Legal Protection of Intellectual Property Rights in the Digital Era
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Abstract: This research uses a qualitative approach with descriptive-analytical methods to examine the legal protection of intellectual property rights (HMI) in the digital era. The research results show that the legal protection of HMI in the digital era still faces various significant challenges. Even though regulations such as Law Number 28 of 2014 concerning Copyright and Law Number 11 of 2008 concerning Information and Electronic Transactions (ITE) exist, their implementation could be more effective. The leading causes are a need for more public knowledge and awareness about the importance of HMI, as well as limited law enforcement resources and technology. Collaboration between the government and digital platforms needs to be improved, while international cooperation is also crucial in dealing with cross-border HMI violations. This research recommends increasing public education and awareness, strengthening regulations, adopting advanced technology such as AI, closer cooperation with digital platforms, increasing law enforcement capacity and resources, and efficient dispute resolution mechanisms. With a more holistic and integrated approach, HMI protection in the digital era can be significantly improved, providing justice for rights owners and encouraging the development of a healthier and more innovative creative industry.

Keywords: intellectual property rights, digital era, legal protection, law enforcement, AI technology, dispute resolution mechanisms.

INTRODUCTION
In the current digital era, the development of information technology has brought significant changes in various aspects of human life, including intellectual property rights (HMI). Intellectual property rights (HMI) include rights recognized by law to works resulting from thought processes, such as copyrights, patents, and trademarks.¹ However, as technology advances, new challenges in HMI protection emerge. Various intellectual works that were previously difficult to duplicate can now be easily copied and disseminated via the Internet, raising concerns about widespread violations of HMI.²

Intellectual property rights violations in the digital era can occur in various forms, such as piracy of software, music, films and electronic books. Apart from that, misuse of trademarks and patents is also increasing along with the ease of access and distribution of information in cyberspace.³ This situation

demands effective regulations and protection mechanisms to ensure that the rights of HMI owners are maintained and respected. Without adequate protection, incentives for innovation and creativity can be reduced, which in turn can hinder economic and cultural development.\(^4\)

Legal protection for HMI in the digital era is becoming increasingly complex due to differences in regulations in various countries. The global nature of the internet means that HMI violations can occur across national borders, thus requiring international cooperation in law enforcement. International conventions such as the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and the World Intellectual Property Organization (WIPO) are an essential basis for harmonizing HMI protection in various countries.\(^5\)

In Indonesia, various laws regulate legal protection for HMI, such as the Copyright, Patent, and Trademark laws. The government has also taken steps to strengthen law enforcement against HMI violations, including establishing the Directorate General of Intellectual Property (DJKI), which is tasked with monitoring and taking action against HMI violations. However, challenges remain, especially in dealing with violations that occur in cyberspace.\(^6\)

One of the main challenges in protecting HMI in the digital era is public awareness of the importance of respecting these rights. Education and outreach regarding HMI need to be improved so that the public understands the negative impact of HMI violations, both for rights owners and for the development of the creative industry as a whole. Innovation in protection technology is also needed, such as the use of Digital Rights Management (DRM) to protect digital content from piracy.\(^7\)

Law enforcement against HMI violations in the digital era requires a holistic approach involving various stakeholders, including government, the private sector and society. Collaboration between the government and digital platforms is also essential to effectively detect and act on HMI violations. The use of technology such as artificial intelligence (AI) and machine learning can help monitor and identify content that violates HMI more efficiently.\(^8\)

In the future, legal protection for HMI will be increasingly crucial as technology advances and creativity and innovation increase in various fields. Therefore, regulations that are adaptive and responsive to technological developments, as well as firm and effective law enforcement, are needed. In this way, the rights of HMI owners can be well protected, and an ecosystem that supports innovation and creativity can be realized in this digital era.\(^9\) Legal protection of intellectual property rights in the digital era is the responsibility of the government and all elements of society. All parties need to work together to create an environment conducive to the development of creativity and innovation while ensuring that the rights of HMI owners are respected and appropriately protected. Only in this way can we maximize the potential of digital technology for collective progress.\(^10\)

**METHOD**


\(^6\) Buzova and Karelina.


This research uses a qualitative approach with descriptive-analytical methods to examine the legal protection of intellectual property rights (HMI) in the digital era. This approach was chosen because it allows researchers to explore in depth how regulations and protection mechanisms are currently implemented and identify the challenges faced in enforcing HMI laws in the digital world. Data collection was carried out through in-depth interviews with legal practitioners, HMI owners and relevant government officials, as well as through the study of legal documents such as laws, regulations and international conventions related to HMI. The data obtained was analyzed using thematic analysis techniques to find relevant patterns and relationships, which were then interpreted to answer research questions.

Relevant literature provides a solid foundation for the methodology of this research. According to Cohen (2007), a qualitative approach is very effective in understanding the impact of digital technology on HMI protection because this approach allows for more in-depth and contextual exploration. Dinwoodie (2010) also emphasized the importance of descriptive-analytical analysis in assessing the effectiveness of international regulations such as TRIPS in harmonizing HMI protection in various countries. In the Indonesian context, Susanti (2015) highlights the need for qualitative research to understand the practical challenges in enforcing HMI laws and the importance of public education and technology in strengthening HMI protection. Thus, the methodology used in this research is not only based on best practices in legal and technology research but is also strengthened by essential findings from the existing literature.

RESULTS AND DISCUSSION

Effectiveness of Legal Protection of Intellectual Property Rights in the Digital Era

The results of this research show that legal protection of intellectual property rights (HMI) in the digital era still faces various significant challenges. Based on interviews with legal practitioners and HMI owners, it was revealed that although there are various regulations governing HMI protection, their implementation could be more effective. One of the leading causes is the need for more public knowledge and awareness about the importance of respecting HMI. More education means that many people still need to pay more attention to HMI violations, such as piracy of software and other digital works.

Law Number 28 of 2014 concerning Copyright is one of the principal regulations governing copyright protection in Indonesia. This law provides legal protection for creators of intellectual works and establishes sanctions for copyright violations. However, in practice, law enforcement still needs to be improved by limited resources and law enforcement capacity in detecting and handling cases of HMI violations. Many cases of digital piracy go undetected or need to be followed up effectively.

This research also found that despite efforts to strengthen regulations, such as through the establishment of the Directorate General of Intellectual Property (DJKI), challenges in law enforcement remain large. DJKI is tasked with monitoring and taking action against HMI violations, but budget and human resource limitations often need to be addressed. In addition, complicated and lengthy legal procedures often make HMI owners reluctant to report violations they experience.

In addition, the research results show that collaboration between the government and digital platforms still needs to be improved. Digital platforms have an essential role in monitoring and taking action against content that violates the HMI. However, often, the existing mechanisms could be more optimal. Some platforms have adopted technologies such as Digital Rights Management (DRM) to protect digital content, but these technologies still have limitations and are only sometimes effective in preventing piracy.

This research also focuses on the importance of international cooperation. HMI violations are often cross-border, requiring cooperation between countries to overcome this problem. International conventions such as the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) have helped harmonize HMI protection, but their implementation still requires stronger enforcement at the national and international levels.

Overall, this research highlights that although HMI protection regulations exist, challenges in implementation and enforcement still need to be addressed. To increase the effectiveness of HMI protection in the digital era, a more holistic approach is needed, including increasing public education, strengthening law enforcement capacity, and increasing cooperation between the government and digital platforms and between countries.

Challenges and Opportunities in Intellectual Property Law Enforcement in the Digital Era

The main challenge in enforcing HMI law in the digital era is the difficulty of monitoring and detecting online violations. Internet technology allows the distribution of digital content quickly and widely, so HMI violations can easily occur without being detected. Additionally, the anonymity of internet users makes law enforcement more difficult. Identification of wrongdoers often requires advanced technology and collaboration with internet service providers.

Law Number 11 of 2008 concerning Information and Electronic Transactions (ITE) in Indonesia regulates various legal aspects related to the use of information technology, including the protection of HMI. Even though the ITE Law provides a legal basis for cracking down on HMI violations in cyberspace, its implementation still faces many obstacles. One of the problems identified in this research is the need for more cooperation between law enforcement and internet service providers in identifying and handling cases of HMI violations.

This research also found that technology can be an effective tool in supporting Challenges and Opportunities in Intellectual Property Law Enforcement in the Digital Era.

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19 Bengler et al., “From HMI to HMIs: Towards an HMI Framework for Automated Driving.”
20 François et al., “Automotive HMI Design and Participatory User Involvement: Review and Perspectives.”
cooperation between law enforcement and internet service providers in identifying and handling cases of HMI violations.

**Intellectual Property Law Enforcement in the Ideal Digital Era**

Enforcement of intellectual property rights (HMI) law in the ideal digital era requires a comprehensive and integrated approach, combining solid regulations, advanced technology, international cooperation, and public awareness and education. In an era where information technology is developing rapidly, the law must be able to keep up with the dynamics of these changes to protect intellectual works effectively. An ideal approach should include multiple aspects that support each other to create an effective HMI protection ecosystem.  

First, robust and adaptive regulations are the foundation of ideal HMI law enforcement. Laws should be designed to protect various forms of HMI, including copyrights, patents, trademarks, and industrial designs. Regulations must include clear provisions regarding the rights and obligations of HMI owners and strict sanctions for violators. In addition, regulations must be able to adapt to technological developments, such as new phenomena in the digital world that may still need to be covered by existing laws.

Second, it is very important to use advanced technology in enforcing HMI laws. Technologies such as artificial intelligence (AI) and machine learning can be used to monitor and detect HMI violations in cyberspace. For example, AI can be used to identify copyright-infringing content on digital platforms automatically. This technology can also help in big data analysis to find patterns of violations and identify perpetrators. Thus, technology can increase the efficiency and effectiveness of HMI law enforcement.

Critical components in ideal HMI law enforcement. Digital platforms have an essential role in monitoring and taking action against content that violates the HMI. Close cooperation between the government and digital platforms can ensure that HMI protection mechanisms work well. Governments can provide clear guidance and regulations, while digital platforms can implement technology to detect and remove content that violates the HMI. Fourth, international cooperation is essential in enforcing HMI laws in the digital era. HMI violations are often cross-border, so regulatory harmonization and cooperation between countries is needed. International conventions such as the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and the World Intellectual Property Organization (WIPO) have provided a framework for international cooperation in the protection of HMI. Countries need to cooperate in law enforcement, exchange of information, and resolution of disputes related to HMI.

Fifth, increasing law enforcement capacity and resources is also an essential element in ideal HMI law enforcement. The government needs to ensure that law enforcers have the knowledge and skills necessary to handle HMI cases. This includes special training for law enforcement on digital technology and ways to address HMI breaches in cyberspace. In addition, law enforcement must be supported by adequate resources, including the necessary budget, equipment, and technology.

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25 Ekman, Johansson, and Sochor.
Sixth, public education and awareness about the importance of HMI is very crucial. The public needs to understand the value of HMI and the negative impact of infringement on rights owners and the creative industry as a whole. Awareness campaigns and educational programs must be stepped up, especially among the younger generation, which is the primary user of digital technology. Increasing awareness is hoped to help the public respect HMI more and avoid violations. Seventh, the ideal approach must also include an effective and efficient dispute-resolution mechanism. Long and complicated legal processes often become obstacles for HMI owners in claiming their rights. Therefore, alternative dispute resolution mechanisms are needed, such as mediation and arbitration, which can provide quick and fair solutions for both parties. Clear regulations and adequate infrastructure must support this mechanism.

Finally, regular evaluation and adjustment of regulations is an integral part of ideal HMI law enforcement. The government and other stakeholders must continue to monitor the effectiveness of existing regulations and make adjustments according to technological developments and community needs. In this way, HMI protection regulations will remain relevant and able to face challenges in the ever-growing digital era.

CONCLUSIONS

The effectiveness of legal protection for intellectual property rights (HMI) in the digital era still needs to improve even though various regulations already exist. This research reveals that law enforcement could be more effective due to limited resources, lack of public awareness, and complicated and lengthy legal procedures. Efforts to strengthen regulations and increase law enforcement capacity through institutions such as DJKI have been made. However, obstacles such as budget and technology limitations still need to be overcome. Cooperation between the government and digital platforms also needs to be improved to ensure that content that violates the HMI can be better monitored and prosecuted. In dealing with cross-border HMI violations, the importance of international cooperation and regulatory harmonization cannot be ignored. International conventions such as TRIPS and WIPO have provided a framework, but their implementation requires more vigorous enforcement at national and international levels. Technologies such as AI and machine learning show great potential in monitoring and detecting HMI breaches, although broader adoption and development are still needed.

They are increasing Public Education and Awareness. Intensive awareness campaigns and educational programs, especially among the younger generation, are significant in creating a culture that respects intellectual property rights, strengthening Regulations and Adapting Technology. The government needs to continue to update regulations to adapt to technological developments and a new phenomenon in the digital world. The use of advanced Technology, such as AI, must be expanded to support HMI law enforcement. Closer Cooperation with Digital Platforms: The government and digital platforms must work more closely together to monitor and take action against HMI violations. Digital platforms must be set up to implement effective HMI protection mechanisms. Increasing Law Enforcement Capacity and Resources: Law enforcement needs to be provided with special training and adequate resource support to handle HMI cases more effectively. Strengthening International Cooperation Countries need to strengthen cooperation in enforcing HMI laws by exchanging information and resolving disputes related to HMI. Efficient Dispute Resolution Mechanisms: Fast and fair alternative dispute resolution mechanisms such as mediation and arbitration are needed to reduce obstacles for HMI owners in demanding their rights. With a more holistic and integrated approach, it is hoped that HMI protection in the digital era can be significantly improved, providing justice for rights owners and encouraging the development of a healthier and more innovative creative industry.

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