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Evaluation on the Legal Status of Music Works Generated by Artificial Intelligence and Sectoral Solution Proposals Regarding Their Licensing

REPORT

MUSICAL WORK OWNERS GROUP COLLECTIVE MANAGEMENT ORGANIZATION (MSG)

Prepared by:
Dr. R. Tamer PEKDİNÇER
Marmara University Faculty of Law
Retired Faculty Member, Department of Commercial Law

Contributors:
Attorney Dr. Barış Şensoy, Attorney İrem Toprakkaya, Burcu Alnıaçık, Bilge Bengü Ekşioğlu, Işılay Öngör, Attorney Sinan Hassas, Attorney Engin Erulutekin, Attorney E. Furkan Er, Attorney Romina Franko, Attorney İlke Solakoğlu

REPORT

Subject: Assessment of the Legal Status of Music Products Generated by Generative Artificial Intelligence ("GENAI") Audio Output for the Artificial Intelligence Workshop and Sectoral Solution Proposals Regarding the Licensing of Such Products

Introduction and Scope

This report ("Report") has been prepared to evaluate proposals regarding whether music products created as outputs of GENAI software can be included under Collective Management Organization protection and/or incorporated into licensing processes, and covers the following matters:

1. Working Principle and Technical Explanations of the AI-Generated Music Software
2. The Nature of Products Constituting Musical Works as AI-Generated Output and the AI System's Copyright Status
3. Evaluation of GENAI Music Production Processes Within the Framework of Limitations and Exceptions (In This Context: Restrictions Under the Copyright Law, Limitations and Exceptions Recognized in EU Directives, the Three-Step Test, and the Status of Organizations Providing Royalty-Free Music Services Hosting GENAI Outputs)
4. Practices of Music Industry Associations Regarding AI-Generated Outputs
5. Disputes Regarding Copyright Infringements in the Context of Artificial Intelligence Worldwide
6. Artificial Intelligence Systems in the Context of Competition Law
7. Practices of Music Trade Associations
8. Protection of AI Outputs as Algorithmic Products Under Unfair Competition Law and the Authorization of Collective Management Organizations in This Context
9. Extended Collective Licensing as a Potential Solution Proposal
10. Technical Measures Applied to Protect Copyrights in AI-Assisted Content Production
11. Sui Generis Protection for Artificial Intelligence Systems
12. Report Summary and Recommendations

This report has been prepared by taking into account current Turkish and international legal provisions, scholarly opinions, current international dispute resolution processes, and the practices of Collective Management Organizations representing music copyright holders operating abroad.

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Abbreviations

EU	European Union
ECJ	Court of Justice of the European Union
US	United States
AIPPI	International Association for the Protection of Intellectual Property
ASCAP	American Society of Composers, Authors and Publishers
Constitutional Court	Constitutional Court of the Republic of Turkey
BMI	Broadcast Music, Inc. (U.S.)
CDPA	The United Kingdom's Copyright, Designs and Patents Act 1988
CISAC	International Confederation of Societies of Authors and Composers
DRM	Digital rights management
DSM	European Union Digital Single Market (DSM) Copyright Directive (2019/790)
FSEK	Law No. 5846 on Intellectual and Artistic Works
GEMA	German Society for Musical Performing and Mechanical Reproduction Rights
GTL	Extended collective licensing
KODA	Danish Society of Composers
LAION	Large-Scale Artificial Intelligence Open Network
LLM	Large Language Model
MESAM	Turkish Music Copyright Society
MSG	Collective Management Organization of Music Copyright Holders
OECD	Organization for Economic Cooperation and Development
SACEM	French Society of Authors, Composers, and Music Publishers
SESAC	American Society of European Playwrights and Composers
SME	Sony Music Entertainment
STEF	Icelandic Composers and Performers' Rights Association
STIM	International Music Bureau of Swedish Composers
TDM	Text and Data Mining
TEOSTO	Finnish Composers' Copyright Society
TONO	Norwegian Society of Composers and Lyricists
TTK	Turkish Commercial Code No. 6102
UMG	Universal Music Group
USCO	U.S. Copyright Office
AI	Generative AI
WCT	WIPO Copyright Treaty of December 20, 1996
WIPO	World Intellectual Property Organization
WMG	Warner Music Group
WPPT	WIPO Performers and Phonograms Treaty of May 2, 2007

CONTENTS

REPORT **1**

Introduction and Scope **1**

Table of Contents **2**

1 DEFINITIONS **5**

2 OPERATING PRINCIPLE AND TECHNICAL DESCRIPTIONS **6**

3 THE WORK STATUS OF AUDIO UYZ OUTPUTS AND THE COPYRIGHT STATUS OF UYZ **10**

3.1 The Nature of AI-Generated Outputs as Works 10

3.2 The Copyright Status of AI Systems 12

3.2.1 Views on the Legal Status of Artificial Intelligence 12

3.2.2 Opinions on the Copyright Ownership of AI Systems 13

4 EVALUATION OF AI MUSIC PRODUCTION PROCESSES WITHIN THE FRAMEWORK OF LIMITATIONS AND EXCEPTIONS **14**

4.1 Limitations in Turkish Law 16

4.2 Limitations and Exceptions in European Union Law 17

4.3 The Three-Step Test 22

4.4 U.S. Practice 23

4.5 Explanations Regarding UAI Inputs 23

4.6 Explanations Regarding AI Outputs 24

4.7 The Status of Royalty-Free Music Platforms Hosting AI Outputs 25

5 DISPUTES REGARDING COPYRIGHT INFRINGEMENTS IN THE CONTEXT OF ARTIFICIAL INTELLIGENCE AROUND THE WORLD **28**

5.1 United States 29

5.1.1 Andersen v. Stability AI 29

5.1.2 Advance Local Media v. Cohere 29

5.1.3 Bartz v. Anthropic 30

5.1.4 Concord Music Group, Inc. v. Anthropic PBC 30

5.1.5 Dow Jones & Company, Inc. v. Perplexity AI, Inc. 30

5.1.6 Getty Images v. Stability AI 30

5.1.7 In re Google Generative AI Copyright Litigation (: 31

5.1.8 Kadrey v. Meta Platforms 31

5.1.9 In re: OpenAI, Inc. Copyright Infringement Litigation MDL 31

5.1.10 Nazemian and Dubus v. NVIDIA Corporation 31
5.1.11 Thomson Reuters v. ROSS 31
5.2 United Kingdom (England) 32
5.3 People's Republic of China 32
5.4 Germany 33
5.4.1 GEMA v. OpenAI 33
5.4.2 Knechke v. LAION 33
5.5 The Big Three v. Suno, Udio 34
5.6 Koda v. Suno 34
6 ARTIFICIAL INTELLIGENCE SYSTEMS IN THE CONTEXT OF COMPETITION LAW 34
7 PRACTICES OF MUSIC TRADE UNIONS 36
7.1 In General 36
7.2 CISAC 37
7.3 GEMA (Germany) 38
7.4 Nordic Music Collecting Societies (STIM, TEOSTO, KODA, TONO, and STEF) 39
7.5 PRS for Music (United Kingdom) 40
7.6 BumaStemra (Netherlands) 40
8 Protection of AI Outputs as Algorithmic Works Under Unfair Competition Law 41
8.1 Background of the Issue and the Economic Value Chain 41
8.2 Generative Artificial Intelligence and Legal Loopholes 41
8.3 Legal Classification: Unfair Competition 42
8.4 Cumulative Protection and the Role of Collective Management Organizations 42
8.5 Proposed Legislative Amendment 42
9 EXTENDED COLLECTIVE LICENSING (ECL) AS A POSSIBLE SOLUTION 42
9.1 Definition of ECL and Legal Authority Under the Copyright Law 46
9.2 "Qualified Majority (Broad Representation)" and Authorization Criteria 47
9.3 The "Opt-out" Mechanism and Technical Standards 47
9.4 Transparency and Data Reporting Obligations 47
9.5 Fair Compensation, Tariff Approval, and Calculation of Economic Loss 48
10 TECHNICAL MEASURES THAT CAN BE IMPLEMENTED TO PROTECT COPYRIGHTS IN AI-ASSISTED CONTENT PRODUCTION 48
10.1 Digital Rights Management (DRM) 49

10.2 Digital Watermarking 50
10.3 Perceptual Hash and Hash-Based Identification Systems 50
10.4 Digital Fingerprinting 50
10.5 Protection at the Model and Data Levels (Specifically for AI) 50
10.6 Blockchain and Timestamped Recording Systems 51
11 SUI GENERIS PROTECTION IN THE CONTEXT OF ARTIFICIAL INTELLIGENCE SYSTEMS 51
12 REPORT SUMMARY AND RECOMMENDATIONS 52
12.1 Background of the Issue and the Economic Value Chain 52
12.2 The Issue of the Legal Protection Regime for AI-Enabled Production and the Need for Reform 52
12.3 Protection AGenAInst Unfair Competition 53
12.4 Implementation of Effective Technical Measures 54
12.5 Extended Collective Licensing (ECL) as a Potential Solution 54
REFERENCES 56
BOOKS 56
ARTICLES AND PAPERS 57
THESES 59
JUDICIAL DECISIONS AND OFFICIAL NOTICES 60
LEGISLATION, REPORTS, AND ONLINE RESOURCES 61

1 DEFINITIONS

The following definitions are used in this report:

Artificial Intelligence	The ability of a computer or a computer-controlled robot to perform various activities in a manner similar to that of intelligent beings; systems equipped with human-like cognitive abilities such as reasoning, meaning discovery, generalization, or learning from past experiences in dynamic and uncertain environments[1]
Artificial Intelligence Research	The effort to enable human-like cognitive activities to be performed directly by computers—which are essentially universal machines—and/or by a wide variety of often complex structures of which computers are a part (in general)[2]
Command	An input or instruction provided to an artificial intelligence model or system to produce an output[3]
Generative artificial intelligence (“GENAI”)	A type of artificial intelligence trained on large-scale datasets that can generate content in various formats—such as text, images, video, audio, or software code—in response to a user-entered prompt or command[4]
Artificial intelligence model	A structure that does not constitute an artificial intelligence system on its own but typically serves as a core component of such systems when integrated into them[5]
Artificial intelligence system	A machine-based system designed to operate with varying levels of autonomy, capable of demonstrating adaptability after deployment, and producing outputs such as predictions, content, recommendations, or

[1] **Office of the Presidency of the Republic of Turkey for Digital Transformation and Ministry of Industry and Technology of the Republic of Turkey**, National Artificial Intelligence Strategy 2021–2025, Ankara, 2021, https://bilgem.tubitak.gov.tr/wp-content/uploads/sites/8/TR-UlusalYZStratejisi2021-2025-1.pdf, (Accessed: March 10, 2026).
[2] **AKSU**, Mustafa, Artificial Intelligence and Law, Istanbul, On İki Levha Publishing, 2023, pp. 50-53.
[3] **INTERNATIONAL ASSOCIATION OF PRIVACY PROFESSIONALS (IAPP)**, AI Governance Center: Key Terms for AI Governance, https://iapp.org/resources/article/iapp-ai-governance-center-key-terms-for-ai-governance/, (Accessed March 10, 2026).
[4] **PERSONAL DATA PROTECTION AUTHORITY (KVKK)**, Guide on Generative Artificial Intelligence and the Protection of Personal Data (15 Questions), Ankara, 2024, p. 9, https://www.kvkk.gov.tr/SharedFolderServer/Dokumanlar/Uretken_Yapay_Zeka_ve_Kisisel_Verilerin_Korunmasi_Rehberi.pdf, (Accessed March 10, 2026).
[5] **EUROPEAN COMMISSION**, AI Act Service Desk: Frequently Asked Questions, Brussels, 2024, https://ai-act-service-desk.ec.europa.eu/en/faq, (Accessed March 10, 2026).

	decisions in accordance with explicit or implicit objectives based on its inputs, which can influence physical or virtual environments through these outputs[6]
Text and Data Mining (TDM)	This concept, referred to as *Text and Data Mining (TDM)* in the English literature, refers to the analysis of text, audio, images, or data in digital form using automated software and algorithms. TDM is a technological method that identifies patterns, trends, and correlations within large datasets to generate new insights and, in particular, to obtain the structured data required for training Artificial Intelligence models.
Extended Collective Licensing	Extended collective licensing involves a collective rights management organization (e.g., a copyright owners' association) legally expanding its existing licensing authority beyond licensing on behalf of its members, so that all copyright owners in the same category who do not have individual contracts with the organization are subject to a single licensing agreement with users regarding their protected musical works and other related rights.
Work Product	A work product refers to any result arising from the intellectual and/or physical labor of an enterprise or individual within the scope of their commercial, industrial, professional, or artistic activities; this includes technical outputs such as proposals, plans, calculations, drafts, analyses, reports, drawings, and diagrams, as well as musical outputs such as sheet music, musical pieces, compositions, lyrics, and similar works—whether or not they qualify as works under the Copyright Law.
Algorithmic product	A digital or non-digital work product generated through predefined rules, statistical models, autonomous artificial intelligence systems, or algorithms, based on specific rules and formulas, without direct creative input from a human.
Parasitic competition	Parasitic competition refers to the exploitation of the intellectual, artistic, and economic labor expended by an individual or entity in the field of music—regardless

[6] **EUROPEAN PARLIAMENT and COUNCIL**, (EU) 2024/1689 Artificial Intelligence Regulation, Brussels, 2024, https://eur-lex.europa.eu/legal-content/TR/TXT/?uri=CELEX:32024R1689, (Accessed March 10, 2026).

of whether a musical work is protected by copyright or not, or whether it qualifies as a work under the Copyright Law—without any compensation or authorization, thereby GenAIning an unfair advantage in the competitive environment.

2 OPEN SOURCE WORKING PRINCIPLES AND TECHNICAL EXPLANATIONS

In the context of AI operating models, a distinction can first be made between "symbolic" and "non-symbolic" (or sub-symbolic) approaches.

Before delving into detailed explanations of this distinction, it must be noted that for any artificial intelligence to produce an output, it must first be fed with inputs[7] . This is because the inputs form the foundation of the AI outputs that constitute the basis of this report. These inputs consist of large datasets and materials[8] . The accuracy of AI outputs can be improved by using large datasets[9] . Additionally, these datasets must contain data of the type corresponding to the desired AI outputs[10] .

The symbolic approach views intelligence as a purely symbolic processing process; it argues that the language of mathematical logic is sufficient for knowledge representation and inference mechanisms. According to this view, every cognitive function can be modeled and programmed as the transformation of symbols in memory from start to finish through a specific computational chain. However, it is understood that the knowledge-based approach—which involves processes such as drawing inferences from AI-specific data, arriving at new conclusions, and updating knowledge—is not limited to mathematical logic-based programming; rather, it encompasses a much broader framework[11] .

In artificial intelligence, the symbolic approach follows a "knowledge-centric" path that directly handles words or concepts and processes them using logical rules. The sub-symbolic (connective) approach, however, deals not with concepts but with the smallest units of data that make up those concepts. This method mimics the principle by which neurons in the human brain process information by connecting to one another; for this reason, it can be called a "data-oriented" approach. In summary, while the symbolic approach attempts to think "like a computer" using logic and rules, the connectionist approach strives to learn and process information "like a brain." In the human brain, the formation of a thought or movement is made possible by the communication of billions of cells and the processing of a vast amount of data. Artificial neural networks aim to do exactly this: rather than going directly to the result, they process and learn data at the lowest level by establishing an artificial network resembling the

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[7] **ATEŞ**, Mustafa, "An Assessment of the Use of Literary and Artistic Works in the Training of Artificial Intelligence in the Context of Copyright," Journal of Copyright and Intellectual Property (TFM), Vol. 11, No. 2, 2023, p. 243. (Citation: **"ATEŞ**, Training of Artificial Intelligence").

[8] **AXHAMN**, Johan, "Extended Collective Licensing for Use of Copyrighted Works for Machine Learning," Columbia Journal of Law & the Arts, 2025, 48(4), p. 525.

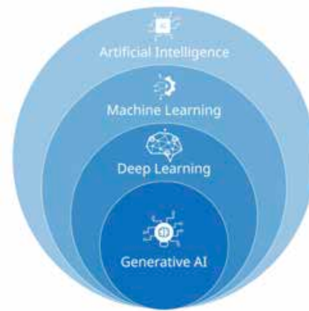
[9] **ATEŞ**, The Training of Artificial Intelligence, p. 244.

[10] **ATEŞ**, The Training of Artificial Intelligence, p. 247.

[11] **AKSU**, Mustafa, *Artificial Intelligence and Law*, Istanbul, On İki Levha Publishing, 2023.

brain's nervous system. This system is like a simplified copy of the brain, and it is technically possible to produce computer hardware that mimics this structure[12] .

In this context, it is also necessary to explain deep learning, another concept related to artificial neural networks. The process of training computers equipped with algorithms is referred to in the literature as "machine learning" or "artificial learning." If the artificial neural networks used in this process exhibit a multi-layered and extensive architectural structure, this specific type of learning is defined as "deep learning"[13] :



The ability to solve complex and challenging problems using artificial neural networks relies on two fundamental requirements: First, the system must be fed with a large volume of training data[14] or accumulate the necessary data for a solution through self-learning. Second, the problem must be addressed in a systematic and hierarchical structure, in stages, with the network architecture designed accordingly. The essence of this approach lies in the system learning the solution method itself—that is, the principle of "self-programming." It does not appear practically feasible for single-layer artificial neural networks to solve complex problems. This is because, for a problem to be solved within a single layer, that layer would need to contain an unrealistic number of processing units (neurons). Furthermore, an expectation such as recognizing an object in a digital image in a single step does not align with the layered data processing principle of the human brain, which serves as the inspiration for these systems. Therefore, it is clear that the solution requires a deep and layered structure[15] .

One of the deep learning methods is parametric learning. In the training of artificial neural networks based on this learning method, control mechanisms and formulations that operate from the output layer to the input layer are used to determine optimal weight values. In this process, particularly through the "backpropagation" algorithm, each weight value responsible for the network producing an erroneous output is revised in proportion to its share of the error and in a manner that minimizes the error. This iterative calculation and adjustment process, repeated thousands of times for each input-output pair in the training dataset, ensures that the final values are found that bring the system to the targeted accuracy rate[16] .

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[12] **AKSU**, pp. 122–123.
[13] **AKSU**, p. 142.
[14] **ATEŞ**, The Training of Artificial Intelligence, p. 246.
[15] **AKSU**, p. 129.
[16] **AKSU**, p. 130.

When an artificial neural network uncovers the hidden rules and connections in the training data, it does not merely memorize them; it also learns to "generalize" by understanding the underlying logic. This means that even when faced with an example it has never seen before, it can make an accurate prediction by applying the rules it has learned. Thanks to this, when the system sees a new photo of a fish it has never seen during training, it can analyze the pixels and say, "This is most likely a shark." The biggest difference here lies in the way of perception. When a human looks at a fish, they perceive it as a "concept" and a "whole" (living, swimming, gilled, etc.). A computer, however, sees that fish merely as a "pile of numbers"[17] .

As mentioned above, unlike symbolic artificial intelligence, this system operates not through "deduction" (from concept to data) but through "induction" (from data to concept). The reason it is called "deep learning" is that the data is processed through numerous layers (stages). These layers operate sequentially like an assembly line and perform increasingly complex analysis[18] :

1. **Lower Layers:** They only detect simple lines or edges.
2. **Middle Layers:** These combine the lines to recognize parts like eyes and ears.
3. **Upper Layers:** Combine these parts to conclude, "This is a human face" or "This is a whale."

For such complex systems to acquire the ability to learn, massive datasets (big data) are required. Alternatively, as in the case of AlphaGo Zero, the system must generate the necessary big data itself through self-learning. In data-driven artificial intelligence, the process is not limited to the mere existence of data; it also requires tasks and processes such as data collection, structuring, labeling, and preparing the data for analysis (data mining)[19] .

In this context, it is important to distinguish not only between "memorization" but also the concepts of "extraction" and "regurgitation":

- **Extraction,** in its narrowest sense, refers to the user's ability to ensure that the model produces an exact or near-exact copy of the training data through a deliberate and successful prompt.
- **Regurgitation/Repetition** refers to the model producing an exact or near-exact copy of the training data as output, regardless of whether the user intended it or not.
- **Memorization** refers to the situation where, upon examining the model using any method, an exact or near-exact copy of the training data can be reconstructed[20] .

These three concepts differ in terms of "process role," "data quantity," and "intent factor."

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[17] **AKSU**, p. 131 ff.
[18] **AKSU**, p. 136.
[19] **AKSU**, p. 138. **GUADAMUZ,** Andres, "A Scanner Darkly: Copyright Liability and Exceptions in Artificial Intelligence Inputs and Outputs," GRUR International, Vol. 73, No. 2, 2024, p. 112.
[20] **MEZEI,** Peter, "Memorization and Generative AI - A Persistent Issue with Copyright Consequences?", 2025, in: Enrico Bonadio, Péter Mezei, and Eduardo Alonso (eds.): The Cambridge Handbook of Generative AI and IP in Europe, Cambridge University Press, 2026 (forthcoming), p. 3.

The process role, "memorization," is a "front-end" phenomenon belonging to the training (input) phase of the artificial intelligence model and falls within the scope of developers' activities. In contrast, "inference" and "repetition" are "back-end" phenomena related to the model’s ability to generate output and emerge through user interaction.

Data completeness, on the other hand, refers to the model having fully learned the entire dataset or its identifiable parts, and is necessary to a certain extent for building a reliable model. The extent of memorization depends on factors such as model parameters, repetitions in the data, and outliers. Data at the output stage can be controlled by constraints imposed by developers (e.g., word limits or preventing style imitation). Regarding **intent**, while inference is an intentional act, repetition and memorization can occur both intentionally and accidentally/unintentionally. However, since copyright law is based on the principle of “objective liability” (strict liability), the presence of intent is not determinative for legal liability[21] .

Ultimately, the challenges involving uncertainty regarding outcomes are not limited to technical aspects but also encompass economic and legal barriers. Indeed, our explanations regarding the inputs and outputs related to the subject and their connection to copyright are provided in the remainder of this study.

3 THE WORK STATUS OF AUDIO AI OUTPUTS AND THE AUTHORSHIP STATUS OF THE AI

In the previous section, the operational mechanism of a UAI was briefly explained in technical terms, and it was noted that, in the broadest sense, a UAI requires datasets to generate outputs. In this section, we will examine whether UAI outputs qualify as works of authorship[22] .

3.1 The Work Status of AI Outputs

The recent rise in the popularity of AI systems and their widespread availability to the public through various applications has raised the question of whether AI outputs qualify as works eligible for protection under the Copyright Law[23] .

In accordance with the Berne Convention and Article 1/B of the Turkish Copyright Law, a work is defined as *“any intellectual or artistic creation bearing the author’s individual character and classified as works of science, literature, music, fine arts, or cinema*,” while the

[21] **MEZEI**, pp. 3–4.

[22] The assessments made under this heading will be limited to outputs generated by GPT systems trained on datasets obtained in compliance with the law. The nature of GPT outputs trained on unlawful datasets has not been examined separately within the scope of this report; for a detailed explanation, see **ATEŞ**, Mustafa, “Evaluation of AI Outputs in the Context of Copyright,” Terazi Law Journal (THD), No. 230, 2025, p. 12 ff. (Citation format: **“ATEŞ**, Artificial Intelligence Outputs”).

[23] **ATEŞ**, Artificial Intelligence Outputs, p. 15.

author is defined as "the person *who creates the work*." 3, musical works are defined as *"all types of vocal and instrumental compositions*."

Accordingly, it is accepted that for an audio output of a UAI to be considered a musical work, the following conditions must be met[24] :

- Objective condition: It must fall under one of the work categories listed in the Copyright Law (in the current context, a musical work),
- Subjective condition: The work must bear the creator's distinctive character,
- It must be structured to a degree that demonstrates the creator's individuality,
- It must have been created as a result of intellectual effort.

Under our law, for a work to be protected under the Copyright Law, it must be created by a human being[25] . In other words, if the condition of human creation is not met in the production of the work, intellectual products created directly by a computer or artificial intelligence cannot be protected as "works"[26] .

Legal doctrine states that products of nature, animals, or machine-produced goods cannot be recognized as works on their own, even if they cannot be distinguished from works resulting from human activity or were obtained through a program of human origin[27] . Conversely, products created by humans using a machine as a tool and clearly bearing the traces of human creativity may be protected as works[28] .

[24] **YILMAZTEKİN**, Hasan Kadir, Authorship in Artificial Intelligence, Ankara, Adalet Publishing House, 2021, p. 156 (Citation: **"YILMAZTEKİN**, Authorship in Artificial Intelligence"); **Supreme Court of Appeals General Assembly.** 02.04.2003, Case No. 2003/4-260, Decision No. 2023/271 (**YAVUZ**, Levent / **ALICA**, Türkay / **MERDİVAN**, Fethi, Commentary on the Law on Intellectual and Artistic Works, Vol. I, Seçkin Publishing, 2014, pp. 773–777); **Supreme Court of Appeals, 11th Civil** Chamber, Date: 03/13/2004, Case No. 2006/934, Decision No. 2007/4555: *"For an intellectual product resulting from mental effort to be protected as a work under the Law on Intellectual and Artistic Works, it must bear the creator's individuality (subjective element) and fall within one of the work categories prescribed by law (objective element). (...) The most important element distinguishing one intellectual effort from others and rendering it eligible for protection as a work is that it has taken shape to a degree that reflects the creator's individuality*."

[25] **TEKİNALP**, Ünal / **OKUTAN NİLSSON**, Gül / **ŞEHİRALİ ÇELİK**, Feyzan Hayal, Tekinalp Intellectual Property Law, 6th Edition, Istanbul, On İki Levha Publishing, 2025, p. 163; **EREL,** Şafak N., Turkish Intellectual and Artistic Property Law, 3rd ed., Ankara, Yetkin Publications, 2009, p. 87. **ÖZTAN**, Fırat, *Law of Literary and Artistic Works*, Ankara, Turhan Bookstore, 2008, pp. 82–83, 234; **ATEŞ**, Mustafa, The Work in Intellectual Property Law, Ankara, Turhan Bookstore, 2007, p. 27; **ATEŞ**, Mustafa, Ownership of Works in Intellectual Property Law, Ankara, Adalet Publishing House, 2012, p. 32; **KAYA**, Arslan, Lectures on the Law of Intellectual and Artistic Works I, Istanbul, Filiz Publishing House, 2024, p. 125; **SULUK,** Cahit / **KARASU**, Rauf / **NAL,** Temel, Intellectual Property Law, 8th Edition, Seçkin Publishing, 2024, p. 77; **YILMAZTEKİN**, Ownership of Works Created by Artificial Intelligence, p. 218.

[26] **ATEŞ**, Artificial Intelligence Outputs, p. 20.

[27] **ÖZTAN**, p. 83; **TEKİNALP / OKUTAN NİLSSON / ŞEHİRALİ ÇELİK**, p. 163; **KARACA**, Uğur / **KARATAŞ**, Esra, "Protection of Intellectual Works Created by Artificial Intelligence Under the Law No. 5846 on Intellectual and Artistic Works," *Maltepe University Law Faculty Journal*, Vol. 1, 2022, p. 45, https://dergipark.org.tr/en/download/article-file/2514817 (Accessed Dec. 22, 2025).

[28] **ÖZTAN**, p. 83; **ATEŞ**; AI Outputs, p. 16., AI Outputs, p. 16. Regarding the fact that in products created using AI, the AI is guided by human thought and the product is the result of a mental act, and therefore the AI output should at least be considered an "intellectual product"; see **KARABAĞ,** Tuğçe, "The Rights of the Author in the Face of Artificial Intelligence and Algorithmic Inspiration," Intellectual Property Yearbook 2024, Edited by Tekin Memiş, Vol. 14, Yetkin Publications, Ankara, 2025, p. 133.

The U.S. Copyright Office (USCO) has stated that works created by humans using AI technologies will not be denied copyright protection only if the AI's contribution is *de minimis* in nature[29] . When the U.S. Copyright Office rejects a request to register output generated by AI as a work, it acknowledges that the commands given by users are merely at the "idea" level, and that AI systems transform these commands into expressions that are unforeseeable and not directly controllable by the user, based on their own algorithms and datasets, thereby creating a gap between the command and the output. In this regard, the U.S. Copyright Office has a consistent practice of determining that creative control over the form of expression lies with the AI rather than the user (the process being of a "black box" nature), and therefore, the command owners cannot be considered the copyright holders, and AI outputs cannot be protected as works under copyright law[30] . In contrast, in China, it is stated that if personal contribution and effort are expended from the conceptual stage to the final selection during the creation process, the resulting output may be considered a work as a product of the individual's intellectual creation[31] .

There are also views that, even if AI-generated products meet the criteria of being fixed and resulting from intellectual effort, artificial intelligence cannot be the author of a work due to the absence of the requirement of originality, and therefore, an AI-generated product cannot be considered a work[32] .

However, while examining whether AI outputs possess distinctiveness, there are more recent interpretations that argue aGenAInst focusing solely on the method by which the product was created using AI, asserting instead that production via AI can also involve creativity. These interpretations contend that the search for distinctiveness should move away from a human-centered approach, and that it should be sufficient for the output to have an impact on a person possessing average knowledge of the type of work in question, and therefore, that AI-generated outputs should be protected under the Copyright Law[33] .

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[29] **U.S. COPYRIGHT OFFICE**, "Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence," in *Federal Register*, Washington, D.C., 2023, https://www.federalregister.gov/documents/2023/03/16/2023-05321/copyright-registration-guidance-works-containing-material-generated-by-artificial-intelligence, (Accessed 01/09/2026).

[30] **U.S. Copyright Office (USCO)**, Second Request for Reconsideration of the Refusal to Register "A Recent Entrance to Paradise" (Correspondence ID 1-3ZPC6C3; SR # 1-7100387071), Washington, D.C., 2022, https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf, (Accessed 01/09/2026); **U.S. Copyright Office (USCO)**, Second Request for Reconsideration of Refusal to Register Théâtre D'opéra Spatial (SR # 1-11743923581; Correspondence ID: 1-5T5320R), Washington, D.C., 2023, https://www.copyright.gov/rulings-filings/review-board/docs/Theatre-Dopera-Spatial.pdf, (Accessed 01/09/2026); **U.S. Copyright Office (USCO)**, Zarya of the Dawn (Registration # VAu001480196), Washington, D.C., 2023, https://www.copyright.gov/docs/zarya-of-the-dawn.pdf, (Accessed 02/21/2023); **U.S. Copyright Office (USCO)**, Second Request for Reconsideration of Refusal to Register SURYAST (SR # 1-11016599571; Correspondence ID: 1-5PR2XKJ), Washington, D.C., 2023, https://www.copyright.gov/rulings-filings/review-board/docs/SURYAST.pdf, (Accessed Jan. 9, 2026).

[31] **CHINA JUSTICE OBSERVER**, "Landmark Ruling: China's Court Upholds Copyright for AI-Generated Images", 2024, https://www.chinajusticeobserver.com/a/landmark-ruling-china%27s-court-upholds-copyright-for-ai-generated-images, (Accessed March 5, 2026).

[32] **AKTÜRK**, Emrah, "An Assessment of Copyright in Relation to Artificial Intelligence Products," *Çukurova University Law Faculty Journal*, p. 203, https://dergipark.org.tr/tr/download/article-file/3785580 (Accessed 12/22/2025)

[33] **KARABAĞ**, p. 165.

The International Association for the Protection of Intellectual Property (AIPPI) holds the view that products created solely by artificial intelligence during the production process are not protected by copyright[34] . The U.S. Copyright Office (USCO) has stated that intellectual works in which artificial intelligence plays a complete role in the production process are not eligible for copyright protection[35] .

In the case law of the European Union and Turkish copyright law, the foundational element of a work's legal protection is that the work must absolutely be the result of a human's mental effort[36] .

3.2 The Copyright Status of AI Systems

3.2.1 Opinions on the Legal Status of Artificial Intelligence

The increasingly autonomous nature of artificial intelligence, particularly with the emergence of general artificial intelligence systems, necessitates the determination of its legal status[37] .

According to the view that artificial intelligence should be treated as property without being granted any legal personhood, the fact that AI is currently a tool created and controlled by humans makes this approach feasible; however, as autonomous behavior increases, this treatment will prove insufficient in terms of liability and predictability.

In contrast, approaches advocating for the recognition of legal personhood for artificial intelligence are based on the assumption that the legal issues that highly autonomous artificial intelligence could raise cannot be resolved within the current legal framework. In this context, the possibility of evaluating artificial intelligence as a natural person has been discussed; however, since the presence of human-specific elements such as discernment, will, consciousness, and fairness is not clear in the case of artificial intelligence, it is observed that this view remains theoretical for now.

While granting a status similar to legal personality or recognizing it as a representative may offer practical solutions, it does not resolve the issue at its root.

For this reason, an independent legal status specific to artificial intelligence—particularly the concept of "electronic personality"—is considered a more appropriate solution. However, the scope, boundaries, and impact of electronic personality on national laws remain unclear.

In conclusion, regulating the legal status of artificial intelligence through new personality models—independent of existing types of legal personality and capable of being differentiated

[34] **INTERNATIONAL ASSOCIATION FOR THE PROTECTION OF INTELLECTUAL PROPERTY (AIPPI)**, "Resolution: Copyright in Artificially Generated Works," London, 2019, https://aippi.org/event/2019-aippi-world-congress-london/, (Accessed May 6, 2022).

[35] **U.S. Copyright Office (USCO)**, Copyright and Artificial Intelligence Part 2: Copyrightability, Washington, D.C., 2025, https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-2-Copyrightability-Report.pdf, (Accessed March 10, 2026)

[36] **TEKİNALP / OKUTAN NİLSSON / ŞEHİRALİ ÇELİK**, pp. 163–167.

[37] **KARACA / KARATAŞ**, p. 24 ff.

based on the nature of the artificial intelligence—appears to be the most appropriate approach for resolving legal issues that may arise in the future.

3.2.2 Views on the Authorship of AI Systems

It has been observed that views on the copyright of AI systems fall under three "schools"[38] . These approaches are sharply divided regarding to whom and on what philosophical basis property rights should be granted.

The Romantic School adopts a "non-property-centered" or "property-secondary" stance. This approach argues that the current intellectual property framework should be interpreted narrowly and that authorship or inventorship is a quality exclusive to natural persons (humans). The Romantic School categorically rejects the establishment of any intellectual property rights over innovations produced by non-human entities. From this school's perspective, products entirely generated by AI systems are deemed ineligible for any copyright protection and are considered to be in the public domain[39] .

The Revolutionary/Reformist School advocates for a "property-centric" approach toward AI products. Within this framework, it is acknowledged that AIs can autonomously produce works or inventions, and it is argued that these systems should be granted a legal status or property rights, either directly or indirectly. The Revolutionary School's primary motivation is to ensure that property rights are extended to these new autonomous entities in order to encourage technological advancement and protect AI investments. It argues that the current legal system is inadequate and supports fundamental legal reforms that would recognize AI as an "author" or "inventor"[40] .

The Modernist School, on the other hand, offers a "property-balanced" framework that seeks to reconcile these two opposing viewpoints. This school adopts the principle that authorship should be recognized only for natural persons; at the same time, it supports the idea that AI-generated works should also be protected. The "sufficient human contribution" principle is put forward as the Modernist School's fundamental criterion. For an AI-generated output to qualify for copyright protection, it must be concretely established that a human's own intellectual creativity or contribution to an inventive concept lies behind the product. If human intervention reaches a level where it can be characterized as "a human's own intellectual creation" within the product's autonomous structure, ownership rights are granted to that natural person; otherwise, protection is not provided[41] .

According to another view in the doctrine, the element of originality and existing regulations prevent non-human entities or structures from being recognized as authors, thereby indicating

[38] **BALLARDINI**, Rosa Maria / **HE**, Kan / **ROOS**, Teemu, "AI-Generated Content: Authorship and Inventorship in the Age of Artificial Intelligence," *Online Distribution of Content in the EU*, (Ed. Taina Pihlajarinne / Juha Vesala / Olli Honkkila), Cheltenham, Edward Elgar Publishing, 2019, pp. 129–134, https://www.cs.helsinki.fi/u/ttonteri/pub/aicontent2018.pdf (Accessed 01/09/2026).
[39] **BALLARDINI / HE / ROOS**, p. 129 ff.; **ATEŞ**, Artificial Intelligence Outputs, p. 21.
[40] **BALLARDINI / HE / ROOS**, pp. 130 ff.
[41] **BALLARDINI / HE / ROOS**, p. 131 ff.

that artificial intelligence does not possess the qualities necessary to demonstrate independent creativity. In light of the rule that works can only be created by natural persons, it is stated that products created by artificial intelligence cannot be considered works, even if they fall under the categories of works listed in the Copyright Law. Given that artificial intelligence cannot possess legal capacity unless it is defined as a legal person, and considering that outputs produced by artificial intelligence should not be left unprotected, it is proposed that this technology be positioned as a type of "employee," and that ownership rights—whether under copyright or a sui generis rights category— [42]

4 EVALUATION OF AI-BASED MUSIC PRODUCTION PROCESSES WITHIN THE FRAMEWORK OF LIMITATIONS AND EXCEPTIONS

As noted at the outset, the significant demand for input materials (training datasets) by AI systems is also of critical importance in terms of the copyright status of the materials used to train and feed the system. This is because such materials may be subject to copyright protection; consequently, AI developers generally need to obtain permission from the rights holders in order to use such data[43] .

However, it is also noted that the situation differs when the work itself is not copied, but only metadata or attributes are extracted. Indeed, the LAION dataset serves as a significant example in this regard, as it contains not copies of the works but only visual links and text descriptions. Although temporary copies are created to calculate similarity scores, these copies are not stored. Although it is debatable whether presenting links in a database constitutes "public transmission," it is argued that, given the difficulty of accessing specific content within a massive structure containing 5 billion links and the fact that links typically direct users to content that is already publicly available, it is technically difficult to classify this as public transmission[44] .

Similarly, since a trained machine learning model stores not a copy of the data but its parameters—which represent the relationship between input and output—in a space known as the "latent space," the claim that these representations constitute a "processing" (adaptation) of the original work is also weak; since the training process breaks the work down into parts, passes them through a noise filter, and transforms them into a statistical cluster, and the model's content is not of a nature that can be browsed like a dataset[45] .

However, since the data must be available in a form suitable for preparation and extraction during the model's training and creation phases, unauthorized reproductions at this stage may constitute an infringement.

[42] **ÇATAKLAR**, Eda, Employees' Works – Consequences of the Employment Contract under the Law of Intellectual and Artistic Works, Istanbul, On İki Levha Publishing, 2022, pp. 154–163.
[43] **GUADAMUZ**, p. 115. **BOSHER**, Hayleigh, Copyright in the Music Industry, London, Edward Elgar Publishing, 2021, p. 222. **ATEŞ,** Training Artificial Intelligence, p. 244.
[44] **GUADAMUZ**, p. 116.
[45] **GUADAMUZ**, p. 115 ff.

Incorporating a work into a dataset or performing digital operations that enable access to such data is generally considered an act of reproduction under copyright law[46] . In this context, artificial intelligence systems accessing copyrighted works without the rights holder's permission, copying these works, or using them in the model training process results in a violation of the reproduction right. In particular, if such use is not limited to temporary and necessary technical processes but constitutes a systematic and permanent data processing activity, the illegality becomes more pronounced.

Furthermore, modifying a copyrighted work in a manner that exceeds technical necessities may harm the work's original structure and integrity, thereby potentially constituting a violation of the author's moral rights. Such interventions that distort the work's meaning, aesthetic value, or characteristic features are deemed unlawful under the Law on Intellectual and Artistic Works (FSEK).

Furthermore, if a work is not only included in a dataset for the purpose of training an artificial intelligence model but is also reproduced as an active copy and made available to the public, this may constitute a violation of both the right of reproduction and the right of communication to the public. In the face of such infringements, rights holders may pursue remedies under the provisions of the FSEK, including filing civil and criminal lawsuits, seeking to block access, requesting the removal of content, and claiming monetary and non-monetary damages.

In this context, the music production process involving artificial intelligence must be evaluated in terms of inputs and outputs[47] . It is beneficial to assess separately whether the inputs related to the AI's learning process constitute a rights infringement and whether the outputs generated through prompts constitute a rights infringement.

However, first and foremost, it is necessary to examine the conditions under which a copyright protected under Turkish and relevant EU legislation may be lawfully used by third parties based on limitations and exceptions. Since the applicability of any limitation or exception to a copyright does not render the use of the copyrighted work unlawful, even without permission[48]
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The "three-step test," which determines the scope of limitations and exceptions in accordance with international texts, serves as a guide in determining whether unauthorized use of a work constitutes a copyright infringement.

Under this test, first, a freedom (limitation or exception) must be established in the law of the Contracting State in accordance with the international text. Second, this freedom established by the Contracting State must not conflict with the normal exploitation of the work[49] . Third

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[46] Regarding the possibility of infringing upon the rights of reproduction and public communication under certain conditions, as well as the rights of public performance, the right to request the mention of the author's name, and the authority to permit or prohibit modifications to the work, see **ATEŞ,** Training Artificial Intelligence, pp. 260–263.
[47] **GUADAMUZ,** p. 111. **BOSHER,** p. 233.
[48] **BOSHER**, p. 223. **GUADAMUZ,** p. 117.
[49] For the explanation that the author's right to use his or her work should not be precluded, see **TEKİNALP / OKUTAN NİLSSON / ŞEHİRALİ ÇELİK**, p. 300.

and finally, the exception or limitation introduced must not cause unreasonable harm to the rights of the copyright holder.

Below are explanations regarding limitations and exceptions in Turkey and the EU.

4.1 Limitations Under Turkish Law

As is known, the limitations and exceptions (restrictions) under the Copyright Law fall within the scope of public order, the public interest, private interests, and the authorities granted to the government. In this context, it is necessary to address only the provisions of FSEK Article 34 (freedom of education and instruction), Article 35 (freedom of quotation), and Article 38 (freedom of personal use).

Under the freedom of education and instruction regulated by Article 34 of the Copyright Law; it is permitted to create compilations and anthologies solely for educational and instructional purposes by making quotations from published musical works within a proportion justified by the purpose[50] . However, this freedom may not be exercised in a manner that causes harm to the rights holder's legitimate interests without just cause or conflicts with the normal exploitation of the work. The creation of anthologies for purposes other than education and instruction is only possible with the author's permission[51] . In all such cases, the work and the author's name must be indicated in the customary manner.

The freedom of quotation under Article 35 of the Copyright Law is possible only if, provided that the quotation is clearly identifiable, parts of a published musical composition—such as themes, motifs, passages, and ideas—are incorporated into an independent musical work.

The personal use exception under Article 38 of the Copyright Law permits the reproduction of all literary and artistic works for personal use without commercial intent. However, such reproduction must not cause harm to the rights holder's legitimate interests without just cause or conflict with the normal enjoyment of the work[52] . While the scope of this personal use exception varies depending on the specific circumstances and the work in question, it may be stated that a single copy of a work is considered sufficient[53] .

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[50] In its unpublished decision dated November 18, 2000, No. 7065/9425, the **11th Civil Chamber of the Court of Cassation** stated regarding the book titled "Orhan Veli Kanık" "His Life, Art, and Selected Works," a book allegedly intended to support education and teaching, the Court stated: "It is clear that this constitutes a scientific study for educational and teaching purposes as provided for in Article 34 of the Copyright Law, and that excerpts may be taken from published musical, scientific, and literary works when creating such a work. However, it is indisputably clear that while selecting sample poems from each of the poet's books, approximately 90% of the content was taken, and in some poetry collections, the entire text was reproduced verbatim through the process of quotation. In this case, it must be acknowledged that the proportion justified by the intent of Article 34 of the Copyright Law has been exceeded." Quoted from: **TEKİNALP / OKUTAN NİLSSON / ŞEHİRALİ ÇELİK**, p. 294.

[51] **TEKİNALP / OKUTAN NİLSSON / ŞEHİRALİ ÇELİK**, p. 293.

[52] While making a photocopy of a design for one's own use constitutes personal use, making thirty photocopies of the same design and sending them to friends as holiday greetings is characterized as use exceeding the normal scope. (**TEKİNALP / OKUTAN NİLSSON / ŞEHİRALİ ÇELİK**, p. 298).

[53] **TEKİNALP / OKUTAN NİLSSON / ŞEHİRALİ ÇELİK**, p. 297.

On the other hand, it is argued that while the law imposes no restrictions, it would not be appropriate for business partnerships, associations, foundations, and trade unions to benefit from this exception[54] .

Under current legislation, it is anticipated that there is no direct exception in Turkish law for UBI operational models, nor can any exception be recognized through interpretation. Consequently, it can be stated that the provision of data sets to UBIs can only be granted through a license[55] .

4.2 Limitations and Exceptions in European Union Law

Within the context of Text and Data Mining ("TDM") under Directive 2019/790, known as the Digital Single Market Directive ("Directive"), and within the scope of other exceptions and limitations, it is important to examine the inputs and outputs of AI systems.

Exceptions to copyright in the EU acquis are regulated in a fragmented manner. The Information Society Directive (InfoSoc) provides for only one mandatory exception in the context of the reproduction right; this covers temporary or incidental copies. In addition to this mandatory exception, InfoSoc provides a list of 20 "optional" (discretionary) exceptions that Member States are free to transpose into their national laws or not. In this context, while Article 5(2) of InfoSoc establishes five optional exceptions to the reproduction right (reprographic reproduction, private copying, non-commercial copying by public bodies, etc.), Article 5(3) lists 15 different optional exceptions regarding the rights of reproduction and communication to the public (education and scientific research, use by persons with disabilities, reporting on current events, quotation, parody, public security, etc.). In addition to this framework established by the InfoSoc Directive, newer directives have introduced additional exceptions into the system. In particular, the "Orphan Works Directive" and the "Marrakech Directive" have added two significant "mandatory" exceptions to the list. These, respectively, allow cultural heritage institutions to digitize works whose authors are unknown or cannot be identified (orphan works) and enable the production of works in accessible formats for the visually impaired[56] . Finally, the Digital Single Market Directive (DSM) has introduced three additional mandatory exceptions regarding the right of reproduction: text and data mining (TDM) for scientific and general purposes, online educational activities, and digitization for the preservation of collections.

It can also be noted that there are potentially three main defense mechanisms (legal grounds/exceptions and limitations) regarding the use of copyrighted materials under the UYZ. These can be classified as: temporary uses necessitated by technology, uses for research purposes, and text/data mining.

[54] **TEKİNALP / OKUTAN NİLSSON / ŞEHİRALİ ÇELİK**, p. 297.
[55] **ATEŞ,** The Training of Artificial Intelligence, p. 259.
[56] **YILMAZTEKİN**, Hasan Kadir, Artificial Intelligence, Design Law and Fashion, Routledge Research in Fashion Law, 2023, p. 115 (Citation format: **"YILMAZTEKİN**, Artificial Intelligence").

As explained in earlier sections of the report, certain FTTs and other digital tools generally operate by generating temporary copies as a matter of their technical functioning, and these copies ensure the technology's fast and efficient operation. Taking this into account, EU law on the " " (InfoSoc), pursuant to Article 5(1), excludes temporary copies that meet certain conditions from the scope of copyright infringement. For this exception to apply, the copy must cumulatively meet the following conditions: (i) it must be temporary, (ii) it must be transient or incidental, (iii) it must be an integral and essential part of the technological process, (iv) its sole purpose must be to facilitate transmission over a network or lawful use, and (v) it must have no independent economic value[57] .

The Court of Justice of the European Union (CJEU) has defined the scope of this exception in the *Infopaq I* and *II* rulings. Examining the data capture process (scanning, text conversion, storage, and printing) for a news clipping service, the Court stated that the "printing" (print out) process does not fall within the scope of the exception; however, the other three stages meet the conditions. In the subsequent *FAPL* and *Meltwater* rulings, temporary fragments in satellite decoder memory and web browser cache copies were also included within the scope of this exception.

In the context of AI, intermediate copies generated during the training process can be likened to the data transmission actions in the *FAPL* and *Meltwater* decisions. However, this "temporary copying exception" does not apply to copies stored prior to AI training or those permanently stored by the AI. For example, some artificial neural networks may store copyrighted works in their internal memory, even in an abstracted form. If this storage process reproduces the creative elements of the work, it constitutes copying (reproduction)[58] . Therefore, to benefit from the aforementioned exception, it is first necessary to determine whether the relevant AI system retains copies.

On the other hand, while the production of copies for educational purposes may be "temporary," it may not be considered "incidental" or meet the "fair use" requirement because it is necessary for knowledge extraction.

Regarding "economic value," while a model like Stable Diffusion—trained on billions of images—may possess economic value itself, it can be argued that a single copy used for training lacks "independent" economic value[59] .

Since the technical details specific to UYZ training have not yet been tested in court, it is not yet possible to fully predict to what extent these exceptions and limitations can be applied by the courts. However, the most significant exception and precedent regarding data collection is the Google Books case in the U.S., where Google was sued by publishers and authors for copyright infringement after scanning and digitizing books from libraries to make them searchable. After a lengthy trial, the court characterized Google's action as "fair use." The decision was based on the "transformative" nature of the process and the fact that it did not

[57] **YILMAZTEKİN**, Artificial Intelligence, p. 120.
[58] **YILMAZTEKİN**, Artificial Intelligence, p. 120.
[59] **GUADAMUZ**, p. 117.

negatively impact the book sales market (as only excerpts/snippets were provided). Although Google Books is not a direct AI case, it resembles machine learning in its logic of “copying large amounts of content to produce something new”[60] and may serve as a guide for AI-related disputes . Similar rulings, such as Authors Guild v. HathiTrust and Kelly v. Arriba Soft Corp[61] , also exist.

InfoSoc includes a "scientific research exception" in addition to existing exceptions. Under this provision, the use does not constitute copyright infringement provided that the "sole purpose" of the use is for educational or scientific research through illustration, the source and author’s name are cited, and the use is not for commercial purposes.

The Digital Single Market Directive (“Directive”), on the other hand, introduces an additional and mandatory exception allowing the reproduction of works in digital form for the same purposes[62] .

Pursuant to Article 2(2) of the Directive, TDM is defined as *“any automated analysis technique for the analysis of text and data in digital form, for the purpose of generating information, including but not limited to patterns, trends, and correlations*.”

It is stated that, provided they remain within the scope of the Directive, AI developers may legally use copyrighted content to facilitate research and development in the AI field and to provide access to more material through TDM[63] .

Under the Directive, there are two exceptions for TDM: (i) TDM conducted by research organizations or universities covered by Article 3 of the Directive for educational and scientific research purposes; and (ii) TDM for any purpose subject to the opt-out conditions under Article 4 of the Directive:

(i) With regard to scientific research conducted by research organizations or universities, the exception under Article 3 of the Directive applies only to research organizations, cultural heritage institutions, or universities that use TDM for non-commercial scientific research. This exception ensures that only covered beneficiaries may use copyrighted text and data within TDM activities conducted for research purposes without infringing copyright laws; however, the works utilized must be legally accessible[64] . Additionally, institutions and organizations wishing to benefit from this exception must take appropriate storage and security measures for copies of copyrighted works used under the exception and implement

[60] **GUADAMUZ**, p. 118 et seq.; **ATEŞ,** The Training of Artificial Intelligence, p. 250.
[61] **AUTHORS GUILD v. HATHITRUST**, 755 F.3d 87 (2d Cir. 2014). **KELLY v. ARRIBA SOFT CORP.**, 336 F.3d 811 (9th Cir. 2003). **ATEŞ,** The Training of Artificial Intelligence, p. 250.
[62] **YILMAZTEKİN**, Artificial Intelligence, p. 121. **AKIN,** İrfan, *Digital Copyright Law,* Seçkin Publishing, 2022, p. 130 ff.
[63] **TE**, Julienne, The Text and Data Mining Exception Under the Copyright and Related Rights in the Digital Single Market Directive (DSM Directive), Lund, Lund University, 2021, p. 1, https://lup.lub.lu.se/student-papers/record/9053913/file/9053914.pdf, (Accessed March 10, 2026).
[64] **AKIN,** pp. 130–131.

necessary measures to protect the security and integrity of the networks and databases where the data is stored. Provided these conditions are met, the unauthorized use of copyrighted datasets will not constitute an infringement.

However, there are two fundamental issues in the application of this exception. The first is the lack of a standard definition of the term "research." Many technology companies have R&D departments, and it is unclear whether these fall under the definition of "non-commercial" research. The second and more critical issue is the phenomenon known as "data laundering" (or "academic-washing"). In law, there is no explicit prohibition aGenAInst a dataset collected for research purposes being subsequently used by a commercial entity. Indeed, Meta's use of the WebVid dataset to train its "Make-A-Video" commercial model is a concrete example of this loophole[65] .

(ii) Regarding TDM (subject to opt-out conditions) for any purpose, under Article 4 of the Directive, Member States are directed to introduce exceptions and limitations for the reproduction and extraction of legally accessible works for TDM purposes.

No restrictions have been imposed on the types of data subject to TDM under this exception, and it is available for use by any person utilizing TDM for any purpose, whether commercial or non-commercial[66] .

Furthermore, unlike the first exception under the Directive, this exception is not limited to scientific purposes but may be applied for any purpose, including commercial ones[67] .

However, the scope of this limitation and exception is restricted to works that are legally available and where the rights holder has not exercised their right to opt out. Copies of works created through TDM conducted under these conditions may only be stored for as long as necessary to carry out the TDM activities[68] .

On the other hand, it can be argued that the opt-out right was introduced to address copyright holders' concerns regarding the unauthorized use of their works[69] . Indeed, copyright holders who exercise the opt-out right can prevent the unauthorized use of their publicly published works, or, by committing not to exercise this right, allow others to use their works in exchange for a specific fee[70] .

[65] **GUADAMUZ**, p. 119.
[66] **YILMAZTEKİN**, Artificial Intelligence, p. 122. **ATEŞ,** The Training of Artificial Intelligence, p. 249.
[67] **YILMAZTEKİN**, Artificial Intelligence, p. 122.
[68] **AXHAMN**, Johan, "Extended Collective Licensing for Use of Copyrighted Works for Machine Learning," Columbia Journal of Law & the Arts, 2025, 48(4), p. 531.
[69] **GUADAMUZ**, p. 120.
[70] **YILMAZTEKİN**, Artificial Intelligence, p. 122. **AXHAMN**, p. 544.

TDM activities may also be assessed within the framework of the "lawful uses" set forth in the Database Directive with respect to copyright-protected databases. Pursuant to Article 6(1) of the Database Directive, a lawful user of a database has the right to perform the reproduction necessary to access the contents or to carry out the "normal use" of the database. In this context, provided the conditions set forth in the Directive are met, the implementation of TDM on a database is recognized in legal doctrine as falling within the scope of the database's "normal use"[71] .

However, when considering the general framework of EU law, it can be stated that there is uncertainty regarding whether the exceptions and limitations in question apply to the UYZ. Indeed, while national courts initially applied the TDM exception to model training, in the recent *GEMA v. OpenAI* decision, the Munich Regional Court (LG Munich) interpreted the TDM exception narrowly, establishing a precedent aGenAInst artificial intelligence. The court held that the TDM exception applies only to the initial stage of creating the training dataset; but that the model's memorization and replication of the data within its own system infringes upon the author's economic rights, and that the condition—one of the requirements of the TDM exception—that the analysis of the information must not harm the economic interests of the rights holders is not met[72] ; therefore, it does not fall under the exception, and the defendants are liable for the reproduction[73] [74] .

Additionally, Member of the European Parliament Axel Voss proposes a radical change, arguing that if AI providers fail to ensure full transparency under the AI Act, an "irrebuttable presumption" should arise that they have used copyrighted works for educational purposes, and all legal costs should be borne by the provider[75] . Indeed, Articles 52 and 53 of the AI Act also mandate that AI providers make their training datasets publicly available, with the aim of facilitating the identification of infringements on intellectual property rights[76] .

4.3 The Three-Step Test

The extent to which the exceptions and limitations outlined above apply must be determined by applying the three-step test after ensuring that the conditions set forth in the relevant regulations are met[77] .

The three-step test was first added to the Berne Convention through the 1967 Stockholm revision and was initially used solely as a criterion for the right of reproduction. Its scope later expanded through the TRIPS Agreement to include other economic rights; it has also found its

[71] **YILMAZTEKİN**, Artificial Intelligence, p. 123.
[72] **MUNICH I REGIONAL COURT (LG MÜNCHEN I)**, Final Decision No. 42 O 14139/24 dated November 11, 2025, (Trans. Savaş Bozbel), 2025, https://www.linkedin.com/posts/savas-bozbel_yapay-zek%C3%A2-telif-hakk%C4%B1-lg-m%C3%BCnchen-karar-activity-7427808221920280576-DR8k, (Last accessed March 10, 2026).
[73] **LG MÜNCHEN I**, November 11, 2025 (Trans. **BOZBEL**).
[74] **MEZEI**, p. 12. **LG MÜNCHEN I**, 11.11.2025 (Trans. **BOZBEL**).
[75] **MEZEI**, p. 12.
[76] **ATEŞ,** Training Artificial Intelligence, p. 249.
[77] **YILMAZTEKİN**, Artificial Intelligence, p. 115.

place in intellectual property law through the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT). The three-step test, defined by different formulations in the aforementioned treaties, is fundamentally accepted as a single principle. The primary purpose of the test is to ensure that limitations imposed on the author's economic rights are reviewed for legality and to strike a balance between the author's rights and the public interest. In this regard, the test is not merely a tool that restricts limitations arising from the law, but also an important criterion that guides courts in interpreting laws and resolving disputes[78] .

According to the three-step test, the legality of a restriction depends on the presence of three cumulative conditions. The first condition is that the restriction must be limited to "specific and particular circumstances"; this requires the regulation to be clear, precise, and foreseeable. "Specific circumstances" are considered from both quantitative (limited scope of application) and qualitative (pursuit of a specific legitimate purpose) perspectives. The second stage requires that the restriction not conflict with "the normal enjoyment of the work." In legal doctrine, this concept is explained through "normative" approaches that prioritize the purpose of the rights, or "empirical" approaches that prioritize economic GenAIn. The third and final stage, however, is based on the principle that the limitation must not cause unreasonable harm to the copyright holder's legitimate interests (both economic and moral), that is, it must preserve the balance between the rights holder and the user[79] .

4.4 U.S. Practice

The most prominent defense mechanism in U.S. law is the "fair use" doctrine. This doctrine generally permits "transformative" uses that do not significantly harm the market interests of copyright holders. However, since U.S. practice and the common law system cannot be applied within the scope of our legal framework, it has been deemed unnecessary to provide a detailed explanation.

4.5 Explanations Regarding AI Model Inputs

As stated in the introductory section of the report, in order for the process of generating results through the use of ML models to be completed successfully, data must be collected and the models must be trained using this data. Indeed, the "learning" process of an ML model requires access to large amounts of data and the ability to analyze this data to identify patterns.

The fundamental question that arises at this stage is whether accessing, reading, and analyzing copyrighted works to train an AI constitutes a copyright infringement.

Data collection and copying: The datasets used to train AI models (such as the billions of text tokens or image sets used for GPT-3) are typically obtained through "scraping" from open-

[78] **TÜRKOĞLU**, Sinem, The Three-Step Test in Intellectual Property Rights, Ankara, Adalet, 2024, pp. 45–46.
[79] **TÜRKOĞLU**, pp. 46–55.

source sources on the internet. Since this process technically involves creating a copy of the works, it directly impacts the copyright holder's exclusive "right of reproduction."

However, a trained AI model does not contain copies of the data used in its training; it only contains the mathematical weights and probabilities of these works[80] . Sources in the so-called "Latent Space" emphasize that a trained model does not actually contain copies of the works . Instead, the model contains a latent space comprising mathematical representations and statistical probabilities of the data. Consequently, the original dataset is no longer required after training, and the model can operate independently[81] .

As explained above, the music production processes carried out by AI systems require the use of data as a starting point. Determining whether such data was obtained lawfully, whether the rights holder has consented to its use for AI training even if obtained lawfully, and, ultimately, whether the relevant AI's use falls within the scope of the exceptions and limitations noted above, is crucial for identifying copyright infringement regarding AI inputs.

4.6 Explanations Regarding AI Outputs

While the collection and processing of data are discussed at the input stage, the legal status of the resulting product and its relationship with original works are examined at the output stage. Determining whether outputs constitute an infringement is generally easier than determining whether inputs do. This is because, to establish copyright infringement, an unauthorized use of one of the exclusive rights held by the copyright owner (such as reproduction or adaptation) must have occurred.

The first point to consider here is whether ML models produce an output that is sufficiently different from the works comprising their inputs. Although it is generally believed that ML models generate content from scratch using statistical predictions,[82] there is a possibility of copyright infringement in certain cases.

Indeed, a GPT-4 may memorize/regurgitate elements that frequently appear in its inputs (such as famous paintings or common code blocks), and in this so-called "overfitting" scenario, the GPT-4 may produce outputs that closely resemble the original work[83] . Consequently, the generated outputs could lead to copyright infringement.

Furthermore, since memorization/regurgitation amounts to the reconstruction of full or partial copies of training data, it has been argued that evaluating this under the "right of reproduction" in copyright law is the most reasonable approach[84] . In the literature and judicial decisions (U.S. Copyright Office report, the *GEMA v. OpenAI* case in Germany), the view that the

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[80] **GUADAMUZ**, p. 115.
[81] **GUADAMUZ**, p. 113.
[82] **GUADAMUZ**, p. 113.
[83] For explanations regarding the rarity of this situation and the fact that GENAIs produce new outputs, see **GUADAMUZ**, p. 121.
[84] **MEZEI**, p. 5.

numerical representations (weights) embedded within the model constitute a fixed copy or adaptation of the work is GenAIning traction[85] .

While the "de minimis" (insignificant use) doctrine and the "substantial similarity" test in U.S. law may not consider small-scale copying to be an infringement, such flexible doctrines do not exist in EU law. Consequently, even the copying of the smallest identifiable part may be considered an infringement in the EU. Although developers like OpenAI attempt to downplay memorization by characterizing it as a "rare error in the learning process," it has been proven that memorization is a measurable phenomenon; while the rate is generally low, it depends on factors such as the frequency of data repetition[86] .

In Europe, discussions revolve around the TDM exception. In a preliminary ruling request submitted by the Budapest Regional Court to the Court of Justice of the European Union (CJEU), the question of whether LLM training constitutes reproduction was raised, though the term "memorization" was not specifically used[87] .

Another point to note here is that since style/tone is not included in copyright protection, creating a work using legally obtained inputs in the style belonging to the owner of another work may not constitute an infringement[88] .

Additionally, if an output bears a significant resemblance to the original work, the exceptions of parody and pastiche—which are not directly recognized under Turkish law—may also come into play[89] .

In conclusion, the output stage requires a case-by-case evaluation of each specific situation and the application of any exceptions and limitations adopted by the relevant country's law, if applicable.

4.7 The Hosting of UGC Output by Royalty-Free Music Platforms

Recently, it has been observed that some digital music platforms claim to offer music services to businesses using terms such as "royalty-free," "certified," or "audit-ready"[90] . Such platforms may create the perception that businesses will not face any obligations before Collective Management Organizations regarding the use of music in public places or encounter issues during audits. However, the legal framework governing the use and public transmission of works, performances, phonograms, and broadcasts in public spaces is regulated under Article 41 of the Copyright Law, and the licensing system administered through Collective Management Organizations constitutes one of the established practices in this field. Therefore, the marketing claims of platforms that claim to offer royalty-free music carry the risk of

[85] **MEZEI**, pp. 5–6.
[86] **MEZEI**, pp. 7–8.
[87] **MEZEI**, p. 9.
[88] **GUADAMUZ**, p. 113.
[89] **GUADAMUZ**, p. 126.
[90] The Muzibu blog contains claims such as "100% legal… ready for inspection… you won't encounter any issues during MESAM/MSG inspections." **MUZİBU**, https://www.muzibu.com/blog/sletmeler-icin-telifsiz-muzik-yasal-guvenli-ve-marka-uyumlu-yayin/ (Accessed: 12/22/2025).

creating a misleading perception of "full protection" for businesses regarding the scope and limits of the aforementioned licensing system.

Such practices may also be evaluated under unfair competition law depending on the specific circumstances of the case. Indeed, Article 54 of the Turkish Commercial Code (TCC) No. 6102 aims to protect a fair and undistorted competitive environment; Article 55, meanwhile, regulates specific cases constituting unfair competition. In this context, particularly pursuant to TCC Article 55/1-e, failure to comply with business conditions established by law, contract, or established practices within the profession is considered a breach of the good faith principle. Given that licensing obligations regarding the use of music in public venues constitute an established business condition within the sector, marketing activities that create the impression that these obligations are ineffective or have been completely eliminated through alternative platforms raise a debatable issue regarding whether such activities constitute unfair competition under these provisions of competition law.

Pursuant to Article 55(1)(e) of the Turkish Commercial Code: *"Failure to comply with business conditions—in particular, failure to comply with business conditions imposed by law or contract on competitors, or those that are customary within a particular industry or community—constitutes a breach of good faith*."

For the existence of unfair competition to be established under this provision, the following conditions must be met: the existence of a business condition prescribed by law, contract, or professional rules, or established through customary practices; conduct in violation of such business conditions; and the absence of a legal or legitimate basis for such conduct.[91]

The key point here is that the business conditions must be "applicable among competitors." The purpose of this provision is to prevent the acquisition of an unfair advantage through the violation of business conditions. The term "competitor" here does not refer to operating in the same industry; rather, if one party acts in violation of the other party's business conditions, thereby causing harm to the other party or exposing it to a risk of harm, that party must be considered a "competitor"[92] .

In addition, such marketing statements must also be evaluated separately under consumer and advertising law. In particular, phrases used in business-to-business contexts, such as "100% legal," "ready for inspection," or "you won't face issues in Collective Management Organization audits," may be subject to scrutiny regarding whether they constitute misleading

[91] The Supreme Court has ruled in numerous decisions that failure to comply with business conditions constitutes unfair competition. For example, in its decision dated June 25, 1990, the Supreme Court ruled that the actions of a computer course operating without obtaining the required permission from the Ministry of National Education—despite such permission being mandatory—constituted unfair competition under Article 57/b.10 of the Turkish Commercial Code, see Supreme Court of Appeals, 11th Civil Chamber, Decision No. E.4644/K.5063 dated June 25, 1990 - **ERİŞ**, Gönen, Commentary on the Turkish Commercial Code, Vol. I, 3rd ed., Ankara, Seçkin Publishing, 2004, p. 1082.

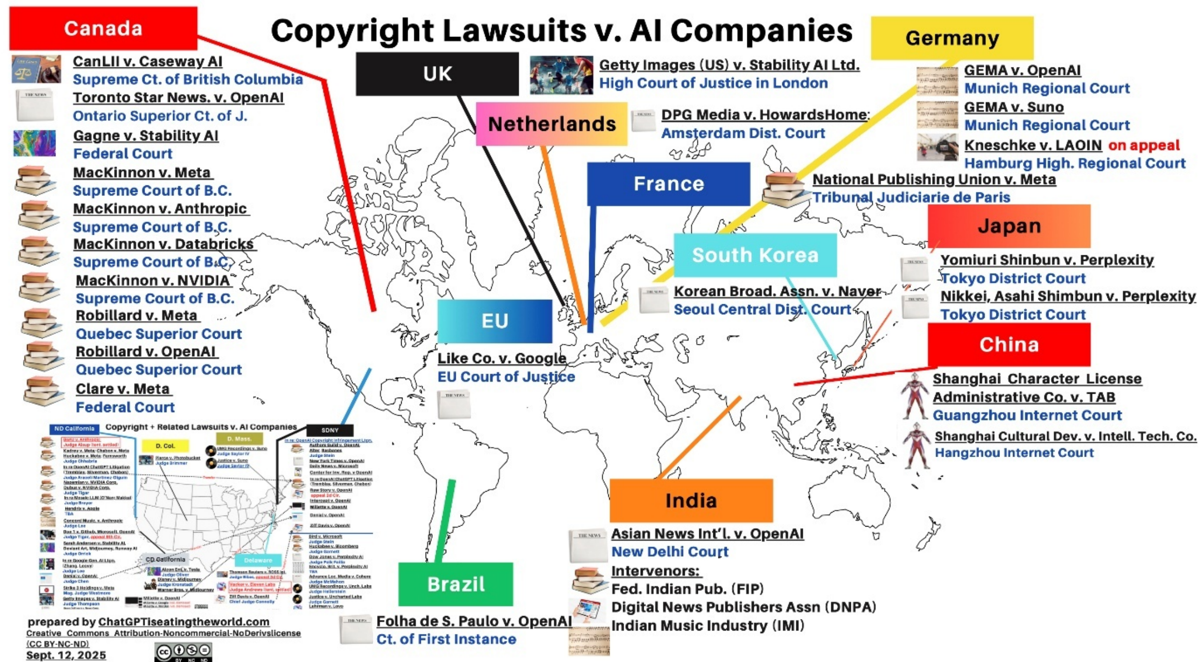
[92] **PEKDİNÇER**, Tamer, Expert Reports and Opinions on Unfair Competition and Trademark Law, Istanbul, Legal Publishing, 2015, pp. 284–285

advertising under the legislation governing the obligation of commercial advertisements to be truthful and honest. Such statements can create the impression that the platform's services provide a broader guarantee than is actually the case regarding their scope and legal consequences, and in this regard, they may raise claims of non-compliance with advertising law.

This debate has GenAIned even greater significance with the increasingly widespread use of AI technologies in the field of music production. This is because some platforms claiming to offer royalty-free music may include AI-generated music outputs in their catalogs, and the legal status of such content may remain unclear. Since issues such as the copyright status of AI-generated outputs, copyright protection, and the legal compliance of data sets remain contentious in many legal systems, the presentation of such content as "completely royalty-free" or "free of all legal risks" raises a matter that requires careful evaluation under both copyright law and unfair competition law. For this reason, the hosting of AI-generated content by royalty-free music platforms requires a multifaceted examination not only from the perspective of copyright law but also within the context of unfair competition and advertising law.

5 DISPUTES REGARDING COPYRIGHT INFRINGEMENTS IN THE CONTEXT OF ARTIFICIAL INTELLIGENCE AROUND THE WORLD

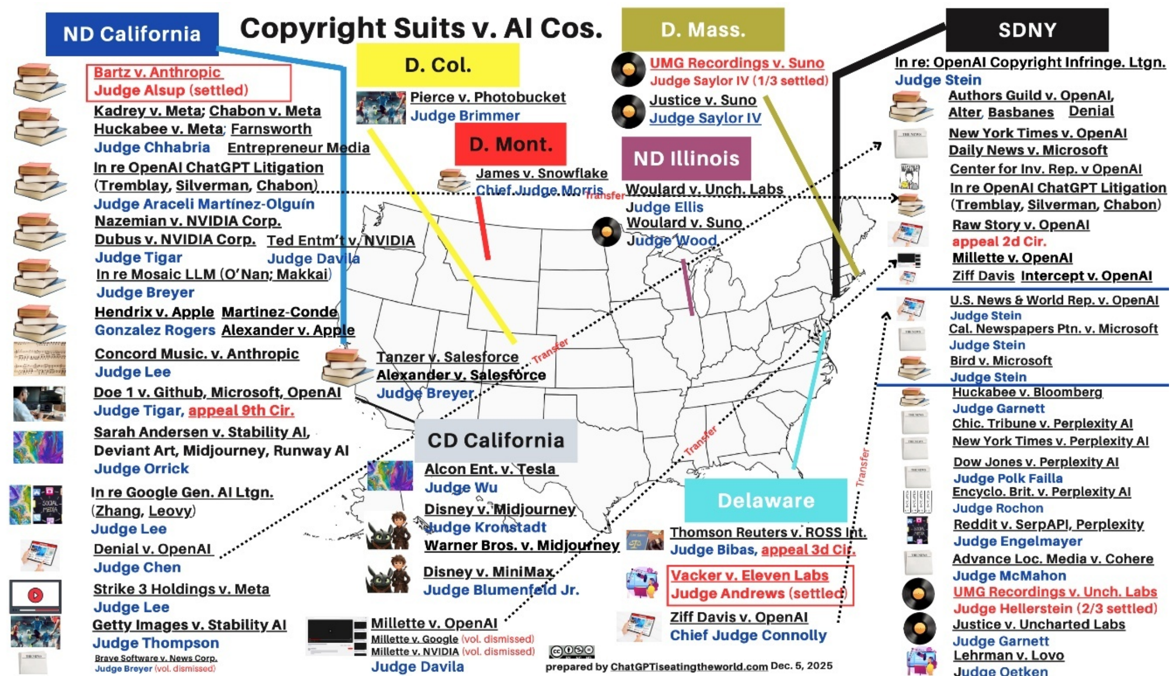
Under this heading, lists of past and current disputes worldwide and explanations regarding certain disputes are provided. However, it should be noted that there is currently no established judicial precedent in courts worldwide[93] .



1. Table showing lawsuits filed aGenAInst IPR holders worldwide (September 2025), https://chatgptiseatingtheworld.com/2025/09/12/updated-world-map-of-all-copyright-suits-v-ai-co-sept-12-2025-75-total/

[93] **ATEŞ,** The Training of Artificial Intelligence, p. 247.

5.1 United States



2. Copyright disputes involving AI producers in the U.S. (December 2025), *https://chatgptiseatingtheworld.com/2025/12/05/updated-u-s-map-of-copyright-suits-v-ai-dec-5-2025-64-suits/*

5.1.1 Andersen v. Stability AI

The first hearing in the lawsuit filed by a group of visual artists aGenAInst StabilityAI, Midjourney, DeviantArt, and RunwayAI—companies offering services to generate visual AI outputs—is expected to take place in 2027 at the U.S. District Court for the Northern District of California; the case is currently in the *discovery* phase[94] . The plaintiffs allege that the defendants, by using the LAION datasets, have committed direct or indirect copyright and trademark infringements at every stage of the data collection, model training, and output generation processes, effectively selling a "service of copyright infringement."

5.1.2 Advance Local Media v. Cohere

Condé Nast and other publishers accuse Cohere of using their content without permission while creating its AI systems[95] ; The court rejected the defendant's defense that the content it created was not similar to the plaintiffs' summarized content, as well as the motion to dismiss the case.

[94] **U.S. DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA**, Andersen v. Stability AI Ltd., Case No. 3:23-cv-00201, ECF No. 238, Oct. 31, 2024, https://www.courtlistener.com/docket/66732129/238/andersen-v-stability-ai-ltd/, (Accessed Jan. 9, 2026).

[95] **U.S. DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK**, Advance Local Media LLC v. Cohere, Inc., Case No. 1:25-cv-01305, Order Denying Partial Motion to Dismiss, November 13, 2025, https://admin.bakerlaw.com/wp-content/uploads/2025/12/ECF-59-Order-Denying-Partial-Motion-to-Dismiss.pdf, (Accessed January 9, 2025).

5.1.3 Bartz v. Anthropic

In a class-action lawsuit filed by three authors alleging that Anthropic, the creator of the Claude language model, used millions of copyrighted books to train its AI model, the U.S. District Court for the Northern District of California ruled that the use of books for model training falls under fair use, but the use of pirated works does not fall under this protection[96] .

The parties have announced that they will reach a settlement involving a payment of $1.5 billion by Anthropic for the use of pirated books in training. Proceedings regarding the settlement are ongoing[97] .

5.1.4 Concord Music Group, Inc. v. Anthropic PBC

Music publishers argue that Anthropic infringed their rights by using copyrighted song lyrics during the training and output phases[98] ; proceedings regarding the plaintiffs' request for a preliminary injunction and Anthropic's motion to dismiss are ongoing in the U.S. District Court for the Northern District of California (N.D. Cal.).

5.1.5 Dow Jones & Company, Inc. v. Perplexity AI, Inc.

Dow Jones and the New York Post, as media organizations, have filed a lawsuit aGenAInst Perplexity AI alleging unauthorized use of their news content;[99] ; the litigation is ongoing in the U.S. District Court for the Southern District of New York.

5.1.6 Getty Images v. Stability AI

Getty Images has accused defendant Stability AI of unlawfully using over 12 million images scraped from Getty's websites without consent as input to train and develop its deep learning AI model, Stable Diffusion, and of infringing on the captions and metadata associated with those images; The proceedings, in which Stability AI's motions to dismiss or transfer the case are being considered and trademark infringements in GPT-generated outputs are being debated, are taking place in the U.S. District Court for the District of Delaware (D. Del.).

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[96] **U.S. DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA**, Bartz v. Anthropic PBC, Case No. 3:24-cv-05417-WHA, Order on Fair Use, June 23, 2025, https://cdn.openai.com/pdf/gov.uscourts.cand.434709.231.0_4.pdf, (Accessed Jan. 9, 2026).

[97] **U.S. DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA**, Bartz v. Anthropic PBC, Case No. 3:24-cv-05417-WHA, Unopposed Motion for Preliminary Approval of Class Settlement, ECF No. 362, December 2, 2025, https://storage.courtlistener.com/recap/gov.uscourts.cand.434709/gov.uscourts.cand.434709.362.0.pdf (E.T. 01/09/2026).

[98] **U.S. DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA**, Concord Music Group Inc. v. Anthropic PBC, Case No. 3:24-cv-03811 (Former Case No.: 3:23-cv-01092), Complaint and Demand for Jury Trial, October 18, 2023, https://admin.bakerlaw.com/wp-content/uploads/2024/01/ECF-1-Complaint-2.pdf, (Accessed Jan. 9, 2026).

[99] **U.S. DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK**, Dow Jones & Company, Inc. & NYP Holdings, Inc. v. Perplexity AI, Inc., Case No. 1:24-cv-07984-KPF, Second Amended Complaint, ECF No. 46, January 28, 2025, https://admin.bakerlaw.com/wp-content/uploads/2025/02/ECF-46-Second-Amended-Complaint.pdf, (Accessed January 12, 2025).

5.1.7 In re Google Generative AI Copyright Litigation

The plaintiffs allege that Google used their works to train its GPT products; this consolidated proceeding, which includes the cases Leovy v. Google and Zhang v. Google, is pending in the U.S. District Court for the Northern District of California.

5.1.8 In re: OpenAI, Inc. Copyright Infringement Litigation MDL

This multi-district litigation (MDL) is a consolidation of twelve cases filed by news organizations and authors aGenAInst OpenAI and Microsoft, scheduled to be heard in the U.S. District Court for the Southern District of New York in April 2025.

5.1.9 Nazemian and Dubus v. NVIDIA Corporation

Two groups of authors allege that NVIDIA copied their books into its language model without permission; the case, in which discovery is set to conclude in November 2025, is pending in the U.S. District Court for the Northern District of California[100] .

5.1.10 Thomson Reuters v. ROSS

In the case where Thomson Reuters alleges that ROSS Intelligence unlawfully copied its content, the U.S. District Court for the District of Delaware ruled on February 11, 2025, that the use of the plaintiff's information notes in training a large language model search engine did not fall under fair use[101] , as the defendant pursued a commercial purpose by developing a service in direct competition with the plaintiff, the content used was subject to copyright protection and involved extensive copying, and the intent was to establish a service intended to replace the Westlaw database from which the content was copied. The dispute is ongoing.

5.2 United Kingdom (England)

In the case Getty Images filed aGenAInst Stability AI in England regarding claims of copyright infringement, the High Court of England and Wales rendered its decision on November 4[102] . The court rejected the claim that Stability AI committed *"secondary* infringement" by making its Stable Diffusion system available to users in England, noting that while the legal concept of "*infringing article*" applies to tangible objects, cloud-based or internet-downloaded GPT-3

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[100] **U.S. DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA**, Kadrey v. Meta Platforms, Inc., Case No. 3:23-cv-03417-VC, Order Granting in Part and Denying in Part Motions for Summary Judgment, ECF No. 598, September 23, 2025, https://cdn.openai.com/pdf/gov.uscourts.cand.415175.598.0_2.pdf, (E.T. Jan. 9, 2026).

[101] **U.S. DISTRICT COURT FOR THE DISTRICT OF DELAWARE (U.S. DISTRICT COURT FOR THE DISTRICT OF DELAWARE)**, Thomson Reuters Enterprise Centre GmbH & West Publishing Corp. v. Ross Intelligence Inc., Case No. 1:20-cv-613-SB, Memorandum Opinion, ECF No. 772, February 11, 2025, https://www.ded.uscourts.gov/sites/ded/files/opinions/20-613_5.pdf, (E.T. January 9, 2026).

[102] **HIGH COURT OF JUSTICE OF ENGLAND AND WALES**, Getty Images (US) Inc. & Others v. Stability AI Ltd, [2025] EWHC 2863 (Ch), November 4, 2025, https://www.judiciary.uk/wp-content/uploads/2025/11/Getty-Images-v-Stability-AI.pdf, (Accessed January 9, 2026).

software cannot be classified as "infringing content" under this legislation, and therefore the software's entry into the country does not constitute illegal importation.

It was noted that no infringement under UK law would occur if the training and development processes of the AI model took place outside the United Kingdom, and it was emphasized that the location of these processes would be determined by examining the location of the development teams (employees and contractors) and the technical resources used (machines and data transfers).

The UK House of Lords Communications and Digital Committee published its latest report titled "Artificial Intelligence, Copyright, and the Creative Industries" on March 6, 2026[103] . The Committee emphasizes that the unauthorized use of copyrighted works in the training of GPT models poses a significant threat to the creative industries, and it strongly opposes broad commercial exceptions that allow for the free use of works under text and data mining (TDM), as well as "opt-out" (opt-out) models that rely solely on the rights holder's objection.

The report calls on the government to take urgent action to address the current imbalance, stressing that the solution to the problem should not be left to legal battles that could drag on for years. In this regard, it demands that technology companies ensure full transparency regarding the training data they use and that a functional licensing framework be established immediately to guarantee fair compensation for creators whose works are utilized. The Committee emphasized that the United Kingdom's goal of becoming a superpower in the digital sphere cannot be achieved by exploiting the country's global creative economy and disregarding copyrights.

5.3 People's Republic of China

Case law from the People's Republic of China contains rulings on various aspects regarding the copyright status of AI-generated outputs[104] . In the *Li v. Liu* case, the Beijing Internet Court ruled that the AI-generated images in question—created as a result of 150 commands entered according to a specific order and parameters—constitute *a work* under national copyright law because they are the result of the command owner's *intellectual effort* and demonstrate originality due to the personal preferences and aesthetic judgment exercised during the production process; It further ruled that the command owner is *the author of the work* due to their direct intellectual effort in selecting and sequencing the commands, and that copyright had been infringed[105] . However, in the *Feilin v. Baidu* decision, the same court ruled that the

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[103] **UK HOUSE OF LORDS COMMITTEE ON COMMUNICATIONS AND DIGITAL AFFAIRS**, "Artificial Intelligence, Copyright, and the Creative Industries," March 6, 2026, HL Paper 267, <https://publications.parliament.uk/pa/ld5901/ldselect/ldcomm/267/26702.htm> (Accessed March 9, 2026)

[104] **WANG**, Yuqian / **ZHANG**, Jessie, "Beijing Internet Court Grants Copyright to AI-Generated Image for the First Time", Kluwer Copyright Blog, February 2, 2024, https://legalblogs.wolterskluwer.com/copyright-blog/beijing-internet-court-grants-copyright-to-ai-generated-image-for-the-first-time/, (Accessed March 10, 2026).

[105] **BEIJING INTERNET COURT**, (2023) Jing 0491 Min Chu No. 11279, Decision dated November 27, 2023, (Official English Translation), https://english.bjinternetcourt.gov.cn/pdf/BeijingInternetCourtCivilJudgment112792023.pdf, (Accessed Jan. 9, 2026).

report in question was not a work because it lacked distinctiveness and had no identifiable author[106] . The Shenzhen Provincial Court ruled in the *Tencent Dreamwriter* case that the AI-generated article constitutes a work[107] .

5.4 Germany

5.4.1 GEMA v. OpenAI

GEMA filed a lawsuit aGenAInst ChatGPT in November 2024 alleging unauthorized use of song lyrics, and aGenAInst the AI music generation software Suno in January 2025.

In GEMA's lawsuit aGenAInst OpenAI, the Munich Regional Court ruled that ChatGPT's AI model contains copies of (copyright-protected) song lyrics, that the inclusion of training data in the model constitutes reproduction if it is reproducible, and that the defendant is liable because of its central role in generating outputs containing portions of the artists' lyrics, even if those outputs were created based on users' prompts[108] . The ruling is not yet final, and the dispute remains ongoing.

The court determined that the recognized exception for text and data mining does not apply.

5.4.2 Knechke v. LAION

A lawsuit filed by a photographer aGenAInst the non-profit organization Large-scale Artificial Intelligence Open Network (LAION) for using the photographer's image to train a GPT model was dismissed by the Hamburg State Court[109] . The court determined that the use in question by LAION fell under the exception for text and data mining for scientific research purposes under Article 3 of the European Union Digital Single Market Directive (UrhG §44b).

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[106] **BEIJING INTERNET COURT**, (2018) Jing 0491 Min Chu No. 239, dated April 25, 2019, (Official English Translation), https://www.chinadaily.com.cn/specials/BeijingInternetCourtCivilJudgment(2018)Jing0491MinChuNo.239.pdf, (Accessed January 9, 2026).

[107] **PEOPLE'S REPUBLIC OF CHINA**, Regulations for the Implementation of the Copyright Law of the People's Republic of China, Art. 2, 3. **INTERNATIONAL REVIEW OF INTELLECTUAL PROPERTY AND COMPETITION LAW (IIC)**, "Tencent Dreamwriter," Vol. 51, 2020, pp. 652–659, https://doi.org/10.1007/s40319-020-00944-9, (Accessed 01/09/2026).

[108] **MUNICH I REGIONAL COURT (LG MÜNCHEN I)**, Decision No. 42 O 14139/24 dated November 11, 2025 (GEMA v. OpenAI), IFRRO, https://ifrro.org/resources/documents/General/German_Court_OpenAI_Memory_Output_Infringe_Copyright_NOV25.pdf, (Accessed 12/25/2025).

[109] **NAMLI,** Deniz Ecem, "Translation of the Hamburg Court's Kneschke v. Laion (Decision No. 310 O 227/23 dated September 27, 2024)," Intellectual Property Yearbook 2024, Edited by Tekin Memiş, Vol. 14, Yetkin Publications, Ankara, 2025, pp. 37–76; **WORLD INTELLECTUAL PROPERTY ORGANIZATION (WIPO)**, WIPO IP Judges Forum Informal Case Summary – Hamburg Regional Court, Germany [2024]: Robert Kneschke v. LAION e.V., Case No. 310 O 227/23, 2024, https://www.wipo.int/wipolex/en/text/592042, (Accessed 01/09/2026).

The decision was upheld by the Hamburg Higher Regional Court on December 10, 2025[110] . The appellate court ruled that since the “prohibition on use in education” stated in plain language at was not provided in a machine-readable format for the photograph in question on the website, the prohibition could not prevent the use[111] .

5.5 The Big Three v. Suno, Udio

Warner Music Group (WMG), Universal Music Group (UMG), and Sony Music Entertainment (SME)—collectively known as the “Big Three” in the music and entertainment industry—engaged in legal disputes and negotiation processes with prominent GPT-4 providers (e.g., Suno, Udio) in the music production sector throughout 2024 and 2025.

On December 2, 2025, WMG announced that it had reached a settlement with Suno. As part of this agreement, Suno’s platform will be transformed to include new features that allow it to train GPT models using licensed content from WMG and enable the use of the voices, compositions, and likenesses of artists who have granted permission[112] . WMG has also withdrawn its copyright lawsuit aGenAInst Suno.

Suno’s competitor, Udio, has also announced that it has reached licensing agreements with UMG and WMG, resolving its copyright disputes, and that Udio will launch a new platform in partnership with UMG[113] .

A UAI company named KLAY has announced that it has entered into licensing agreements with the Big Three and other record labels. KLAY claims that the “broad music model” underlying its platform—which has not yet been launched—is entirely trained on licensed works[114] .

5.6 Koda v. Suno

The Danish music rights organization Koda announced on November 4, 2025, that it had filed a copyright infringement lawsuit aGenAInst Suno in the Copenhagen City Court[115] . Koda

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[110] **FILIKHINA**, Ekaterina / **ELSASS**, Lennart, “Robert Kneschke v. LAION: Judgment of December 10, 2025 (Ref.: 5 U 104/24)”, DLA Piper Technology’s Legal Edge, December 22, 2025, https://www.technologyslegaledge.com/2025/12/robert-kneschke-v-laion-judgment-of-10-december-2025-ref-5-u-104-24/, (Accessed 01/09/2026).

[111] For the view that the TDM exception covers only acts of use and reproduction, and therefore the act of making such datasets publicly available after training AI models with them does not fall within this exception, see **ROSATI**, Eleonora, “Is Text and Data Mining Synonymous with AI Training?”, *Journal of Intellectual Property Law & Practice*, Vol. 19, No. 12, 2024, pp. 851-852, https://doi.org/10.1093/jiplp/jpae114, (Accessed March 10, 2026).

[112] **WARNER MUSIC GROUP (WMG)**, “Warner Music Group and Suno Forge Groundbreaking Partnership,” November 25, 2025, https://www.wmg.com/news/warner-music-group-and-suno-forge-groundbreaking-partnership, (Accessed January 9, 2025).

[113] … (Accessed January 9, 2025)

[114] **WARNER MUSIC GROUP (WMG)**, (Accessed January 9, 2025).

[115] **KODA**, “KODA Sues U.S. Tech Company Suno for Stealing Danish Artists’ Music”, November 4, 2025, https://koda.dk/en/about-koda/news/koda-sues-us-tech-company-suno-for-stealing-danish-artists-music, (Accessed March 10, 2026).

alleges that works owned by its members were used without permission or compensation to train the model and appear verbatim in the outputs.

6 ARTIFICIAL INTELLIGENCE SYSTEMS IN THE CONTEXT OF COMPETITION LAW

The development of artificial intelligence technologies has also led to a significant transformation in competition law debates. In the past, competition discussions centered on big data and algorithms focused primarily on identifying competition violations and, in particular, on issues such as algorithmic pricing, data concentration, or platform dominance. However, with the emergence of generative AI systems today, the scope of the debate has expanded, and the issue of access to the fundamental inputs of the AI ecosystem has come to the forefront from a competition law perspective. In this context, not only the impact of algorithms on market behavior but also access to the data sources and technological infrastructure used in AI development processes has become a key determinant of competition.

This transformation is particularly significant in terms of the quality and scope of the datasets used to train AI models. Generative AI models are largely trained on high-volume, high-quality datasets. A significant portion of these datasets consists of copyrighted works such as musical compositions, lyrics, scores, recordings, and other creative content. Consequently, musical compositions and other creative content are not merely the result of cultural production but also serve as a critical data input for the development of artificial intelligence technologies.

This point is also explicitly emphasized in the report titled "Artificial Intelligence, Data and Competition," published by the Organisation for Economic Co-operation and Development (OECD) in 2024. The report notes that access to inputs such as data, computational capacity, and skilled human resources plays a critical role in determining the competitive dynamics within the AI ecosystem. In particular, it is stated that if access to high-quality datasets is limited or concentrated under the control of certain actors, competition in AI markets may weaken and entry barriers may rise.

In this context, the issue of using copyright-protected works in the training of AI systems emerges as a matter that must be evaluated not only from the perspective of intellectual property law but also from the perspective of competition law. Indeed, the systematic use of works produced by the creative sectors in AI development processes demonstrates that such content has effectively become one of the fundamental inputs of the AI value chain. The unauthorized and uncompensated use of these inputs, however, carries the potential to both infringe upon the economic rights of copyright holders and undermine the sustainability of creative content production.

For this reason, the development of licensing mechanisms is increasingly being discussed in cases where AI systems use copyright-protected works as training data. Models that provide for the payment of licensing fees to copyright holders can, on the one hand, support the economic sustainability of creative sectors, while on the other hand, establish legal and transparent frameworks for AI developers' access to critical data sources. This approach can

be viewed as a solution that strikes a balance between allowing completely unrestricted data access and completely blocking it.

At this point, it is important to consider policy tools in a combined manner, encompassing both preventive (ex ante) and ex post intervention measures. Under ex ante tools, transparency obligations regarding AI training data, data licensing models, and collective licensing mechanisms may come to the fore. Under ex post tools, investigations by competition authorities regarding data access, market power, and potential competition violations are of particular importance. Such an approach could contribute both to the protection of rights holders' rights and to ensuring fair and sustainable competition conditions within the AI ecosystem.

Therefore, the discussion of licensing models regarding the use of copyright-protected works as training data in the face of the development of AI technologies is an issue that must be evaluated not only within the context of intellectual property law but also from a competition policy perspective. Such a framework could contribute to the balanced and sustainable regulation of the relationship between the creative sectors and AI developers[116] .

7 PRACTICES OF MUSIC TRADE UNIONS

7.1 In General

While the practices of Collective Management Organizations operating in various countries on the international stage vary in their approach to content produced by AI, it is known that the world's leading Collective Management Organizations have begun the registration processes for works created with AI support.

In this context, major music industry associations such as BMI (U.S.), ASCAP (U.S.), PRS for Music (UK), GEMA (Germany), SACEM (France), KODA (Denmark), TONO (Norway), ZAIKS (Poland), TEOSTO (Finland), STIM (Sweden), SOCAN (Canada), and BUMA Stemra (Netherlands) have begun registering works produced using AI as of 2025.

However, these practices by the organizations do not mean that works "entirely" produced by artificial intelligence are directly registered in their databases. The organizations require the copyright holder to declare that the work was created by a human—in other words, that it was produced with "human creativity and touch"—for copyright to arise. Most Collective Management Organizations accept that there must be a reasonable and honest belief that the work to be registered meets the definition of an original musical work.

Therefore, the presence of "human contribution" is significant when the copyright holder applies to register the work. At this stage, the distinction between AI-assisted content and AI-generated content comes into play, and works entirely produced by AI are considered

[116] **ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD)**, "Artificial Intelligence, Data and Competition," OECD Artificial Intelligence Papers, No. 18, May 24, 2024, https://doi.org/10.1787/e7e88884-en, (Accessed March 10, 2026).

separately from those produced with AI assistance. Works in which a human has contributed as a creator may be subject to traditional registration and filing processes; in contrast, since there is no human contribution in content entirely produced by AI, ownership is not recognized, and therefore registration is not permitted.

It is undeniable that content produced with AI requires a different approach from traditional works in terms of copyright collection and distribution processes by Collective Management Organizations. For this reason, the priority of many Collective Management Organizations is to understand the nature of the AI contribution, confirm the presence of human contribution, and regulate the flow of royalties accordingly.

The lack of minimum standards for the activities of Collective Management Organizations across the European Union (EU) and the differences in national legislation among member states have created certain legal and economic barriers, particularly in cross-border licensing and rights management processes, such as monopolization, transparency issues, and competition violations[117] . The need to establish a uniform legal framework across the Union materialized with the adoption of Directive 2014/26/EU, following extensive efforts led by the European Commission. While the Directive aims to institutionalize the principles of efficiency, effectiveness, transparency, and accountability in the administrative and financial processes of Collective Management Organizations, it also imposes an obligation on member states to establish an effective, proportionate, and deterrent public oversight mechanism aGenAInst unlawful practices. Accordingly, association executives are required to avoid conflicts of interest; Collective Management Organizations are legally required to transparently share their bylaws, current licensing fees, and distribution guidelines with the public, as well as to publish annual reports that have undergone independent audit. This comprehensive regulation, which facilitates multi-territorial licensing within the internal market and encourages alternative dispute resolution methods, has been integrated into the domestic laws of all member states as of 2017. Thus, a modern collective rights management practice has been established across the EU, based on a standardized and strictly regulated system that safeguards the rights of both rights holders and users.

7.2 CISAC ( )

While CISAC views artificial intelligence as one of the most significant revolutions for the creative sector, it maintains that, as a matter of principle, this technology should not replace human creativity but rather serve it. It emphasizes that AI companies are achieving “parasitic” growth in their revenues by using copyrighted works without permission, which could lead to a transfer of value at the expense of rights holders. Consequently, it argues that all AI regulations must be based on the principles of **Authorization, Remuneration, and Transparency**.

[117] **SEMİZ**, Özgür, Collective Management of Copyright and Related Rights and Dimensions of Public Oversight, Ankara, Seçkin Publishing, 2021, pp. 198–210.

There is strong opposition to expanding the current "Text and Data Mining" (TDM) exceptions adopted by the European Union and various countries, particularly for commercial generative AI models; it is emphasized that "opt-out" mechanisms are impractical for artists and provide free data to AI companies.

The primary objective set by CISAC is to prevent AI platforms from being trained on human-created works and then producing content that competes with these works, thereby devaluing the market.

In this context, within the scope of CISAC's non-binding proposal regarding the registration of works generated by artificial intelligence, recommended practices for Collective Management Organizations regarding works produced by AI have been established. The main points of these recommended practices are as follows:

- It is stated that AI developers' disclosure of the data used for training is a prerequisite for the establishment of a licensing market.
- Works produced entirely by AI should not be registered in repertoires because they fall outside the scope of existing copyright protection.
- On the other hand, it is noted that works containing even minimal human contribution may be registered; however, Collective Management Organizations are not required to examine whether the work is entirely an AI-generated output at this stage, and the responsibility for registration lies with the registering member.
- It is recommended to use specific identifiers (IPI numbers) for works containing AI components and to distinguish between "human, hybrid (AI-assisted), or synthetic (AI-generated)" during registration.
- To prevent revenue loss for copyright holders, it has been proposed that all AI-generated works be subject to existing tariffs under the assumption that they involve human contribution, or that a new "remuneration right" be introduced.

In addition, there are several licensing models supported by CISAC for AI services and outputs. The models developed by the GEMA and STIM Collective Management Organizations, which stand out among these, will be explained in detail below.

7.3 GEMA (Germany)

The German music industry association **GEMA**, in addition to pursuing legal proceedings aGenAInst platforms like Suno and OpenAI to protect copyrights, has established the world's first licensing model for AI providers, emphasizing that it should receive not just a one-time but an ongoing share of the economic value created by AI.

On October 17, 2024, GEMA announced the details of its "Two-Component Licensing Model"[118] . The model covers the use of copyright-protected musical works by AI service

[118] **GEMA**, "Two components - one goal: Music creators shall receive fair shares through effective AI licensing", October 17, 2024, https://www.gema.de/en/w/generative-ai-licensing-model, (Accessed March 10, 2026).

providers for training AI models, as well as the commercial presentation or use of the musical content generated after training.

- **First Component: Licensing of AI Service Providers (Input/Training Phase).** The first component of the GEMA model aims to allow the use of copyrighted musical works as **"input"** for training AI models. Accordingly, the format used in training is not restricted; it covers the use of copyrighted musical works by AI service providers in both pre-training and fine-tuning processes. In this regard, it is stipulated that 30% of all net revenue generated by AI service providers (e.g., revenue from subscription fees) shall be paid to the rights holders of the works used in training; in cases where no net revenue is generated or the revenue is very low or nonexistent, a minimum royalty fee calculated based on the number of outputs produced shall be paid. This licensing will apply to all AI service providers offering their outputs in the German market, regardless of where the education takes place, as recent scientific findings indicate that educational data remains stored in the memory of trained models.

- **Second Component: Subsequent Use of Content Generated by AI (Output Phase).** This component covers the commercial reuse and monetization of **"output"**—such as the publication of AI-generated music on digital platforms or its use as background music in businesses (stores, restaurants, etc.)—in the form of **"output."** Thus, the aim is to ensure that third parties using AI music services and seeking to monetize the resulting musical outputs comply with copyright laws, while also preventing the infringement of original copyright holders' rights, thereby establishing a balance of interests. In the developed model, it is envisaged that the royalty amounts paid for music works generated by AI and those produced by humans will be set at equivalent levels, thereby harmonizing the regulatory framework applied to both types of music works.

GEMA's AI-generated music licensing model has not yet been widely implemented. However, as a first step toward separating AI-generated music from other musical works under the current system, members are now required to check a box on the online work registration form declaring that their works were not created by artificial intelligence[119] .

7.4 Nordic Music Collecting Societies (STIM, TEOSTO, KODA, TONO, and STEF)

The Swedish music industry association STIM, the Finnish music industry association TEOSTO, the Danish music industry association KODA, the Norwegian music industry association TONO, and the Icelandic music industry association STEF have come together to develop a comprehensive and experimental licensing framework aimed at building a sustainable creative economy that encompasses the entire AI value chain.

Similar to the GEMA model, the Nordic model also emphasizes that licensing must cover every commercial value-generating stage of the AI process. Accordingly, licensing covers the use of

[119] **GEMA**, "Works & repertoire," https://www.gema.de/en/help/creators/works-repertoire, (Accessed March 10, 2026).

copyrighted music for data collection and dataset creation, the stage of making AI tools accessible to individual or corporate users as a service, and the subsequent commercial use of content (output) generated by AI systems.

Additionally, it proposes a hybrid payment model to ensure fair compensation for rights holders: a fixed fee is charged for each training session or data processing process; a continuous percentage share is taken from the AI service's total user-generated revenue; and rights holders are also intended to receive a share of the economic value created by content that is not subject to copyright (entirely AI-generated).

In registration processes, a clear distinction is made between "AI-assisted" and "AI-generated" content; while no copyright protection is granted for content entirely created by AI, special identification numbers (IPI) are used for technical management:

- **TONO OU** (IPI: 1246878315)
- **Teosto AI** (IPI: 1244889810)
- **AI Koda** (IPI: 1210554306)

The most innovative component of this model is a pilot program aimed at tracking which original works were used and to what extent in the creation of a specific AI-generated output—a concept that can be summarized as "third-party attribution technologies."

Sweden-based STIM, through its pilot project[120] announced on September 9, 2025, is currently collaborating with Songfox, a Sweden-based voice-to-text service startup, and the initiative covers only a limited number of works from rights holders who have provided prior consent. The following conditions have been established for granting the license to other AI providers:

- Ownership of the produced music product must be clearly defined in the terms of use;
- The permitted uses of the outputs must be clearly defined;
- To determine which original works the music products licensed under this agreement were trained on, the output must be analyzed using Sureel's music attribution/tracking technology, and the results of this analysis must be communicated to STIM;
- Fees generated from the use of the produced music by third parties or from revenue-generating activities must be collected, and appropriate royalty payments must be made (there is no sublicensing for use in large-scale advertising campaigns, television, film, or radio; separate agreement processes will apply);
- The outputs must be clearly classified as AI-generated and should not receive a share of the existing royalty revenue pool.

There are currently no separate developments regarding STIM's licensing project available from open sources.

[120] **STIM**, "STIM Launches the World's First AI License for Music," September 8, 2025, https://www.stim.se/en/news/stim-launches-the-worlds-first-ai-license-for-music, (Accessed March 10, 2026).

7.5 PRS for Music (United Kingdom)

According to the stated principles, only "AI-Assisted" works—where human creativity is predominant—are permitted for registration; works entirely generated by AI (AI-Generated) are not permitted for registration. In hybrid works, disclosure of the AI component is mandatory . Additionally, it is noted that AI-based data analysis tools and mechanisms have been developed to detect irregularities in the registration process and excessive numbers of applications[121] .

7.6 BumaStemra (Netherlands)

While allowing the standard registration of AI-supported works, it requires that if only a portion of a work (lyrics or composition) is AI-generated, those sections must be registered with a separate IPO number and labeled **"AI BUMASTEMRA"** (IPI: 01252737944), similar to the practice in Nordic countries.

Additionally, it offers the MyMusicSafe platform, where member rights holders can document their creative processes (including prompts), and is conducting pilot verification projects to determine whether recordings were created using AI[122] .

8 PROTECTION OF AI OUTPUTS AS ALGORITHMIC WORKS UNDER UNFAIR COMPETITION LAW

Under this heading, we will examine whether AI-generated works can be considered algorithmic products rather than traditional works, and whether they can be protected under unfair competition principles.

8.1 Background of the Issue and the Economic Value Chain

The creation of a musical work is the product of a multi-layered and collective labor process rather than a singular moment of creation. The artistic creativity of the songwriter and composer is shaped by conservatory education, knowledge of music theory, and aesthetic experience; this initial creative core is then transformed into a concrete musical work through the contributions of performing artists and musicians. Added to this process are producers' financial investments, organizational efforts, and assumption of risk; while radio, television, and digital media broadcasters contribute through activities related to the distribution, marketing, and dissemination of the work to the public.

[121] **PRS FOR MUSIC**, "AI and music copyright", https://www.prsformusic.com/works/how-copyright-works/ai-and-music-copyright, (Accessed March 10, 2026); **PRS FOR MUSIC**, "PRS for Music and Artificial Intelligence Policy", 2024, https://www.prsformusic.com/-/media/files/prs-for-music/works/prs-for-music-and-artificial-intelligence-policy.pdf, (Accessed March 10, 2026).
[122] **BUMASTEMRA**, "AI and registering your work", https://bumastemra.nl/en/ai-registered-work/, (Accessed March 10, 2026); **BUMASTEMRA**, "MyMusicSafe", https://bumastemra.nl/en/mymusicsafe/, (Accessed March 10, 2026).

In this context, the musical work matures within a "tiered value chain" (tiered system); it reaches the listener through mechanical media such as CDs, as well as concerts, broadcasts, and digital platforms, ultimately forming a market with economic value. Each stage generates independent added value, and these added values are protected by intellectual property law and the regime of related rights.

8.2 Generative Artificial Intelligence and Legal Loopholes

Generative AI systems often incorporate works resulting from this lengthy and costly value chain into their datasets without consent, licensing, or payment, and convert them into algorithmic outputs obtained with a single click. The fundamental legal issue arising here is the inadequacy of current legislation regarding AI outputs.

As detailed above, under the Copyright Law, copyright ownership is contingent upon the condition of originality based on human creativity. Therefore, under the current legal framework, it is not possible for artificial intelligence itself to be the copyright holder. Outputs generated by AI are generally not recognized as works. However, these outputs possess economic value, are used commercially, and are becoming capable of replacing works based on human labor in the market. Moreover, due to the "black box" nature of algorithms, trade secret protection, and the practical impossibility of reverse engineering (as is the case with ranking and production algorithms used on major platforms), it is impossible to determine to what extent specific works are being utilized. This situation effectively results in free-riding.

8.3 Legal Classification: Unfair Competition

Although AI-generated outputs are not currently protected as works under the Copyright Law, these outputs draw upon the creative and economic labor of others accumulated over many years, compete in the market with works produced through such labor, yet do not bear the costs of that labor.

This scenario aligns with the concepts of parasitic competition and unfair competition under the Turkish Commercial Code. For what is at issue here is the extraction of benefit without any compensation from a market and value created through another's labor and investment[123] .

Therefore, while the outputs of the GENAI may not be classified as "works" in every instance, they can be characterized as "works of art" and protected under the provisions of unfair competition law[124] .

8.4 Cumulative Protection and the Role of Collective Management Organizations

The proposed system envisions a cumulative structure between copyright protection and unfair competition protection. Accordingly, creations possessing the qualities of a work are protected

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[123] **PEKDİNÇER**, Remzi Tamer, *Expert Reports and Opinions on Unfair Competition and Trademark Law - II*, Ankara, Seçkin Publishing, 2019, pp. 296–298.
[124] **ATEŞ,** Artificial Intelligence Outputs, p. 21.

under the Copyright Law, while AI outputs lacking such qualities can be addressed under the unfair competition regime due to their nature as products of labor. At this point, the empowerment of Collective Management Organizations is of great importance. Since it is practically impossible for individual rights holders to monitor algorithmic processes and datasets one by one, Collective Management Organizations are the institutional structures capable of filling this gap through their sector-specific expertise, representational capacity, and experience in collective rights enforcement.

8.5 Proposed Legislative Amendment

In this context, a legislative amendment could be proposed to authorize Collective Management Organizations to monitor outputs that do not qualify as works but are based on economic and creative labor. For example, provisions could be added to the Copyright Law (FSEK) or the Turkish Commercial Code (TTK)—specifically to Article 55 of the TTK, which addresses unfair competition—to explicitly state that AI outputs, as products of labor, can be protected under collective rights management within the scope of unfair competition. Additionally, Collective Management Organizations could be granted the authority to file lawsuits aGenAInst AI applications that exploit their members' collective labor, request an injunction, and conduct licensing negotiations aGenAInst AI applications that draw on their members' collective labor, and ensuring that transparency and data usage obligations are regulated for large-scale AI service providers.

9 EXPANDED COLLECTIVE LICENSING (ECL) AS A POSSIBLE SOLUTION PROPOSAL

The impact of rights management carried out through Collective Management Organizations on the rights holders' authorities is generally examined under three main headings[125] : voluntary collective rights management, extended collective rights management, and mandatory collective rights management.

In a voluntary collective rights management system, the management of rights is fundamentally dependent on the rights holder's discretion. Within this framework, individuals cannot be compelled to join a Collective Management Organization; similarly, rights holders are not required to grant licenses for the use of their works through Collective Management Organizations. Likewise, there is no obligation for users to obtain licenses from Collective Management Organizations.

In contrast, in the extended collective rights management system, Collective Management Organizations, as a rule, can manage rights not only on behalf of their members but also on behalf of rights holders who are not members. However, rights holders who do not wish to

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[125] **OKUTAN NİLSSON**, Gül / **TOSUN**, Yalçın, **ÇATAKLAR**, Eda, Collective Rights Management in the Audiovisual Sector: Comparative Law and Recommendations for Turkey, Istanbul 2014, On İki Levha, pp. 117–118, (Citation format: **"OKUTAN NİLSSON / TOSUN / ÇATAKLAR**, Collective Rights Management").

participate in the system are granted an "opt-out" option, allowing them to remain outside the system and manage their rights individually. In this regard, the expanded collective rights management system is considered a hybrid structure that incorporates elements of both voluntary and mandatory collective rights management.

Mandatory collective rights management, on the other hand, refers to a system that requires rights holders to exercise certain rights exclusively through Collective Management Organizations and within the framework of established procedures. In this model, rights holders are not permitted to remain outside the system and exercise their rights individually, a structure that significantly limits the rights holders' discretion over their rights.

With the widespread adoption of AI technologies, the music industry has reached one of the most critical crossroads in the history of copyright. The massive datasets used to train artificial intelligence systems incorporate millions of copyrighted musical works, arrangements, and song lyrics into the system without obtaining permission from rights holders; this process is being attempted to be legitimized under the guise of "data mining." However, the scale and speed of this technological activity are rendering traditional individual licensing methods granted to Collective Management Organizations ineffective and leaving the economic rights of rights holders facing serious erosion.

At this point, to ensure compliance with copyright laws during the training of AI models, the "Extended Collective Licensing" (ECL) regime[126] is proposed as a central solution.

Extended Collective Licensing is a collective rights management regime based on the principle of expanding a Collective Management Organization's authority to grant collective licenses—which is normally limited to its own members—to include rights holders who are not members of that association or have not granted authorization, through a legal mechanism[127] . Under this system, if a Collective Management Organization represents the "qualified majority" of rights holders in a specific sector for a particular area of use, it GenAIns the right to act as a central licensor on behalf of the entire repertoire through a special authorization granted by the state[128] . Consequently, rights holders in the relevant class are subject by law (ex lege) to the legal

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[126] **WORLD INTELLECTUAL PROPERTY ORGANIZATION (WIPO)**, *WIPO Good Practice Toolkit for Collective Management Organizations*, Geneva, 2021, pp. 16–17, https://www.wipo.int/publications/en/details.jsp?id=4561, (Accessed 01/09/2026); **U.S. Copyright Office (USCO)**, *Copyright and Artificial Intelligence, Part 3: Generative AI Training Report (Pre-Publication Version)*, 2025, p. 99, https://www.copyright.gov/ai/Copyright-and-Artificial-Intelligence-Part-3-Generative-AI-Training-Report-Pre-Publication-Version.pdf, (Accessed 01/09/2026).

[127] **MINISTRY OF EDUCATION AND CULTURE, FINLAND**, "Extended collective licensing", https://okm.fi/en/extended-collective-licensing, (Accessed January 11, 2026). **ERÇAL**, Hilal, *Extended Collective Licensing*, Unpublished Doctoral Thesis, Ankara Yıldırım Beyazıt University Institute of Social Sciences, Ankara, 2024, p. 185. **GUIBAULT**, Lucie, "Extended Collective Licensing as a Rights Clearance Mechanism for Online Music Streaming Services in Canada," *Canadian Journal of Law and Technology*, Vol. 18, No. 2, 2020, p. 233.

[128] **ERÇAL**, p. 185. **WIKIPEDIA CONTRIBUTORS**, "Extended collective licensing," *Wikipedia, The Free Encyclopedia*, September 12, 2024 (Version No. 1245395674), https://en.wikipedia.org/w/index.php?title=Extended_collective_licensing&oldid=1245395674, (Last accessed March 10, 2026).

consequences of the concluded licensing agreement unless they explicitly declare their intention to opt out of the system[129] .

The GTL system first emerged in Denmark in the 1960s. During this period, the rapid spread of mass media such as radio and television broadcasting created a need for broadcasters to use thousands of works within seconds; the difficulties and transaction costs associated with negotiating individually with each rights holder brought the system to a standstill, Consequently, lawmakers in other Scandinavian countries—including Sweden, Finland, and Norway, led by Denmark—developed the GTL model to ensure a legal framework and legal certainty for access to works for all users, particularly broadcasters, and to prevent all rights holders—whether or not they were members of a Collective Management Organization—from being deprived of their royalties[130] .

Today, GTL has evolved into an advanced collective rights management tool used not only in radio and television broadcasting but also in various other fields; for example, in Norway, the mass digitization and online accessibility of works in the national library's collection are based on this legal authority, which is exercised by Collective Management Organizations representing rights holders and extends to non-members as well[131] .

There is no consensus in the literature regarding whether fair use falls under limitations and exceptions, or whether it should be subject to the three-step test if it does[132] .

In the European Union (EU) acquis, this model was anticipated to be adopted by all member states, thereby transforming the system into a general legal norm across continental Europe. Indeed, Article 12 of the Digital Single Market Copyright Directive (DSM Directive), dated April 17, 2019, and numbered 2019/790, has established this as a positive legal norm and granted member states the option to recognize this authority for Collective Management Organizations with significant representational power, subject to certain transparency measures[133] . Under this provision, three methods have been established for expanded collective licensing: the first involves expanding the scope to include rights holders not

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[129] **EUROPEAN PARLIAMENT AND COUNCIL**, Directive (EU) 2019/790 on Copyright and Related Rights in the Digital Single Market (DSM Directive), Official Journal of the European Union, L 130, 2019, Art. 12, http://data.europa.eu/eli/dir/2019/790/oj, (Accessed 01/09/2026).

[130] **MINISTRY OF CULTURE, DENMARK**, Copyright Act of 2014 (Consolidated Text), Act No. 1144, 2014, Art. 50–52, https://english.kum.dk/fileadmin/KUM/Documents/Kulturpolitik/Ophavsret/Act_on_Copyright_2014__Lovbekendtgoerelse_nr.1144__2014.pdf, (Accessed 01/09/2026). **AXHAMN**, p. 534. **RAUER**, Nils / **BIBI**, Alexander, "Extended Collective Licensing in the DSM Directive – An Opportunity to Make Art. 17 DSM Directive Work?", *GRUR International*, Vol. 71, No. 2, 2022, p. 114. **FICSOR**, Mihaly, *Collective Management of Copyright and Related Rights*, 3rd ed., Geneva 2022, WIPO, p. 108.

[131] **KINGDOM OF NORWAY**, Copyright Act (*Åndsverkloven*), LOV-2018-06-15-40, 2018, § 63, https://lovdata.no/dokument/NL/lov/2018-06-15-40, (Accessed Jan. 9, 2026).

[132] **ERÇAL**, p. 51 ff.; **RAUER / BIBI**, p. 115; **RIIS**, Thomas / **SCHOVSBO**, Jens, "Extended Collective Licenses and the Nordic Experience — It's a Hybrid but is it a VOLVO or a Lemon?", *Columbia Journal of Law & the Arts*, Vol. 33, No. 4, 2010, p. 14 ff. There would be no benefit in subjecting a GTL possessing the elements specified in the remainder of this study to a three-step test as well (**GEIGER**, Christophe / **SCHÖNHERR**, Franciska / **JÜTTE**, Bernd Justin, "Efficient and Balanced European Copyright for the Digital Single Market: Between Old Paradigms and Digital Challenges," 2017, pp. 35–36).

[133] DSM Directive, Art. 12(1). **AKIN**, p. 132.

represented by a licensing agreement; the second involves granting a Collective Management Organization the legal authority to represent rights holders; and the third involves expanding this authority based on a legal presumption. This regulation aims to provide legal certainty, particularly in situations where obtaining individual permissions from rights holders is impractical or excessively burdensome due to the difficulties and costs involved[134] .

In addition to the European Union, the ECL regime is also part of the current legislation in the United Kingdom. The United Kingdom established the legal framework for the ECL system by amending the Copyright, Designs and Patents Act 1988 (CDPA) through the Business and Regulatory Reform Act 2013[135] . Based on this legal foundation, the 2014 "Copyright and Related Rights (Extended Collective Licensing) Regulations" established the process and conditions under which a trade association must obtain authorization from the UK Intellectual Property Office (IPO) to license on behalf of rights holders it does not represent[136] .

Our current copyright legislation is structurally inadequate in the face of the processing speed and scope of AI technologies. In a digital ecosystem where billions of data points are processed instantaneously, it is indisputable that individual licensing models are unsustainable. To ensure that technological advancements are grounded in a legal framework without hindering progress, while simultaneously protecting the creative industries, the integration of the Extended Collective Licensing mechanism into the Copyright Law is considered a necessity.

At this point, it is necessary to refer specifically to the decision of the Constitutional Court ("AYM") dated March 24, 2010, Case No. 2007/33 E., Decision No. 2010/48 K. Indeed, the provision in the first sentence of Article 41/12 of the Copyright Law, which states that copyright holders and rights holders who are members of a Collective Management Organization may only demand payments for uses through the Collective Management Organizations they have authorized, was found to violate Articles 13 and 36 of the Constitution, and the word "only" was struck down. At this point, it is debatable whether members of a Collective Management Organization are required to exercise the rights they have authorized the association to manage through the association itself[137] .

Pursuant to Article 5 of the "Regulation on Authorization Certificates to Be Issued to Collective

[134] **EUROPEAN COMMISSION**, *Impact Assessment on the Modernisation of EU Copyright Rules*, SWD(2016) 301 final, 2016, p. 145, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016SC0301, (Accessed 01/09/2026). **TATAR,** Meryem Ebru, "Protection of Rights in Musical Works in the Online Environment," Ankara, Yetkin, 2022, p. 112.
[135] **UNITED KINGDOM**, *Copyright, Designs and Patents Act 1988*, c. 48, § 116 (As amended by the Enterprise and Regulatory Reform Act 2013), https://www.legislation.gov.uk/ukpga/1988/48/section/116, (Accessed 09.01.2026).
[136] **UNITED KINGDOM**, *The Copyright and Rights in Performances (Extended Collective Licensing) Regulations 2014*, SI 2014/2588, Reg. 4 et seq., https://www.legislation.gov.uk/uksi/2014/2588/contents/made, (Last accessed 01/09/2026).
[137] In the doctrine, Okutan Nilsson / Çataklar / Tosun state *that since the authority to file lawsuits has been transferred to the Collective Management Organization along with the transfer of rights, there is no legal benefit in filing individual lawsuits; on the contrary, this is prone to producing negative consequences; and most importantly, in cases where individual rights enforcement is practically extremely difficult, a mandatory rights enforcement system is inevitable;* it is stated that *deeming this system unconstitutional is not appropriate*. See **OKUTAN NİLSSON / TOSUN / ÇATAKLAR**, Collective Rights Management, p. 143.

Management Organizations" (Official Gazette No. 31297), published in the Official Gazette dated November 7, 2020, , the authorization granted to Collective Management Organizations is in the form of a full license, and it is stipulated that Collective Management Organizations have exclusive authority to manage the rights specified in the authorization certificate. Pursuant to the provision, ***"****(1) Rights holders are required to issue an authorization certificate in accordance with the principles of this Regulation and the conditions determined by the Collective Management Organizations in order to become members of a Collective Management Organization. Upon the issuance of the authorization certificate, Collective Management Organizations, which are authorized to exercise the rights covered by the certificate in the form of a full license, have exclusive authority regarding the administration and enforcement of these rights, as well as the collection and distribution of royalty fees."*

However, to ensure the proper functioning of collective rights management and to resolve uncertainties regarding whether Collective Management Organizations can file lawsuits on behalf of rights holders who do not hold a license and have not authorized the association, and whether they possess active standing to sue, the Copyright Law and secondary legislation should include a "broad-based collective licensing" framework that allows for rights enforcement and the filing of lawsuits without requiring a power of attorney, and for Collective Management Organizations to derive their rights enforcement authority directly from the law rather than from a document, offers a practical and legal solution[138] .

Although Article 19 of the 2018 FSEK Amendment Bill (the provision adding Article 42/C to the Law), taking into account the Constitutional Court's grounds for annulment, limited the individual enforcement of rights transferred to Collective Management Organizations for non-commercial uses and, by eliminating the distinction between members and non-members in revenue distribution, established a systematic framework for the application of extended collective licensing under Turkish law—particularly regarding non-member rights holders—the draft has not been enacted into law.

Another provision in the draft text is Article 42/E, titled "Collective Rights Management." While this article does not conceptually define the Extended Collective Licensing (ECL) system, it contains the system's fundamental elements. This is because the article grants rights holders who have not authorized the Collective Management Organization the right to notify the association of their intention to opt out of the system and switch to individual enforcement. Although the draft diverged from the classical ECL model on issues such as the requirement for an authorization certificate and time limitations, it offered the potential to meet the needs of the digital age[139] .

[138] **ERÇAL**, p. 185.
[139] **ERÇAL**, p. 187. In this context, the author assesses that in the integration of the system into Turkish law, the provisions of a "power of attorney agreement" could apply to the relationship between the Collective Management Organization and a rights holder who is not a member, while the provisions of a "statutory license" could apply to the relationship between the user and the rights holder. From the perspective of litigation procedure, it is stated that a legal regulation designating the party who first files the lawsuit as the competent

[140]However, the system's success depends on the establishment of a transparent and accountable management structure and the enactment of comprehensive solutions into law, as in the 2018 Bill. In this context, it is considered that the GTL regime could be incorporated into our legislation by evaluating it based on five key points:

9.1 Definition of ECL and Legal Authority Under the Copyright Law

In accordance with the European Union's Directive 2019/790 (Article 12), a specific article defining the Extended Collective Licensing regime must be added to the Copyright Law. To address the representation issue in the current system, Collective Management Organizations that include the "qualified majority" (broad representation) of rights holders in the relevant work category should be granted the authority to grant licenses on behalf of non-member rights holders as well. This regulation will, on the one hand, ensure legal certainty and inclusivity, while on the other hand, eliminate the issue of a legal counterpart for ODR developers.

9.2 "Qualified Majority (Broad Representation)" and Authorization Criteria

The matter of which Collective Management Organizations will be granted GTL authority must be tied to clear and objective criteria to prevent the formation of monopolistic structures. An association seeking authorization must be required to demonstrate its representational strength in the sector through objective data such as the number of members, the market share of its repertoire, and the intensity of work usage; a fair system must be established by ensuring that all Collective Management Organizations meeting the specified criteria are granted the relevant authority. Furthermore, such authorization should not be granted indefinitely by the Ministry or the relevant Supervisory Authority, but rather for a limited period (maximum 5 years) and subject to regular oversight mechanisms.

9.3 "Opt-out" Mechanism and Technical Standards

To ensure the legal and democratic legitimacy of the GTL system, it is mandatory to grant both rights holders and Collective Management Organizations the right to opt out of the system without providing a reason[141] . However, for this right to be effectively exercisable, digital standards must be codified into law. The use of metadata tags and robots.txt protocols that enable GENAI browsers to automatically apply opt-out preferences must be established as a legal standard. Additionally, Collective Management Organizations must be required to create a central registration portal where rights holders can manage these preferences in a transparent and user-friendly manner.

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party, or an exception specific to these cases in the Code of Civil Procedure (HMK) and the Copyright Law (FSEK), is necessary to prevent the "pending litigation" objection, p. 188.

[140] **ERÇAL**, p. 189.

[141] **GEIGER**, Christophe / **SCHÖNHERR**, Franciska / **JÜTTE**, Bernd Justin, "Limitations to Copyright in the Digital Age, Safeguards for Users' Rights, Creativity, and Authors' Remuneration Interests," *Research Handbook on EU Internet Law*, Andrej Savin / Jan Trzaskowski (eds.), 2nd ed., Edward Elgar, 2022, p. 35, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4212627, (Accessed 10.03.2026).

9.4 Transparency and Data Disclosure Obligations

To ensure the transparency of the licensing market, strict disclosure requirements must be imposed on AI developers. It should be a legal requirement for AI providers to submit sufficiently detailed summaries of the copyrighted content they use to train their models to the relevant Collective Management Organizations. Furthermore, not only the data input but also the production phase must be monitored; the use of "citation" technologies that identify which works AI outputs are derived from should be made mandatory.

9.5 Fair Compensation, Tariff Approval, and Calculation of Economic Loss

The pricing model to be developed for AI must follow a "Two-Column Model" structure, as seen in international examples, covering both the training (input) and production (output) stages. When determining tariffs, the fact that artificial intelligence not only uses copyrighted works but also reduces their market share and substitutes for them must be taken into account; the "market substitution damage" caused by artificial intelligence through the use of copyrighted works must be included in the calculations. In addition to all this, AI licensing tariffs prepared by Collective Management Organizations, as in the current tariff regime, must be determined through a process subject to Ministry approval and the industry's right to object, in order to prevent arbitrariness. Consequently, GTL is not yet a defined mechanism within the FSEK framework. There is no provision in our current legislation granting Collective Management Organizations the authority to license works in a manner that binds rights holders who have not issued authorization certificates to them. Therefore, the collective licensing of AI-generated music products in Turkey will only be possible through the implementation of fundamental structural reforms in the FSEK that grant expanded authority to Collective Management Organizations.

10 TECHNICAL MEASURES THAT CAN BE APPLIED TO PROTECT COPYRIGHTS IN AI-ASSISTED CONTENT PRODUCTION

Article 72 et seq. of the FSEK regulate the legal framework for technological measures aimed at protecting copyrights. Pursuant to these provisions, any technical tool that prevents or restricts access to, reproduction of, or public communication of a work without the author's permission is considered an "effective technological measure." In this context, acts aimed at circumventing, disabling, or bypassing such technological measures without authorization are deemed unlawful in and of themselves.

In this context, robust watermarking, hash-based content identification systems, DRM solutions, and content recognition mechanisms may be considered tools that qualify as technological measures under Article 72 of the Copyright Law. In particular, robust watermarks embedded in digital content play a significant role in proving infringement by enabling the identification of rights ownership in cases of unauthorized reproduction or modification of the work. Similarly, hash-based systems are used to complement technical protection measures by determining whether the integrity of a work has been compromised.

The EU InfoSoc Directive (2001/29/EC) recognizes the protection of technological measures as a fundamental element of copyright law. Article 6 of the Directive[142] prohibits the circumvention of effective technological measures used by rights holders and imposes obligations on member states to ensure the legal protection of such measures. This provision is one of the primary sources of inspiration for Article 72 of the Turkish Copyright Law (FSEK) , and the concept of technological measures in Turkish law largely parallels EU regulations.

The DSM Directive (2019/790/EU)[143] has further reinforced the importance of technical measures by specifically increasing the liability of online content-sharing platforms. Pursuant to Article 17 of the Directive, platforms are expected to implement "appropriate and proportionate technical measures," such as content recognition and filtering systems, to prevent copyright infringements. Thus, it holds online content-sharing platforms directly responsible for preventing copyright infringements; in this context, it effectively mandates the implementation of appropriate and proportionate technical measures such as content recognition, matching, and filtering. Although the Directive does not explicitly name these technical measures, it establishes a normative framework requiring platforms to use such technologies within the scope of their "best efforts" obligation.

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[142] **EUROPEAN PARLIAMENT AND COUNCIL**, Directive 2001/29/EC on the Harmonization of Certain Aspects of Copyright and Related Rights in the Information Society (InfoSoc Directive), Official Journal of the European Union, L 167, June 22, 2001, https://eur-lex.europa.eu/eli/dir/2001/29/2019-06-06, (Last accessed 10.03.2026) - **Directive 2001/29/EC** *Article 6 – Obligations as to technological measures*
Article 6(1) Member States shall provide adequate legal protection aGenAInst any circumvention of effective technological measures where the person concerned acts with the knowledge, or ought reasonably to have known, that such circumvention is intended.
Article 6(2) Member States shall provide adequate legal protection aGenAInst the following acts:
a) the introduction, marketing, or adaptation of effective technological measures for the primary purpose of circumventing such measures;
b) having a limited commercial purpose or use other than the circumvention of effective technological measures;
c) the manufacture, import, distribution, sale, rental, advertising, or commercial possession of devices, products, or components, or the provision of such services, that are primarily designed, produced, adapted, or implemented
the manufacture, import, distribution, sale, rental, advertising, or commercial possession of such devices, products, or components, as well as the provision of such services.
Article 6(3) For the purposes of this Directive, "technological measures" means any technology, device, or component designed to prevent or restrict acts, in the normal course of their operation, that are not authorized by the right holder in respect of works or other protected subject matter.
Technological measures are considered effective if they achieve the protection objective through access control or a protection process (such as encryption, scrambling, or other transformation of the work) or through a copy control mechanism.
Article 6(4) The exceptions and limitations provided for in Article 5(2)(a), 5(2)(c), 5(2)(d), 5(2)(e), 5(3)(a), 5(3)(b), or 5(3)(e) of this Directive, Member States shall take appropriate measures to ensure that such persons can actually benefit from the relevant exception or limitation, unless rightholders have taken voluntary measures to that effect. This paragraph shall not apply to works or protected subject matter subject to optional licensing conditions.

[143] **EUROPEAN PARLIAMENT AND COUNCIL**, Directive (EU) 2019/790 on Copyright and Related Rights in the Digital Single Market (DSM Directive), Official Journal of the European Union, L 130, May 17, 2019, https://eur-lex.europa.eu/eli/dir/2019/790/oj, (Accessed March 10, 2026).

There are multi-layered technical measures developed to prevent the unauthorized use of digital content and copyright infringements. These techniques provide mechanisms to both control access and verify the integrity and ownership of content.

10.1 Digital Rights Management (DRM)

DRM systems are technical protocols designed to restrict access to and usage rights of digital content, operating in accordance with the licensing terms granted by the copyright holder. DRM solutions ensure that content is used only by authorized users through methods such as encryption, license verification, usage time limits, and platform-based restrictions. These systems are recognized as a fundamental tool in preventing copyright infringement and have been extensively studied in both academic and industrial literature[144] .

10.2 Digital Watermarking

Digital watermarking is a data hiding method that embeds copyright information into content in either visible or invisible forms. A watermark can be designed to remain detectable even after changes are made to the content; this plays a significant role in helping the copyright holder prove ownership. Different types of watermarking techniques (e.g., robust, fragile, semi-fragile) can be used to both protect the content and detect whether it has been altered[145] .

Additionally, as a technical example in this field, watermarking algorithms integrated with cryptographic techniques have been developed; for instance, it is noted that cryptographically enhanced watermarking approaches provide higher reliability[146] .

10.3 Perceptual Hash and Hash-Based Identification Systems

Hash-based content identification systems generate unique hashes derived from the structure of the content to protect the authenticity and integrity of digital files. These hashes ensure that even the smallest changes in the content can be detected. Perceptual hash-based digital fingerprinting systems for multi-modal content such as images, audio, or text enable the unique identification of content and the control of its reuse[147] .

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[144] **HAN**, Lu / **LIU**, Mohong, "Digital Rights Management (DRM) technologies and legal research: Applications and regulations of encryption, digital watermarking, and copyright protection systems", *Applied and Computational Engineering*, Vol. 82, November 8, 2024, pp. 106–111, https://doi.org/10.54254/2755-2721/82/20240957, (Accessed 10.03.2026).

[145] **WIKIPEDIA CONTRIBUTORS**, "Digital watermarking," *Wikipedia, The Free Encyclopedia*, https://en.wikipedia.org/wiki/Digital_watermarking, (Accessed March 10, 2026).

[146] **SINGH**, Amandeep / **KUMAR**, Munish / **SINGH**, Rajesh Kumar, "A Survey on Digital Image Watermarking Techniques for Copyright Protection", *Applied Sciences*, Vol. 12, No. 17, August 31, 2022, 8724, https://doi.org/10.3390/app12178724, (Accessed March 10, 2026).

[147] **QU**, Yidong / **WU**, Zhentao / **CHEN**, Bin / **YI**, Di / **LI**, Shu-Tao, "Invisible Watermarking for Generative AI: A Survey and Taxonomy", August 26, 2024, https://arxiv.org/abs/2408.14155, (Accessed March 10, 2026).

These methods not only ensure the preservation of technical integrity but also support content tracking and the monitoring of copyright ownership; for example, when integrated with blockchain, both hash and watermark information can be stored in an immutable manner[148] .

10.4 Digital Fingerprinting

Fingerprinting is based on storing unique identifier "fingerprint" data derived from content in a reference database and comparing online content aGenAInst this data. Fingerprinting systems can identify content with high accuracy even across different versions or recoded content; this technique is widely used for copyright control, particularly for media types such as video and audio[149] .

10.5 Protection at the Model and Data Levels (AI-Specific)

In the context of AI applications and model training processes, model watermarking and data protection techniques have been developed. These techniques ensure the traceability of model outputs for copyright purposes through identification information directly embedded in the training data, while also enabling the verification of model ownership. Recent studies addressing copyright protection for large language models (LLMs) systematically examine these approaches[150] .

10.6 Blockchain and Timestamped Recording Systems

Blockchain-based systems ensure that data such as proof of copyright, license tracking, and content usage history are recorded in an immutable and transparent manner. This structure provides a robust technical infrastructure for proving claims of content ownership and detecting unauthorized reproduction; the literature includes case studies on how blockchain-supported DRM frameworks are integrated for this purpose[151] .

11 SUI GENERIS PROTECTION IN THE CONTEXT OF ARTIFICIAL INTELLIGENCE SYSTEMS

Excluding outputs generated by artificial intelligence using licensed inputs from traditional copyright protection not only creates a legal loophole but also weakens economic incentives and investment incentives**.** The fact that artificial intelligence productions—particularly those

[148] **HORITA**, Daichi / **HYODO**, Ryosuke / **IMAIZUMI**, Shoko / **AIZAWA**, Kiyoharu, "Invisible Image Watermarking aGenAInst Image-to-Image Generation", March 11, 2024, https://arxiv.org/abs/2403.06094, (Accessed March 10, 2026).
[149] **WIKIPEDIA CONTRIBUTORS**, "Digital video fingerprinting", *Wikipedia, The Free Encyclopedia*, https://en.wikipedia.org/wiki/Digital_video_fingerprinting, (Accessed 10.03.2026).
[150] **ZHOU**, Yan / **WANG**, Jincheng / **ZHAO**, Hu / **LIU**, Xiaoxiao, "Robust Watermarking Frameworks for Generative AI Models: Technical and Legal Perspectives", August 14, 2025, https://arxiv.org/abs/2508.11548, (Accessed March 10, 2026).
[151] **HORITA**, Daichi / **HYODO**, Ryosuke / **IMAIZUMI**, Shoko / **AIZAWA**, Kiyoharu, "Invisible Image Watermarking aGenAInst Image-to-Image Generation", March 11, 2024, https://arxiv.org/abs/2403.06094, (Accessed March 10, 2026).

used for commercial purposes, involving significant financial and technical investments, and widely consumed—are not subject to any protection regime leaves investors, developers, and platform owners without legal certainty. This situation also poses significant risks to the sustainability of the creative economy. Indeed, in the European Union, this issue has been addressed in certain areas through sui generis protection systems. Under EU law, the Database Directive 96/9/EC places databases—which lack creative merit but involve significant financial, technical, and organizational investment—under a sui generis protection regime. In this model, the basis for protection is not the originality of the content but the economic and structural contributions made to its production. In legal doctrine, it is debated whether the underlying rationale of this approach could be applied to AI-generated works as well; that such content could also be regulated under a similar investment-based protection model[152] . However, unlike traditional databases, AI-generated works are based on dynamic, autonomous, continuously learning, and evolving data processing processes. For this reason, it does not appear feasible to extend the database model to AI systems without any modifications. At this point, it is assessed that the Copyright Law should be amended to include concepts such as "AI system owner," "platform operator," "data provider," "algorithmic product," "input," and "output," and that a special protection regime should be established to apply when specific investment criteria and transparency standards are met by these actors. This approach could be particularly functional with regard to AI-based databases.

12 REPORT SUMMARY AND RECOMMENDATIONS

12.1 Background of the Issue and Economic Value Chain

The creation of a musical work is the product of a multi-layered and collective labor process rather than a singular moment of creation. The artistic creativity of the songwriter and composer is shaped by their education, knowledge of music theory, and aesthetic background; this initial creative core is then transformed into a concrete musical work through the contributions of performing artists and musicians. Added to this process are producers' financial investments, organizational labor, and risk-taking; while radio, television, and digital media broadcasters contribute through activities related to the distribution, marketing, and dissemination of the work to the public.

In this context, the musical work matures within a "tiered value chain" (tiered system); it reaches the audience through mechanical and digital tools as well as concerts, broadcasts, and digital platforms, ultimately forming a market with economic value. Each step generates independent added value, and these added values are protected by intellectual property law and the regime of related rights.

With the shift of the creative process to the algorithmic level, the concept of individual ownership of a work in the classical sense has largely lost its function. Today, content

[152] **ATEŞ**, Artificial Intelligence Outputs, p. 22.

production takes place through the simultaneous contributions of numerous actors, such as datasets, algorithms, prompt writers, system developers, platform operators, and users[153] . Among the initial input datasets, musical works created through the contributions of copyright holders, performing artists, phonogram producers, and publishers at various stages are used as raw material or training data; however, despite their labor being present in the resulting output, they are unable to generate economic revenue.

12.2 The Issue of Legal Protection Regimes and the Need for Reform in AI-Assisted Production

The success of artificial intelligence systems, particularly large language models and generative AI applications, depends largely on the quality of the data utilized during training and testing phases. This data often consists of works protected by copyright, such as books, images, musical works, and press and media content. This situation has sparked serious debates regarding both the legal nature of the training process and the ownership of rights related to outputs generated by artificial intelligence.

At the international level, while views have been put forward regarding granting AI legal personality or independent legal status, or establishing a sui generis protection regime, there is still no agreed-upon uniform model. At this point, distinct differences in approach emerge between the European Union and the United States.

The European Union's approach acknowledges the economic and technological significance of AI while seeking to preserve the human-centered structure of copyright law; consequently, it focuses on transparency, licensing, and collective redress mechanisms. The U.S. approach, however, tightly links copyright protection to human creativity and largely leaves AI-related disputes to judicial precedent.

In this context, considering the international treaties to which Turkey is a party and the need for legislative alignment with the EU, it is assessed that Turkey is more likely to adopt an EU-centered model supported by sui generis provisions and technical measures in the medium term.

While the development of artificial intelligence technologies is inevitable, the transformation of this development into a structure that renders human labor invisible and devalues it is incompatible with the principles of the rule of law and fair competition.

The fact that AI-generated outputs are not considered works should not imply that the economic activities arising from these outputs are entirely deprived of legal protection.

Labor, whether direct or indirect, deserves legal protection. Therefore, the proposed approach is significant both for the sustainability of creative sectors and for establishing a balance between technological development and justice.

[153] **ATAKAN**, Murat Can, "Evaluation of AI Works from the Perspective of Intellectual Property Law," Intellectual Property Yearbook 2024, Edited by Tekin Memiş, Vol. 14, Yetkin Publications, Ankara, 2025, p. 211.

The Copyright Law is based on a classical copyright legal framework rooted in a human-centered and singular creative subject assumption; however, evolving technology and AI-driven production models have transformed the creative process into a multi-layered, algorithmic structure; this transformation has significantly weakened the direct applicability of the current copyright regime[154] .

Fundamental questions—such as whether AI-generated works can be recognized as works of authorship, and if so, who the author is—point to structural gaps not anticipated by the FSEK. Particularly regarding fully automated AI-generated works, it is clear that the requirement of "creation by human hands" is inapplicable. This situation demonstrates that the fundamental framework of the Copyright Law has become incompatible with contemporary production realities, and that these gaps are causing harm to copyright holders.

12.3 Unfair Competition Protection

To provide protection under unfair competition provisions on behalf of rights holders for products created by artificial intelligence that do not qualify as works, a legislative amendment authorizing Collective Management Organizations could be proposed. Thus, adding an explicit provision to the Copyright Law (FSEK) or the Turkish Commercial Code (TTK) stating that AI outputs can be protected under unfair competition as works of labor within the scope of collective rights management would grant Collective Management Organizations the authority to file lawsuits aGenAInst AI applications that exploit their members' collective labor, request injunctions, and conduct licensing negotiations aGenAInst AI applications that draw on their members' collective labor, and ensure that transparency and data usage obligations are regulated for large-scale AI providers to facilitate the burden of proof.

12.4 Implementation of Effective Technical Measures

By implementing technical measures—including access control, identification of content ownership, preservation of file integrity, and model-level copyright protection strategies—a multi-layered and complementary defense mechanism aGenAInst digital copyright infringements must be established. This technical infrastructure enables copyright holders to effectively protect their rights and detect unauthorized use. The mandatory use of various technical methods—which serve both evidentiary and preventive functions—specifically regarding AI inputs and outputs is considered a critical measure for preventing digital copyright infringements and safeguarding the rights of rights holders. Especially on AI platforms, such multi-layered technical measures are indispensable for ensuring that content creation and usage processes are transparent, auditable, and compliant with the law.

[154] **ATAKAN**, p. 211.

12.5 Extended Collective Licensing (ECL) as a Potential Solution

To ensure compliance with copyright laws during the training of UAI models, the "*Extended Collective Licensing*" (Extended Collective Licensing - GTL) mechanism has been proposed as one of the primary solution models in academic literature and international reports. Under this regime, rights holders in the relevant category are subject to the legal consequences of the concluded license agreement by law (ex lege) unless they explicitly declare their intent to opt out of the system. The fundamental difference between the GTL model and compulsory licensing is that the license fee and terms are negotiated between Collective Management Organizations and users within the framework of free market dynamics, rather than through an administrative process; the state's role here is limited to that of a regulator/supervisor who outlines the system's general framework.

The GTL system was first established in Denmark's copyright legislation and is applied as a standard legal mechanism in the fields of librarianship and publishing. Following Denmark, Sweden, Finland, and Norway have also adopted this regime; for example, in Norway, the national library's digitization of works in its collection and making them available online is based on this legal authority, which was established through negotiations with Collective Management Organizations representing rights holders and extends to non-members as well.

In the European Union (EU) acquis, this model was codified as a positive legal norm under Article 12 of the Directive on Copyright in the Digital Single Market (DSM Directive) (DSM Directive), and grants member states the option to recognize this authority for Collective Management Organizations with strong representational power, subject to certain transparency measures. This regulation aims to provide legal certainty, particularly in situations where obtaining individual licenses from rights holders is impractical or excessively burdensome in terms of transaction costs.

In addition to the European Union, the GTL regime is also part of the current legislation in the United Kingdom. The United Kingdom established the legal framework for the GTL system by amending the Copyright, Designs and Patents Act 1988 (CDPA) through the Business and Regulatory Reform Act 2013 ( ). Based on this legal foundation, the 2014 "Copyright and Related Rights (Extended Collective Licensing) Regulations" established the process and conditions under which a trade association must obtain authorization from the UK Intellectual Property Office (IPO) to license on behalf of rights holders it does not represent.

Digitalization, and particularly the use of artificial intelligence technologies to utilize millions of works simultaneously and continuously, renders the traditional approach of individual licensing and exclusive rights unsustainable, creating significant challenges in terms of both transaction costs and the effective protection of rights holders. To overcome these challenges in the GTL system, a Collective Management Organization is authorized through legislative regulation, and the authority to collectively manage all works and related rights within the relevant rights category is granted directly by law. Thus, the association's authority creates an expanded scope of influence, covering not only its members but also rights holders who are not members. Authorization, which normally requires the rights holder's signature, is provided through legislation in the GTL model; in this respect, the law acts in lieu of the rights holder's

will. In this context, the effective and sustainable collective licensing of music products in Turkey will only be possible through fundamental legal reforms that grant Collective Management Organizations expanded authority to cover both members and non-member rights holders; otherwise, the sector's dynamics and the structural conditions of creative production face the risk of being driven to a point where irreparable consequences may arise.

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