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Copyright Protection and Activation Policies in the Metaverse:

Focusing on NFTs and UGC

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Abstract

This study explores the balance between copyright protection and industrial promotion in the metaverse environment, focusing on NFTs and user-generated content (UGC). Through analysis of Korea's Virtual Convergence Industry Promotion Act (2024) and Korea Copyright Commission guidelines, alongside comparative examination of policies in the United States, European Union, Japan, and China, this research identifies critical gaps in current regulatory frameworks. While Korea enacted the world's first metaverse-specific promotion law, its copyright protection system remains incomplete. The study proposes a tiered platform liability system, fair remuneration rights for creators, and blockchain-based provenance systems as essential components for sustainable metaverse ecosystem development. The findings suggest that Korea's position as both a K-content powerhouse and ICT leader provides unique opportunities to establish global standards in metaverse copyright policy, contingent upon achieving refined balance between creator protection and industrial activation.

Keywords : Metaverse, NFT, User-Generated Content, Copyright, Platform Liability, Creator Economy, Digital Assets, Virtual Worlds

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1. Introduction

The explosive growth of the metaverse market has positioned the balance between copyright protection and industrial activation as a critical policy challenge (OECD, 2023). The global metaverse market is projected to reach approximately \$936.6 billion by 2030, with market size estimated at \$105.4 billion in 2024 and \$139.1 billion in 2025 (Grand View Research, 2024). Korea is identified as the fastest-growing regional market, projected to reach \$51.4 billion by 2030 (Statista, 2025). However, the convergence of user-generated content (UGC) and non-fungible tokens (NFTs) in metaverse environments has generated unprecedented copyright challenges (Chon, 2022).

1.1 Research Significance

The timeliness of this research manifests in three dimensions:

1.1.1 Legal-Institutional Dimension

Korea pioneered metaverse legislation with the world's first Virtual Convergence Industry Promotion Act (Law No. 20352) enacted February 27, 2024, with implementation on August 28, 2024, yet copyright protection frameworks remain ambiguous (Virtual Convergence Industry Promotion Act, 2024).

1.1.2 Economic Dimension

Roblox distributed \$923 million to creators in 2024 and exceeded \$1 billion in 2025, marking a 31% year-over-year increase (Roblox Corporation, 2025). The UGC-based economy's growth necessitates urgent creator protection measures.

1.1.3 International Dimension

The USPTO-USCO's March 2024 NFT joint report maintains that "amendments to intellectual property laws are not necessary or advisable at this time" (U.S. Copyright Office & U.S. Patent and Trademark Office, 2024), contrasting sharply with the EU's DSM Directive (2019/790) imposing active platform responsibilities (European Parliament and Council, 2019). The EU Digital Services Act entered full force on February 17, 2024. As of early 2025, the European Commission has initiated multiple DSA compliance investigations, with potential fines reaching hundreds of millions of euros (European Commission, 2025).

1.2 Market Overview and Growth Projections

Figure 1. *illustrates the projected growth of the global metaverse market from 2024 to 2030.*

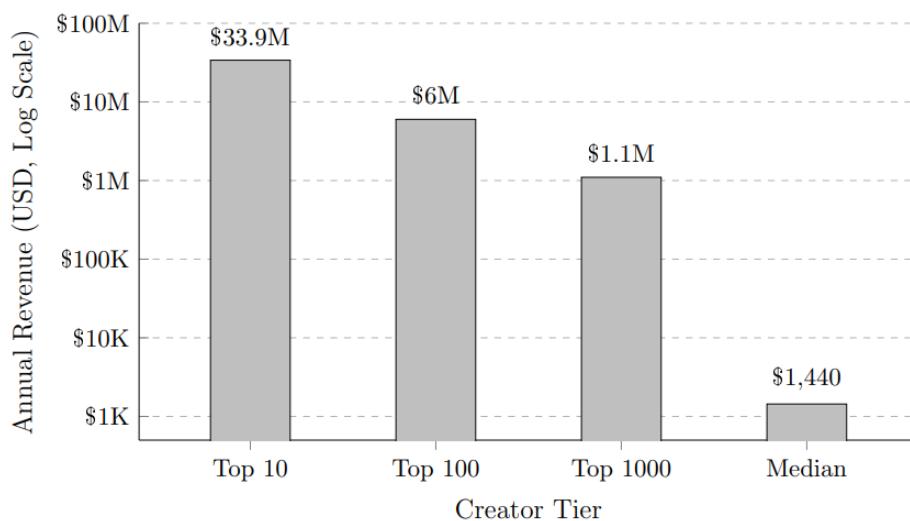


Figure 1. Global Metaverse Market Size Projection 2024-2030 (Source: Grand View Research, 2024; CAGR: 44.1%)

1.3 Research Objectives and Questions

This study addresses three core research questions:

- (a) How is Korea's metaverse copyright policy evolving, and what institutional foundations currently exist?
- (b) What characteristics and differences emerge in metaverse copyright policies across the United States, European Union, Japan, and China?
- (c) What policies can enable Korea to simultaneously achieve creator protection and industrial activation through international comparison?

1.4 Research Methodology

The methodology combines comparative legal analysis with case studies. Primary sources include official documents and guidelines from the Korea Copyright Commission, Ministry of Culture, Sports and Tourism, and Ministry of Science and ICT, alongside policy reports from the U.S. Copyright Office, EU Commission, Japan's Ministry of Economy, Trade

and Industry, and China's Ministry of Industry and Information Technology. Empirical analysis examines terms of service from major platforms (Roblox, ZEPETO, Fortnite) and copyright policies of NFT marketplaces (OpenSea, Rarible).

2. Theoretical Background

2.1 Conceptual Framework of Metaverse and Copyright

The metaverse represents a three-dimensional virtual world where virtual and physical spaces converge, defined as "virtual convergence world" in Korea's Virtual Convergence Industry Promotion Act (2024) (Virtual Convergence Industry Promotion Act Enforcement Decree, 2024). From a copyright perspective, the metaverse exhibits three distinctive characteristics:

(a) **Proliferation of UGC:** Roblox hosts 71.8 million monthly creators who directly produce games, items, and avatars (Roblox Corporation, 2024).

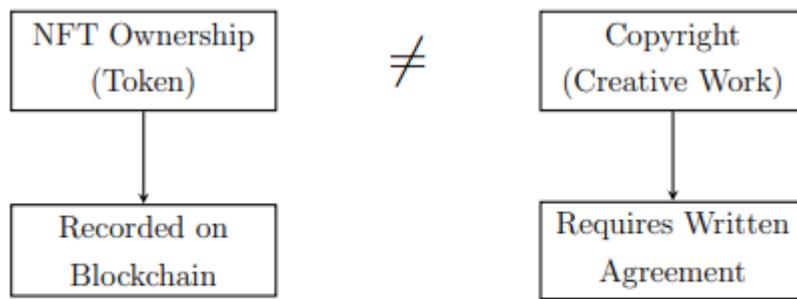
(b) **Integration with NFTs:** NFTs serve as tokens proving digital asset uniqueness on blockchain, representing ownership of virtual assets within the metaverse. However, as the USPTO-USCO report (2024) clarifies, "NFT ownership and copyright ownership are entirely separate," creating legal confusion (U.S. Copyright Office & U.S. Patent and Trademark Office, 2024).

(c) **Platform Intermediation Role:** Metaverse platforms function not merely as technical conduits but as active agents organizing and curating content, raising questions about the scope of copyright infringement liability (Samuelson,

2023).

2.2 Separation of NFT and Copyright Ownership

The legal nature of NFTs constitutes a core issue in metaverse copyright. Figure 2 illustrates the fundamental separation between NFT ownership and copyright.



17 U.S.C. §204 requires written transfer

Figure 2. Separation of NFT Ownership and Copyright

Technically, NFTs are encrypted data on blockchain, while actual digital works are separately stored on IPFS or central servers (Lemley&Casey, 2022). This creates three separations:

- (a) Token ownership \neq Asset ownership
- (b) Asset ownership \neq Copyright ownership
- (c) NFT transfer \neq Copyright transfer

U.S. Copyright Act 17 U.S.C. 204 requires written agreements for copyright transfer, preventing copyright acquisition through NFT purchase alone (Copyright Act, 2022).

3. Current State of Korean Metaverse Copyright Policy

3.1 Enactment and Limitations of the Virtual Convergence Industry Promotion Act

Korea enacted the world's first independent legislation for metaverse industry promotion on February 27, 2024 (Virtual Convergence Industry Promotion Act, 2024). The Virtual Convergence Industry Promotion Act, implemented August 28, 2024, encompasses three core elements:

- (a) Basic Plan Establishment: Establishes and implements a Virtual Convergence Industry Basic Plan every three years.
- (b) Priority Permission and Post-Regulation Principle: Introduces temporary standards systems creating self-regulatory environments suited to new industry characteristics.
- (c) User Protection Obligations: Protects children and adolescents from harmful activities and media.

However, this law lacks specific provisions for copyright protection. Copyright is not mentioned once in the statute, focusing on industrial promotion while relegating creator rights protection to existing copyright law (Ministry of Science and ICT, 2023).

3.2 Korea Copyright Commission's Metaverse Guidelines

The Korea Copyright Commission systematically researched metaverse copyright issues since 2022:

- (a) "Metaverse and NFT Copyright Issues Research" (November 2022): A comprehensive 152-page report commissioned by the Ministry of Culture, Sports and Tourism (Korea Copyright Commission, 2022).
- (b) "Guidelines for Work Usage in the Metaverse" (December 11, 2023): A

58-page practical guide for general users and creators (Korea Copyright Commission, 2023).

These studies present four core principles: (a) Necessity of clarifying copyright attribution, (b) Flexible judgment of fair use, (c) Strict application of OSP liability limitations, (d) Special consideration for music copyright, choreography copyright, and architectural works. However, these guidelines remain non-binding recommendations without legal force.

3.3 NFT Transaction Copyright Guidance and Effectiveness Issues

The Ministry of Culture, Sports and Tourism published "Copyright Guidelines for NFT Transactions" (Ministry of Culture, 2022). Three key messages emerge:

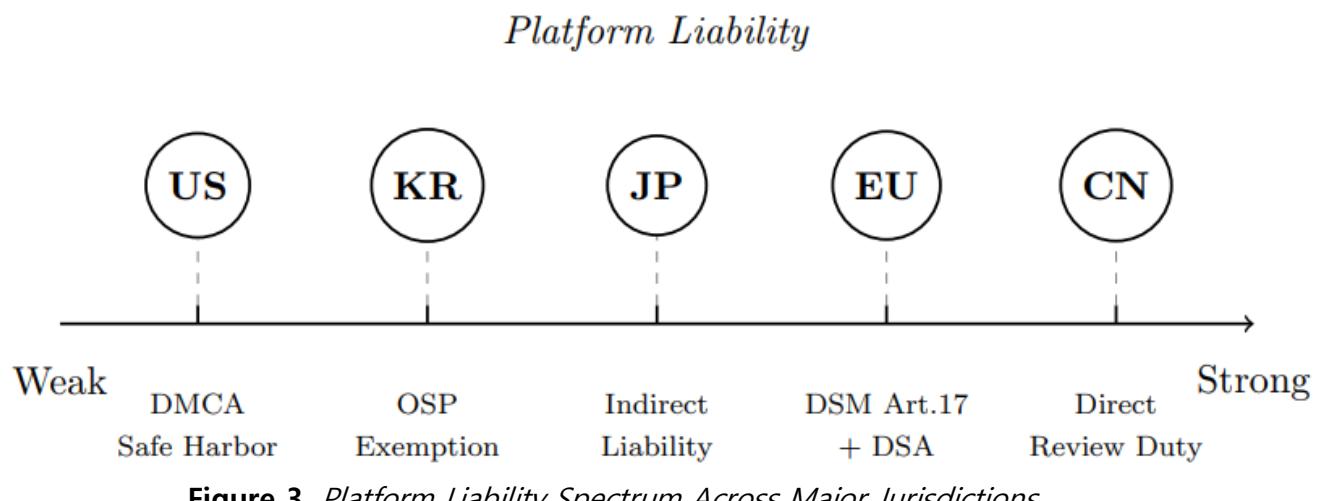
- (a) While NFTs can prove content uniqueness, they do not automatically secure copyright.
- (b) No current laws guarantee digital work ownership for NFT purchasers.
- (c) Using copyrighted content may trigger infringement controversies.

The Korea Copyright Protection Agency's 2022 "Copyright Protection Issue Outlook Report" ranked metaverse (18.0%) and NFT transactions (14.1%) as top issues (Korea Copyright Protection Agency, 2022).

4. Comparative Analysis of International Policies

This section provides detailed comparative analysis of how different jurisdictions handle new types of digital content, with specific policy recommendations for each area

identified. Figure 3 illustrates the platform liability spectrum across major jurisdictions.



4.1 United States: Maintaining Existing Legal Frameworks and Market Self-Regulation

The United States applies the 1998 Digital Millennium Copyright Act (DMCA) to the metaverse through a conservative approach (Digital Millennium Copyright Act, 1998). The landmark Viacom v. YouTube (2012) decision established that platforms need not proactively monitor for infringement, setting the precedent for current metaverse platform policies (Viacom International, 2012). Section 512 provides Safe Harbor to OSPs contingent upon four requirements: (a) Knowledge requirement, (b) Financial benefit limitation, (c) Repeat infringer policy, (d) Notice-and-takedown procedures.

On March 12, 2024, the USPTO-USCO submitted the "Joint Report on NFTs and Intellectual Property" (U.S. Copyright Office & U.S. Patent and Trademark Office, 2024). The core conclusion states that "amendments to intellectual property laws are not necessary or advisable at this time."

Key Cases (2023-2025):

- Hermès v. Rothschild (MetaBirkins, 2023): The jury recognized trademark infringement and awarded \$133,000 in damages. Appeal pending at Second Circuit (Hermès International, 2023).

Nike v. StockX (2025): As of March 2025, a judge ruled that Nike's trademark claims must face a jury trial (Nike, 2025).

4.1.1 Comparison: U.S. vs. Korea on UGC Platform Liability

Table 1 - U.S. vs. Korea: Creator Protection Mechanisms

Aspect	United States	Korea
Legal Basis	DMCA 512 Safe Harbor	Copyright Act Art. 102-104
Platform Duty	Reactive (notice-takedown)	Reactive with monitoring exceptions
NFT Specificity	No specific provisions	Guidelines only (nonbinding)
Creator Recourse	Civil litigation	Civil + Administrative complaint

Targeted Recommendation for Korea: Korea should adopt a hybrid model that maintains the reactive notice-takedown system for small platforms while introducing proactive monitoring obligations for large platforms (annual revenue exceeding 50 billion KRW), similar to the EU's tiered approach but calibrated to Korea's market size.

4.2 European Union: Active Platform Responsibility and Creator Protection

The EU adopted Directive 2019/790 (Digital Single Market Copyright Directive) on April 17, 2019 (European Parliament and Council, 2019). Article 17 establishes platform liability by considering OCSSPs as "communication to the

public" actors.

Additionally, the Digital Services Act (DSA) entered full force on February 17, 2024 (European Commission, 2025). The European Commission has initiated multiple investigations into DSA compliance, with potential penalties for noncompliance reaching up to 6% of global annual turnover.

Platforms failing to obtain licenses must prove all three conditions for exemption:

- (a) Best efforts to obtain authorization
- (b) Best efforts according to high industry standards to ensure unavailability of specific works
- (c) Expedited blocking and prevention of re-uploads

Article 17(6) provides mitigation for startups. Service providers with less than 3 years operation and annual turnover below EUR 10 million need only fulfill reduced obligations (European Commission, 2021).

Table 2. EU vs. Korea: Creator Protection Mechanisms

Aspect	European Union	Korea
Fair Remuneration	Art. 18-22 statutory right	No specific provisions
Transparency	Mandatory quarterly report	Platform discretion
Contract Adjustment	Right to renegotiate	General civil law only
Collective Bargaining	Explicitly protected	Limited framework

4.2.1 Comparison: EU vs. Korea on Creator Remuneration

Targeted Recommendation for Korea: Benchmarking EU DSM Directive Articles 1822, Korea should establish "Creator Fair Remuneration Rights" guaranteeing minimum 30% of platform revenues from creator works, with

mandatory quarterly transparency reports on usage frequency, generated revenue, and remuneration paid.

4.3 Japan: Web3-Centered Creator Economy Policy

Japan established a Web3 Policy Office within the Ministry of Economy, Trade and Industry in July 2022 (Ministry of Economy, 2023). The Liberal Democratic Party's Web3 White Paper 2024 contains four core policies (Japan Liberal Democratic Party, 2024):

(a) NFT business activation

(b) Tax reform (exempting corporate crypto assets from year-end market valuation taxation)

(c) DAO legalization

(d) Leading international rule formation

Japan amended its Copyright Act in 2018, adding Article 30-4 (non-enjoyment purpose use), permitting copyrighted work usage for AI learning (Copyright Act of Japan, 2018).

4.3.1 Comparison: Japan vs. Korea on AI-Generated Content

Table 3. Japan vs. Korea: AI Content Copyright Treatment

Aspect	Japan	Korea
AI Training Data	Art. 30-4 broad exemption	No specific provision
AI Output Rights	Human -> contribution -> required	Unclear
NFT Tax Treatment	Corporate exemptions	Standard taxation

Industry Focus	Web3 ecosystem growth	Metaverse promotion
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Targeted Recommendation for Korea: Korea should introduce clear guidelines on AI-generated content in metaverse environments, specifying: (1) conditions under which AI-assisted creations qualify for copyright protection, (2) disclosure requirements for AI involvement in content creation, and (3) liability allocation between AI tool providers and human creators.

4.4 China: State-Led Industrial Metaverse with Strict Control

China announced the "Three-Year Action Plan for Metaverse Industry Innovation Development (2023-2025)" in September 2023 (Ministry of Industry and Information Technology, 2023). Core objectives include cultivating 3-5 globally competitive metaverse companies and 3-5 industrial clusters by 2025. China strictly separates NFTs from cryptocurrency. Chinese NFTs, termed "digital collectibles" (Shuzi Cangpin), trade only in yuan with commercial resale prohibited (Zhang, 2025).

Landmark Case Hangzhou Bigverse (2022): The world's first completed NFT copyright case. The Hangzhou Internet Court imposed "higher review obligations than general e-commerce" on NFT platforms, holding Bigverse liable for third-party copyright infringement (Hangzhou Internet Court, 2022). The court noted that NFTs can be made redundant by sending to a "burn address," though this does not fully destroy the token.

4.4.1 Comparison: China vs. Korea on Platform Review Obligations

Table 4. China vs. Korea: NFT Platform Obligations

Aspect	China	Korea
Pre-upload Review	Mandatory verification	Not required
Platform Liability	Direct liability possible	OSP exemption applies
NFT Resale	Prohibited	Permitted
Crypto Integration	Banned	Regulated

Targeted Recommendation for Korea: Korea should implement mandatory copyright verification during NFT minting (proposed Copyright Act Article 104-8), requiring marketplace operators to obtain copyright documentation. This adopts China's preverification approach while maintaining Korea's market-friendly resale permissions.

4.5 Recent NFT Copyright Cases Summary (2022-2025)

Table 5 summarizes the major NFT-related intellectual property cases across jurisdictions.

Table 5. Major NFT Copyright/Trademark Cases (2022-2025)

Case	Country	Year	Outcome	Significance
Bigverse (FatTiger)	China	2022	Plaintiff wins	World's first completed NFT copyright case; higher platform duty established
Hermès v.MetaBirki ns	USA	2023	Hermès wins (\$133K)	NFT trademark infringement recognized; appeal pending

Mango v. VEGAP	Spain	2024	NFT side wins	Physical owner can mint NFT without copyright holder consent (appealed)
Nike v. StockX	USA	2025	Jury trial ordered	NFT-physical goods linkage; trademark in virtual goods

4.6 Comprehensive International Policy Comparison

Table 6. Comprehensive Comparison of Metaverse Copyright Policies

Table 6: Comprehensive Comparison of Metaverse Copyright Policies

Category	Korea	United States	EU	Japan	China
Legal Foundation	Virtual Convergence Act (2024)	DMCA (1998)	DSM Directive + DSA	Copyright Act Art. 30-4	3-Year Plan
Platform Liability	OSP Exemption (Limited)	Safe Harbor (Lenient)	Public Comm. (Strict)	Safe Harbor Principle	High Review Duty
NFT Regulation	Guidelines Only	No New Legislation	MiCA Sub-stance	Crypto Deregulation	Crypto Ban
Creator Protection	Limited	Contract Freedom	Statutory Fair Remun.	Tax Incentives	State-Led Platform

5. Creator Economy Analysis

5.1 Roblox Creator Revenue Distribution (2024-2025)

The metaverse creator economy demonstrates extreme income inequality.

Figure 4 visualizes the revenue distribution among Roblox creators using a

logarithmic scale to illustrate the magnitude of disparity.

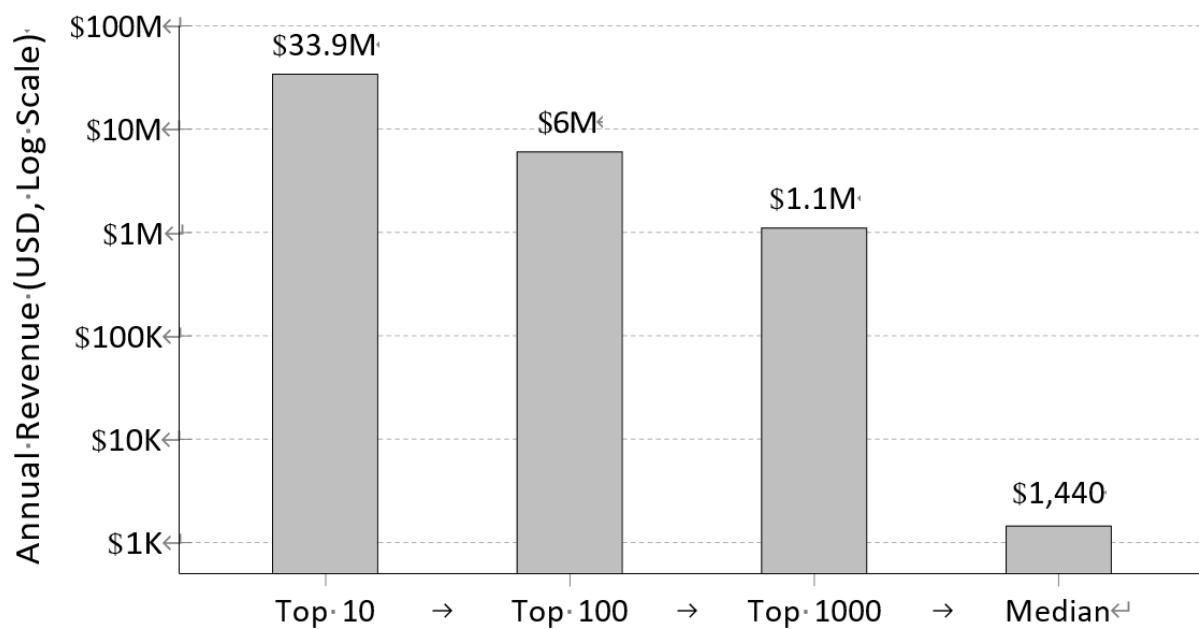


Figure 4. Roblox Creator Revenue Distribution 2024-2025 (Logarithmic Scale). The ratio between top 10 average (\$33.9M) and median (\$1,440) is 23,500:1.

Key statistics from Roblox's 2025 Economic Impact Report (Roblox Corporation, 2025):

- Total creator payouts: \$923 million (2024) → \$1+ billion (2025)
- Top 10 creators: Average \$33.9 million annually
- Top 100 creators: Average \$6 million annually
- Top 1,000 creators: Average \$1.1 million annually
- DevEx Program median: \$1,440 annually
- Ratio (Top 10 : Median): **23,500:1**

5.2 Platform Revenue Share Structure

Roblox's new monetization tools (2024-2025) include:

- Paid video games option with up to 70% revenue share
- Daily Engagement Reward: 5 Robux per active spender (10+ minutes)

- Audience Expansion Reward: 35% revenue share on first \$100 from new users

6. Policy Recommendations

Based on the comparative analysis in Section 4 and creator economy analysis in Section 5, this section provides specific, actionable policy recommendations.

6.1 Legislative Improvements

6.1.1 Copyright Act Amendment Reflecting Metaverse Specificity

Current copyright law, designed for offline contexts, inadequately reflects the metaverse's real-time, immersive, UGC characteristics. The following provisions are proposed:

Proposed Article 30-5 (Metaverse Fair Use): Non-commercial UGC creation within metaverse platforms constitutes fair use when meeting these requirements: (a) Not unduly harming the original work's market value, (b) Constituting transformative use, (c) Providing source attribution.

Rationale: This addresses the gap identified in the U.S.-Korea comparison (Table 1), providing clearer guidance than the U.S. case-by-case fair use analysis while maintaining flexibility for creative UGC.

Proposed Article 104-8 (Copyright Verification Obligation for NFT Minting): NFT marketplace operators must obtain copyright documentation during minting.

Rationale: This adopts the China model's pre-verification strength (Table 4)

while avoiding its restrictive resale prohibitions, learning from the Bigverse case precedent.

Proposed Article 136-2 (Metaverse Platform Damage Compensation Exception): Platforms implementing infringement prevention measures may receive 50% damage reduction.

Rationale: This incentivizes proactive platform behavior, bridging the gap between

U.S. reactive Safe Harbor and EU strict liability approaches.

5-0-1 Special Legislation Clarifying NFT-Copyright Relationships

Proposed "Digital Assets Basic Act" would clarify:

- (a) Legal definition of NFTs
- (b) Separation principle between NFT ownership and copyright
- (c) Copyright transfer requirements for NFT transactions (mandatory written contracts)
- (d) NFT marketplace duty of care standards

6.2 Redesigning Platform Liability: Korean Balanced Model

Current Copyright Act Article 102 (OSP Liability Limitation) fails to consider metaverse platforms' active roles. Figure 5 illustrates the proposed Korean balanced model.

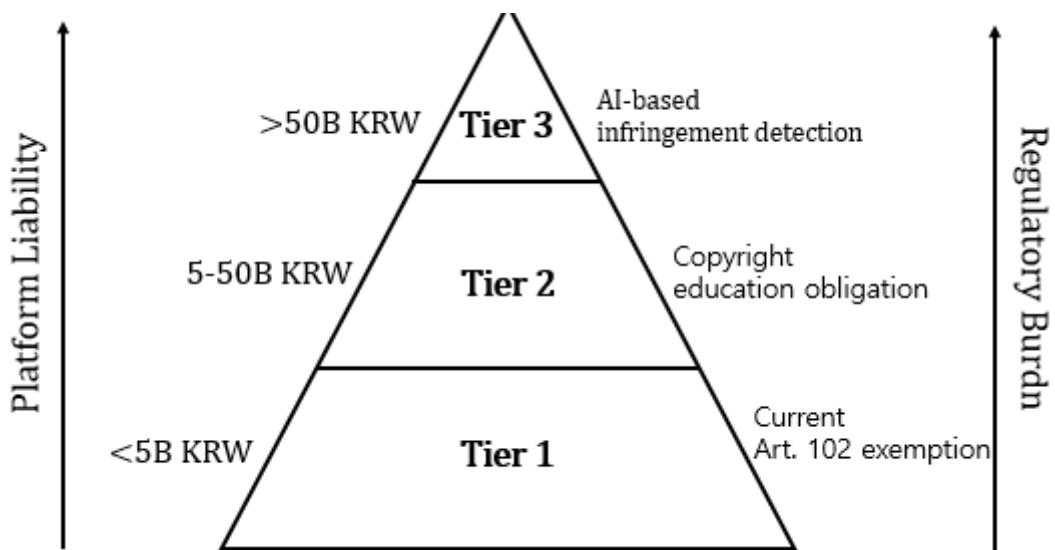


Figure 5. Proposed Korean Tiered Platform Liability Model

Proposed Article 102-2 (Tiered Metaverse Platform Liability):

- **Tier 1 (Small Platforms):** Annual revenue below 5 billion KRW → Current Article 102 applies
- **Tier 2 (Medium Platforms):** Annual revenue 5-50 billion KRW → Prior copyright education obligations
- **Tier 3 (Large Platforms):** Annual revenue above 50 billion KRW → AI-based infringement detection system construction

Rationale: This tiered approach mirrors EU Article 17(6) startup protections while establishing clear thresholds appropriate for Korea's market scale.

6.3 Strengthening Creator Rights

6.3.1 Introducing Creator Fair Remuneration Rights

Benchmarking EU DSM Directive Articles 18-22, establish "Creator Fair Remuneration Rights" (Quintais&Husovec):

Proposed Article 45-2 (Creator Fair Remuneration Rights): Creators providing works to metaverse platforms have rights to minimum 30% of platform

revenues from those works.

Proposed Article 45-3 (Transparency Obligations): Metaverse platforms must notify creators quarterly regarding work usage frequency, generated revenue, and remuneration paid.

Rationale: This directly addresses the creator protection gap identified in the EUKorea comparison (Table 2) and the extreme inequality shown in Figure4.

6.3.2 Establishing Metaverse Creator Support Fund

Create an annual 50 billion KRW fund for:

- (a) K-content metaverse transformation support
- (b) Independent creator NFT issuance vouchers (maximum 5 million KRW per person)
- (c) Legal support for copyright disputes
- (d) Overseas metaverse platform entry consulting

6.4 Strengthening Technical Protection Measures

6.4.1 Building Blockchain-Based Copyright Provenance System

Korea Copyright Commission and Korea Internet & Security Agency (KISA) collaborate to develop systems recording copyright registration information on public blockchains.

Implementation Priority: This addresses the NFT-copyright separation problem illustrated in Figure 2 by creating immutable ownership records.

6.4.2 Developing AI-Based Metaverse Copyright Infringement Detection System

Korea Copyright Protection Agency leads integration of:

- (a) Image similarity checking (Perceptual Hashing)
- (b) 3D model shape comparison (Mesh Similarity)
- (c) Music fingerprinting (Audio Fingerprinting)
- (d) Text plagiarism detection (NLP-based)

Rationale: This technical infrastructure enables the Tier 3 platform obligations proposed in Section 6.2.

6.5 Building International Cooperation Systems

6.5.1 Establishing Korea-US-EU-Japan Metaverse Copyright Cooperation Forum

Since the metaverse transcends borders, single-country regulation has limited effectiveness (WIPO, 2022). Korea leads democratic nation cooperation systems addressing:

- (a) Cross-border copyright infringement joint response
- (b) NFT transaction standard terms development
- (c) AI-generated content copyright joint research
- (d) Metaverse platform self-regulation guidelines

6.5.2 Concluding Digital Content Import-Export Copyright Agreements

Amend Korea-US FTA Chapter 18 (Intellectual Property Rights) to specify metaverse content and NFT copyright enforcement cooperation.

6.6 Education and Awareness Enhancement

6.6.1 Mandating Metaverse Copyright Education

Include metaverse copyright education in elementary, middle, high school IT curricula and university liberal arts courses:

- (a) Copyright verification methods for UGC creation
- (b) Rights scope acquired through NFT purchase
- (c) Response procedures for infringement occurrence

6.6.2 NFT Consumer Protection Campaign

Ministry of Culture, Sports and Tourism and Korea Consumer Agency collaborate to produce and distribute:

- (a) Pre-NFT purchase checklist
- (b) NFT fraud prevention guide
- (c) Dispute response manual

7. Conclusion

This study presents policy directions for balancing metaverse copyright protection with industrial activation. Key findings include:

- (a) Current State and Limitations of Korean Policy:** Korea enacted the world's first Virtual Convergence Industry Promotion Act (Law No. 20352, August 2024), yet copyright protection systems remain incomplete. Korea Copyright Commission guidelines (2022-2023) are systematic but lack

legal binding force, with dual governance (MSIT vs. MCST) creating policy consistency issues.

(b) International Policy Trends: Major countries occupy different positions on the platform liability spectrum (Figure 3). The United States maintains DMCA Safe Harbor while refusing new legislation. The EU imposes "public communication" liability through DSM Directive Article 17 and enforces DSA with significant potential fines. Japan pursues rapid tax reform through its Web3 White Paper. China focuses on industrial metaverse through state leadership with strict platform review duties.

(c) Separation of NFT and Copyright: All countries declare the principle "NFT ownership != copyright transfer," yet most consumers fail to understand this (Figure 2). The Spain Mango v. VEGAP case (2024) challenged this by allowing physical owners to mint NFTs, though appeal is pending.

(d) Creator Economy Inequality: Roblox data reveals a 23,500:1 ratio between top creators and median earners (Figure 4), necessitating fair remuneration mechanisms benchmarked against EU standards.

(e) Core Policy Recommendations: This study's policy recommendations rest on five principles:

(f) Clarity: Resolve legal uncertainty through copyright law amendments

(g) Balance: Protect startups through Korean tiered platform liability (Figure 5)

(h) Fairness: Correct imbalances through creator fair remuneration rights

(i) Technology Neutrality: Solve technical problems with blockchain and

AI

(j) International Cooperation: Secure cross-border enforcement capabilities

Korea possesses potential to create global standards in metaverse copyright policy as a K-content powerhouse and ICT leader [34]. The market is projected to reach \$936.6 billion globally by 2030, with Korea as the fastest-growing regional market. However, developing this into a sustainable ecosystem requires refined balance between creator protection and industrial activation.

Study limitations include empirical data constraints, technological change velocity, and absence of stakeholder perception surveys. Future research should evaluate Virtual Convergence Industry Promotion Act implementation effects, investigate metaverse copyright infringement status, and study AI-generated content copyright attribution.

The metaverse represents the most revolutionary platform since the internet, dissolving boundaries between creation and consumption while democratizing creator participation. Copyright law functions not merely as rights protection but as a social contract ensuring creative ecosystem sustainability. Korea's proposed policy model can contribute to healthy global metaverse industry development.

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References

OECD, "The Metaverse: Opportunities and Policy Implications," OECD Publishing, 2023.

Grand View Research, "Metaverse Market Size and Share Report, 2030," 2024. [Online]. Available: <https://www.grandviewresearch.com/industry-analysis/metaverse-market-report>.

Statista, "Metaverse Worldwide Market Forecast," 2025. [Online]. Available: <https://www.statista.com/outlook/amo/metaverse/worldwide>

J. W. Chon, "Protection of Trademarks and Copyrights in the Metaverse," *Industrial Property Law Review*, vol. 71, pp. 153–196, 2022.

Virtual Convergence Industry Promotion Act, Law No. 20352, Enacted Feb. 27, 2024, Effective Aug. 28, 2024.

Roblox Corporation, "Annual Economic Impact Report 2024-2025," Sep. 2025. [Online]. Available: <https://corp.roblox.com/newsroom/2025/09/roblox-annualeconomic-impact-report>

U.S. Copyright Office & U.S. Patent and Trademark Office, "Joint USPTOUSCO Report on NFTs and Intellectual Property," Mar. 2024. [Online]. Available: <https://www.copyright.gov/policy/nft-study/>

European Parliament and Council, "Directive (EU) 2019/790 on Copyright and Related Rights in the Digital Single Market," OJ L 130/92, Apr. 17, 2019.

European Commission, "Digital Services Act: Keeping Us Safe Online," Sep. 2025. [Online]. Available: <https://digital-strategy.ec.europa.eu/en/policies/digitalservices-act>

Korea Copyright Commission, "Metaverse and NFT Copyright Issues Research," KCC Research Report, Nov. 2022.

Ministry of Science and ICT, "Virtual Convergence Industry Promotion Plan," MSIT Policy Document, 2023.

Ministry of Culture, Sports and Tourism, "Copyright Guidelines for NFT Transactions," MCST Guidelines, 2022.

Virtual Convergence Industry Promotion Act Enforcement Decree, Presidential Decree No. 34589, Aug. 28, 2024.

Roblox Corporation, "User-Generated Content Program Terms," Version 5.0, 2024.

P. Samuelson, "Three Fundamental Fallacies About NFTs and Intellectual Property," Communications of the ACM, vol. 66, no. 3, pp. 22–24, 2023.

M. A. Lemley and B. Casey, "Fair Learning," Texas Law Review, vol. 99, no. 4, pp. 743–785, 2022.

Copyright Act, 17 U.S.C. 204, United States Code, 2022.

Korea Copyright Commission, "Guidelines for Use of Works in the Metaverse," KCC, Dec. 2023.

Korea Copyright Protection Agency, "2022 Copyright Protection Issue Outlook Report," KCOPA, 2022.

Digital Millennium Copyright Act, Pub. L. 105-304, 112 Stat. 2860, 1998.

Hermès International v. Rothschild, 603 F. Supp. 3d 98 (S.D.N.Y. 2023).

Nike, Inc. v. StockX LLC, No. 1:22-cv-00983 (S.D.N.Y. Mar. 2025).

European Commission, "Guidance on Article 17 of Directive 2019/790," COM(2021) 288 final, 2021.

Ministry of Economy, Trade and Industry, "Web3.0 Policy Office Annual Report," METI, 2023.

Japan Liberal Democratic Party, "Web3 White Paper 2024," LDP Headquarters, 2024.

Copyright Act of Japan, Act No. 48 of 1970, Article 30-4, Amended 2018.

Ministry of Industry and Information Technology, "Three-Year Action Plan for Metaverse Industry Innovation," MIIT, Sep. 2023.

W. Zhang, "NFT Without Crypto: China's Policy, Regulation and Expectations,"

Asian Journal of Law and Economics, vol. 16, no. 1, pp. 45–72, 2025.

Hangzhou Internet Court, Shenzhen Golden Idea v. Hangzhou Bigverse, Case No. (2022) Zhe 0192 Min Chu 1008, 2022.

J. P. Quintais and M. Husovec, "How Platforms Govern Users' Copyright-Protected Content," Computer Law & Security Review, vol. 48, p. 105791, 2022.

Viacom International, Inc. v. YouTube, Inc., 676 F.3d 19 (2d Cir. 2012).

Barcelona Commercial Court No. 9, Mango v. VEGAP, Jan. 11, 2024.

WIPO, "WIPO Conversation on Intellectual Property and the Metaverse," World Intellectual Property Organization, 2022.

"Meta-Morphosis of Copyright and User-Generated Content: Can East Asia's Emerging

Policies Navigate through the Metaverse?" *Asian Journal of Law and Society*, Cambridge University Press, 2024.