution of counterfeit goods by reporting on any online vendors selling fraudulent products to the U.S. Government agency that are responsible for enforcing intellectual property laws, such as the Office of Intellectual

⁵⁷ Connie Boutsikaris, *Cracking Down on Counterfeits – How Trademark Owners Can Protect Themselves from Sellers of Counterfeit Products*, DUNNER LAW <https://dunnerlaw.com/cracking-down-on-counterfeits-how-trademark-owners-can-protect-themselves-from-sellers-of-counterfeit-products/> (January 12, 2015).

⁵⁸ *The 4 E’s: How Brands Are Using Outsourced I.P. Investigators to Successfully Battle Counterfeits*, VAUDRA INTL. <https://vaudra.com/the-4-es-how-brands-are-using-outsourced-i-p-investigators-to-successfully-battle-counterfeiters/> (last accessed November 12, 2023).

⁵⁹ *U.S. Customs and Border Protection Services for Trademark Owners*, UNITED STATES PATENT AND TRADEMARK OFFICE [https://www.uspto.gov/trademarks/protect/customs-and-border-protection#:~:text=Recording%20your%20trademark%20registration,and%20Border%20Protection%20\(CBP\)](https://www.uspto.gov/trademarks/protect/customs-and-border-protection#:~:text=Recording%20your%20trademark%20registration,and%20Border%20Protection%20(CBP)) (last accessed January 10, 2024).

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *E-Commerce*, U.S. CUSTOMS AND BORDER PATROL <https://www.cbp.gov/trade/basic-import-export/e-commerce> (last access November 05, 2023).

Property Rights or the National Intellectual Property Rights Coordination Center.⁶³ However, a recent research conducted by Michigan State University found that almost 7 in 10 people had been deceived into purchasing counterfeit products at least once in the past year (most commonly shoes and clothes).⁶⁴ Needless to say, manual reporting can be an entirely unreliable procedure because CBP cannot possibly stop every counterfeit product from entering the stream of commerce and not every consumer is able to detect a counterfeit product.

Instead of settling for the mediocre detection and reporting procedures mentioned above, federal trademark owners (whose trademarks are likely to be counterfeited) should implement a blockchain-based system for decentralized verification and immutable record keeping. This would be an extremely secure way of tracking, verifying, and authenticating a genuine product's supply chain journey from start to finish. Owners could establish this type of system on a reliable blockchain platform, such as Ethereum.

To accurately *track* the supply chain journey, it would first begin by the trademark owner initiation production, then authorized participants (i.e., suppliers, manufacturers, distributors, and sellers) could be required to input data indicating: (1) when they received production materials, (2) when they started production, (3) the tasks they were given and when they completed each of them, (4) when they completed production entirely, and (5) when they distributed the product to the next point in the supply chain and any potential tracking information (e.g., from FedEx, etc).

To accurately *verify* the supply chain journey, both authorized and unauthorized (i.e., some sellers, CBP, and consumers) supply chain participants should be given access to general tracking data and details on authorized shipments of the product. For instance, CBP officials

⁶³ *Report an Online Vendor Selling Fakes*, STOPFAKES.GOV <https://www.stopfakes.gov/Reporting-an-Online-Vendor-Selling-Fakes> (last accessed November 05, 2023).

⁶⁴ Saleem Alhabash, et al., *MSU survey: 7 in 10 consumers deceived into buying counterfeit products online*, <https://comartsci.msu.edu/about/newsroom/news/msu-survey-7-10-consumers-deceived-buying-counterfeit-products-online> (October 25, 2023).

could use a copy of the blockchain ledger to determine whether a suspicious shipment was authorized or if it is counterfeit goods, which could help CBP “reduce uncertainty, time, and investigation costs associated with identifying counterfeits and preventing them from entering the United States.”⁶⁵

To accurately *authenticate* the supply chain journey, interactive tags should be embedded in goods that are popular/highly sought/expensive and vulnerable to being counterfeited. These interactive tags would be scannable and used to automate authentication. Although this sounds similar to the type of interactive technology that is currently used (e.g., QR codes), these interactive tags would be different in that they would not link to a single source of information, but rather a distributed ledger which has already gone through decentralized verification and cannot be altered or deleted.⁶⁶ By notifying CBP officials, consumers, and e-commerce platforms about the use of interactive tags, each of these parties would have an easy and accessible way to check whether the product is a counterfeit. Although establishing blockchain-based solutions throughout the supply chain may take time, its implementation in the long run would make tracking, verification, and authentication processes more reliable through automation.

Currently, executing and maintaining licensing agreements is essential to ensuring that a trademark owner has the ability to enforce their basic rights. Through licensing, trademark owners (licensors) allow others (licensees) to use their mark in commerce for specified products in exchange for payments through fees and/or royalties. A trademark license is usually obtained through an agreement between the licensor and licensee, which outlines all terms related to authorized use and required royalties. Once the parties are finished negotiating the terms and signatures have been received, the agreement should be recorded with the USPTO. After the

⁶⁵ AMERICAN BAR ASSOCIATION, *supra* note 34.

⁶⁶ STANFORD JOURNAL OF BLOCKCHAIN LAW & POLICY, *supra* note 30.

agreement has been entered into, it is only good for as long as the licensor controls the nature and quality of the goods that are using the trademark. Controlling the nature and quality of the goods requires the licensor to actively and continuously monitor use of the mark by the licensee. Although it can be unexciting to exercise control over the nature and quality of the products using the trademark, it is necessary for the licensor to do so or trademark rights might be lost altogether. Additionally, when licensing a trademark, licensees must pay royalty rates for every sale in which the mark is used, which can be calculated using the percentage of sales or a payment per unit sold.⁶⁷ Most royalty payments are made manually through direct or wire transfers, check deposits, or e-payments through mobile platforms. Moreover, royalty payments are likely reviewed manually by financial managers to ensure there is tax compliance, payments align with the terms of the agreement/financial statements, and verification of payment amount/recipient is accurate.⁶⁸

The current processes in place complicate, rather than simplify, the enforcement of basic trademark rights by requiring physical execution of the agreement terms. At this point in time, agreements are made electronically or on paper. Electronic contracts are becoming the most popular way to draft and execute a legal agreement, as digital signatures are legally recognized.⁶⁹ While they are popular and relatively secure, these documents must still be physically executed and can potentially be lost, deleted, or destroyed.

Instead of settling for complicated manual procedures relating to trademark licensing agreements, trademark owners should implement a blockchain-based system for decentralized verification and immutable record keeping because that would be an extremely secure way of

⁶⁷ Caroline Banton, *What Is a Royalty? How Payments Work and Types of Royalties*, INVESTOPEDIA <https://www.investopedia.com/terms/r/royalty.asp> (June 21, 2022).

⁶⁸ *Id.*

⁶⁹ *What Is an Electronic Contract?*, IRONCLAD JOURNAL <https://ironcladapp.com/journal/contracts/what-is-an-electronic-contract/#:~:text=Electronic%20contracts%20are%20more%20popular.%2C%20manage%2C%20and%20store%20them> (last accessed November 05, 2023).

enforcing trademark rights and simplifying the execution of licensing agreements. Owners could establish this type of system on a reliable blockchain platform, such as Ethereum.

Specifically, smart contracts can be used to automate the execution and enforcement of trademark licensing agreements. A smart contract is a set of programmable computer codes, shared between two or more parties, that runs on a blockchain and represents the terms which were agreed upon by the parties.⁷⁰ Smart contracts are self-executing and self-verifiable, meaning that the smart contracts automatically perform the predefined conditions and detail the consequences once those conditions are met.⁷¹ The self-executing aspect of the automated contracts helps to ensure overall compliance with the terms of the agreement and all other contractual obligations.⁷²

For licensors in particular, this sort of programmable code would be extremely beneficial for ensuring satisfaction of the requirement that the licensor must exercise the proper amount of control over the nature and quality of the goods using the licensed mark. Smart contracts can be used by licensors to exercise control by automatically monitoring the licensee's use and verifying that the products are made by a pre-approved manufacturer, have undergone necessary inspections, and are used only in pre-approved territories. The distributed ledger system would give each party easy and immediate access to this information. For licensees in particular, this sort of programmable code would be extremely beneficial when accounting for use and making royalty payments. Specifically, smart contracts can be used as a way of providing verified/up-to-date accounting of sales and revenue of products using the licensed mark.⁷³

Additionally, smart contracts can be used as a way of allowing the transfer of payments in real

⁷⁰ Mayank Pratap, *Everything You Need to Know About Smart Contracts: A Beginner's Guide*, HACKERNOON <https://hackernoon.com/everything-you-need-to-know-about-smart-contracts-a-beginners-guide-c13cc138378a> (August 27, 2018).

⁷¹ *Id.*

⁷² *Id.*

⁷³ AMERICAN BAR ASSOCIATION, *supra* note 34.

time to trademark owners. More specifically, when royalty is to be paid based on the amount of sales or revenue, the amount-specific payments can be quickly calculated and automatically distributed to the licensor.

In conclusion, the use of blockchain technology can significantly enhance security and simplify enforcement of trademark rights. In particular, blockchain-based systems can be used to enhance security, as well as prevent the trafficking and distribution of counterfeit goods through supply chain tracking, verification, and authentication system for identifying genuine goods and securing a federally protected trademark from infringement. Tracking and verification would be benefited by the use of decentralized verification and immutable record keeping to document the supply chain journey for genuine goods. Moreover, authentication would be benefited by the use of scannable interactive tags to make the process automated. Additionally, blockchain-based systems can also be used to implement automated systems for the execution and enforcement of trademark licensing agreements for the simplified enforcement of basic trademark rights. More specifically, smart contracts can automate enforcement and execution of trademark licensing agreements by programming computer code to execute predefined conditions, with specified consequences once said conditions are met, which ensures compliance with the terms of the agreement. Smart contracts would also be able to automate royalty calculations and payment transmissions. Overall, as the means in which intellectual property rights can be enforced evolve, the implementation of blockchain technology should be encouraged, as it increases reliability, productivity, efficiency, and accessibility to all.

III. RECOMMENDATION: ENCOURAGE THE USE OF BLOCKCHAIN BY UPDATING THE LANGUAGE OF THE LANHAM ACT

Since it was first enacted, the Lanham Act has been amended numerous times by subsequent Congressional Acts, which have either extended or modified federal trademark protection. For example, the Trademark Counterfeiting Act of 1984 extended the Lanham Act to include criminal sanctions and civil remedies against any person who knowingly trafficked goods or services using a counterfeit trademark.⁷⁴ Most recently, the Lanham Act was expanded upon by the Trademark Modernization Act of 2020.⁷⁵ While this “Modernization” Act was passed with the intention of making trademark proceedings more efficient and affordable, it interestingly enough does not implement “modern” technology to do so. Instead, the Trademark Modernization Act merely established new proceedings, shortened deadlines, and modified other standards. In other words, this Act may have established new prosecution deadlines/enforcement options to increase efficiency and decrease prices, but it did not actually modernize federal trademark protection or the Lanham Act to do so.

A. *Recommendations of Where the Lanham Act Can Be Updated to Reflect Modern Times and Technology*

The language of the Lanham Act can and should be updated in nearly every section to reflect modern times and technology. While this paper will not act as the legislative branch and rewrite the actual policy, there are a few key sections highlighted and discussed below *where* the language of the Lanham Act could be updated to encourage the use of blockchain technology

⁷⁴ 18 U.S.C. § 2320; Lisa Lyne Cunningham, *Trademark Counterfeiting and Individual Purchaser Liability*, THE NATIONAL LAW REVIEW <https://www.natlawreview.com/article/trademark-counterfeiting-and-individual-purchaser-liability> (November 11, 2011).

⁷⁵ KILPATRICK TOWNSEND, *supra* note 11.

during prosecution, maintenance, and enforcement processes. Modern technology within our society is developing faster than ever. Rather than instigating fear surrounding these new technologies, such as blockchain technology, the government and other tech-related public figures should be dismantling fear and encouraging its use. Although being hesitant to use the unknown is fair, with proper management and safeguards in place, modern technology would be beneficial for everyone in countless ways – not only for “crypto bros.”⁷⁶

For starters, the use of blockchain technology should especially be encouraged during the prosecution and maintenance process. As explained in section 2(A) above, in order to obtain and maintain federal trademark registration, the applicant must satisfy the “use-in-commerce” and “distinctiveness” requirements.⁷⁷ Use-in-commerce is shown by providing dates of first use and physical evidence of use for each applied-for class of goods or services, which must be done during both the prosecution and renewal processes.⁷⁸ Meanwhile, “inherent distinctiveness” is shown during the prosecution process by having a strong trademark (arbitrary, fanciful, or suggestive) that “quickly and clearly identifies [the applicant] as the source of [their] goods or services.”⁷⁹ If the mark is not strong (descriptive or generic), the application will only be approved upon a showing of acquired distinctiveness. Under § 1051 of the Lanham Act (Application for registration; Verification), the original language should be kept for those who will not be using blockchain technology, but an additional section should be included to encourage and allow its use, with reasonable safeguards in place. For example, after the existing

⁷⁶ Marco Quiroz-Gutierrez, ‘Crypto bro’ isn’t just slang. *New research shows the industry is dominated by men*, FORTUNE <https://fortune.com/2022/07/21/crypto-bro-web3-gender-diversity-women-in-tech/> (July 21, 2022).

⁷⁷ Cornell Law School, *Trademark*, CORNELL LAW SCHOOL: LEGAL INFORMATION INSTITUTE <https://www.law.cornell.edu/wex/trademark#:~:text=Two%20basic%20requirements%20must%20be,power%20to%20regulate%20interstate%20commerce.> (last accessed November 12, 2023).

⁷⁸ *Dates of Use*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/laws/dates-use-1> (last accessed January 10, 2024).

⁷⁹ *Strong Trademarks*, UNITED STATES PATENT AND TRADEMARK OFFICE <https://www.uspto.gov/trademarks/basics/strong-trademarks> (last accessed January 10, 2024).

subsection “(f) Third-Party Submission of Evidence,” a new subsection could be added titled “(g) Submission of Required Application Specimens via Blockchain Technology.” In this section, Congress should explain how, why, and when the “use-in-commerce” requirement can be satisfied by using blockchain for in-use versus intent-to-use applications, including any access controls the applicant does or does not have. Additionally, under § 1059 of the Lanham Act (Renewal of Registration), the original language should also be kept here, but another additional section should be included to encourage and allow the use of blockchain technology, with reasonable safeguards in place. Specifically, after subsection “(c) Designation of Resident for Service of Process and Notices,” a new subsection could be added titled “(d) Submission of Evidence Required Renewal Application Specimens via Blockchain Technology.” For instance, in this section, Congress could again explain how, why, and when the “use-in-commerce” requirement can be satisfied by using blockchain for renewal application.

Additionally, the use of blockchain technology should also be encouraged when enforcing trademark rights. As explained in section 2(B) above, in order to enhance the security of federal trademark registration rights, the owner should make an effort to prevent infringement by counterfeit goods. Additionally, 2(B) also provides that in order to simplify enforcement of federal trademark registration rights, the owner should execute licensing agreements through smart contracts. Under subchapter 3 of the Lanham Act (“General Provisions”), a new coded section should be created and included to encourage the use of blockchain technology for infringement prevention and agreement execution. Specifically, this new coded section could outline methods, such as supply chain tracking and smart contracts, which would be encouraged when enforcing trademark rights.

Ultimately, although this paper points out in which areas the language of the Lanham Act could be updated to encourage the implementation of blockchain technology, it is very likely that such an update will not happen any time soon. Not only because the use of blockchain technology has not outwardly been encouraged in federal law before, but also because Congress will likely want to have a basic legal framework in place for blockchain technology in general, that can be applicable within any sector, before actually letting and encouraging its full implementation.

IV. CONCLUSION

In conclusion, federal trademark prosecution, maintenance, and enforcement processes should be made more efficient and accessible by implementing blockchain technology, and current processes, as well as the Lanham Act, are inadequate for carrying out that purpose. More specifically, these trademark processes would be and should be substantially enhanced by blockchain's ability to conduct decentralized verification and immutable record keeping.

For the prosecution process, using blockchain technology would make it easier to provide and prove dates of first use, evidence of use-in-commerce, and acquired distinctiveness for inherently weak marks. For the maintenance process, using blockchain technology would make it easier to provide and prove ongoing use of the mark in commerce. In other words, both the prosecution and maintenance processes would significantly benefit from the implementation of a blockchain-based record storage and authentication system for public use.

For the enforcement process related to infringement, using blockchain technology would enhance security and prevent the trafficking and distribution of counterfeit goods through a supply chain tracking, verification, and authentication system for identifying genuine goods. Additionally, for enforcement processes related to licensing agreements, using blockchain

technology would simplify said processes through the implementation of an automated system for execution and enforcing the terms set forth and agreed to by both parties.

While it is understandable why the federal government has remained hesitant when it comes to the implementation of blockchain technology, as it is newer with no safeguards or controlling laws in place, the government is going to have to start somewhere with regulating this new industry. Where would that be? Should the federal government establish safeguard before actually implementing the use of blockchain in any sector? If so, what would those general safeguards be? Regardless of the government's apprehension towards the implementation of blockchain technology, there is no doubt that its integration would be extremely beneficial for improving the efficiency and accessibility of the aforementioned federal trademark law processes.