

INSIGHTS

AI and Law: A Global to Local Look at Regulating the Fourth Industrial Revolution

PONG Pich¹, MA in Public Law

ING Chandavya², LLM in Intellectual Property and Competition Law

TANN Thangvansounary³, BA in International Law

¹ ***PONG Pich** is a Research Fellow at AI Forum*

² ***ING Chandavya** is a Research Fellow at AI Forum*

³ ***TANN Thangvansounary** is a Research Associate at AI Forum*

Introduction

The Fourth Industrial Revolution, so-called 4IR, has currently transformed the way of humanity's life by reshaping work, transportation, and social interaction. The concept of man and machine contemplated for centuries is now coming to fruition through the Internet of Things (IoT), where connectivity is constant and has only accelerated with the aid of artificial intelligence (AI). Since its coinage in 1956 by John McCarthy (Haenlein & Kaplan, 2019), the AI industry has boomed in recent years and, according to Chui et al. (2018), will contribute US\$9.5 trillion to US\$15.4 trillion of added value per annum. Due to its sheer size and impact across all sectors, from health to banking to transportation, it is incumbent on regulators and governments to develop regulations, guidelines, and legislation that will help the AI industry move forward in the proper direction. Therefore, the legal implications concerning Intellectual Property and AI at the national (Cambodia), regional (ASEAN), and global level will be discussed in this article without intending to analyze the law in detail but rather to give a comprehensive overview of the present situation and how it may be applied to this new field.

Cambodian Legal Framework Concerning Artificial Intelligence and Intellectual Property

AI has the potential to promote significant innovation and economic growth. It has been used in a variety of industries, including healthcare, banking, manufacturing, and education, because it improves workplace productivity and efficiency. This section will look at the existing Cambodian legal frameworks and policies governing AI and intellectual property, as well as make recommendations. As Cambodia embraces digital transformation, it is critical to adopt and implement this technology in order to boost innovation and economic growth. However, it also presents challenges for legal practitioners and law enforcement, particularly in the area of AI-related intellectual property issues.

Cambodia is currently exploring pathways to regulating AI, while other Asian-Pacific countries such as India, Japan, Korea, the Philippines, Taiwan, Thailand, and Vietnam are working to establish one, whereas China has already established and implemented laws concerning AI, such as the Interim Measures for the Management of Generative Artificial Intelligence Services (Brower Group Asia, 2023). Yet, with the rapid adoption of AI in the Cambodian society, the lack of governing legal frameworks on AI-related IP poses significant challenges for Cambodia

in terms of law enforcement and legal compliance. It is important to note that IPR is inextricably linked with AI because AI has raised new issues such as AI-generated inventions, how to deal with copyrighted content used to train AI, or AI as an enabler of innovation and research, and whether it can be patented. These are the questions that have yet to be answered.

The Cambodian existing laws governing IPR may not be able to deal with AI-generated works. Those existing legal frameworks relating to IPR comprises of the Law concerning Marks, Trade Names and Acts of Unfair Competition, Law on the Patents, Utility Model Certificates and Industrial Designs, Law on Copyright and Related Rights, and so forth. These laws only provide legal frameworks concerning IPR protection without mentioning any provisions regarding the governing of AI-generated works, which will be subject to further discussion.

Even though there are no special legal frameworks yet, some national policies and documents are in place to provide direction for future regulation of AI, developed by the Cambodia's Ministry of Industry, Science, Technology, and Innovation. Those policies and documents consist of the Digital Tech Roadmap and the AI Landscape in Cambodia: Current Status and Future Trend. The Digital Tech Roadmap was published in 2023 in line with other existing policies and frameworks to assist Cambodia in becoming an upper-middle-income country by 2030 and a high-income country by 2050 with an emphasis on AI and machine learning as one of the key technologies (National Council of Science, Technology & Innovation, 2023). In addition, the Ministry also released a book entitled AI Landscape in Cambodia: Current Status and Future Trend in 2023 with the contribution of scholars and experts in their respective fields by examining the current stage of AI, challenges, opportunities, and the future of AI in Cambodia (Chhem et al., 2023).

All in all, the lack of Cambodian legal frameworks governing AI-related IP poses significant challenges for legal practitioners and law enforcement. Establishing these legal frameworks will create a foundation for dispute settlement mechanisms with the promotion of innovation, foreign investments, and economic growth.

ASEAN's Legal Framework Concerning Intellectual Property and Artificial Intelligence

Even though some aforementioned countries are closely considering AI, it has emerged as a transformative force across various sectors in the Association of Southeast Asian Nations (ASEAN), presenting opportunities and challenges, particularly in the context of IP. The fast advancement of AI technologies has posed questions concerning IP ownership, protection, and enforcement. ASEAN member states are dealing with issues such as the attribution of authorship in AI-generated works, the patentability of AI inventions, and the adequacy of existing IP laws to address AI-related innovations. In this regard, this section seeks to further explore the evolving landscape of AI and IP in ASEAN, focusing on the ASEAN region's approaches and legal frameworks to address these challenges and opportunities.

ASEAN is working to strengthen AI governance and Ethics to promote the utilization of AI responsibly. As a result, the 4th ASEAN Digital Ministers' Meeting 2024 published the ASEAN Guide on AI Governance and Ethics (ASEAN, 2024). This Guide is practical guidance for organizations in the region seeking to utilize AI technologies in commercial and non-military applications (ASEAN, 2024). Simultaneously, concerning IP rights, the ASEAN Framework Agreement on Intellectual Property Cooperation 1995 aims to promote cooperation in the field of IPR within the ASEAN region and explore appropriate intra-ASEAN cooperation arrangements (ASEAN, 2012).

The convergence of IP and AI poses challenges and opportunities. Adopting traditional IP regulations with AI-generated works is complicated, posing questions concerning ownership and enforcement in a fast-evolving digital landscape. AI and IP-related issues are addressed differently based on geographical locations. For ASEAN, although there are no specific rules or regulations to address those issues, each member states have its way of dealing with them. However, the ASEAN Framework on AI Governance and Ethics recommends that principles like transparency, fairness, security, human-centricity, privacy, and accountability could indirectly address these issues (ASEAN, 2024).

To sum up, the rise of AI in ASEAN poses a dynamic landscape of promise and complexity, especially within the area of IP. The ASEAN member states face essential challenges surrounding IP ownership, protection, and enforcement, including authorship attribution and patentability, as AI technologies advance. Despite the insufficient specific approaches addressing AI-related IP issues within ASEAN, the ASEAN Guide on AI Governance and Ethics and the ASEAN Framework Agreement on Intellectual Property Cooperation stated the

region's commitment to fostering responsible AI development and facilitating cooperation in IP matters. By navigating the evolving intersection of AI and IP, ASEAN seeks to harness emerging technologies ethically and effectively for the benefit of society.

Global's Legal Framework Concerning Intellectual Property and Artificial Intelligence

Innovation and invention are at the heart of intellectual property; without the two, particularly without proper protection or granted rights, creators, authors, or inventors may be discouraged from developing new products, leading to a reduction or even halt in the arts and sciences. Understanding this concern, global consideration and efforts have been put into creating necessary legal regulations to protect intellectual and artistic creativity and innovation, as evidenced by the adoption of the Berne Convention for the Protection of Literary and Artistic Works in 1886, followed by the Universal Copyrights Convention in 1952, the Agreement on Trade-Related Aspects of Intellectual Property Rights in 1995, and the 1996 Universal Copyright Convention, despite the extensive international coverage of law, the language of the law has limited jurisdiction to cover AI and the development of the new sophisticated realm of cyberspace, resulting in fragmentation (Yu, 2022).

To be more specific, the Berne Convention for the Protection of Literary and Artistic Works in 1886, followed by the Universal Copyrights Convention in 1952 are concerned with and relating to literary and artistic works (Polishchuk, 2024). Although the creativity and product created by AI/machine may be novel, it was trained on a specific set of existing data, calling the product's originality into question (Foss-Solbrekk, 2021). Furthermore, authorship remains an unanswered question because the above-mentioned conventions regard the author as a human being rather than a machine (Watiktinnakorn et al., 2023). The 1995 Agreement on Trade-Related Aspects of Intellectual Property Rights, on the other hand, includes computer programmes for protection in article 10, whereas the 1996 Universal Copyright Convention emphasizes consideration of computer programmes, but does not highlight the process or algorithm of the programming side, leaving it blurred (Foss-Solbrekk, 2021). Although these two conventions tend to embrace technological development, they differ in their legal definitions and the scope of how to define creative work or computer programmes in particular. With that said, countries, particularly advanced nations, are taking the matter into their own

hands and instituting national legislation or regulations (Voitovych et al., 2021). The reason for this could be that current intellectual property regulation is limited in its ability to protect and preserve creativity, whereas issues such as algorithms and AI creations are protected by intellectual property law.

Having said that, it is critical to emphasize that at all levels, as examined in this paper, a trend has emerged demonstrating that new technological development is not adequately addressed by law. Therefore, tackling this issue requires national resolve, regional cooperation, and international efforts.

Conclusion

It is significant to note that while AI is still in its early stages of development, the impact is consequential and it is raising new economic, social, and cultural issues at all levels around the world, particularly in intellectual property. However, it is important to note that to address the concern, particularly in the context of the law that does not adequately address AI and its impact on IP, a multi-pronged approach is required at every level. Collaboration efforts at the global, trilateral, and national levels must be aware of and take action to bridge the legal gap to ensure responsible AI development and deployment of proper IP protection in the new era. Without proper protection, AI may disrupt the promotion of innovation and the integrity of creation.

References

- Anna, U. (2023). Artificial Intelligence and Intellectual Property: Navigating the Complexities of Cyber Law. *IRSHAD*, 1(4), 3-5. <https://doi.org/10.59022/ijlp.57>
- ASEAN. (2012). *ASEAN Framework Agreement on Intellectual Property Cooperation* Bangkok, Thailand, 15 December 1995. <https://asean.org/asean-framework-agreement-on-intellectual-property-cooperation-bangkok-thailand-15-december-1995/>
- ASEAN. (2024). *ASEAN Framework on AI Governance and Ethics*. https://asean.org/wp-content/uploads/2024/02/ASEAN-Guide-on-AI-Governance-and-Ethics_beautified_201223_v2.pdf
- Bower Group Asia. (2023). *AI Policy and Regulatory Frameworks Take Shape in APAC*. <https://bowergroupasia.com/ai-policy-and-regulatory-frameworks-take-shape-in-apac/#:~:text=Cambodia%20does%20not%20have%20a,Trends%20report%20in%20May%202023.>
- Chhem, R. K., Khieng, S., & Prum, S. (2023). AI for Cambodia: Policy Framework and Options. In Chhem, K.R., Hul, S., & Mounh, N. (Eds), *AI Landscape in Cambodia: Current Status and Future Trend* (1st ed., pp. 52-53). MISTI.
- Chui, M., Manyika, J., Miremadi, M., Henke, N., Chung, R., Nel, P., & Malhotra, S. (2018). *Notes from the AI frontier: Insights from hundreds of use cases*. McKinsey Global Institute. <https://www.mckinsey.com/west-coast/~:/media/McKinsey/Featured%20Insights/Artificial%20Intelligence/Notes%20from%20the%20AI%20frontier%20Applications%20and%20value%20of%20deep%20learning/Notes-from-the-AI-frontier-Insights-from-hundreds-of-use-cases-Discussion-paper.pdf>
- Costigan, J. (2024, February 29). China Rules AI Firm Committed Copyrights Infringement. *Forbes*. <https://www.forbes.com/sites/johannacostigan/2024/02/29/china-rules-ai-firm-committed-copyright-infringement/?sh=19c83023454d>

- Foss-Solbrekk, K. (2021). Three routes to protecting AI systems and their algorithms under IP law: The good, the bad and the ugly. *Journal of Intellectual Property Law and Practice*, 16(3), 247–258. <https://doi.org/10.1093/jiplp/jpab033>
- Haenlein, M. & Kaplan, A. (2019, July). A brief history of artificial intelligence: On the past, present, and future of artificial intelligence. *California Management Review*.
<http://dx.doi.org/10.1177/0008125619864925>
- National Council of Science, Technology and Innovation. (2023). *Digital Tech Roadmap*. Ministry of Science, Technology and Innovation, 20-21.
<https://misti.gov.kh/public/file/202307291690603726.pdf>
- Polishchuk, A. (2024). Consideration of intellectual property law in the context of European Union practice. *Law. Human. Environment*, 15(1), 70–84.
<https://doi.org/10.31548/law/1.2024.70>
- Voitovych, P., Bondarenko, K., Ennan, R., Havlovska, A., & Shliienko, V. (2021). Objects of intellectual property rights created by artificial intelligence: international legal regulation. *Cuestiones Políticas*, 39(68), 505–519.
<https://doi.org/10.46398/cuestpol.3968.32>
- Watiktinnakorn, C., Seesai, J., & Kerdvibulvech, C. (2023). Blurring the lines: how AI is redefining artistic ownership and copyright. *Discover Artificial Intelligence*, 3(1).
<https://doi.org/10.1007/s44163-023-00088-y>
- Yu, P. K. (2022). Marshalling Copyright Knowledge to Understand Four Decades of Berne. *IP Theory*, 12(1). <https://www.repository.law.indiana.edu/ipt/vol12/iss1/4/>

* Edited with ChatGPT for clarity; all views expressed are solely those of the authors.

* The opinions expressed are the authors' own and do not reflect the views of AI Forum.