

INTELLECTUAL PROPERTY RIGHTS VIOLATION IN VARIOUS ONLINE BUSINESS MODELS: A THOROUGH ANALYSIS

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Summary: *The paper studies the violation of intellectual property (IP) rights within different online business models through a research that utilizes a comprehensive approach, including an introduction, methodology, online business model analyses, common IP infringements, as well as in depth exploration of most impactful legal battles Viacom v. YouTube, A&M Records v. Napster, and Apple v. Samsung. The analysis extends to the challenges faced in enforcing IP rights, detailing main challenges and key aspects. Additionally, the paper delves into legal responses and countermeasures, ranging from cease and desist letters to criminal prosecution, outlining enforcement mechanisms like WTO TRIPS and DMCA notices. Lastly, it delves into the future landscape of intellectual property (IP) rights in online business models and discusses various emerging trends.*

Keywords: *Intellectual Property (IP) Law, Online Business Models, IP Infringement, Viacom v. YouTube, A&M Records v. Napster, and Apple v. Samsung, Enforcement Challenges, Legal Responses.*

1. Introduction

The fast-paced development of technology in the last 20 years have made intellectual property (IP) protection not only a necessity, but a key factor in the promotion of ingenuity, creativity and economic development. The great importance of intellectual property in today's world can be seen in almost all aspects of life, as huge amount of economic, technological, creative, educational, artistic and healthcare activities are facilitated by the internet and navigated online. The goal of this paper is to analyse the relevance of intellectual property in different online business models.

So, what comprises intellectual property? By definition, intellectual property comprises of patents, trademarks, industrial designs, copyright, trade secrets, geographical indications and plant varieties (World Intellectual Property Organisation (WIPO), 2020). These intellectual properties are best described as intangible assets that are created as a consequence of human ideas. They can also be described as means by which creators can protect their creations in a

world where protection is much needed. Patents can protect an invention due to its revolutionary design or utility. Copyright protects literary, artistic, musical, dramatic, audio-visual, architectural, computer, choreographic, derivative works and sounds recordings (Copyright Alliance, 2023). Trademarks protect brands by ensuring their distinctiveness from other brands in regards to the quality of the origin of the goods and services that the trademarked brand offers. The subject of protection may be a distinctive sign, symbol, name, logo, slogan etc. When it comes to the form, aesthetics, functionality, usability, innovation and manufacturability of a work – we think of industrial design protection (European Union, 2024). Trade secrets are means by which confidential business information such as formulas, methods, processes or any other private knowledge that provides competitive advantage is protected. The qualities and reputation that a product possesses due to its origin are protected by a type of intellectual property right called geographical indication. The main goal of this IP right is to protect items whose uniqueness stems from the geographical region of production. Plant variety is also a form of intellectual property right that protects a plant variety under the condition that it is different from any other, novel, uniform and stable. Due to these intellectual property rights, creators have a much higher incentive to invest the time, effort and means in order to create something novel and unique.

Content replication and distribution in the online world today takes place more frequently than ever (National Academies of Sciences, Engineering, and Medicine, 2013). In this context, copyright deserves a special importance amongst the other IP rights. Worth to discuss is the thin line over which copyright should walk when enforcing. We have to be mindful to the fact that one of the main foundational benefits of the internet is exactly the access to, using, replicating and sharing content. Consequently, copyright has to strike a balance between protecting the rights of the creators which will promote inventiveness, creativity and advancement, but also make sure that the internet does not lose its purpose.

The digital sphere contains economical, technological, commercial, data, educational, entertainment and many other sectors. All of these heavily rely on intellectual property protection, thus making IP a foundation for economic growth and competitiveness. Countries, systems companies and other entities that prioritize the use of IP, witness increased innovation, growth in knowledge and increased financial gain. IP lays in the essence of the connection between creativity and innovation from one side and economic advancement from the other.

This work will shift its focus to a pressing concern directly related to certain online business models infringing upon intellectual property rights. Humans have managed to create a thriving, rapidly developing and dynamic online environment where everyone with internet

has possibility to participate in. Similar to the real world, rules of conduct exist in the digital world. They are often not respected and/or broken for number of different reasons. Some people or companies engage into activities that break the laws and regulations that protect creative works of others, namely they infringe upon the intellectual property of others. This is a very significant and serious challenge for creators, inventors and their businesses, as IP infringement jeopardizes their hard work, invested capital and inventiveness. When online entities use patented technologies, copyrighted content, other peoples' or companies' trademarks or trade secrets unlawfully or without authorization – consequences may vary from monetary losses, devaluation of companies, depreciation of assets, but also less incentive to be operational and advance with the appropriate pace. On the other hand, the infringers may face legal actions, injunctions, cease and desist letters, fines, criminal charges etc. We will delve deeper in each of these aspects of IP infringement as the importance of the subject matter surpasses the protection of individual rights; it's about keeping fair field of play and ethical standards in the world of online business.

2. Methodology and Literature Review

The main aim of this paper is to analyse various online business models such as e-commerce, UGC platforms, P2P platforms and others in the context of intellectual property infringement. It will describe and explain the issue through presenting the negative impacts of IP infringement on different business models and additionally delve into solutions for the said problem. In order to successfully do this, an extensive material of literature has been reviewed in order to gain solid amount of knowledge in regards to intellectual property, different online business models as well as the legal frameworks that affect both of these aspects.

In addition to the method of literature review, relevant case studies have been reviewed in order to understand the material in practice. By combining theoretical insights from the literature review with legal disputed that were of great value for the development of this problematic, this paper aims to offer a nuanced approach on the issues surrounding intellectual property protection in the digital world. This paper will give an overview that will be helpful not only to businesses but also policymakers and legal practitioners in protecting intellectual property in the ever-evolving system.

3. Types of Online Business Models

Electronic commerce, better known as e-commerce refers to the online trade of goods and services. The novelty part of e-commerce is that one does not need a physical presence or

direct contact. Every step of one transaction takes place online, which is made possible by online marketplaces either created by ecommerce platform or by the sellers themselves, in which businesses showcase their goods and services containing all the main information such as images, description, prices and other information that would ease the trade process. These platforms and websites are easily accessible with the use of internet, via websites or mobile applications (Pondicherry University, 2005). Since it is an online business model, e-commerce involves only digital payment such as credit cards, bank transfers, PayPal, Apple Pay and number of other payment providers which are encrypted and secure, making sure that any financial malversation is avoided. When it comes to storage and delivery of products, this business model uses modern order fulfilment methods by involving warehouses for keeping the goods, they offer packaging, tracking methods etc. Additionally, various shipping options are offered including no cost, longer shipping options as well as premium, fast shipping at certain cost (Pondicherry University, 2005). There are various methods through which sellers of goods and services market themselves online. Except for using social media marketing such as paid advertisement on major platforms such as Facebook, Instagram, X and others, sellers use search engine optimization (SEO) tactics in order to make their websites and/or platforms more visible in the digital space with the final goal to attract more customers and make more sales. Customer feedback and reviews that are visible on their platforms might be the best way for future customers to confirm the quality of the products and services, quality of shipping, payment procedures as well as customer support quality. Due to this, customer reviews are one of the key aspects of the e-commerce business model. Some of the most known and successful e-commerce platforms include the giant e-commerce platform Amazon that offers a huge number of different products, Alibaba which is a Chinese based platform that connects sellers and customers worldwide and Zalando, which is a German based platform specialized in fashion and clothing, hugely popular across Europe.

In the business model of e-commerce, intellectual property infringement represents the biggest issue for both the customers as well as the reputable brands that suffer a great cost due to the presence of replicas of their unique items. The said infringement in this case may vary from fake/counterfeit products to illegal use of trademarks as well as illicit use of material protected by copyright. Number of studies published by the World Intellectual Property Organization (WIPO), European Union Intellectual Property Office (EUIPO), Organization for Economic Co-operation and Development (OECD) and other prominent institutions give as an idea of the gravity of this issue. EUIPO, through its 2019 Status Report on IPR Infringement has analysed more than 1,400 web pages and 180,000 adverts from 280 suspected infringing

websites (European Union Intellectual Property Office (EUIPO), 2019). Through this study we have been shown that twenty-five online business models engaged in illegal activities such as selling counterfeit goods, phishing, selling fake/duplicated good and sharing pirated digital content. In Germany, Spain, Sweden and the UK, the study detected 27,870 e-shops suspected of marketing trademark-infringing goods, with up to 75.4% of them using domain names unrelated to their prior use. This research has given us important information that assist in creating effective strategies for combating intellectual property infringement in the online world.

Streaming services are online platforms that deliver audio, video or multimedia content in real time with the help of the internet. This business model is different from traditional downloading in that content can be accessed and watched by users instantly, without the need to download the file. Additionally, there is no need for extra digital storage space on users' devices. Examples of best-known streaming services at the moment are Netflix, Hulu and Disney+. This is a multidimensional model that operates by receiving subscription fees from customers as well as ads. Some platforms offer a free tier with ads while having a premium package, meaning more expensive subscription which is ad free. Content licensing consists of having negotiations and making deals with the owners of the content through one-time fees or agreement involving share of revenue that might greatly vary on case to case basis. Streaming services platforms invest in exclusive content production, which attracts and retains subscribers which leads to great profits. Premium options offer basic services for free, while at the same time inviting subscribers to upgrade to premium options. Streaming services also collaborate with telecom and cable companies with the aim of expanding user reach through bundled offerings (Chalaby, April 2024). Gathering the user's data can enhance the correct recommendation process to users, which can later be monetized through partnership with advertisers that tackle users through customized advertisements. Continuous investment in new technologies will guarantee a continuous streaming experience for customers. This business model has managed to redefine how users access and engage with digital content, emphasizing subscription models and exclusive content creation.

Intellectual property infringement represents a big challenge for this business model and has negative effect on both the streaming platforms, as well as the content creators themselves (Metrolex IP Law Group, 2023). Streaming platforms are constantly battling huge piracy networks whose main goal is distributing unauthorized copies of content by using advanced technologies in order to evade detection and freely proceed with the illegal activities. This replication and distribution are done in a swift manner, going head to head against the

exclusivity of the licensed material that streaming platforms share. Additionally, striking a balance between supreme user experience and strict IP protection is a very difficult job, having in mind that overly restrictive measures might disturb user engagement from one side, while leniency might enable IP infringement on the other side.

There are certain strategies that can be employed in order to avoid IP infringement in this sector and bring fairness to the digital environment (Raj, 2023). Using stricter authentication and access controls such as multi-factor authentication will ensure that the content is accessed only by users with authorization to do so. Continuous monitoring has to be implemented in order to be able to detect infringement in real time and respond promptly. Flagging online behaviour that hints on piracy and tracking users' activities will create a positive direction towards solution to this problem. The advance of artificial intelligence has to be considered as investing in machine learning that will continuously improve and self-teach on content recognition, piracy spotting and implementing advanced algorithms capable of locating copyrighted content will be of great assistance.

Social media platforms as a business model represent arenas in which users create, share and exchange content, creating and promoting global connectivity. At this moment, best known social media platforms include Facebook, Instagram and X. Facebook is the largest social media platform by number of users, connecting billions of people globally. Through utilizing this platform, its users can share texts, photos and videos as well as use various features such as Facebook Groups, Pages and Facebook Marketplace. Instagram is another huge social media platform which is owned by Facebook and whose focus is visual content in which influencer and businesses create and share videos. X, formerly known as Twitter is a blogging platform that allows people and companies to post short posts called tweets with the goal of promoting and fostering public conversation and free speech.

Advertising is the primary source of revenue for these social medias. This system is created so that businesses pay in order to promote products and services by running targeted advertisements (Social Media Today, 2024). User data is collected for data monetization, which improves advertising targeting and also giving insights into target audiences. Important part of the social media online business model are the features incorporated from the e-commerce business model, meaning enabling direct product sales which improves user interaction and increases revenue streams. Today, some social media platforms explore a subscription models which offer premium experience and advertisement free usage.

Social media platforms are not excluded from facing various intellectual property infringement challenges. It is not evident that social media users often times (knowingly or

unknowingly) share copyrighted material on the platforms and by doing so they infringe on the copyrights of the original creators of the said content. One of the most frequent ways through which this is happening would be the sharing of copyrighted music in their videos. For this, the social media platforms may be held accountable as they are hosting this content. Additionally, social media platforms often times contain users accounts or pages that are selling counterfeit products that use trademarks without the permission of the original holder (European Union Intellectual Property Office (EUIPO), 2016). It is very easy for holders of infringing account to impersonate reputable brands involved in any sphere of life, undermining the integrity of these brands and posing a legal risk for the platform as well as the seller. The vastness of the content in social media platforms makes moderation of illegal activities nearly impossible, which prolongs the user's exposure to infringed content.

Advanced reporting mechanism for reporting and flagging accounts that sell counterfeit goods will be advantageous for social media platforms in battling intellectual property infringement. As technology is evolving so are the new tactics used by infringers to continuously operate their illicit activities. Analysing, identifying and suspending copyrighted material quick is key in order to battle this phenomenon, thus social media platforms should implement automated detection systems that will help this. Implementing advanced algorithms and machine learning is a new method that will be developed much more in the future and together with artificial intelligence, it will give users the change to customize content filters based on their preferences and copyright concerns. Community reporting is a fairly new method that X uses in order to battle fake news. Encouraging users to report potential IP infringement through a user-friendly system will provide transparent information about the content created, promoted and sold on these platforms. Overall, combining advanced technologies with effective legal measures and collaboration with content creators and rights holders is the best approach in tackling this digital issue.

User-generated content (UGC) platforms are online platforms that work on the system of active users' involvement in the creation, sharing and collaboration on variety of content on the platform. What is different about this platform is that the platform itself does not create any content – all content is created and shared by its users. These platforms motivate and encourage users to express themselves and their creativity while participating in the online world. The content is very diverse and satisfies the entertainment and professional needs of a wide range of viewers. Largest and most widely known examples of UGC platforms are YouTube, Reddit and TikTok.

Primary source of revenue is advertisement paid by businesses to promote their products and services on these platforms (Thetsidaeng, 2019). Key strategy here is the implementation of the so called “Creator Monetization Programs” which allow content creators to monetize their effort through revenue-sharing or direct gifts from their fans. Brand partnerships and collaborations are common, making it for some, a highly lucrative endeavour. Some platforms offer premium features and subscription that allow users to access premium advanced tools, no advertisement viewership as well as access to exclusive content. These methods present an additional revenue streams for the platforms. Most of the platforms are users friendly – allowing businesses and creators to understand user behaviour, engagement patterns, and demographics for targeted decision-making through utilization of tools such as Data Analytics and Insights.

While being a hub for promoting new ideas and creativity, issues with copyright are very frequent on user-generated content platforms. Users often upload content such as music, videos or images that infringes on copyrighted material which often leads to legal issues for both the platform and the content creators. Having in mind the large amount on content generated by users being uploaded on these platforms, it is extra hard and challenging to monitor and control with high success if copyright protection is infringed. Users might also infringe on trademark law, using the brands and logos of the original brands on impersonating the said brands. Impersonation harms the brand image and leads to potential confusion among customers, thus trademark owners take legal actions against the platforms, as well as the users infringing. The phenomenon of “fair use”, or using copyrighted work under certain conditions without the owner’s permission is still not that well defined and may be subjective, which often defeats its purpose and leads to disputes between content creators and right holders.

Platforms must implement AI-driven monitoring systems that are able to handle large volume of content. The volume of user generated content is expected to increase in the future, consequently making the AI monitoring systems a smart investment. In regards to the “fair use” method, clear guidelines which are understandable for the users have to be set and available to the public. The legal procedure for disputes and resolution has to be simplified as much as possible, as only in that way there will be incentive for taking steps against IP infringers.

Peer to peer (P2P) sharing platforms are best explained as decentralized networks where individuals and businesses can share information, goods and services. Users can interact directly, they can share collaboratively and each user may be in the role of customer as well as provider. Users communicate and share resources between each other directly, meaning the platforms do not serve as an intermediary. Some of the most well-known businesses that are based on this approach are Airbnb, connecting hosts that provide short term accommodation

rental with travellers; Uber, a ride-sharing company that connects independent drivers with passengers; BitTorrent, a platform that allows users to share files through a decentralized method.

There are various methods that P2P platforms use in order to be sustainable and stay functional. One of the main revenue sources is commissions on completed transactions or transaction fees which is done by taking a certain percentage of the total value of the transaction. Other source of revenue is implementing a subscription model which involves users paying certain fee in order to enjoy some premium features or enhanced services. In order to reach the trust of the users, P2P platforms collaborate with insurance providers which ensure user safety. Trust is also built through customer reviews. Some platforms use subscription methods that are free of charge and contain less features, which leads to number of customers wanting to get the full package option for which of course there exists a sum that needs to be paid in the form of paid premium subscription. Overall, P2P sharing platforms emphasize a community driven approach, transforming resource access while ensuring safety, trust and compliance with regulations.

Peer to peer sharing platforms face several challenges related to enforcement of intellectual property rights (Sundararajan, 2016). Copyright infringement is obviously the major issue, as P2P sharing platforms are often facilitators of sharing copyrighted music, images, books, software etc. Any user can upload, share or download material that might be copyrighted. These platforms do not include the presence of a centralized authority or control, nor content moderation mechanisms, which makes it extremely difficult to battle IP infringement and increases the risk of spreading. P2P networks often allow users to remain relatively anonymous, which is also resulting in freer and more widespread, illegal use and distribution of content. Due to the decentralized nature of these platforms and often encrypted nature, tracking and monitoring individuals that engage in copyright infringement is almost impossible. Unlike centralized platforms, where the central authority/the platform itself regulates, monitors and acts, P2P networks rely on the actions of the users themselves. Policies and rules of behaviour do exist, just as any other online platform, but the decentralized encrypted structure makes it challenging to enforce content policies and identify and remove infringing material promptly. User anonymity is what makes P2P platforms unique, but for the same reason there is a lack of accountability for users engaging in IP infringement. This makes it difficult for rights holders to pursue legal actions, which leads to reduced effectiveness of traditional enforcement measures.

In order to enforce intellectual property law with greater success, P2P platforms must implement verified user accounts that will be linked to real-world identities, which discourages illegal activities by providing some level of accountability. The rapid enhancement of technology has given platforms the chance to prove their willingness to battle IP infringement through the use of modern and sophisticated content recognition technologies from the AI realm and machine learning algorithms. The usage of machine learning can aid in distinguishing original from infringing content by better and faster comprehension of the content. Engaging the users in safeguarding intellectual property rights and preventing infringement can be assisted with user engagement through community notes or community reporting. This makes users actively participating in the process and aiding in a more safe and fair online community. The combination of AI, automated system and user generated reports will increase the capacity of the platforms to promptly identify intellectual property infringement and act upon it.

4. Case Studies

Viacom International Inc. v. YouTube, Inc.:

This iconic legal battle was initiated by Viacom, at that time a giant in the world of mass media and entertainment (Viacom International Inc. v. YouTube, Inc., 2012). Viacom owned brands like MTV and Nickelodeon. On the other hand, YouTube is the most famous UGC that is owned by Google. In 2007, Viacom took legal action against YouTube and its parent company Google, seeking \$1 billion in damages as a consequence of YouTube knowingly allowing the uploading and sharing of copyrighted material without proper authorization. This content included various forms such as TV shows, movies and music owned by Viacom. The accuser made their case that this was a copyright infringement scandal from a massive level, thus seeking the amount mentioned above.

Viacom stated that the user generated content (UGC) business model on which YouTube is based, massively contributed to the widespread copyright infringement, and that YouTube knew about the copyrighted content but did not do enough to stop it. In its defence, YouTube used DMCA Safe Harbour, which represents the Safe Harbour Provision of the Digital Millennium Copyright Act. These provisions defend online service providers from copyright infringement cases against them under the conditions that the users were generating the infringed content, and not the platform. They are protecting the platform from transfer of liability from the users to the platforms. DMCA Safe Harbour also can be used as a defence mechanism against copyright infringement liability in instances where the online service

providers remove or disable the access to materials in good faith in cases where it follows specific procedures for notifying the alleged infringer. In its defence, YouTube stated that they possessed and used an automated tool that assists them in finding and dealing with copyrighted material – the Content ID system which allows owners of copyrighted work to handle their content or request for its removal. In summary, the platforms defence was the proof that they followed the DMCA as well through the Content ID system, took proactive steps to deal with copyright issues.

The Viacom-YouTube legal battle lasted for years, involving many court proceedings. Finally, they settled in 2010 out of court, with terms which were kept private, making the details unknowns to the public.

Through this court case we can see the difficulties that can be encountered when enforcing copyright in the internet world, especially with the larger presence of user-generated platforms like YouTube, making it extra hard for creators to control the usage of their content. Due to this, it is the responsibility of the online platforms to do a better job in making sure that the content on their platforms is in accordance with the existing intellectual property policies, which would include a quick response to takedown notices and implementing measures to deter copyright infringement.

Another key aspect of this case is the interpretation and understanding of the safe harbour provisions under the Digital Millennium Copyright Act (DMCA), which exclude online platforms from responsibility when the copyright violation s done solely by their users. These provisions can work only in cases where certain requirements are met, one of them being a prompt removal of the infringing content from the platform after receiving the notice from the holder of the violated copyright. This case proves the role of YouTube as intermediaries in this case, thus judging in their favour and protecting them from liability in cases where the infringement was done by its users.

From the courts ruling, we can witness that proactivity from the site of the online platforms and their commitment to protecting intellectual property is appreciated in the court processes, thus the need of having well structured and efficient notice and takedown procedures and other effective mechanisms in place. YouTube has demonstrated their willingness to act in this direction through implementing the Content ID system which aids in identifying and managing the content on their platform.

This court case proves the complexities and difficulties that users created content platforms are facing when handling copyrighted material on a big level. It proves the need for an advanced and strong system that will identify and remove content that does not follow and

oblige to copyright law and will lower the legal risks for both the platform and the users. Lastly, *Viacom International Inc. v. YouTube, Inc.* is reflecting the tension between content creators, holders of copyrighted content and on the other hand the UGC platforms. Unfortunately, this tension is still present today, even with more complex, better structured and more legally regulated online business models.

A&M Records, Inc. v. Napster, Inc.:

This is the second case that the paper will analyse as a consequence of its representation as a significant example of an intellectual property infringement. This case represents a significant example of an intellectual property infringement (*A&M Records, Inc. v. Napster, Inc.*, 2001). From one hand it involves Napster, which is a digital audio file sharing, peer to peer platform launched in 1999. Napster has revolutionized the way that people might access and share music online. That was managed by making it possible for users to share and download MP3 music files directly from each other's computers for free and often without having the permission from the copyright owners of the music in question. As a consequence, to this, major players in the music industry such as A&M Records sued Napster based on their claims that Napster assisted in the widespread copyright infringement by allowing its users to share music protected by copyright without any compensation to the copyright holders.

In the year 2000, a federal judge issued an injunction against Napster, that instructed that the platform removes all copyrighted material. In this case Napster made an attempt to filter songs protected by copyrights, but did not do enough, thus legal challenges persisted. The United States District Court ruled in favour of A&M Records and the rest of the plaintiffs by labelling Napster as liable for contributing to the widespread copyright infringement on the platform as it knowingly let its users take illegal actions and failed to do enough to prevent these activities. Finally, Napster was forced to halt its primary service operations, even though they attempted to bring in various measures to comply with copyright law.

Firstly, this case aids us in understanding the revolution in the way people access and share music online, as well as the challenges that traditional copyright enforcement mechanisms must face due to the rapid advancement of technology. Analysing the case of *A&M Records, Inc. v. Napster, Inc.* has demonstrated the value of intellectual property protection in the context of distributing music online. It sheds light to the need for robust copyrights laws that would define and prevent unlawful distribution of protected material. Second, the case creates a legal precedent when it comes to the accountability of online service providers for copyright infringement. It serves as basis for many future court decisions in the field. It demonstrates the

need of online platforms to act upon copyright infringement cases taking place on their digital space, even if they themselves did not directly engage in infringing activities.

This case underlines the gravity of the challenges facing the music industry in fighting against IP infringement and protecting IP rights, especially the need for innovative business models and various strategies for management of digital rights in order to adapt to the ever-evolving landscape of music distribution. It is making obvious the fact that efforts from all sides must be made to develop solutions for combating online infringement as well as promoting a lawful way of distribution. *A&M Records, Inc. v. Napster, Inc.* proves the need to increase collaboration between stakeholders in the direction of addressing and solving complex legal challenges.

The impact of this case is one of the most significant ones in the copyright law. It reaches far into the music industry, marking a shift towards legal online music distribution models such as iTunes, Spotify or Apple Music. It has shown us that the advancement in technology must always be followed by more in-depth intellectual property laws that will develop in line with the emerging technology (*A&M Records, Inc. v. Napster, Inc.*, 2001).

Apple Inc. v. Samsung Electronics Co., Ltd.:

Apple Inc. is an American technological company whose main business includes production of smartphones, computers, tables etc. while Samsung is a South Korean technological company that produces a wide range of electronics such as smartphones, computers, televisions and other appliances. The legal battle between these two technological giants was initiated back in 2011 when Apple Inc. sued Samsung for copying specific design features of the iPhone and iPad and utilized those designs on the Samsung smartphones and tablets. The American company stated that these actions by Samsung violated a number of Apples patents that were novel in regards to the design and feel of the electronics. In detail, Apple sued as a consequence of the fact that the rectangular shape, followed by the rounded corners, as well as the bounce-back effect when scrolling were all patented ideas of Apple which were crucial in making Apples products distinctive from any other devices.

In the first trial in the year 2012, the court decided in favour of Apple, stating that Samsung in fact did infringe on Apples patents and design elements, which resulted in Apple receiving over a billion dollars in damages. This case did not end here, in fact the legal battle went on for years through number of appeals. In 2018, the US Supreme Court sent this case back to the lower courts, following a statement which accented the decision that damages should not be based on the entire devices, but rather on specific components of the device which

were the exact reason for the violation of Apples patents. This case ended in the same year, by a non-disclosed settlement between these two technological giants (Apple Inc. v. Samsung Electronics Co., 2016).

First lesson taken out of this case is the need for quality internal IP strategies for companies taking part in highly competitive sectors. Apple understood the strategic value of aggressively protecting their intellectual property and was highly proactive in enforcing it, using all available legal mechanisms to maintain a competitive edge and protect their innovative designs. Additionally, this case has a major influence on the marked dynamics in the smartphone industry, serving as a real time lesson regarding the importance of respecting intellectual property rights of others and being efficient and aggressive in enforcing your rights. Apple Inc. v. Samsung Electronics Co., Ltd. Also has international implications as it involves multinational corporations that operate under multiple jurisdictions. It demonstrates the difficulties when navigating various legal systems and enforcing IP rights across borders. This just proves the increased need for cross border cooperation and harmonization of IP laws.

We can all understand the important role that evidence and expert testimony play in disputes of this kind. The extensive evidence presented by both parties, including design samples, related documents as well as expert opinion were of great aid to the court when accessing the validity of the claims.

The Apple Inc. v. Samsung Electronics Co., Ltd legal process is a proof of the importance and necessity for balance between innovation and imitation. The case does a great job of pointing out the intricate nature of patent disputes in the world of rapid innovation and technological advancement, with a focus to the sphere of smartphones and mobile devices. Fairness in competition must come above profit, and sticking to the rules of intellectual property will always win over imitation of already existing ideas and designs.

5. Challenges in Enforcement

Main Challenges:

Due to the fact that the internet does not have borders, there exists a great amount of digital material out there, that is being spread quickly, making it impossible to stick to the same exact IP rules everywhere it gets spread (Lee, 2018). In addition to this, due to the broadness of the internet, spotting IP infringement and protecting IP rights in the online world is a difficult job as the digital scene keeps shifting. Different countries have different IP laws as well as different ways of enforcing the said laws, making it difficult for owners of intellectual property to protect their ideas and creations globally. On the internet, perpetrators can hide their identity by using fake names, making it hard to discover the original of the IP infringement, consequently making it hard to go after them legally. Illegal copying and distributing protected items are a frequent phenomenon and discovering the perpetrators and halting their activities poses a significant challenge.

Platforms that operate on the users generating content method produce massive amounts of data daily, which accents the crucial nature of advanced technology for effective identification of IP infringement amongst the huge volume of information.

There is not a single unified manner of addressing online IP infringement due to the complexities behind different jurisdictions, as it often means navigating different legal standards and procedures across different countries. Differences in understanding the true meaning of fair use and safe harbour provisions, as well as application of the same, makes enforcement efforts even more complicated.

Additional issue is the lack of capability of small businesses or individual creators to effectively monitor and protect their rights online due to their limited financial resources (Litman, 2014). As a result, cooperation from online platforms is crucial. Their compliance with intellectual property rights online is essential for these small businesses and individuals, and still, many platforms are failing to produce results in this area due to lack of enforcement efforts. The rapidly developing landscape of online business models such as peer to peer sharing platforms and/or streaming services, bring up additional challenges in detecting and preventing IP infringement. Lacking structured legal frameworks as well as international collaboration and industry partnerships are some of the key reasons for failure.

The lack of determined jurisdictional boundaries for enforcement of IP law, in combination with the decentralized realm of the internet, as well as lack of coordination across borders and conflicting legal systems has put creators in a rather difficult situation.

Key aspects include:

Intellectual property enforcement is a phenomenon that has been and is still facing numerous challenges that require both domestic and international cooperation. These issues, ranging from global agreements and law enforcement collaboration to domain name disputes and border issues, addressing these issues requires a constant and expanding effort to ensure fairness in the rapidly evolving digital age.

International agreements such as TRIPS -the Agreement on Trade-Related Aspects of Intellectual Property Rights, create a framework whose goal is aligning IP laws among member countries and at the same time promoting overall harmonization in the IP world. These types of agreements assist and improve the collaboration among nations and create a standard for protecting intellectual property which is much needed having in mind the vastness of the digital world.

The largest and most powerful law enforcement entities in Europe, such as Interpol and Europol, hold a crucial position in coordinated efforts to fight cross-border IP crimes by restructuring information sharing as well as cooperation among law enforcement agencies worldwide.

WIPO – the World IP Organisation, offers arbitration, mediation and other dispute resolution services that help resolve IP disputes across borders. This represents a significant difference vis a vis the traditional court system and creates a way for effective conflict resolution. Collaboration between different countries through bilateral or multilateral agreements, strengthens the efforts to address IP issues through encouraging and sponsoring an integrated method of combating IP infringement globally. Collaboration between law enforcement agencies pertaining to different countries in the area of investigations and sharing of information related to individuals violating IP rights across various jurisdictions is crucial for nurturing global cooperation.

In the European Union, the European Union Intellectual Property Office is a body of the European Union that plays a key role in ensuring consistency of IP rights amongst the EU member states by harmonizing the intellectual property protection across the European Union. UDRP – Uniform Domain Name Dispute Resolution is a policy which imposes that trademark-based domain name disputes have to be resolved by an agreement, court action, or arbitration before a registrar will cancel, suspend or transfer a domain name. This policy allows trademark owners to address violations through a uniform process which endorses fairness as well as effectiveness in resolving disputes from the realm of domain usage.

Addressing challenges related to cross-border issues is possible by increased and continuous efforts to advance international cooperation, fine-tuning legal frameworks and guaranteeing global obedience to similar approaches.

6. Legal Responses and Countermeasures to Intellectual Property Infringement

When we talk about IP protection, the implementation of effective legal responses and countermeasures is a principal thing. This section delves into the practical strategies and direct actions that can be taken in combatting intellectual property infringement.

Cease and Desist Letters

Cease and desist letters are representing the first step that can be taken by the right holder and communicated to the alleged infringing party, in which the intellectual property at stake is identified, the infringing action is detailed and the protecting law is referenced (World Intellectual Property Office (WIPO), s.d.). The main goal of cease and desist letters is to mandate an instant stop to the infringing activities. In addition to this, a cease and desist letter states the non-compliance consequences, such as legal actions or seeking damages, as well as a timeframe for a response. When the infringer complies with the letters demands, the issue is resolved successfully without the involvement of the court, making cease and desist letters a friendly approach to solving IP related issues.

Injunctions

An injunction is a powerful court order that serves as an instant tool to halt specific action (Law Insider , s.d.). The actions may vary from illicit trademark use to distributing copyrighted material or manufacturing and selling patented goods. What makes an injunction special is the rapid cessation of illegal actions in order to prevent the continuation of the harm to the right holders and to minimize the damages that it caused. Except for injunctions that are preventing harm during legal processes even before the bringing of the final court decision, called early stop orders, injunctions can also exist as final stop orders which permanently end the rule-breaking only after the final decision of the trial.

In order to secure an injunction, the right holder must prove that a substantial harm is brought from the continued rule-breaking. Only in this case the intervention of the court will be justified. Non-compliance to injunctions may lead to court charges which provide an additional

warning. Injunctions may be applied locally, nationally or internationally, which depends on the illegal action itself as well as the court authority. Injunction decision may be appealed by requesting a review.

Customs enforcement and border measures

Customs enforcement and border measures play immensely important role in protecting IP rights by preventing importation/exportation of counterfeit goods and limiting the global trade of fake products which assists in safeguarding consumers and protecting owners` rights (European Union, 2015). Countries create legal agendas that give customs authorisation to enforce rights, as well as inspect and detain goods violating IP rights such as trademark, copyright, patent rights and others. Their work consists of monitoring shipments by land and sea, collaborating with rights holders with the goal of identification and seizure of counterfeit goods, using scanning and X ray technologies as well as other technology to identify illegal shipments. Part of their work is undergoing through training in recognizing original products and distinguishing them from fake ones.

Upon finding infringing goods, customs notify right holders, asking them to inspect the shipment and confirm or deny the potential infringement as well as determine if legal action will be taken. Customs have the authorisation to detain potentially infringing goods for certain amount of time and extend the detention with the proper court order. This is due to the fact that detention will aid in protecting customer/consumers from the harm that potential illegal products might bring. When the infringed products are confirmed as such, the authorities may destroy the goods.

Crucial part of the work of customs enforcement is collaboration with authorities from other countries, which involves sharing of information and coordinated actions that aid in battling cross border IP infringement. Regardless of ever-increasing trade volumes as well as differences in legal jurisdictions, it is important to continue the efforts to overcome these obstacles and improve the effectiveness of border measure and customs enforcement.

Digital Forensics and Investigation in IP Protection

Digital Forensics and Investigation in IP Protection involves gathering, conserving, examining and presenting digital evidence in legal proceedings and presents an integral part of IP protection in relation to IP infringement and cyber-crime. This method includes inspecting

both online and offline channels for forged goods and brand misappropriation, examining fakes or replicas in trademark law, examining digital evidence in relation to unlawful distribution of copyrighted goods in copyright law, examining digital evidence in relation to replicas of patented inventions in instances of patent infringement as well as investigating cases of trade secret theft or disclosure of trade secret protection.

The digital forensics investigation in IP protection involves systematic collection of digital evidence such as files, metadata, server logs and communication records in order to prove IP infringement claims (Magnet Forensics, 2023). Various techniques are used in this process, spanning from data recovery and reconstruction to restoring deleted and/or manipulated digital assets. Experts in the field often use the method of network forensics through which they analyse traffic, logs and communication patterns with the goal of tracing the origin and distribution link of infringing goods. These specialists might conduct malware analysis in the case of pirated software or malicious code. Experts also might use specialized tools to detect and analyse hidden content inside the files. As with the customs enforcement, the digital forensics sphere also depends on the synchronisation within cross border collaboration. Even though there are number of challenges that are present when conducting cross border investigations, collaborating with international law enforcement and legal entities – the field of digital forensics continuously evolves with technological advancements as well as development and improvement of specialists in the field. Experts are coming up with new improved tools and methodologies to address IP infringement.

Criminal Prosecution in IP Enforcement

Criminal prosecution is diploid in cases of significant IP infringement usually in large-scale case of counterfeiting or piracy (European Union Intellectual Property Office (EUIPO), 2018). It is reserved for cases that represent a significant threat to public safety or to the economy through widespread production and distribution of counterfeit goods as well as large scale digital piracy. By attacking key players in the supply chains and illegal networks, law enforcement agencies can interrupt the whole supply chain, which will significantly reduce the spread of these products in the market. The criminal prosecution consists of severe consequences involving fines, imprisonment and/or asset confiscation and this varies based on jurisdiction and on the severity of the infringement.

Criminal prosecution is targeting the financial incentives behind IP crimes by imposing these severe consequences (Manta, 2019). Severe consequences are imperative in cases where counterfeit goods pose risks to public health and safety, for example selling counterfeit pharmaceuticals or devices that put the safety of consumers at risk.

It is crucial for enforcement agencies to collaborate with their colleagues across other countries and jurisdictions as IP crimes often times surpass national borders. Being aware of the possibility for criminal prosecution of perpetrators gives a sense of security in the creators' world, as law enforcement agencies foster confidence within industries, they encourage innovation, investment and create an atmosphere that is encouraging financial growth and development.

7. Future Landscape of Intellectual Property Rights in Online Business Models:

The future of intellectual property (IP) rights in various business models will definitely endure significant transformation which will be imposed by advancements in technology, but also in legal procedure as well as consumer behaviour. The existence and development of artificial intelligence, blockchain technology and augmented reality are some of the main aspects of the future development in how IP law will be protected as these aspects may directly rise questions in the cases of ownership of IP, infringement and taking accountability for infringement.

Artificial intelligence will play a significant role in monitoring and enforcing IP rights, while blockchain may assist in establishing ownership and determining the origin of ideas and creations. Artificial intelligence, as a powerful monitoring tool can analyse large amount of digital content which will aid in quickly discovering unoriginal material or unauthorized use of copyrighted material, revolutionizing IP protection and offering innovative solutions for management of IP rights. On the other hand, blockchain can offer a more concise way of proving ownership of rights as well as aiding in transparency and authenticity in transactions related to intellectual property.

As various online business model mature, there will be a demand for adaptation in copyright law, patent law and trademark law, as well as adaptation in enforcement of these rights (Geiger & Pflaumer, 2021). E-commerce platforms will have to increase efforts in combating IP infringement in the context of tackling the spread of illegal counterfeit goods, while the business models involving streaming services are expected to invest in advanced Digital Rights Management (DRM) technologies that will shelter and defend digital assets. User-generated content social media platforms must strike a delicate balance between promoting creation of content by users and implementing strict and fruitful monitoring mechanism that will ensure adequate protection of intellectual property. Peer to peer sharing platforms will go through technological advancements that involve improved and adapted legal

frameworks, increased collaboration between stakeholder and as most important, global cooperation in addressing the challenges imposed by the ever-evolving digital world.

The future landscape of intellectual property in relation to different online business models must implement adaptive strategies, use new technology as frequently as possible and modify legal frameworks in a forward-thinking manner. Addressing the dynamic nature of intellectual property challenges has to be done on a global basis, making international cooperation crucial in protecting innovation, creativity and fair practices.

1. Conclusion

This paper analyses the complex phenomenon of intellectual property rights within the evolving, dynamic and multidimensional landscape of online business models. It has explored key factors of protecting intellectual property and also highlighted future paths of protection in the digital age.

Starting with an overview of intellectual property law, the paper clarifies why and how IP plays a crucial role in fostering innovation, creativity and fair competition. The discussion then addresses various online business models, in the context of challenges to intellectual property posed by the growing influence of online business models. The appearance and development of e-commerce platforms, streaming services, social media, user-generated platforms and peer to peer sharing platforms is bringing important and complicates IP related issues, crucial to address. In order to address this phenomenon, certain challenges such as detailed examination of legal frameworks, emerging technologies and global collaboration efforts have to be examined.

Furthermore, the paper puts an accent to the vital role of international organisations such as World Intellectual Property Organization (WIPO) and regional bodies such as the European Patent Office (EPO) in influencing and determining the landscape of intellectual property rights. Additionally, it explores the legal responses and countermeasures to intellectual property infringement – cease and desist letters, Digital Millennium Copyright Act (DMCA) notices, the integration of customs enforcement and border measures, the power of court injunctions and digital forensics. These legal responses play a key role in the comprehensive approach needed to protect intellectual property rights effectively.

The paper is looking forward in the future landscape of intellectual property rights in online business models which at the moment are and will even more so go through major transformation. Key technological advancements and innovative models such as blockchain,

artificial intelligence and augmented reality are going to completely change the way intellectual property is protected by enhancing digital rights management, global collaboration on evolving standards for protection and will focus on preventive measures that contain a proactive stance against ever emerging challenges.

In essence, this paper strongly advocates for and supports an approach which is forward looking and adaptive to the evolving world of intellectual property rights and online business models. It recognizes that how we employ intellectual property law must advance together with the advancement in technology in order to foster innovation, sustain creative industries and ensure a fair digital economy. Cross-border collaboration and evolving dialogue about innovative practices in the area of legal and technological frameworks will be essential in creating a future of prosperous existence of intellectual property rights within the complex world of online business models.

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