

# ***New Challenges of Intellectual Property Rights for Digital Products in the Digital Age***

## ***Exploring Approaches with Disney as an Example***

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**Abstract:** Nowadays, digital products are becoming more and more popular on account of the rapid development of the Internet and technology. At the same time, digital piracy has become more and more serious. Many industries have been affected by this problem, with the television and film industries being the most severely impacted. This article collects and analyzes data on the negative impact of digital piracy on multiple parties, with the goal of highlighting the serious harm digital piracy is doing to businesses and the industry as a whole today. The television and movie industry has grown rapidly in recent years, but such growth has also made it urgent to address the piracy problem. In particular, since Disney owns a large amount of copyrighted content, they have to face this challenge on a large scale. To adequately address this complex dilemma, different solutions have been proposed and implemented over time. The purpose of this paper is to analyze the solutions in light of Disney's initiatives in digital piracy. This paper will explore how technological advances have led to complex forms of piracy and how these technologies can be used to counteract piracy.

**Keywords:** digital piracy, television and movie, Disney

## **1. Introduction**

### **1.1. Background**

In recent years, the entertainment industry has undergone tremendous changes due to the advent of various digital technologies, which have made it easy to distribute and consume content. However, this revolution has brought along some challenges as well, including the rampant problem of digital piracy that plagues many media companies. Digital piracy refers to the unauthorized use or distribution of copyrighted material over digital channels such as the Internet. It is an issue that affects not only film studios but also music labels and video game developers. According to a report by Digital TV Research, global losses due to online piracy are expected to reach \$51 billion by 2022. Given these staggering numbers, it is no surprise that media giants like Disney have been taking steps to counteract this trend actively. In fact, Disney's approach serves as an excellent case study on how companies can tackle digital piracy head-on. Therefore, this paper will take a closer

look at solutions proposed by various stakeholders across industries while analyzing Disney's specific strategies for combating digital pirates. Measures ranging from legal action and technological methods to prevent unauthorized access or sharing of copyrighted content online will be explored.

## 1.2. Related Research

The difficulty of protecting intellectual property rights in the digital age has further increased due to the ease of copying and distribution of digital content. Advances in the Internet and technology have increased the availability and accessibility of digital content, making it easier for piracy to occur [1]. As a result, governments and related experts have attempted to strengthen intellectual property protection and enforcement mechanisms, such as the Digital Millennium Copyright Act (DMCA) in the United States [2]. However, some scholars argue that these legal measures alone are not sufficient to address the worldwide problem of digital piracy, as enforcement is very lax in many Asian countries where piracy is particularly rampant [3]. Many scholars have called for a more comprehensive approach that includes high technology, collaborative strategies, and awareness and education.

Among the various types of digital piracy, movie piracy has been widely studied for its economic and employment impacts. Smith and Telang analyzed the negative impact of piracy on box office revenues and found that piracy can severely reduce the profitability of movies, especially for small and micro businesses or independent producers [4]. Also, similar to the box office, physical film and television goods such as CDs and videotapes receive a particularly severe hit. Siwek estimates that piracy in the film industry alone resulted in the loss of 141,030 jobs in the United States in 2010 [5]. These studies underscore the serious impact of digital piracy over time and the urgency of addressing it. In other words, addressing digital piracy is urgent in order to protect the economic and employment prospects of the television and film industries.

Various measures had been implemented to combat digital piracy. For example, digital rights management (DRM) and watermarking, aim to limit the access and distribution of unauthorized digital content [6]. However, due to the continuous development of technology, this war between piracy and non-piracy has gradually evolved into an arms race. The rise of streaming platforms had also been suggested as a potential solution, as they offer a legal, convenient, and cost-effective alternative to piracy [7]. In addition, a number of educational and advocacy-themed campaigns had begun to emerge to discourage piracy by promoting respect for intellectual property rights and resistance to piracy [8]. Similarly, some companies were developing policies. For example, Netflix invested in original content and actively sought partners, Disney launched its streaming service, Disney+, and implemented technological measures to protect their intellectual property [9]. These cases provide valuable insights for other companies in mitigating the impact of digital piracy on their own.

In summary, the literature on IPR protection in the digital age, the economic and employment impacts of movie piracy, and measures to combat digital piracy provide a solid foundation for this study. Using existing works as a basis and the television and film industries as case studies, this paper explores feasible measures to combat digital piracy in the current environment.

## 1.3. Objective

This paper is divided into three main parts, starting with an overview of the development of the entire TV and film industry, including its development in recent years and the outlook for the future. The analysis focuses on the industry as a whole and does not cover the profitability of specific companies. The second part is about the piracy faced by the entire TV and movie industry. This part

collects and analyzes data on the negative impact of piracy, specifically on the economy and employment, and other macro aspects. The final section explores existing programs and provides an analysis of their feasibility, using Disney's specific measures to protect digital rights in recent years as a case study.

## 2. Overview of the Television and Film Industry

The global film industry has seen significant growth in size and volume in recent years as technology advances, business models continue to improve, and diverse content that caters to the tastes of diverse audiences increases. Over the past decade, the film industry has witnessed a growth in global box office revenues. According to Statista, global box office revenues reached a record high of \$42.3 billion in 2019, reflecting growing audience demand for diverse and high-quality content [10], as shown in Figure 1.

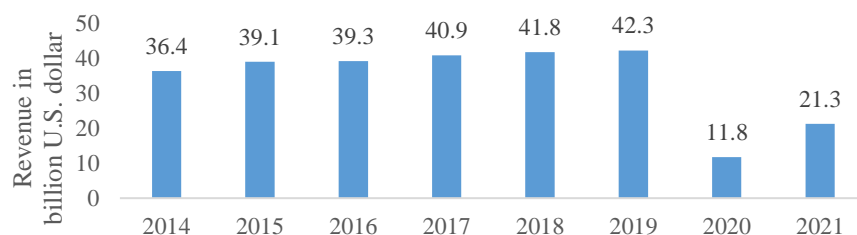


Figure 1: Global box office revenue from 2014 to 2021 all over the world.

Although the decline was more severe in 2020 due to the impact of the new crown epidemic, the data also show that box office revenues remained stable and grew after the situation improved. This growth is closely related to the following factors: the growing middle class in emerging markets such as China and India, increased disposable income, and increased access to movie screens [11]. In addition, the success of franchised films and the growing popularity of international content has contributed to the expansion of the industry.

The film industry has also adapted to changing consumer preferences by adopting new distribution models and publishing platforms. Numerous subscription video-on-demand (SVOD) services, represented by Netflix, Amazon Prime Video, and Disney+, have dramatically changed the way people consume. They provide viewers with a more convenient and personalized alternative to traditional distribution channels, and people can enjoy movies without being bound by time and space. The success of these platforms can be attributed to their focus on original content, data-driven decision-making, and user-friendly interfaces, all of which are contributing to the rapid growth of the digital streaming market [11]. According to Market Research Future's forecast in the report, the global over-the-top (OTT) content market, including video streaming services, is expected to grow to about \$551.75 billion by 2030 and have a compound annual growth rate of 17.9% from 2020 to 2030 [12]. At the same time, these digital platforms are opening up new ways for independent filmmakers, individual studios, and micro and small businesses to reach a global audience without the need for traditional distribution channels. The barriers to content production and distribution have been lowered, and this democratized form of cinema has further advanced the film industry, allowing for the creation of diversity and content to cater to a wider range of audience preferences.

However, it is important to note that the growth in global box office revenues and the development of digital platforms have highlighted the boom in the film industry. This boom is in stark contrast to the serious challenges posed by global digital piracy. The streaming format of movies has made digital piracy significantly less expensive. Subsequent sections of this article will

delve into the issue of copyright infringement and the losses suffered by the film industry as a result of piracy.

### 3. The Impact of Digital Piracy

Against the backdrop of increasingly rampant piracy of digital products, piracy in the movie industry is particularly serious. According to MUSO, by investigating the number of visits to pirate sites in the year 2021 to 2022, there had been a significant increase in piracy of almost all types of digital products. What is more, the TV and movie industries are most affected by piracy among all digital products, whose sum accounts for two-thirds of the overall [13], as shown in Figure 2 and Figure 3.

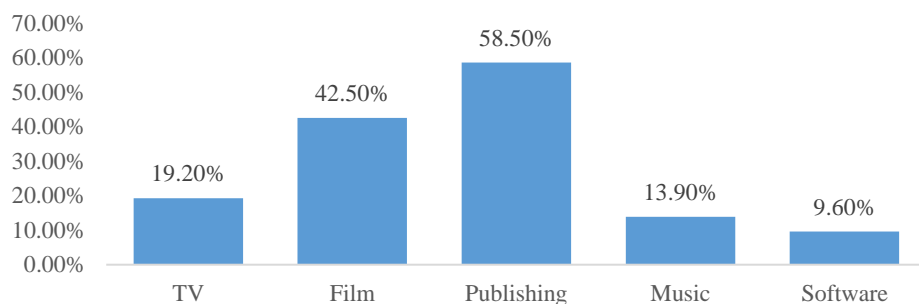


Figure 2: Percentage increase in piracy website visits from 2021 to 2022.

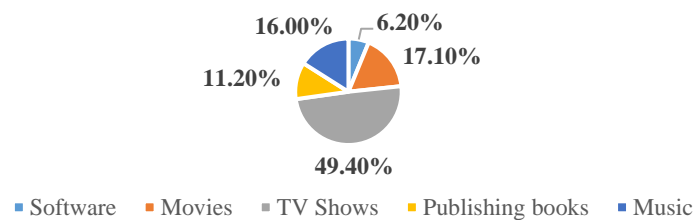


Figure 3: Percentage of visits to digital products on piracy websites.

According to the report delivered by Hollywood and Netflix to the US government in 2022, the Motion Picture Association used the term "notoriety" to describe the current state of the movie market, highlighting the threat that piracy poses to the industry. Copyright infringement is a pervasive issue in the film industry, continually causing significant financial losses. In recent years, piracy has intensified at an alarming rate, resulting in billions of dollars in lost revenue for the global film industry [14]. With the advent of new digital technology like peer-to-peer file sharing, streaming platforms, and Torrent sites, it has become increasingly easy for individuals to access and distribute copyrighted content without obtaining permission or paying fees. This widespread unauthorized distribution of copyrighted material has been increasing in recent years, leading to a considerable surge in digital piracy. Studies by Danaher and Waldfogel highlighted that online piracy has a substantial impact on international box office sales. As a result, the film industry is experiencing a sharp decline in revenue [15][16]. This trend is alarming as it could ultimately lead to reduced creativity among filmmakers who may find it challenging to invest their time and resources into producing high-quality films that generate less profit due to piracy. Additionally, digital piracy has a serious impact on the entire industry, not only in terms of financial losses but also in terms of employment and other social issues. Christian Archambeau, the Executive Director

of the EIPO, emphasized the impact of piracy on the many copyright-intensive industries represented by television, film and music that support more than 11 million jobs in Europe.

In 2019, the final season of the popular HBO serial publication "Game of Thrones" experienced significant digital piracy. According to Clark's report, the first episode of this season was pirated 54 million times within only 24 hours of its broadcast [17]. There was the same thing happened to the season's last episode even more seriously. It became almost the most incredible record in the history of piracy, with millions of people watching the last episode through seeds shared by pirate software. In 2015, more than 250,000 people shared a file at the same time, and such a record will be hard to break in the future [18]. In 2021, the highly anticipated Marvel movie "Black Widow" was subject to digital piracy upon its release. The film was released simultaneously in theaters and on Disney+. For the latter, there is Premier Access for a one-time fee of \$29.99 for this movie. Within hours of the film's release, pirated versions of the film appeared in HD on various pirate websites and illegal streaming platforms. Viewers were able to bypass the Premier Access fee and watch it directly. Within the first two weeks of its release, Black Widow was reportedly downloaded illegally more than 20 million times. Assuming that each act of piracy costs Disney thirty dollars, this report arrives at its compact figure of \$600 million [19]. While not all pirate users will choose to pay for authentic products, the massive scale of piracy for the series and film indicates the substantial loss of potential revenue for HBO and Disney. At least for these users, they will not choose to pay anything for these digital products.

#### 4. Solutions for Digital Piracy

Disney is a company with many digital products and has been the target of digital piracy many times. This paper will take Disney and its Marvel Cinematic Universe (MCU) as a case study to explore possible measures to deal with digital piracy. In the past few years, Disney has taken a number of steps to protect the copyright of the MCU and the various peripherals associated with it. This paper divides it into two categories, based on their initiative: Proactive Measures and Enforcement Strategies

For Proactive Measures, Disney uses advanced DRM technology to prevent digital piracy by encrypting products to restrict access to specific users or devices. This management method is in line with the digital era under the block, with the advantages of flexibility and accuracy in giving access to target consumers [20]. At the same time, Disney actively seeks strategic partners and signs agreements with streaming media such as Netflix and Amazon, which on the one hand expands the dissemination of digital products and is more conducive to promotion, and on the other hand increases the relative quantity of licensed goods in the market, which has a certain degree of suppression of digital piracy. Finally, thanks to Disney's high visibility, they can use their influence to promote the idea of supporting genuine products against piracy. For example, there are activities and materials to inform consumers about the importance of IPR and the consequences of piracy [21,22].

For Enforcement Strategies, Disney's style of pursuing infringement to the end is worth learning from other companies in the industry. The MCU is always aggressive in litigation against companies that illegally steal its digital products and profit from them. For example, in *Disney v. Redbox*, Disney demonstrated its determination to fight unlawful infringement to the end [23]. Afterward, the company or individual involved will be asked to take down the stolen digital products or stop the circulation of the products in the market. What is more, Disney also worked with ISPs, search engines, and other intermediaries to block access to websites distributing pirated [24].

As a result, Disney's intellectual property protection efforts have had a positive impact on preserving the value of the MCU and deterring potential infringers. Which have contributed to



minimizing unauthorized distribution and use of its IPR. For Disney's strategy, the following points are worth highlighting. A comprehensive strategy that combines proactive measures with aggressive enforcement efforts, including digital rights management, licensing, advocacy, litigation, and collaboration with intermediaries, is critical. In addition, prioritizing innovation and adaptation while leveraging the power of the brand helps create a culture of respect for IP and the fight against piracy. These strategies act as invisible barriers that reduce the likelihood of digital piracy. In short, Disney's proactive approach to adopting new technologies and strategies has helped protect the intellectual property of the MCU in the evolving digital landscape. By learning from Disney's successful practices, companies in the film and television industry can effectively protect their intellectual property in the current era of increasingly diverse means of piracy.

## 5. Conclusion

With the rapid development of the film and television industry, digital piracy has become increasingly rampant, and its negative effects are becoming more widespread and more severe. Throughout this paper, various methods and solutions for combating digital piracy have been explored taking Disney as an example. These include legal actions against perpetrators, technological measures to prevent unauthorized access to content, and education campaigns aimed at raising awareness about the harms caused by piracy. It is worth noting that no single solution can completely solve the problem of digital piracy. Rather, a combination of approaches may be necessary to effectively tackle this complex issue. Moreover, as technology continues to advance and new methods of piracy emerge, it will be essential for these solutions to adapt accordingly. In light of these challenges and opportunities for progress, it is clear that addressing digital piracy requires ongoing attention and commitment from individuals and organizations across various industries. The success story of Disney mentioned in this paper can provide a reference for other companies that also suffer from digital piracy in several dimensions. It also lays the groundwork for future research on related issues and promotes a deeper understanding of the television and film industries in the ever-changing digital environment.

However, this report only starts with the television and film industry, which is most affected by piracy, and does not provide sufficient analysis of the digital product industry as a whole. At the same time, the analysis stays on the generalization of existing cases and the hypothesis of new scenarios. There is an overall lack of testing and quantitative analysis of these strategies. Finally, Disney's strategy stems from the size, reach, and character of its capabilities. For other companies in the industry, blind imitation is not an option. This paper intends to provide a diversified vision for companies to build their strategies with their own characteristics. Hope that future research will focus more on the multiparty cooperation and emerging technologies that are urgently needed to solve the current digital piracy problem. For the sake of individuals, companies, and society as a whole, piracy should be firmly resisted!

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