

Challenges of AI for Cinematography and Intellectual Property Rights

Exploring AI's impact on Creativity, Ownership and Fair Remuneration

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Setting the Scene

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Rights in an AI- Driven World

01. IP Basics for Cinematographers

Copyright, Patents, and Design Rights in the Audiovisual Creative Industry

1.1 Copyright

Definition:

- Copyright protects an author's **original literary or artistic creations**, known as "**Works**."
- It grants the author **exclusive (monopolistic) rights to control the use of their work** and safeguards **moral rights**, such as the right to recognition of authorship and the integrity of the work (as per Continental European legislation).

Requirements for Copyright Protection:

- **Originality:** The work must reflect the **author's personal expression and creativity**, demonstrating free choice in the creation process.
- **Fixation:** The work must be fixed in a tangible or intangible medium. **Mere ideas are not eligible** for protection.
- **No Registration Required:** Copyright protection arises **automatically** upon creation of the work without the need for formal registration.

Author:

- The author must be a **human being**, as copyright law traditionally protects human creativity (certain countries, such as the UK, New Zealand, Ireland, India, and South Africa, have adopted exceptions or alternative interpretations in specific cases).
- Copyright may be shared **among multiple creators (co-authorship or collective creativity)**, as long as each contributor makes an original, creative input.

01. IP Basics for Cinematographers

Relevance to Cinematographers:

- **Film:** The entire cinematographic work (e.g., the final movie) is protected by copyright.
- **Visual Elements:** Individual shots, camera work, lighting, and composition can qualify for copyright protection.
- **Sound and Music:** Original music, sound effects, and dialogue in the film are also protected.
- **Costume and Production Design** can be protected if they meet the originality requirement
- **Duration:** Copyright lasts for the lifetime of the creator, plus 70 years.
- **Ownership:**
 - **Authorship of Cinematographers:** Cinematography plays a **crucial role in visual storytelling**. Through skillful arrangement of camera angles, lighting, and movement, cinematographers create evocative and powerful scenes that resonate deeply with audiences.

As such, cinematographers should typically hold copyright for their camera work and visuals, including individual shots. However, **sole authorship of cinematography is not universally recognized**.

- **Co-authorship:** Ownership of the film's copyright is often shared by cinematographers with the original contribution of other creatives, such as directors, scriptwriters, composers, etc.

Many European countries have opted for the Co-authorship approach to protect the creativity of cinematographers, either through case law (e.g., Germany, Austria, Denmark) or through direct legal presumption (e.g., Poland, Romania, Estonia, Greece, etc.).

- **Ownership in Production Companies:** Depending on specific legal provisions and especially due to buy-out clauses in contractual agreements, the **audiovisual producer may be the exclusive owner of the economic exploitation rights**.

1.2 Patents

01. IP Basics for Cinematographers

Definition:

A patent grants exclusive rights to an inventor for a **new invention** or technological process. The invention must involve an **inventive step** and **be useful or industrially applicable**.

Relevance to Cinematographers:

- **Cinematography Equipment:** If a cinematographer or company develops new camera equipment, rigs, or other filmmaking tools, they may be able to patent the design or technology.
- **Filmmaking Techniques:** Innovative techniques used in film production (e.g., new methods of lighting, camera movement, or special effects) may also be patentable if they are novel and non-obvious.

Ownership:

The **inventor** is typically the first owner of the patent, unless the invention is made as part of their employment or a contract specifies otherwise.

Duration:

Patents typically have a duration of 20 years from the filing date.

1.3 Design Rights

01. IP Basics for Cinematographers

Definition:

Design rights protect the visual appearance of products, including their shape, configuration, pattern, or ornamentation. These rights focus on safeguarding the aesthetic qualities of a creation, ensuring that its unique visual design is protected.

Relevance to Cinematographers:

- **Film Set Design:** The design of sets, props, costumes, and other visual elements in a film can be protected by design rights in addition to copyright protection, as they are considered original works of art.
- **Cinematographic Equipment:** Unique and original designs for filmmaking equipment (such as cameras, tripods, and lighting rigs) are also eligible for design protection, provided they meet the requirements of novelty and individual character.

Duration:

- In the European Union, **registered design rights** last for **5 years** from the filing date, with the **option to renew for additional 5 year periods up to a maximum of 25 years in total**.
- **Unregistered design rights** in the EU provide **protection for 3 years** from the date the design is first made available to the public.

02. The Evolving Role of AI in Film Production

Case Studies

1. AI's role in visual effects and de-aging technology.



"The Irishman" (Director: Martin Scorsese, Cinematographer: Rodrigo Prieto, Year: 2019) - Font: Youtube

2. AI's influence on realistic visual effects and creating lifelike environments.



"The Lion King" (Director: Roger Allers and Rob Minkoff, Year: 1994) - Font: Youtube

02.The Evolving Role of AI in Film Production



"The Lion King" (Director: Jon Favreau, Cinematographer: Caleb Deschanel, Year: 2019) - Font: Youtube

3. Mufasa: The Lion King

02.The Evolving Role of AI in Film Production



"Mufasa: The Lion King" (Director: Barry Jenkins Year: 2024 - Font: Youtube

02.The Evolving Role of AI in Film Production

1

AI in Pre-Production

- Scriptwriting and Story Development
- Casting and Talent Optimization
- Budgeting and Scheduling Efficiency

2

AI in Filming and Cinematography

- Automated Camera Work and Cinematic Techniques
- Virtual Cinematography: The Role of Digital Environments
- Real-time Feedback for Enhanced Filming

3

AI in Post-Production

- Editing and Footage Selection with AI Assistance
- Visual Effects Creation and Enhancement
- AI-Driven Sound Design and Audio Editing

5

Conclusion: The Future of AI in Film Production

AI **enhances human creativity**, but it **cannot replicate the intuition and emotional depth** behind the shot.

Blurring Boundaries: Films like *Everything Everywhere All at Once* (2022, Directors: Daniel Kwan, Daniel Scheinert, DoP: Larkin Seiple) blur the lines **between human and machine, both in narrative and technical aspects**. *Mufasa* (2025, Director: Barry Jenkins, DoP: James Laxton) takes this further, with AI playing a much more dominant role in both its narrative and visual creation.

4

AI in Marketing and Distribution

- AI-Generated Trailers and Promotional Content
- Audience Insights and Personalized Content Creation
- Smart Distribution and Global Localization

03. IP Challenges in the Age of AI

3.1 IP Challenges because of AI Training

- **AI Training:** AI models improve by analyzing large datasets (images, text, audio, etc.), recognizing patterns, and enhancing tasks like visual effects, editing, and scene recognition.
- **IP-Relevant Acts:** Although mass digitisation transforms content into “data”, each instance of feeding audiovisual works – or parts of them, such as scenes – into AI models constitutes an IP-related act.

International and EU Copyright Law:

Berne Convention (1886) and EU IP Law: The reproduction, distribution, public communication, or transformation of a work **requires authorization** from the author/co-authors or rights holders.

Article 18 DMS (Directive (EU) 2019/790, on Copyright in the Digital Single Market): Authors should **be remunerated for any exploitation of their work**, whether as a “work” or as “data” used in AI training.

- **Preliminary Conclusion:** Exploiting audiovisual works without authorization and remuneration constitutes IP infringement.
- **However:** The author’s exclusive rights are limited by **so-called legal exceptions**, including:

Text and Data Mining (TDM):

- **Article 3 DSM:** Research organizations, cultural heritage institutions may use data **for scientific research without authorization and compensation**, if access is lawful.
- **Article 4 DSM:** Data may be used **by any institution or person for any purpose without compensation**, but authors/owners retain the **right to opt out**.

03. IP Challenges in the Age of AI

- **Challenges with Opt-Out:**

- **Practical difficulties:** Lack of clarity about who, when, and how authors can opt out.
- **No Universal Standard:** Multiple initiatives by AI providers, rights holder groups, and third parties.
- **AI Model Developers:** Generally, **not interested in licensing negotiations** with Collective Management Societies (CMS).
- **Fragmented Rights Clearance:** AI Act does not address fragmented EU rights clearance, and CMS does not offer **efficient pan-European rights clearance**.
- **Conclusion:** Opt-out “solution” is far from optimal
- **Inapplicability of the Fair Use Doctrine Exception**

Fair Use Doctrine:

Allows limited use of copyrighted material without permission or compensation, based on factors like:

1. **Purpose** and character of the use (commercial or educational).
 2. **Nature** of the copyrighted work.
 3. **Amount** and substantiality **of the work used**.
 4. **Effect on the market value**.
- **Fair Use Cannot Defend IP Infringement by AI Training in Audiovisual Works:**
 1. **Commercial Purpose:** Profit-driven AI applications may be considered commercial.
 2. **High Protection:** Films and scripts are highly protected by copyright.
 3. **Large Dataset Processing:** AI training models often use entire works, which weighs heavily against fair use.
 4. **Market Harm:** AI training outputs can substitute for original works, harming the market.
 5. **Licensing Availability:** CMS should offer licensing options for audiovisual works.

3.2. IP Challenges: Ownership by AI Output

3.2.1. AI-Generated Creative Work

- **AI-Generated Works**

When creative works are fully produced by AI with no human involvement, they are typically not considered “works” under traditional copyright laws.

- **No IP Protection**

As a result, AI-generated works may not be eligible for traditional intellectual property protection.

- **However:**

Despite this, such works can still be recognized as art.

For example, *Edmond de Belamy* from the *La Famille de Belamy* series was sold at Christie's on October 26, 2018, for \$432,500.

03. IP Challenges in the Age of AI



Edmond de Belamy from the *La Famille de Belamy*, 2018

3.2.2. Human-AI Creative Collaboration

- **Separate Contributions:**

When human and AI contributions are clearly separable, **IP rights are granted** only to the human-created portion.

- **Integrated Contributions:**

If human and AI contributions are deeply integrated, **copyright eligibility** depends on the extent of the human's control or influence over the AI's output (authorial contribution).

- **Complex Decisions:**

This leads to **case-to case specific decisions**, often complicated by the '**black box**' nature of AI.

An example of the difficulty in determining IP ownership is "**Théâtre D'Opéra Spatial**" by Jason M. Allen. This piece, which won the 2022 Colorado State Fair Fine Arts competition, was later denied copyright registration in USA. It was generated using **MidJourney**, undergoing over **624 revisions**, and further edited in **Adobe Photoshop**.

03. IP Challenges in the Age of AI



Midjourney Image

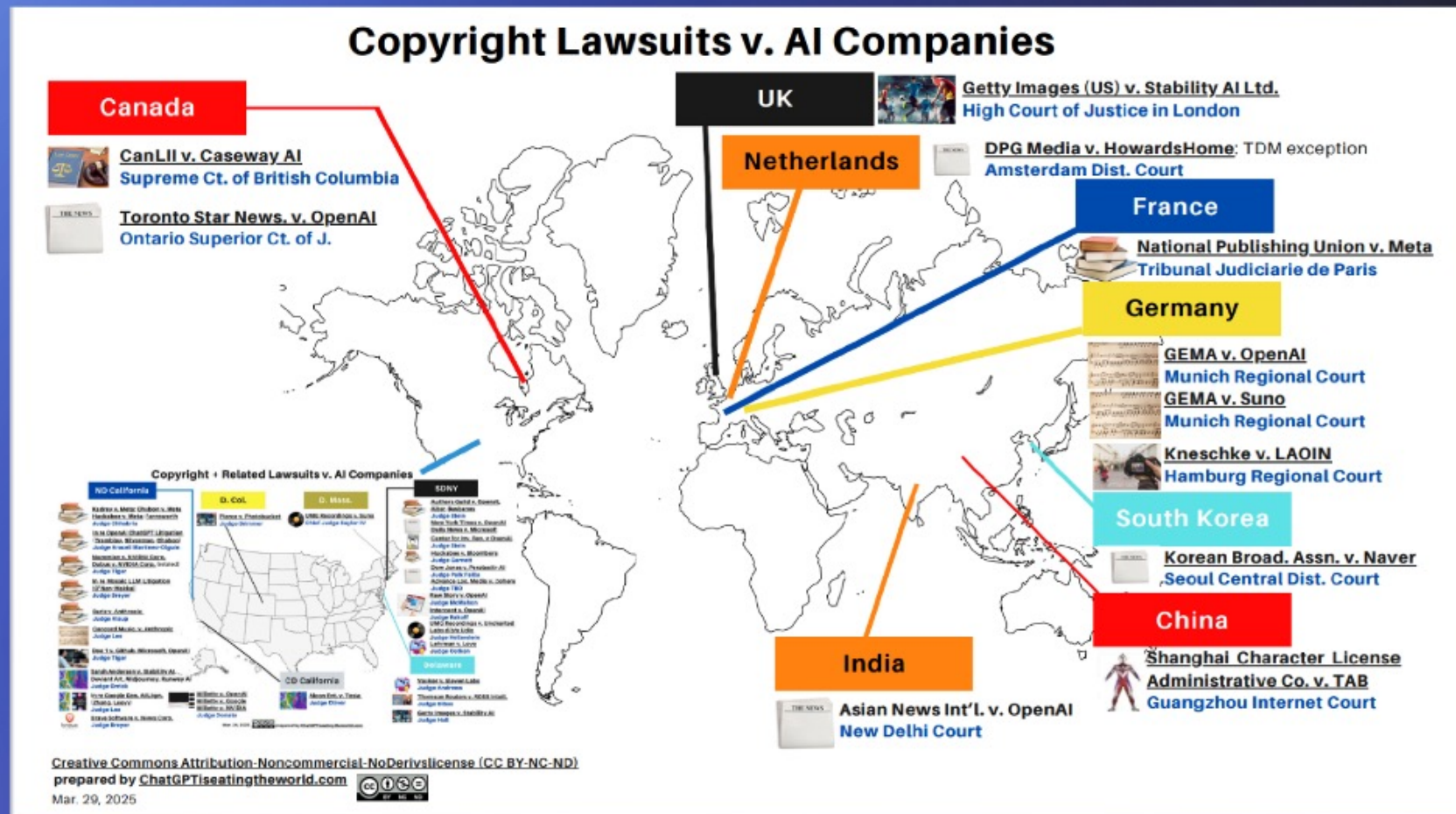


The Work

"Théâtre D'Opéra Spatial" by Jason M. Allen.

There are currently **111 ongoing proceedings** for **IP infringement** related to AI-generated content.

03. IP Challenges in the Age of AI



Ongoing IP Infringement Proceedings

These proceedings primarily involve **music** and **literary works**, but some **visual artists** have also filed claims against outputs generated by **Stability AI**, **MidJourney**, and **DeviantArt**.

Case Example:

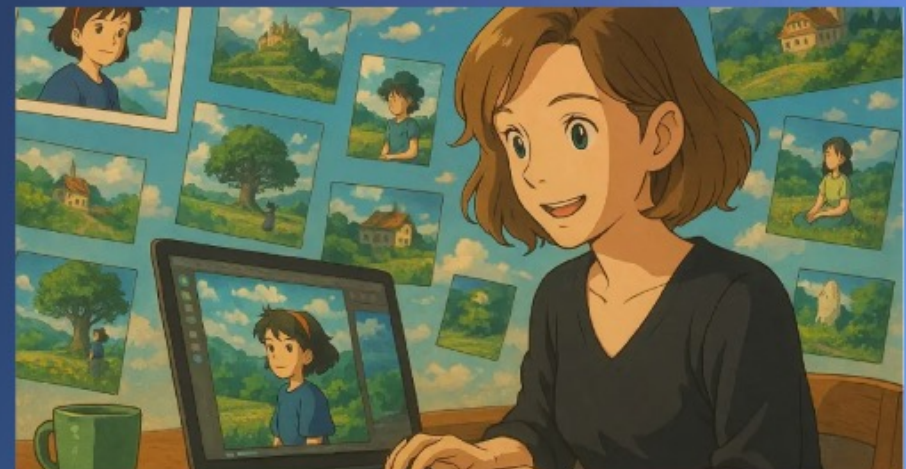
- **Sarah Anderson, Kelly McKernann, and Karla Ortiz** claim that **Stable Diffusion** was trained on their artworks to generate images in the style of specific artists.
- **August 12, 2024:** The **First Instance Court** of the Northern District of California ruled that none of the generated images closely matched the training data.
- **Final decision** is expected in **September 2025**.

OpenAI launched GPT-4, which enables high-quality image generation and allows users to replicate famous artistic styles. Studio Ghibli has (yet) not announced any legal actions against OpenAI for this mass abuse (e.g., trademark or IP infringement, unfair competition).

03. IP Challenges in the Age of AI



An example of Andersen's comics and Stability AI's recreation from late 2022



Example of an AI-generated image with the characteristic aesthetic of Studio Ghibli films. 20bits/OpenAI.

04. Protecting Human Creativity

4.1 EU AI Act (Effective August 1, 2024)

The EU AI Act establishes a comprehensive framework for AI development and use. While it doesn't directly address human creativity, it includes provisions that help protect it.

Key Provisions: Article 53: Obligations for Providers of General-Purpose AI Models

Providers must:

(c) **Comply with Union copyright laws, respecting rights reservations** under the DMS Directive (EU 2019/790).

(d) Publish a summary of content used for AI training, following a **template from the AI Office**.

Challenges:

- **Lack of Enforcement:** The AI Act lacks robust mechanisms to ensure compliance.
- **Insufficient Protection:** Creatives remain inadequately protected under the current framework.
- **Vague Measures:** The EU AI Office's Code of Practice (third!) proposal is too vague to prevent exploitation of creative content.
- **Delayed Implantation:** The EU AI Act will be fully applicable by August 2, 2026, with some exceptions. The delayed rollout leaves creators vulnerable and unprotected in the meantime.

04. Protecting Human Creativity

4.2 International Legal Approaches

Countries Exploring Legal Reforms

- Countries such as the UK, Ireland, Hong Kong, New Zealand and India are revising or considering legal frameworks to address the copyrightability of AI-assisted works with human input.

United States

- The U.S. Copyright Office (January 2025, Part 2 of *Copyright and Artificial Intelligence*) emphasizes that AI-assisted works can only qualify for copyright protection if they demonstrate substantial human creativity beyond mere suggestions or basic modifications.

Ukraine: Sui Generis Protection for AI-Generated Works

Similar to Italy, Ukraine proposes a unique protection system for AI-generated works, separate from traditional copyright laws. However, these proposals are still under review and have not yet been approved.

4.3 Potential Solutions

• Clear Definitions for AI-Generated Works

Establish precise legal definitions to distinguish fully AI-generated content from hybrid works involving human input.

• Incentivize Human Creativity through strong Copyright Protection

- Reaffirm the principles of authorization and remuneration for creators.
- The opt-out system should be reformed to encourage licensing, not hinder it.
- Strong copyright frameworks boost creator incentives.

• Transparency in Datasets

Require disclosure of datasets used to train AI tools to ensure ethical use of copyrighted material, similar to GEMA's guidelines.

05. Fair Remuneration for Creatives

5.1. Statutory License for Commercial Training by AI Models (TDM)

- A **statutory license** could allow works to be used for training AI tools in exchange for a fee (“permitted-but-paid”), similar to the **private levy exception**.
- **Statutory remuneration rights** are well established in EU national laws, particularly concerning the **online distribution of audiovisual works**, but **significant differences** exist across EU member states.
- It is **problematic** to define who holds the right to place a **disclaimer** and what the **legal effects** of such a disclaimer would be (e.g., a worldwide license).
- Currently, no **convincing technical or administrative solution** has been identified.

5.2. Charging the AI companies for AI-Generated Content

A different approach focuses on the output of AI rather than the training data:

- In the early 1990s, Adolf Dietz proposed the concept of “domaine public payant” to address the gap between profits generated from public domain works and the precarious conditions of authors.
- Under this concept, AI companies that generate content in place of human-created works should pay a fee.
 - The Court of Justice of the European Union (CJEU) (October 21, 2010, Padawan v. SGAE) ruled that Member States can impose obligations on manufacturers and importers due to practical difficulties in tracking private uses, requiring compensation for rightsholders.
 - No need to track individual permissions for each work.
 - Remuneration could be a percentage of AI company revenues, such as from advertising fees.
 - Lump-sum remuneration can be integrated into existing collective licensing schemes. The beneficiaries are not the individual authors/members of the CMS, but the CMS with the obligation to use it for the social benefit of its members.

06. A Call to Action: Protecting Cinematographer's Rights in an AI-Driven World

AI's Role in Cinematography:

- **Creative Potential:** AI can enhance cinematic creation, but it also introduces significant challenges to authorship, ownership, and fair compensation.

Key Focus Areas:

- **Authorship & Ownership:**
The need to define and protect cinematographers as the authors of their visual work in the age of AI.
- **Lack of Consistency:**
Cinematographers often face unfair buyouts or loss of control due to inconsistent legal protections and reliance on contracts.

The Broader Fight:

- Outside of audiovisual business, discussions around licensing, royalties, and fair use are often painted as "anti-progress."
- This issue is not just a battle for legal rights; it's a fight for cultural identity and the protection of artistic integrity in an era where AI is reshaping creative fields.

Final Goal:

- Acknowledge that **cinematographers' artistry** is the **lifeblood of cinema**, shaping its **visual language** and **emotional impact**.
- Cinematographers' work is central to the essence of cinema. Protecting their rights ensures that their artistry and contribution to storytelling remain respected and safeguarded in the AI era.
- **Sole authorship** provides the strongest framework for ensuring proper **remuneration** and protection of **moral rights**.

Thank you for your patience



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