



TECHNOLOGY BRIEFING ON AI IN COPYRIGHT & IP

The rise of artificial intelligence (AI) in content creation introduces complexities in copyright and intellectual property (IP) rights. As AI crafts art, literature, and even patented technologies, it challenges traditional notions of ownership and originality. A growing concern is that unchecked AI could blur authorship lines, diminish human creativity's value, and shake the core principles of IP rights. This demands a timely revision of current copyright frameworks to address AI's unique challenges.

Content Production by AI

- **Basics of Generative AI** (GenAI): At its core, generative AI uses algorithms designed to generate new data samples from the information it's trained on.
 - **Data Sourcing:** Generative AI is trained on extensive datasets sourced from the internet, which might include images from artists' portfolios, literary works from writers, open-source code repositories, research papers, music samples, video clips, and more. This broad and indiscriminate data collection often includes copyrighted material, sometimes without proper permissions or attributions, and generally without the consent of users who publish their work on the public domain.
 - **Applications in Patent Writing**
 - By training on a large corpus of existing patents, natural language processing (NLP) models such as *PatentPal* are able to help generate patents and IP documents. However, these models often fail to check for novelty and can misrepresent information. As of now, *standard practice is to audit and refine generated content with human legal professionals*. However, the continued and increased use of this legal GenAI could lead to issues:
 - **Potential for Infringement:** The AI's heavy reliance on existing patents means there's a risk it could inadvertently reproduce parts of those patents. Even if unintentional, this could lead to claims of infringement.
 - **Lack of Novelty:** A core requirement for patents is novelty. If an AI tool is over-reliant on existing content, it might produce applications that lack the necessary innovation to qualify for a patent.
 - **Over-Standardization:** While streamlining is beneficial, there's a risk that AI tools could produce very standardized patent applications. This might reduce the diversity and richness of patent literature.
 - **Legal Disputes:** Accidental similarities between newly drafted patents and existing ones can lead to costly and time-consuming litigation.
 - **Removing Watermarks:** AI technologies has also been applied to illegally remove watermarks from copyrighted content, posing new threats to samples of IP placed on the public domain (such as stock images).
- **Copyright/IP Risks:** Several potential pitfalls arise from this method of content generation:
 - **Loss of Originality:** With AI replicating styles and patterns from existing artworks or texts, the boundary between original human-made content and AI-generated content becomes blurred. This poses questions about the originality and authenticity of AI-generated works.

- **Infringement Claims:** If an AI model recreates or closely mimics a copyrighted piece, it can lead to infringement claims. For instance, an AI trained on copyrighted paintings might generate a piece eerily similar to an existing artwork, leading to potential legal disputes.
- **Monetary Loss for Original Creators:** Artists or creators might face financial losses if AI-generated replicas of their works are sold or used commercially without their consent or without proper licensing fees.

AI's Recycling of Data and IP Concerns

- **Training of Models Like ChatGPT:** Chatbots like ChatGPT use vast amounts of text data to train. This data is sourced from books, articles, websites, and other text-rich domains. The model learns language patterns, structures, and nuances, enabling it to generate human-like text based on user prompts.
- **IP Risks with Training Data**
 - **Reproduction of Proprietary Content:** If a bot is trained on proprietary or copyrighted texts, there's a risk it might reproduce or closely mimic that content in its responses. For instance, if a specific coding solution from a copyrighted programming book is part of the training data, ChatGPT might produce a similar solution when prompted, leading to potential IP issues.
 - **Lack of Attribution:** *AI doesn't inherently recognize copyright laws or the need for attribution.* If a user receives a passage closely resembling a copyrighted text, they might use it without realizing its origins, leading to inadvertent copyright violations.
 - **Hallucinations:** Generative AI is designed to replicate from and create new source material, not be factually correct or accurate. As a result of this, even when a user explicitly requests for generated content to be properly attributed, AI often misquotes or creates fake citations, leading to further issues.
 - **Dilution of Unique Content:** *Original content might lose its uniqueness* if AI tools widely reproduce it. For writers, artists, or any content creators, this dilution can diminish the value of their original works.

GenAI Prompting Legal Action

Privacy Cases

- **P.M. v. OpenAI LP, June 2023:** A group of anonymous plaintiffs filed suit against OpenAI LP and Microsoft, Inc., claiming the theft and misuse of personal information for the training of AI tools like ChatGPT, Dall-E, and Vall-E. They assert this collection and use of data as theft, misappropriation, and a breach of privacy rights. The lawsuit also delves into potential dangers of AI, including misinformation and its use in autonomous weapons.
- **J.L. v. Alphabet Inc., July 2023:** In a case against Google by the same firm behind P.M., plaintiffs argue against Google's generative AI tools, claiming both privacy and copyright infringements. While Google disclosed its data practices, plaintiffs argue alternatives to data gathering should have been explored. The lawsuit expresses theoretical concerns about AI's broad impact on society.

Copyright Cases

- **Andersen v. Stability AI Ltd.:** Artists allege that Stability AI scraped copyrighted images from online sources for training image-generating models, leading to losses for artists. The debate centers on whether the AI-generated images are "substantially similar" to original works and if they fall within the training data scope.
- **Doe v. GitHub, Inc., November 2022:** Developers claim that their licensed code uploaded on GitHub was used to train GitHub's Copilot without due attribution or permission, challenging the boundary between open-source code and proprietary rights.

- The lawsuit was also against OpenAI (which developed Codex, the model that powers Copilot) and Microsoft (which funds and supports the data infrastructure for these applications).
- **Tremblay v. OpenAI, Inc.**, June 2023: Authors Tremblay and Awad allege that OpenAI used copyrighted materials in its training datasets and that AI outputs infringe upon original copyrighted works.
- **Silverman v. OpenAI, Inc.**, June 2023: Following Tremblay's lead, authors like Sarah Silverman filed similar lawsuits against AI developers, arguing against the unpermitted use of their copyrighted materials in training datasets.

Trademark Cases

- **Getty Images (US), Inc. v. Stability AI, Inc.**, February 2023: Media giant Getty Images alleges that Stability AI scraped its website to train its AI model, leading to both copyright and trademark infringements. The inclusion of Getty's watermark in AI-generated images has been a significant point of contention.
 - Visual Artists vs. Generative Tools: Generative image tools like Stable Diffusion and Midjourney, trained on internet-scraped images, also allegedly violate copyrights. A striking detail is the presence of remnants of watermarks, such as Getty's, and mangled artist's signatures in some generated images and illustrations.

Right of Publicity and Facial Recognition Cases

- **Young v. NeoCortex, Inc.**, April 2023: TV personality Kyland Young challenges NeoCortex's "Reface" app, which allows users to swap faces with celebrities. Young claims the application violates California's Right of Publicity Statute.

Tort and Defamation Cases

- **Defamation** (not filed): Another dimension to AI's legal challenges is its potential to disseminate misinformation. A mayor in Australia considered legal action against ChatGPT after it falsely claimed he had served prison time.
- **Walters v. OpenAI**, June 2023: Radio host Mark Walters alleges libel against OpenAI after ChatGPT generated a false complaint associating Walters with fraud and embezzlement.

Current Regulatory Landscape & Interventions

- **U.S. Copyright Office on AI and Copyright**: On March 15, 2023, the U.S. Copyright Office clarified its stance regarding the copyrightability of AI-generated content. Central to this clarification was the human authorship requirement.
 - *Works entirely produced by AI without human intervention cannot be copyrighted.*
 - *Works containing AI-generated material may be eligible for copyright, contingent on the degree of human authorship involved. For instance, if a human creatively selects, arranges, or modifies AI-generated content, that work may be copyrightable.*
 - *The Copyright Office mandates disclosure of any AI involvement in copyright applications.*
- **Watermarking for AI-Generated Content**: In light of challenges posed by the proliferation of AI-generated content, such as deepfakes and copyright infringements, leading AI companies have been working on watermarking solutions.
 - Google DeepMind has introduced *SynthID*, a watermarking tool designed for AI-generated images.
 - Unlike traditional watermarks, which can be easily removed or lost, SynthID employs two neural networks to embed an almost invisible pattern within an image.
 - Despite its purported robustness against tampering, *experts like Ben Zhao have expressed skepticism regarding its long-term efficacy*, especially considering the motivations of malicious actors.

- Google DeepMind's decision to keep their watermarking tool proprietary could restrict its wider applicability, as only Google can embed and detect these watermarks. In order for this to be combatted, separate legislation must be introduced or copyright law must be updated to include provisions for a universal AI-generated content watermarking system.
 - This watermark should be multimodal, applying not only to images, but also text and audio.
 - Creating development standards for how GenAI “creates” new content and gives credit is also necessary, along with investment in research to support fact checking, awareness of plagiarism/infringement, and citations.
- **The Push for Transparency:** Given the complexities surrounding AI-generated content and watermarking, there's a consensus on the need for greater transparency. Although initial efforts by companies like Google DeepMind have been labeled experimental, industry leaders stress the importance of collaboration and information-sharing to develop effective watermarking strategies that can withstand adversarial attempts.
- **Future Directions:** The Copyright Office has indicated an intention to seek public input on additional legal and policy topics related to AI. This suggests a proactive approach to engaging with stakeholders and experts to navigate the evolving implications of AI on copyright law.

The intertwining of AI-driven content generation with copyright and intellectual property (IP) rights highlights the pressing need for cohesive and adaptable regulations. To ensure the integrity of artistic and innovative endeavors, it's essential to foster multi-stakeholdership, actively soliciting insights and advice from creatives, technologists, and legal experts. By collaboratively navigating this landscape, a balanced framework can be established, respecting both the dynamism of AI and the sanctity of human creativity, ensuring a future where innovation thrives without compromising rightful ownership and recognition.