

DEVELOPMENT OF AN ONLINE TRADEMARK INFRINGEMENT MONITORING SYSTEM: GOOGLE CASE STUDY

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ABSTRACT

Online marketing or often called digital marketing is marketing with the concept of promoting products or services through internet-based media, one of which is a website. Digital transformation has brought new opportunities and challenges to brand protection, particularly in the online space. Trademark infringement across digital platforms, including search engines like Google, is becoming increasingly common and requires innovative and integrated solutions. This article discusses the development of a technology-based monitoring system to detect and resolve online trademark infringement, focusing on a case study of Google's infringement policies and mechanisms. This research utilizes a normative legal analysis method with a case study approach. The results show that artificial intelligence (AI)-based technologies and machine learning algorithms can improve the effectiveness of infringement detection. However, challenges such as cross-country regulatory inconsistencies, lack of algorithmic transparency, and limited reporting processes remain major obstacles. The study recommends strengthening international regulations, enhancing cooperation among stakeholders, and developing comprehensive surveillance technologies to create a sustainable brand protection ecosystem in the digital age.

Keywords: trademark, infringement, monitoring.

INTRODUCTION

The Indonesian economy is one of the largest economies in Southeast Asia and has strong growth potential. Having abundant natural resources, a large population, and a strategic geographical location has the potential to improve the economy for the community, such as trade, and tourism.

The digital revolution has fundamentally changed the global trade landscape, creating a virtually limitless economic ecosystem without geographical restrictions. The development of internet technologies and digital platforms has enabled multinational corporations such as Google to develop a highly complex and dynamic global business footprint. In this context, trademarks are no longer mere visual identities, but rather multi-billion dollar strategic assets that require comprehensive protection in the digital space.

The development of information technology and the internet has fundamentally changed the global trade landscape, providing businesses with a wider space to conduct transactions and promotions online. In this context, trademarks have become very important strategic assets for companies, especially global technology companies such as Google, which owns trademarks worth billions of dollars. However, the limitless accessibility of the internet has opened up opportunities for trademark infringement practices that are increasingly complex and difficult to detect.

The development of this technology has renewed the order of people's lives which is now completely digital, as a result of which a new culture has emerged in citizens, namely everything in life is connected through gadgets and the internet, this shows an opportunity for entrepreneurs to promote their products using a lot of social media. For this reason, a brand is needed which becomes a special characteristic that is able to distinguish a product or service using other products or services. In addition to being a differentiator, so that the product is easily recognized by the citizen which is contained in the form of a brand. Brands using names that are interesting, easy to recognize and remember are certainly very attractive to the producers so that their goods or services are also easily remembered and recognized by consumers. Brands that have interesting names, easy to identify, and can be remembered certainly as a desirable option for the producer so that the products or services they offer are also easily remembered and recognized by consumers.

In Law Number 20 Year 2016 on Trademarks and Geographical Indications, the definition of trademarks and brands is explained in writing in Article 1 paragraph 1 and paragraph 2 with the following formulation: "Trademark is a sign that can be displayed graphically in the form of images, logos, names, words, letters, numbers, color arrangements, in the form of 2 (two) dimensions and/or 3 (three) dimensions, sound, holograms, or a combination of 2 (two) or more of these elements to distinguish goods and/or services produced by persons or legal entities in trading activities of goods and/or services." "Trademarks are Trademarks used on goods traded by a person or several persons jointly or legal entities to distinguish with other similar goods."

In Law Number 20 Year 2016 on Trademarks and Geographical Indications, the definition of trademark and trademark is explained in writing in Article 1 paragraph 1 and paragraph 2 with the following formulation: The importance of trademarks in influencing the development of the business of a good or service can be seen from the desire of the public who are buyers or consumers in the use of goods or services that have a well-known trademark, therefore trademark protection is needed to maintain healthy business competition and prevent violations of intellectual property rights. The development of technology has renewed the order of people's lives that are all digital as a result of the emergence of new habits for society, namely everything is connected through gadgets and the internet, this shows an opportunity for entrepreneurs to promote their products using a lot of social media. For this reason, a brand is needed which becomes a special characteristic that is able to distinguish a product or service from other goods or services. In addition to being a differentiator, so that the product is easily recognized by the public which is contained in the form of a brand. Brands using names that are interesting, easy to recognize and remember are certainly very attractive to producers so that their goods/services are easily remembered and recognized by consumers. Brands that have attractive names, are easy to identify, and can be remembered are certainly a desirable choice by producers so that the products or services they offer are also easily remembered and recognized by consumers.

The phenomenon of online trademark infringement has evolved into a systemic threat to the digital economy ecosystem. Global statistics show that economic losses due to trademark infringement amount to more than 500 billion dollars per year, with around 60% of infringements occurring through digital platforms. The complexity of this issue not only involves legal and economic aspects, but also includes information technology dimensions that require a multidisciplinary approach.

Google, as one of the leading technology corporations, faces unique challenges in protecting its trademark portfolio. With more than 240 global products and services, the company is a prime target for increasingly sophisticated digital infringement practices. The unique characteristics of Google's digital ecosystem, which includes platforms such as Google

Search, YouTube, Google Cloud, and Android, require a comprehensive and adaptive monitoring strategy.

Conventional approaches to trademark enforcement face significant limitations in the digital context. The speed of information dissemination, anonymity of perpetrators, and technological complexity make traditional methods ineffective. Therefore, it is necessary to develop a monitoring system that utilizes cutting-edge technologies such as artificial intelligence, machine learning, and large-scale data analysis.

Trademark protection mechanisms in the digital era are becoming increasingly complex due to the rapid development of technology and the widespread of online commerce. In this context, brand protection plays an important role in protecting the rights of brand owners. The digital age brings new challenges to brand protection, including the need to address issues related to online infringement, domain name disputes, and the use of trademarks in digital marketing and e-commerce. Hence, there is an increasing need for legal regulations and enforcement mechanisms to effectively protect marks in the digital environment.

Moreover, the digital age has led to the internationalization of trademarks. Therefore, it is important to create a legal framework for the protection and enforcement of marks across borders. This includes considerations regarding the recognition and protection of marks in various jurisdictions, as well as mechanisms to address cross-border trademark disputes.

In this article, the author discusses the dynamics of brand protection in the digital era. Given the broad scope of trademark issues, this study only limits the main opportunities and challenges for trademark protection in the digital era and describes strategies that can overcome these complexities.

METHODS

The research method used is prescriptive legal research. h. Approaching the problem under study by investigating aspects of the applicable laws and regulations, observing their application in daily practice. This research is descriptive and analytical and focuses on a systematic description or description of relevant facts related to the problem under study. The data sources used in this research are secondary, meaning that data is obtained through library research and supported by information collected directly from field research.

RESULTS AND DISCUSSION

A. What are the patterns and characteristics of online trademark infringement that occur on the Google platform?

For customers, brands are a guarantee of product quality and can facilitate purchasing decisions. For producers, brands are a strategy to form loyalty and maintain sustainable relationships with their consumers. However, if a mark shows similarity to other goods or services, granting exclusive rights to the mark is considered inappropriate because it lacks the element of uniqueness and includes information similar to that found in other marks.

Social media is an online medium, where users can easily participate, share, and create content including blogs, social networks, wikis, forums and virtual worlds. Blogs, social networks and wikis are the most common forms of social media used by people around the world.

Social media users can freely edit, add, modify text, images, videos, graphics, and various other content models. Social media is about being human. Ordinary people who share ideas, work together, and collaborate to create, think, debate, find people who can be good friends, find partners, and build a community. In essence, using social media makes us who we are. Apart from the speed of information that can be accessed in seconds, being yourself in

social media is the reason why social media is growing rapidly. Not least, the desire for self-actualization and the need to create personal branding.

Online trademark infringement on platforms like Google has complex patterns and characteristics. One important aspect in assessing trademark infringement is the degree of brand distinctiveness, i.e. the extent to which consumers associate a brand with a particular source. Google can be used to assess this distinctiveness, as search results can reflect consumers' views of a brand. If many search results are associated with sources identified by the brand, then the brand is considered strong.

E-commerce platforms have changed the way businesses operate and interact with consumers, but they also pose new challenges in trademark rights protection. Common infringements include the sale of counterfeit goods, unauthorized use of marks, and domain infringement. It is important to identify, prevent, and enforce these infringements in the ever-evolving digital ecosystem. This pattern of infringement often involves the use of trademarks in advertisements appearing in Google search results, which can cause confusion among consumers as to the source of the product or service.

A key characteristic of this online trademark infringement is the anonymity offered by the internet, which makes it easy for perpetrators to commit infringement without being detected. Moreover, these infringements often involve the sale of counterfeit products or gray imported goods, as well as the unauthorized use of trademarks on websites.

Online trademark infringement on the Google platform has evolved into an increasingly complex and dynamic phenomenon along with the evolution of digital technology. As one of the largest technology companies in the world, Google faces various forms of trademark infringement that are not only financially costly but also threaten reputation and consumer trust. Based on data from the 2022 Google Transparency Report, there has been a significant increase in the number of trademark infringements, with more than 10,000 cases reported each month across Google's various platforms.

In the development of the digital world today, it not only offers a variety of opportunities and great benefits for those with business interests. However, there are also various challenges that must be faced, namely:

a. Counterfeiting and Infringement of Brand Rights

The main challenge faced is the misuse of brand names that can harm brand owners and consumers. In the digital era, the existence of online sales can make it easier for someone to claim someone else's brand.

b. Counterfeiting of Brand Identity Defense In a competitive digital era, businesses must maintain their brand identity to remain recognizable and distinguishable from competitors' products.

Businesses must maintain their brand identity to remain recognizable and distinguishable from competitors' products.

Relevant legal bases in addressing online trademark infringement in Indonesia include Law Number 20 Year 2016 on Trademarks and Geographical Indications. This law provides legal protection for trademark owners and establishes sanctions for infringement of trademark rights, including infringement occurring in the digital environment.

News coverage in digital and social media has a significant impact on public opinion. It is important to continuously monitor and analyze news in digital and social media so that appropriate action can be taken. To prevent negative impacts on public opinion, a monitoring method known as Digital Media and Social Media Monitoring must be conducted. Digital and social media monitoring identifies different types of public reactions and opinions towards private and government entities, including

business people, politicians, and local governments, based on data from all types of digital and social media. This is an analysis method for media. The data will be processed until it is accurate so that it can be used as a basis for determining appropriate actions on existing issues and opinions.

A relevant example of a case in Indonesia is a trademark infringement case involving the unauthorized use of a well-known brand in an online advertisement. This case shows how infringement can occur through advertising platforms such as Google AdWords, where third parties use trademarks to draw consumers' attention to their own products.

In dealing with these infringements, it is important to strike a balance between the protection of a trademark owner's rights and the need for a free online space. Courts often have to consider the extent to which the use of trademarks in online advertising may cause confusion among consumers.

Google, as a service provider, has an important role to play in addressing this infringement by implementing strict policies against the use of trademarks in advertisements. However, Google's legal liability in cases of trademark infringement is still a matter of debate, especially with regard to whether they can be held liable for infringement committed by users of their services. To address online trademark infringement, trademark owners can take steps such as reporting violations to advertising platforms, filing lawsuits, and raising consumer awareness about genuine products. In addition, cooperation between brand owners and online platforms is essential to prevent and crack down on infringement.

It is also important to update the existing legal and regulatory framework to address new challenges that arise in the digital environment. This includes strengthening enforcement mechanisms and enhancing international cooperation in dealing with cross-border trademark infringement.

Overall, online trademark infringement on platforms like Google requires a comprehensive and collaborative approach between brand owners, online platforms, and legal authorities to protect intellectual property rights and ensure fairness for all parties involved.

B. What integration between legal frameworks and monitoring technologies can enhance trademark protection in the digital age, and what challenges and opportunities arise from this integration?

Global development in this millennial year is characterized by increasingly rapid progress in the field of science and technology (IPTEK). Given the variety of human demands and needs, these developments appear increasingly multidimensional. This complexity increases further when combined with the pattern of business interactions in modern society. This influence has changed the face of world trade and the world economy into a form of global business. Economic globalization means that the economies of various countries are integrated into one, as if not limited by national sovereignty. One of the most prominent business characteristics in economic globalization is the speed of trade and the flow of goods and capital. This also has an impact on various regulations in the corporate sector that are changing rapidly.

a. Legal Framework for Trademark Protection

Trademark protection is an important aspect in the intellectual property law system, aiming to protect the identity of products or services from being misused by other parties. Generally, trademarks are regulated under domestic laws that refer to international standards to ensure comprehensive protection. In Indonesia, this protection is regulated in Law Number 20

Year 2016 on Trademarks and Geographical Indications, while internationally, the Madrid Protocol becomes one of the main instruments for cross-border trademark registration.

The legal framework of trademark protection includes important principles, such as the exclusive rights granted to the trademark owner after the registration process. These exclusive rights allow the owner to use the mark lawfully and prohibit other parties from using similar or identical marks without authorization, which may lead to confusion in the market. Some countries apply a “first-to-file system,” such as Indonesia and the European Union, where rights are granted to the party who first registers the mark. On the other hand, countries like the United States use the principle of “first-to-use,” where rights are granted based on the first use in commerce.

In its supervision, the legal framework also includes enforcement mechanisms, both through civil litigation and criminal sanctions. Brand owners can file a lawsuit in court to obtain damages for infringement of their rights, while perpetrators of brand counterfeiting may be subject to criminal penalties as a preventive measure. Moreover, in some jurisdictions, customs are empowered to seize trademark infringing goods before they enter the domestic market.

In the digital age, the legal framework faces new challenges, including trademark infringement in the online space. Unauthorized use of brand names in web domains, search-based advertising, or social media is often a problem. Therefore, some countries have developed additional laws that accommodate the digital space, such as the Digital Millennium Copyright Act in the United States that protects trademarks from online infringement.

International cooperation is also an important part of this legal framework. The Madrid Protocol allows for international registration of marks under a single system, which makes it easier to protect trademarks in different countries. In addition, the TRIPS (Trade-Related Aspects of Intellectual Property Rights) Agreement provides for minimum standards of trademark protection that must be adopted by member countries of the World Trade Organization (WTO). With an integrated and updated legal framework in place, trademark protection is expected to provide legal certainty and encourage economic growth through healthy business competition.

b. Monitoring Technology in Trademark Protection

Monitoring technology is a modern approach used to support trademark protection, especially in the digital era that is full of new challenges. By utilizing tools such as artificial intelligence (AI), blockchain, and big data analysis, monitoring technology enables early detection of brand infringement and prompt response. This innovation also helps brand owners to protect their reputation while providing a sense of security to consumers.

Infringement Detection with Artificial Intelligence (AI) plays an important role in monitoring online activities and detecting trademark infringement automatically. AI systems use sophisticated algorithms to scan e-commerce platforms, websites, and social media for content that involves unauthorized trademarks. For example, image recognition algorithms can detect logos or brand designs used in counterfeit products sold online. AI can also scan for keywords in product descriptions or meta-tags that mislead consumers, such as those often found in online advertisements. This process enables real-time monitoring of potential infringements and taking action before the brand is harmed further.

Apart from artificial intelligence there is also Blockchain which is used for Authentication and Transparency. Blockchain is a revolutionary technology that can be used to provide authenticity and transparency in protecting trademarks. This technology enables the creation of immutable digital certificates, recording the ownership of a trademark and its transaction history on a decentralized network.

In addition, Blockchain can be used to track products from the manufacturer to the end consumer in the supply chain. For example, a QR code connected to the blockchain system allows consumers to verify the authenticity of the product by scanning the code using a smart phone. This technology not only protects trademarks, but also strengthens consumer confidence in the products they buy.

After blockchain Big Data analytics can also be used to detect patterns of infringement. Big data enables the collection of information from various digital sources, such as e-commerce platforms, social media, and infringement reports, to analyze patterns of trademark infringement. This big data is processed using analytics technology to identify certain trends, such as the geographic location of infringers, the types of products that are frequently counterfeited, or specific times when infringements tend to increase. For example, data analysis can uncover a network of product counterfeiters operating in a particular region, allowing brand owners or law enforcement to take proactive action. This process can also save time and money compared to manual methods.

While monitoring technology offers an effective solution, its use is not free from challenges and limitations. One of the main challenges is the high investment cost, which may be difficult for small and medium-sized enterprises (SMEs) to access. In addition, the legal framework in some countries does not fully support the use of digital evidence generated by monitoring technology in litigation. Furthermore, trademark infringement is often cross-border in nature, requiring coordination between jurisdictions. This complicates enforcement efforts, especially in the absence of effective international cooperation.

Overcoming these challenges requires collaboration between governments, tech companies and brand owners. Governments should update regulations to allow the use of monitoring technology as valid evidence in court. On the other hand, technology companies need to develop more cost-effective solutions that are accessible to SMEs. International cooperation is also important, especially to address cross-border infringement. Organizations such as the World Intellectual Property Organization (WIPO) and the World Trade Organization (WTO) can facilitate this cooperation through agreements such as the Madrid Protocol and the TRIPS Agreement.

Monitoring technology has become a very effective tool to provide additional protection to trademarks. By integrating AI, blockchain, and big data analytics, brand owners can detect and address infringements quickly. However, to achieve maximum protection, there needs to be adequate regulatory support, affordable technology investments, and cross-sector and international collaboration.

C. Integration of Legal Framework and Monitoring Technology

The integration of legal framework with monitoring technology is a strategic solution in providing comprehensive protection for trademarks. This integration requires alignment of legal rules with technological capabilities to detect, prevent, and handle trademark infringement more effectively. With this approach, trademark protection can be improved both at the national and international levels.

Aligning Legal Framework with Monitoring Technology. The applicable legal framework must support the use of monitoring technology to strengthen trademark protection. For example, legal rules that allow the use of digital evidence generated by artificial intelligence (AI) or blockchain can speed up the evidence process in court. Several countries, such as the United States, have begun to accept digital data as legal evidence, as long as the data is collected through a system that can be properly audited. In addition, international regulations such as the Madrid Protocol and the TRIPS Agreement provide a legal basis for trademark registration in various countries. When combined with monitoring technology, this framework becomes more effective in monitoring cross-border infringement in real-time.

The Role of Monitoring Technology in Law Enforcement. Monitoring technology offers a sophisticated tool to detect and handle trademark infringement. AI, for example, can be used to scan digital platforms and identify violations such as illegal use of brand names or logos on counterfeit products. Meanwhile, blockchain provides a solution to ensure the authenticity of products by creating a digital footprint that cannot be manipulated. This integration allows authorities to take faster action based on the data collected through technology. For example, big data analysis can help identify patterns of violations that are often committed by certain actors, so that legal action can be taken more targeted.

Stakeholder Collaboration Collaboration between governments, technology companies, and brand owners is essential for the success of this integration. Governments can adopt policies that support the use of monitoring technology, while technology companies can provide more cost-effective tools for small and medium-sized enterprises (SMEs). On an international scale, organizations such as WIPO and WTO play a key role in facilitating cooperation between countries to address cross-border trademark infringement. By implementing a unified system that leverages monitoring technology, trademark infringement can be identified and addressed more effectively across jurisdictions.

While this integration promises many benefits, challenges remain. One of the biggest obstacles is the difference in regulations across countries, which often hinders cross-border enforcement. In addition, the high cost of implementing monitoring technology is a barrier for many SMEs. To overcome this challenge, the government can provide incentives in the form of subsidies or training programs for brand owners. Harmonization of international regulations is also needed to create a more uniform legal system, so that trademark infringement can be addressed with a consistent approach. Integrating the legal framework and monitoring technology is an innovative approach to strengthening trademark protection. Technology allows for faster tracking and prevention of infringement, while legal support ensures that these measures have a legitimate basis. However, to achieve optimal results, support from regulations, affordable technology solutions, and collaboration between stakeholders at the national and international levels are needed.

D. Challenges and Opportunities in the Integration of Law and Technology

Amid the increasingly rapid development of the digital era, the integration of law and technology has become a very important issue. Digital change brings various opportunities to improve efficiency in law enforcement and public services. However, the challenges that arise cannot be ignored.

One of the main obstacles is the mismatch between technological advances and existing regulations. Technology often moves faster than the legislative process, creating conditions where existing regulations are no longer adequate to regulate new developments such as artificial intelligence (AI) and Blockchain. This condition opens up opportunities for legal loopholes that can be misused for illegal activities.

On the other hand, the application of technology in the legal system presents great opportunities. For example, blockchain technology can increase transparency in legal transactions, such as the application of smart contracts. In addition, the application of AI in the analysis of legal documents can speed up the work of lawyers and judges, increasing efficiency without reducing accuracy.

Another thing that needs to be considered is the protection of personal data. In the digital era, the issue of data security is very important. The integration of technology in law must be accompanied by efforts to ensure that people's personal data remains safe. This requires strong policies and legal instruments that are able to adapt to technological changes.

Another opportunity is the use of technology for legal education. E-learning platforms can be a tool to improve public understanding of their rights and obligations under the law.

Thus, technology is not only utilized by legal professionals but can also empower society at large.

In addition, the digital divide is still a challenge that needs to be addressed in many countries. Not all individuals or communities have equal access to technology. This inequality can lead to injustice in the implementation of technology-based laws. Therefore, an inclusive strategy is needed to ensure that all levels of society can benefit from the integration of technology into the legal system.

The development of legal tech also requires ethical oversight. For example, the application of AI algorithms in the judicial system must be monitored to ensure that the resulting decisions are not biased. Research shows that certain algorithms can replicate biases contained in training data, which can ultimately threaten the principle of legal justice.

In facing these challenges and opportunities, synergy between various stakeholders is very important. The government, academics, technology industry players, and legal practitioners need to join hands to build an adaptive and inclusive legal framework. Thus, the integration of law and technology can be carried out optimally, providing broad benefits to the community, while minimizing the risks that may arise.

The implementation of a legal framework integrated with monitoring technology is a crucial step in the increasingly connected digital era. Monitoring technology allows for quick and efficient identification of violations, while the legal framework provides a legal basis for following up on these violations. Despite facing challenges, such as disparities in international regulations and cost constraints, the benefits offered are very significant in strengthening trademark protection.

CONCLUSIONS

This study highlights the major challenges in trademark protection in the increasingly complex digital era, focusing on trademark infringement cases on the Google platform. Trademark infringement in the digital environment has unique patterns and characteristics, such as the anonymity of the perpetrator, the speed of information dissemination, and the use of sophisticated technology in carrying out the infringement. Google, as one of the largest technology companies, faces various forms of infringement that not only have financial impacts but also threaten consumer reputation and trust.

The development of monitoring technology based on artificial intelligence (AI), blockchain, and big data analysis has shown effectiveness in detecting and responding to trademark infringement. This technology enables real-time monitoring, analysis of infringement patterns, and more proactive preventive measures than conventional methods. However, the implementation of this technology still faces challenges, including high investment costs, the digital divide, and limited regulations that support the use of digital evidence in court.

Trademark protection in the digital era also requires an adaptive legal framework. National legal instruments such as Law Number 20 of 2016 concerning Trademarks and Geographical Indications, as well as international instruments such as the Madrid Protocol and the TRIPS Agreement, provide an important foundation for cross-border trademark protection. However, regulatory disparities between countries remain an obstacle to cross-jurisdictional law enforcement. Harmonization of regulations at the international level is a necessary step to create a more uniform legal system in dealing with trademark infringement in the digital environment.

In addition, collaboration between stakeholders is a key element in strengthening trademark protection. Governments, technology companies, brand owners, and international organizations have important roles to play in creating an effective ecosystem to protect

trademarks. Policies that support monitoring technology, the development of more cost-effective solutions for small and medium enterprises (SMEs), and cross-country cooperation are needed to comprehensively address the challenges of trademark infringement.

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