ACG Artificial Intelligence Overview Memo
As of 1.18.23

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Introduction:

Global organizations seeking to responsibly deploy artificial intelligence (AI) systems face a complex and quickly evolving legal landscape. While agencies are increasingly providing guidance on how to apply existing laws to AI systems, lawmakers in the EU, the U.S., and around the world are considering major new AI-related legislative and regulatory proposals. In addition to existing national legal and regulatory frameworks, international governmental and standards organizations have been doing their jobs by coordinating global efforts to align views on ethical and trustworthy AI to bolster cross border interoperability.

Recent Developments (Generative AI and Chat GPT):

Generative A.I. refers to artificial intelligence systems that use unsupervised or semi-unsupervised machine learning algorithms to create new content, such as text, images, or music, that is similar to existing examples of that content.

Over the last five months, generative machine learning and A.I. have rapidly evolved and pushed to the forefront of the technological landscape. While companies have developed generative A.I. for years, it only recently captivated public attention. What was once a fringe field, is now one of the most successful machine frameworks in the evolution of deep learning over the past decade. Generative A.I. will continue this rapid acceleration in the years to come. Analysts have already predicted that generative A.I. will grow to a $110 billion industry by 2030 and will account for 10% of all data production by 2025.

The sudden emergence of these platforms includes:

- Image generation models such as:
    - Stable Diffusion
    - Midjourney, and
    - OpenAI's DALLE-2
- Text generation models such as:
    - ChatGPT and
    - HyperWrite.ai

Generative A.I. first piqued the public's interest with OpenAI's release of DALL-E, which lets people generate photo-realistic images through text, in January of 2022. In October, Stability AI launched an open-source image generation model, called Stable Diffusion, which, unlike DALL-E, could be used by anyone.

Two months ago, in November 2022, generative A.I. reached an inflection point with OpenAI's release of ChatGPT, a chatbot that generates detailed answers to questions posed by users. Since then, over a million people have used the A.I.-powered tool to create everything from business plans, school papers, and love letters.

It is currently estimated that over 450 start-ups are now working on generative A.I.

Further, investors have poured over $1.3 billion into generative A.I. companies within the last year. (That is approximately the same amount invested in the previous five years combined.) Most recently, Microsoft Corp is in talks to invest $10 billion in Open AI, the owner of ChatGPT. The deal would value Open AI at $29 billion, more than double its 2021 valuation. This investment frenzy embodies the rapidly evolving field and growing excitement around generative A.I. This new era of A.I. also holds implications for efficiency, creativity, copyright, and public domain.

Overview of U.S. Actions on AI in 2022:

This Section provides an overview of the actions the U.S., the EU, and the OECD have taken to date to regulate AI technology, as well as provides an outlook on the policies coming down the pipeline in those jurisdictions as of September 2022.

What has been done in the United States:

- In 2019, then-President Trump issued an Executive Order on Maintaining American Leadership in the United States (EO 13859). The EO insisted that the United States must "foster public trust and confidence in AI technologies and protect civil liberties, privacy, and American values in their application…"

- In January 2021, the United States enacted the **National AI Initiative Act.** The landmark legislation created the National AI Initiative, which is *"an overarching framework to strengthen and coordinate AI research, development, demonstration, and education activities across all U.S. Departments and Agencies.*" It also established the National Artificial Intelligence Initiative Office (NAIIO) within the White House Office of Science and Technology Policy (OSTP) to coordinate these efforts. For stakeholders who are interested in providing feedback to the office, we have identified its Founding Director, Dr. Lynne Parker as the best point of contact. Her email is Lynne.E.Parker@ostp.eop.gov.

- On April 14th, 2022, the U.S. Department of Commerce announced the appointment of 27 experts to the **National Artificial Intelligence Advisory Committee (NAIAC)**, which will advise the President and the National AI Initiative Office on a range of issues related to AI. The Advisory Committee is comprised of representatives from Google, the AFL-CIO, Salesforce, Stanford University, BSA: The Software Alliance, and more. According to a press release announcing their appointments, the members are slated to serve three-year terms. The Committee held its first meeting on May 4th. While there does not presently appear to be an opportunity to be added to the Committee as an Advisory Member, there is a way to contact the Committee at the bottom of this page.

- While the **Federal Trade Commission (FTC)** has yet to finalize regulations, the technology is on the agency's radar. In April 2021, the FTC issued a memo that apprised companies that were using AI that produces discriminatory outcomes equates to a violation of Section 5 of the FTC Act, which prohibits unfair or deceptive practices.

- On August 15th, 2022, the **Department of Energy (DOE)** published an AI Risk Management Playbook., a voluntary reference guide for AI risk identification and recommended mitigations to support responsible and trustworthy AI use and development.

- In October of 2022, OSTP released a **Blueprint for an AI Bill of Rights**: Making Automated Systems work for the American People. Link to PDF here.
    - The Blueprint for an AI Bill of Rights is a white paper published by the White House Office of Science and Technology Policy. It is intended to support the development of policies and practices that protect civil rights and promote democratic values in the building, deployment, and governance of automated systems.
    - The Bill of Rights Includes:
        - You should be protected from unsafe or ineffective systems.
        - You should not face discrimination by algorithms and systems should be used and designed in an equitable way.
        - You should be protected from abusive data practices via built-in. protections, and you should have agency over how data about you is used
        - You should know that an automated system is being used and understand how and why it contributes to outcomes that impact you.
        - You should be able to opt out, where appropriate, and have access to a person who can quickly consider and remedy problems you encounter.

AI-Related Programs in Progress in the United States:

- The **National Institute of Standards and Technology (NIST)**, which falls under the U.S. Department of Commerce, is engaging with stakeholders to develop "a voluntary risk management framework (RMF) for trustworthy AI systems." The output of this project may be analogous to the EU's proposed regulatory framework, but in a voluntary format. NIST published a draft RMF on August 18th, and – according to the agency's projected timeline – it will publish a final document in January 2023. Of note, the draft NIST framework slightly modifies the OECD's classification of AI actors. Specifically, the NIST modification highlights the importance of test, evaluation, verification, and validation (TEVV) throughout an AI lifecycle and generalizes the operational context of an AI system. The RMF also recognizes the need for organizations to identify their own risk tolerance when deploying AI, and notes that emerging knowledge and methods to better inform cost-benefit tradeoffs will continue to be developed and debated by businesses, governments, academics, and civil society. More info. here.

EU Actions on AI in 2022:

What has been completed in the EU:

- The previously enacted EU **General Data Protection Regulation** (GDPR) already carries implications for AI technology. **Article 22** prohibits decisions based solely on

automated processes that produce legal consequences or similar effects for individuals unless the program gains the user's explicit consent or meets other requirements.

- The European Commission has proposed three interrelated legal initiatives that seek to help strengthen trustworthy AI:
    - An EU legal framework for AI to address fundamental rights and safety risks specific to AI systems;
    - EU rules to address liability issues related to new technologies, including AI systems (last quarter 2021-first quarter 2022);
    - A review of sectoral safety legislation (e.g., Machinery Regulation, General Product Safety Directive, second quarter 2021).

What is in Progress in the EU:

- The European Commission has published an overarching regulatory framework proposal titled the **Artificial Intelligence Act**. The proposal focuses on the risks created by AI, with applications sorted into categories of minimal risk, limited risk, high risk, or unacceptable risk. Depending on an application's designated risk level, there will be corresponding government actions or obligations.
    - So far, the proposed obligations focus on enhancing AI applications' security, transparency, and accountability through human oversight and ongoing monitoring. Specifically, companies will be required to register stand-alone high-risk AI systems, such as remote biometric identification systems, in an EU database. If the proposed regulation is passed, the earliest date for compliance would be the **second half of 2024**.

- Finally, the Commission is also expected to propose a legal framework adapting liability rules in the context of new challenges presented by AI.

- The UK Intellectual Property Office (UKIPO) wants to expand current text and data mining (TDM), for commercial or non-commercial purposes, with no option to opt-out. This would mean that AI systems could be trained on a wide range of data, including copyrighted works. Many in the copyright community are concerned about this and feel that there should be tighter restrictions.
    - The Copyright Alliance wrote a letter to the UKIPO and had a call with the U.S. Intellectual Property Enforcement Coordinator's (IPEC) office and are trying to raise the concern that Copyright law/protection cannot be ignored for AI innovation/development.
    - This is a developing and ongoing issue that will need to be watched as countries try to "recruit" AI businesses/systems with potential expanded TDM regulations.

Also of note, the OECD adopted the following principles for responsible stewardship of trustworthy AI in May 2019:

- Inclusive growth
- Sustainable development and well-being
- Human-centred values and fairness

- Transparency and explain-ability
- Robustness, security, and safety
- Accountability

Since adopting these principles, the OECD has worked to help member countries implement them. To guide this effort, the OECD has established the **OECD.AI Network of Experts on AI**, which brings together policy, industry, and technical experts to discuss policy approaches, classification, risk, tools, accountability, and AI computing. The **AI Policy Observatory**, OECD.AI, is the organization's platform that puts forward global developments in AI policy and data, and the **OECD Working Party on AI Governance** (AIGO) reviews national AI policies.

AI Related Legislation in the United States:

Below is a list of AI-related legislation that was introduced during the 117th Congress. While this list is expansive, it may not be comprehensive, and it will be important to track new bills with AI components that are introduced at the beginning of the 118th Congress.

The members of Congress that seem most involved in the AI arena are:

- Sen. Gary Peters (D-MI)
- Sen. Ron Wyden (D-OR)
- Sen. Cory Booker (D-NJ)
- Rep. Yvette Clarke (D-NY-09)
- Rep. Carolyn B Maloney (D-NY-12)
- Rep. Darren Soto (D-FL-09)
- Rep. Jay Obernolte (R-CA-23)

The relevant Committees/Government Agencies that will likely be involved in any AI-related legislation include:

- The White House Office of Science and Technology Policy (OSTP)
- National Artificial Intelligence Initiative Office (NAIIO)
- House and Senate Judiciary Committees
- National Artificial Intelligence Advisory Committee (NAIAC)
- FTC
- Department of Energy
- National Institute of Standards and Technology (NIST)
- OECD
- Senate Homeland Security
- House Oversight and Reform
- House Education and Labor
- National Science Foundation
- House Science Space and Technology
- House and Senate Armed Services

1. During the 117th Congress, Senator Ron Wyden (D-OR), Senator Corry Booker (D-NJ), and Representative Yvette Clarke (D-NY-09) introduced the **Algorithmic Accountability Act (H.R.6580/S.3572).** The bill would require developers and users of certain AI systems to conduct algorithmic impact assessments and build regulatory capacity at the FTC. In response to reports that AI systems can lead to biased and discriminatory outcomes, the bill would direct the FTC to create regulations that mandate "covered entities," including

businesses meeting certain criteria, to perform impact assessments when using automated decision-making processes.

2. **S.2551 – "AI Training Act"**
    - Last Action: Became Public Law.
    - Cosponsors: 1
        - Summary: This bill requires the Office of Management and Budget (OMB) to establish or otherwise provide an artificial intelligence (AI) training program for the acquisition workforce of executive agencies (e.g., those responsible for program management or logistics), with exceptions. The purpose of the program is to ensure that the workforce has knowledge of the capabilities and risks associated with AI.

3. **S.1257 – "AI Scholarship-for-Service Act"**
    - Last Action: Referred to the Committee on Commerce, Science, and Transportation.
    - Cosponsors: 1
        - Summary: This bill establishes a federal artificial intelligence (AI) scholarship-for-service program to recruit and train AI professionals to lead and support AI in federal, state, local, and tribal governments.

4. **H.R.4468 – "AI for Agency Impact Act"**
    - Last Action: Referred to the House Committee on Oversight and Reform.
    - Cosponsors: 0
        - Summary: This bill requires each federal agency to establish and implement an artificial intelligence (AI) strategy, objectives, and metrics plan. These plans will specifically designate personnel responsible for the management and use of AI technologies, as well as clearly define the ethics that the organizations will abide by in their use of AI.

5. **S.1353 – "Advancing American AI Act"**
    - Last Action: Ordered to be reported with an amendment in the nature of a substitute favorably.
    - Cosponsors: 1
        - Summary: This bill requires specified federal agencies to take steps to promote artificial intelligence (AI) while aligning with U.S. values, such as the protection of privacy, civil rights, and civil liberties.

6. **S.3035 – "GOOD AI Act of 2021"**
    - Last Action: Placed on Senate Legislative Calendar under General Orders.
    - Cosponsors: 1
        - Summary: This bill directs the Office of Management and Budget to (1) incorporate specified considerations and principles, and the input of specified individuals and entities, in developing an update of guidance for federal agency use of artificial intelligence; and (2) establish an Artificial Intelligence Hygiene Working Group.

7. **H.R.7296 – "GOOD AI Act of 2022"**
    - Last Action: Referred to House Committee on Oversight and Reform.
    - Cosponsors: 1
        - Summary: This bill directs the Office of Management and Budget to (1) incorporate specified considerations and principles, and the input of specified individuals and entities, in developing an update of guidance for federal agency use of artificial intelligence; and (2) establish an Artificial Intelligence Hygiene Working Group.

8. **H.R.6553 – "AI Jobs Act of 2022"**
    - Last Action: Hearing held by Committee on Banking, Housing, and Urban Affairs.
    - Cosponsors: 4
        - Summary: This bill requires the Department of Labor to prepare and submit to Congress a report on artificial intelligence and its impact on the workforce.

9. **H.R. 4469 – "AI in Counterterrorism Oversight Enhancement Act"**
    - Last Action: Committee Consideration and Mark-up session held.
    - Cosponsors: 3
        - Summary: This bill expands the responsibilities of the Privacy and Civil Liberties Oversight Board to include oversight of the use of artificial intelligence (AI) in counterterrorism and addresses related issues. The bill also expands the board's authorities to access or subpoena information to include information about AI-enabled technologies used for counterintelligence, such as the training and testing processes for such technologies. Furthermore, the bill expands the responsibilities of privacy and civil liberties officers to include responsibilities related to AI-enabled technologies used in counterterrorism.

10. **H.R.3844 – "Fellowships and Traineeships for Early-Career AI Research Act"**
    - Last Action: Referred to the House Committee on Science, Space, and Technology.
    - Cosponsors: 4
        - Summary: This bill directs the National Science Foundation (NSF) to award grants and fellowships to support students and researchers in fields related to artificial intelligence. The NSF shall award fellowships to masters and doctoral students and postdoctoral researchers at institutions of higher education who are pursuing degrees or research in artificial intelligence and related fields, including in the field of technology ethics.

11. **H.R.7811 – "AI for National Security Act"**
    - Last Action: Referred to the House Committee on Armed Services.
    - Cosponsors: 1
        - Summary: This bill adds provisions for the use of AI-based security systems in the National Defense Authorization Act.

12. **H.R.5467 – "Healthy Technology Act of 2021"**
    - Last Action: Referred to the Subcommittee on Health.

- Cosponsors: 0
  - Summary: This bill establishes that artificial intelligence (AI) or machine learning technology may be eligible to prescribe drugs.

13. **S.2904 – "Department of Defense Artificial Intelligence Metrics Act of 2021"**
    - Last Action: Referred to the Committee on Armed Services.
    - Cosponsors: 0
      - Summary: This bill requires the Department of Defense (DOD) to review the potential applications of artificial intelligence and digital technology to DOD platforms, processes, and operations. The bill also requires DOD to establish performance objectives and accompanying metrics for the incorporation of artificial intelligence and digital readiness into such platforms, processes, and operations.

14. **H.R.3426 – "Democracy Technology Partnership Act"**
    - Last Action: Referred to the House Committee on Foreign Affairs.
    - Cosponsors: 8
      - Summary: This bill establishes the International Technology Partnership Office, led by the Special Ambassador for Technology, in the Department of State. The office shall advance U.S. technology policy through the creation of an International Technology Partnership with specified foreign countries. The bill also establishes the International Technology Partnership Fund in the Department of the Treasury.

15. **H.R.8152 – "American Data Privacy and Protection Act"**
    - Last Action: Ordered to be Reported (Amended) by the Yeas and Nays: 53 - 2
    - Cosponsors: 3
      - Summary: This bill establishes requirements for how companies, including nonprofits and common carriers, handle personal data, which includes information that identifies or is reasonably linkable to an individual. The bill provides for enforcement of these requirements by the FTC and state attorneys general. Beginning four years after the bill's enactment, individuals may, subject to certain notification requirements, bring civil actions for violations of the bill. Finally, the bill preempts state laws that are covered by the provisions of the bill except for certain categories of state laws and specified laws in Illinois and California.

Additional Documents/Resources:

Copyright Alliance AI Position Paper

Link to the paper on their website can be found here.

A couple of highlights:

- Where a copyright owner offers licenses for uses relating to the training of AI systems, it is essential that these licenses be respected by any copyright or AI legal regime,

especially in the case of ingestion of copyrighted material used for text and data mining (TDM). There is already high demand for corpuses of copyrighted works to train AI systems, and copyright owners already enter into licensing agreements for TDM use. This licensing activity is evidence of existing markets for TDM. It is important that the conditions of those licenses are respected and that they are not undermined by new exceptions that excuse unauthorized uses.

- In short, the marketplace should continue to properly value and incentivize creativity, and AI policy should not interfere with the ability of copyright owners to license their works for AI uses.

CRS report from May 2021

Link: https://crsreports.congress.gov/product/pdf/R/R46795

Highlights:

- Multiple bills introduced in the 117th Congress have included language about AI, either as a focus of the bill or in a specific provision, though no legislation has been enacted.
- Some bills have included AI as one of multiple key technology areas important for U.S. competitiveness.
    - Other bills have focused on federal AI expertise; addressed potential bias in automated decision systems that may use AI; or included AI as a technology with potential applications in healthcare.
- The FY2021 NDAA incorporated the expansive National Artificial Intelligence Act of 2020
- The Consolidated Appropriations Act, 2021 included the AI in Government Act of 2020
    - Which created within the General Services Administration (GSA) an AI Center of Excellence (CoE) to facilitate the adoption of AI technologies in the federal government.

Links to Additional Resources:

Provided by the Copyright Alliance

AI Copyright/Artist Impact Overview Articles

- https://techcrunch.com/2022/07/22/commercial-image-generating-ai-raises-all-sorts-of-thorny-legal-issues/
- https://www.technologyreview.com/2022/09/16/1059598/this-artist-is-dominating-ai-generated-art-and-hes-not-happy-about-it/
- https://waxy.org/2022/08/opening-the-pandoras-box-of-ai-art/
- https://www.forbes.com/sites/robsalkowitz/2022/09/16/ai-is-coming-for-commercial-art-jobs-can-it-be-stopped/
- https://www.washingtonpost.com/technology/interactive/2022/artificial-intelligence-images-dall-e/
- https://www.bbc.com/news/technology-62788725
- https://copyrightlately.com/using-ai-artwork-to-avoid-copyright-infringement/
- https://venturebeat.com/ai/why-generative-ai-legal-battles-are-brewing-the-ai-beat/

- https://ipkitten.blogspot.com/2022/12/how-artificial-intelligence-works-in.html
- https://www.vox.com/recode/2023/1/5/23539055/generative-ai-chatgpt-stable-diffusion-lensa-dall-e
- Terms of Use Agreements for AI Machines: https://provingground.io/2023/01/10/a-splash-of-cold-water-considering-ai-terms-of-service-training-data-and-copyright/

AI Litigation

- (U.K.) Getty Images Lawsuit Against Stability AI:
  - *https://newsroom.gettyimages.com/en/getty-images/getty-images-statement*
  - *https://www.theverge.com/2023/1/17/23558516/ai-art-copyright-stable-diffusion-getty-images-lawsuit*
- (U.S.) Visual Artists' Class-Action Lawsuit Against Stability AI, Midjourney, and DeviantArt:
  - https://www.technollama.co.uk/artists-file-class-action-lawsuit-against-stability-ai-deviantart-and-midjourney
  - https://stablediffusionlitigation.com/
- (U.S.) Thaler v. Perlmutter:
  - https://www.bloomberglaw.com/public/desktop/document/THALERvPERLMUTTERetalDocketNo122cv01564DDCJun022022CourtDocket?1666638988
- (U.S.) Programmers' Class Action Lawsuit Against GitHub:
  - https://githubcopilotlitigation.com/
  - https://scholarlykitchen.sspnet.org/2023/01/05/github-is-sued-and-we-may-learn-something-about-creative-commons-licensing/
- (U.S.) Thomson Reuters Enterprise Centre v. ROSS Intelligence Inc.
  - https://dockets.justia.com/docket/delaware/dedce/1:2020cv00613/72109
  - https://www.ded.uscourts.gov/sites/ded/files/opinions/20-613_0.pdf

AI Copyright Registration

- Zarya of the Dawn: Graphic Novel made using Midjourney; Registered with USCO in September:
  - https://www.upi.com/Top_News/US/2022/09/24/nyc-artist-granted-first-known-registered-copyright-ai-art/4081664063008/
  - https://ipwatchdog.com/2022/11/01/us-copyright-office-backtracks-registration-partially-ai-generated-work/id=152451/
  - Kashtanova's Appeal Letter: https://drive.google.com/file/d/1Idhn8eb9t883mm_U4CxAQQ_aANTI7UTX/view
- Thaler v. Perlmutter:
  - https://www.bloomberglaw.com/public/desktop/document/THALERvPERLMUTTERetalDocketNo122cv01564DDCJun022022CourtDocket?1666638988
  - https://www.reuters.com/legal/litigation/computer-scientist-says-ai-artist-deserves-its-own-copyrights-2023-01-11/

AI Machines

- Audiovisual**:**
    - The Video Killed the Radio Star: https://colab.research.google.com/github/dmarx/video-killed-the-radio-star/blob/main/Video_Killed_The_Radio_Star_Defusion.ipynb
    - Make-a-Video (Audiovisual) (Meta): https://www.upi.com/Science_News/2022/10/08/Facebook-parent-Meta-unveils-AI-video-generator-Make-a-Video/7411665284314/

- Literary/Software
    - https://justoutsourcing.blogspot.com/2022/03/gpts-plagiarism-links.html
    - Copilot (Software) (GitHub): https://www.technollama.co.uk/copilot-the-next-stage-in-the-ai-copyright-wars
    - Codex (Software)(OpenAI): https://openai.com/blog/openai-codex/
    - Authors Using AI to Write Books: https://www.theverge.com/23520625/chatgpt-openai-amazon-kindle-novel

- Visual Arts
    - https://waxy.org/2022/08/opening-the-pandoras-box-of-ai-art/
    - https://www.businessinsider.com/ai-image-generators-artists-copying-style-thousands-images-2022-10
    - https://www.theverge.com/2022/9/21/23364696/getty-images-ai-ban-generated-artwork-illustration-copyright
    - https://newsletters.theatlantic.com/galaxy-brain/62df88dabcbd490021adc375/dalle-open-ai-midjourney-art/
    - https://kotaku.com/ai-art-dall-e-midjourney-stable-diffusion-copyright-1849388060
    - https://www.vice.com/en/article/v7vzpj/shutterstock-is-removing-ai-generated-images
    - https://waxy.org/2022/08/exploring-12-million-of-the-images-used-to-train-stable-diffusions-image-generator/
    - https://waxy.org/2022/11/invasive-diffusion-how-one-unwilling-illustrator-found-herself-turned-into-an-ai-model/
    - DALL-E/DALL-E 2 (Images): https://techcrunch.com/2022/10/12/microsoft-brings-dall-e-2-to-the-masses-with-designer-and-image-creator/
    - DALL-E/DALL-E 2: https://www.instagram.com/p/CgSqRxhPF_X/?hl=en
    - Stable Diffusion (Images): https://techcrunch.com/2022/08/12/a-startup-wants-to-democratize-the-tech-behind-dall-e-2-consequences-be-damned/
    - Lensa: https://www.nbcnews.com/tech/internet/lensa-ai-artist-controversy-ethics-privacy-rcna60242
    - Clip Studio: https://www.clipstudio.net/en/news/202212/02_01/
    - https://www.dpreview.com/news/6341509927/adobes-content-analysis-program-raises-privacy-concern
    - DeviantArt: https://www.arsanalytics.com/post/deviantart-announces-new-artist-protection-to-help-stop-ai-scraping

- Music/Audio:

    - Music AI Machines: https://globalnews.ca/news/9193451/ai-generated-music/
    - Songmastr: https://torrentfreak.com/riaa-flags-artificial-intelligence-music-mixer-as-emerging-copyright-threat-221017/
    - https://www.musicbusinessworldwide.com/tiktok-goes-on-ai-music-making-and-machine-learning-specialist-hiring-spree1/
    - https://medium.com/@nturkewitz_56674/anthony-bourdain-voice-cloning-the-precarious-state-of-humanity-bab7c98800b8
    - https://techcrunch.com/2022/09/26/ai-is-taking-over-the-iconic-voice-of-darth-vader-with-the-blessing-of-james-earl-jones/
    - https://www.billboard.com/pro/ai-technology-will-change-how-music-written/
    - https://www.billboard.com/pro/ai-created-songs-cost-human-musicians-jobs/
    - https://www.forbes.com/sites/forbesbusinesscouncil/2022/12/12/artificial-intelligence-has-big-implications-for-ownership-in-the-music-industry/?sh=542153935797

- Misc:
    - https://torrentfreak.com/adobe-thinks-it-can-solve-netflixs-password-piracy-problem-220913/

AI Policy

- White House "AI Bill of Rights": https://www.whitehouse.gov/ostp/ai-bill-of-rights/

AI International

- UK
    - https://www.designweek.co.uk/issues/10-15-october-2022/ai-future-design-industry/
    - https://www.copyright.com/blog/uk-law-and-artificial-intelligence/

- Israel
    - https://time.news/israeli-ministry-of-justice-you-can-train-ai-with-copyrighted-content/

AI Developments Update
As of May 1, 2023

INTRODUCTION

The deployment of artificial intelligence (AI) systems presents a legal and regulatory challenge for global organizations. With existing national legal and regulatory frameworks in place, international governmental and standards organizations are coordinating efforts to align views on ethical and trustworthy AI to bolster cross-border interoperability. Generative AI, a type of AI that uses unsupervised or semi-unsupervised machine learning algorithms to create new content, has rapidly evolved in the past six months and is predicted to grow into a $110 billion industry by 2030, accounting for 10% of all data production by 2025. While generative AI has captivated public attention with its recent innovations, its implications on society require careful consideration and action to ensure responsible use and prevent potential harm.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)

January 26, 2023: NIST released its Artificial Intelligence Risk Management Framework (AI RMF 1.0), the first formal US government guidance to set standards for designing, developing, deploying, and using AI systems. The AI RMF provides a structured approach for organizations to help manage the risks of AI technologies and aims to improve the trustworthiness of AI. While compliance with the AI RMF is voluntary, it serves as a "guidance document for voluntary use by organizations designing, developing, deploying or using AI systems to help manage the many risks of AI technologies." The AI RMF is intended to work with the OSTP's Blueprint for an AI Bill of Rights.

December 1, 2022: The U.S.-EU Trade and Technology Council (TTC), a task force of U.S. and EU officials, published its TTC Joint Roadmap on Evaluation and Measurement Tools for Trustworthy AI and Risk Management. The three-pronged plan "aims to guide the development of tools, methodologies, and approaches to AI risk management and trustworthy AI." The Roadmap is intended to "1: advance shared terminologies and taxonomies, 2: collaborate on standards and tools for trustworthy AI and risk management, 3: and monitor and measure existing and emerging AI risks."

U.S. COPYRIGHT OFFICE

March 16, 2023: The Copyright Office published a statement of policy on "Works Containing Material Generated by Artificial Intelligence" to clarify its practices for examining and registering works that contain material generated by the use of artificial intelligence technology. According to the Office, non-human machines will not be classified as authors. However, if human input is involved, copyright registration will be permitted. The Office will not register works that contain solely AI-generated content, but if there is enough human authorship involved, the USCO will allow registration. Applicants and those who have already been granted registration will need to disclose their use of AI tools in creating their works and exclude AI-generated content that is significant in any way. This policy is not itself legally binding or a guarantee of a particular outcome, but rather the latest step in an ongoing debate over the copyrightability of machine-assisted products of human creativity.

March 16, 2023: The Copyright Office launched a new Artificial Intelligence Initiative. The initiative will explore the scope of copyright protection for works generated using AI tools and the potential copyright infringement implications of using copyrighted materials in AI training.

- The Copyright Office will gather informal public input before seeking more formal input later this year. It will also hold a series of sector-specific "listening sessions" between April 19 and May 31, 2023:
    - April 19, 2023: Literary Works Listening Session (deadline to request to participate – March 31)
    - May 2, 2023: Visual Arts Listening Session (deadline to request to participate – April 11)
    - May 17, 2023: Audiovisual Works Listening Session (deadline to request to participate – April 26)
    - May 31, 2023: Music and Sound Recordings Listening Session (deadline to request to participate – May 10)

USPTO

February 14, 2023: The USPTO publishes a request for comments as part of the AI/emerging technologies (ET) partnership seeking stakeholder input on the current state of AI technologies and inventorship issues that may arise in view of the advancement of such technologies, especially as AI plays a greater role in the innovation process. Comments were due to the USPTO by May 15th.

June 2022: The USPTO announced the formation of the AI/ET Partnership, which provides opportunities for stakeholders to come together to share ideas, feedback, experiences, and insights on the intersection of intellectual property and AI/ET.

THE NATIONAL ARTIFICIAL INTELLIGENCE ADVISORY COMMITTEE (NAIAC)

April 14, 2022: The U.S. Department of Commerce announced the appointment of 27 experts to the National Artificial Intelligence Advisory Committee (NAIAC), which will advise the President and the National AI Initiative Office on a range of issues related to AI. The Advisory Committee is comprised of representatives from Google, the AFL-CIO, Salesforce, Stanford University, BSA: The Software Alliance, and more. According to a press release announcing their appointments, the members are slated to serve three-year terms. The Committee held its first meeting on May 4th.

WHITE HOUSE OFFICE OF SCIENCE AND TECHNOLOGY POLICY (OSTP)

October 4, 2022: The White House Office of Science and Technology Policy (OSTP) issued the Blueprint for an AI Bill of Rights that asserts principles and guidance around equitable access and use of automated, or AI systems. The Blueprint for an AI Bill of Rights is a white paper published by the White House Office of Science and Technology Policy. It is intended to support the development of policies and practices that protect civil rights and promote democratic values in the building, deployment, and governance of automated systems. The five key principles include safe and effective systems, algorithmic discrimination protections, data privacy, notice and explanation, and human alternatives, consideration, and fallback.

January 2021: the United States enacted the National AI Initiative Act. The landmark legislation created the National AI Initiative, which is *"an overarching framework to strengthen and coordinate AI research, development, demonstration, and education activities across all U.S. Departments and Agencies.*" It also established the National Artificial Intelligence Initiative Office (NAIIO) within the White House Office of Science and Technology Policy (OSTP) to coordinate these efforts. For stakeholders who are interested in providing feedback to the office, we have identified its Founding Director, Dr. Lynne Parker as the best point of contact. Her email is Lynne.E.Parker@ostp.eop.gov.

COUNCIL OF ECONOMIC ADVISERS

December 5, 2022: The Council of Economic Advisers and the European Commission published an economic study on "The Impact of Artificial Intelligence on the Future of Workforces In the European Union and the United States of America." The report is "intended to

highlight the economics behind AI-driven technological change with a particular focus on the institutional and policy decisions that will shape its future impact on the workforce."

THE DEPARTMENT OF ENERGY (DOE)

August 15, 2022: The Department of Energy (DOE) published an AI Risk Management Playbook., a voluntary reference guide for AI risk identification and recommended mitigations to support responsible and trustworthy AI use and development.
LEGISLATION

CHAMBER OF COMMERCE

March 9, 2023: The U.S. Chamber of Commerce has called for regulation of artificial intelligence technology to "ensure it does not hurt growth or become a national security risk." The Chamber report argues policymakers and business leaders must quickly ramp up their efforts to establish a "risk-based regulatory framework" that will ensure AI is deployed responsibly. The report states that AI is projected to add $13 trillion to global economic growth by the end of the decade. "Rather than trying to develop a one size-fits-all regulatory framework, this approach to AI regulation allows for the development of flexible, industry-specific guidance and best practices," the report says.

CONGRESS

The Congressional Research Service has put out two reports relating to AI in the past months.

- Generative Artificial Intelligence and Copyright Law (February 24, 2023)
- Copyright Law: An Introduction and Issues for Congress (March 7, 2023)

Proposed Legislation in 118th Congress

- Senator Michael Bennet introduced a new bill titled the Assuring Safe, Secure, Ethical, and Stable Systems for AI (ASSESS AI) Act, which proposes the creation of an AI Task Force. This task force would consist of cabinet members and be responsible for reviewing current U.S. policies on artificial intelligence, with the goal of reducing threats to privacy, civil liberties, and due process. Specifically, the task force would identify areas where regulatory oversight of AI falls short and recommend necessary reforms. Read Bennet's press release here.

- Senate Majority Leader Schumer is laying the groundwork for Congress to create regulations around artificial intelligence (AI) technology. He has been sharing a general framework with experts in recent weeks, and any regulations would likely focus on four key guardrails: (1) The identification of who trained the algorithm and who its intended audience is, (2) The disclosure of its data source, (3) An explanation for how it arrives at its responses, and (4) Transparent and strong ethical boundaries. While a final proposal is still weeks away, many are encouraged by the sign that something is in the works. Read Schumer's press release here.

- SJC staff have been in the internal stages of working on his own AI legislation with 3 components: (1) AI cannot be registered as the owner of a copyright or patent. (2) Federal agencies cannot rely on AI as an ultimate decision maker. (3) AI cannot be used as an excuse or liability shield (as in - if a manufacturer's AI car causes a crash, the manufacturer is liable. Cannot claim lack of liability b/c it was a self-driving, AI car.)

- On January 26, 2023, long-time supporter of copyright Rep Ted Leu (D-CA) introduced a resolution, H. Res. 66 to that "the House of Representatives supports Congress focusing on AI in order to ensure that the development and deployment of AI is done in a way that is safe, ethical, and respects the rights and privacy of all Americans, and that the benefits of AI are widely distributed and the risks are minimized." (The resolution was drafted in part by ChatGPT)

Legislation in 117th Congress

- S.2551 – "AI Training Act"
  - Last Action: Became Public Law.
  - Cosponsors: 1
    - Summary: This bill requires the Office of Management and Budget (OMB) to establish or otherwise provide an artificial intelligence (AI) training program for the acquisition workforce of executive agencies (e.g., those responsible for program management or logistics), with exceptions. The purpose of the program is to ensure that the workforce has knowledge of the capabilities and risks associated with AI.
- S.1257 – "AI Scholarship-for-Service Act"
  - Last Action: Referred to the Committee on Commerce, Science, and Transportation.
  - Cosponsors: 1
    - Summary: This bill establishes a federal artificial intelligence (AI) scholarship-for-service program to recruit and train AI professionals to lead and support AI in federal, state, local, and tribal governments.

- H.R.4468 – “AI for Agency Impact Act”
    - Last Action: Referred to the House Committee on Oversight and Reform.
    - Cosponsors: 0
        - Summary: This bill requires each federal agency to establish and implement an artificial intelligence (AI) strategy, objectives, and metrics plan. These plans will specifically designate personnel responsible for the management and use of AI technologies, as well as clearly define the ethics which the organizations will abide by in their use of AI.
- S.1353 – “Advancing American AI Act”
    - Last Action: Ordered to be reported with an amendment in the nature of a substitute favorably.
    - Cosponsors: 1
        - Summary: This bill requires specified federal agencies to take steps to promote artificial intelligence (AI) while aligning with U.S. values, such as the protection of privacy, civil rights, and civil liberties.
- S.3035 – “GOOD AI Act of 2021”
    - Last Action: Placed on Senate Legislative Calendar under General Orders.
    - Cosponsors: 1
        - Summary: This bill directs the Office of Management and Budget to (1) incorporate specified considerations and principles, and the input of specified individuals and entities, in developing an update of guidance for federal agency use of artificial intelligence; and (2) establish an Artificial Intelligence Hygiene Working Group.
- H.R.7296 – “GOOD AI Act of 2022”
    - Last Action: Referred to House Committee on Oversight and Reform.
    - Cosponsors: 1
        - Summary: This bill directs the Office of Management and Budget to (1) incorporate specified considerations and principles, and the input of specified individuals and entities, in developing an update of guidance for federal agency use of artificial intelligence; and (2) establish an Artificial Intelligence Hygiene Working Group.
- H.R.6553 – “AI Jobs Act of 2022”
    - Last Action: Hearing held by Committee on Banking, Housing, and Urban Affairs.
    - Cosponsors: 4
        - Summary: This bill requires the Department of Labor to prepare and submit to Congress a report on artificial intelligence and its impact on the workforce.
- H.R. 4469 – “AI in Counterterrorism Oversight Enhancement Act”

    - Last Action: Committee Consideration and Mark-up session held.
    - Cosponsors: 3
        - Summary: This bill expands the responsibilities of the Privacy and Civil Liberties Oversight Board to include oversight of the use of artificial intelligence (AI) in counterterrorism and addresses related issues. The bill also expands the board's authorities to access or subpoena information to include information about AI-enabled technologies used for counterintelligence, such as the training and testing processes for such technologies. Furthermore, the bill expands the responsibilities of privacy and civil liberties officers to include responsibilities related to AI-enabled technologies used in counterterrorism.
- H.R.3844 – "Fellowships and Traineeships for Early-Career AI Research Act"
    - Last Action: Referred to the House Committee on Science, Space, and Technology.
    - Cosponsors: 4
        - Summary: This bill directs the National Science Foundation (NSF) to award grants and fellowships to support students and researchers in fields related to artificial intelligence. The NSF shall award fellowships to masters and doctoral students and postdoctoral researchers at institutions of higher education who are pursuing degrees or research in artificial intelligence and related fields, including in the field of technology ethics.
- H.R.7811 – "AI for National Security Act"
    - Last Action: Referred to the House Committee on Armed Services.
    - Cosponsors: 1
        - Summary: This bill adds provisions for the use of AI-based security systems in the National Defense Authorization Act.
- H.R.5467 – "Healthy Technology Act of 2021"
    - Last Action: Referred to the Subcommittee on Health.
    - Cosponsors: 0
        - Summary: This bill establishes that artificial intelligence (AI) or machine learning technology may be eligible to prescribe drugs.
- S.2904 – "Department of Defense Artificial Intelligence Metrics Act of 2021"
    - Last Action: Referred to the Committee on Armed Services.
    - Cosponsors: 0
        - Summary: This bill requires the Department of Defense (DOD) to review the potential applications of artificial intelligence and digital technology to DOD platforms, processes, and operations. The bill also requires DOD to establish performance objectives and accompanying

metrics for the incorporation of artificial intelligence and digital readiness into such platforms, processes, and operations.

- H.R.3426 – "Democracy Technology Partnership Act"
    - Last Action: Referred to the House Committee on Foreign Affairs.
    - Cosponsors: 8
        - Summary: This bill establishes the International Technology Partnership Office, led by the Special Ambassador for Technology, in the Department of State. The office shall advance U.S. technology policy through the creation of an International Technology Partnership with specified foreign countries. The bill also establishes the International Technology Partnership Fund in the Department of the Treasury.
- H.R.8152 – "American Data Privacy and Protection Act"
    - Last Action: Ordered to be Reported (Amended) by the Yeas and Nays: 53 - 2
    - Cosponsors: 3
        - Summary: This bill establishes requirements for how companies, including nonprofits and common carriers, handle personal data, which includes information that identifies or is reasonably linkable to an individual. The bill provides for enforcement of these requirements by the FTC and state attorneys general. Beginning four years after the bill's enactment, individuals may, subject to certain notification requirements, bring civil actions for violations of the bill. Finally, the bill preempts state laws that are covered by the provisions of the bill except for certain categories of state laws and specified laws in Illinois and California.

JUDICIARY

Copyrightability/Ownership

- Thaler v. Perlmutter
- Andy Warhol Foundation for the Visual Arts, Inc. v. Lynn Goldsmith

Fair Use/Infringement

- Anderson v. Stability AI
- Doe v. Github
- Getty Images v. Stability AI
- Planner 5D v. Facebook
- Thomson Reuters Enterprise v. Ross Intelligence Inc.

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

SARAH ANDERSEN, an individual; KELLY MCKERNAN, an individual; KARLA ORTIZ, an individual,

Individual and Representative Plaintiffs,

v.

STABILITY AI LTD., a UK corporation; STABILITY AI, INC., a Delaware corporation; MIDJOURNEY, INC., a Delaware corporation; DEVIANTART, INC., a Delaware corporation,

Defendants.

Case No.

COMPLAINT

CLASS ACTION

DEMAND FOR JURY TRIAL

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Plaintiffs Sarah Andersen, Kelly McKernan, and Karla Ortiz ("Plaintiffs"), on behalf of themselves and all others similarly situated, bring this Class Action Complaint (the "Complaint") against Defendants Stability AI Ltd. and Stability AI, Inc. (collectively "Stability"); Midjourney, Inc. ("Midjourney"); and DeviantArt, Inc. ("DeviantArt") (all collectively "Defendants") for direct and vicarious copyright infringement under 17 U.S.C. § 501; violation of the Digital Millennium Copyright Act, 17 U.S.C. §§ 1201–1205 (the "DMCA"); violation of Plaintiffs' statutory and common law rights of publicity, Cal. Civ. Code section 3344; violation of Unfair Competition law, *Cal. Bus. & Prof. Code* §§ 17200, *et seq.*; and declaratory relief.

I. AI IMAGE GENERATORS ARE 21ST-CENTURY COLLAGE TOOLS THAT VIOLATE THE RIGHTS OF MILLIONS OF ARTISTS

1. Stable Diffusion is a software product—defined below as an AI Image Product—maintained and sold by Stability.

2. Stability downloaded or otherwise acquired copies of billions of copyrighted images without permission to create Stable Diffusion, including Plaintiffs'. These images are defined below as "Training Images."

3. By training Stable Diffusion on the Training Images, Stability caused those images to be stored at and incorporated into Stable Diffusion as compressed copies. Stability made them without the consent of the artists and without compensating any of those artists.

4. When used to produce images from prompts by its users, Stable Diffusion uses the Training Images to produce seemingly new images through a mathematical software process. These "new" images are based entirely on the Training Images and are derivative works of the particular images Stable Diffusion draws from when assembling a given output. Ultimately, it is merely a complex collage tool.

5. These resulting derived images compete in the marketplace with the original images. Until now, when a purchaser seeks a new image "in the style" of a given artist, they must pay to commission or license an original image from that artist. Now, those purchasers can use the artist's works contained in Stable Diffusion along with the artist's name to generate new

works in the artist's style without compensating the artist at all. As used herein, the phrase "in the style of," refers to a work that others would accept as a work created by that artist whose "style" was called upon, not the general category of work, such as fantasy or impressionism. Only a very small number of incredibly talented artists are capable of this same feat for a single other artist (i.e., reproducing art that is convincingly in that artist's style), let alone for countless other artists. AI Image Products do so with ease by violating the rights of millions of artists.

6. All AI Image Products operate in substantially the same way and store and incorporate countless copyrighted images as Training Images.

7. Defendants, by and through the use of their AI Image Products, benefit commercially and profit richly from the use of copyrighted images.

8. The harm to artists is not hypothetical—works generated by AI Image Products "in the style" of a particular artist are already sold on the internet, siphoning commissions from the artists themselves.

9. Plaintiffs and the Class seek to end this blatant and enormous infringement of their rights before their professions are eliminated by a computer program powered entirely by their hard work.

II. JURISDICTION AND VENUE

10. Plaintiffs bring this action on their own behalf and as representatives of a Class of similarly situated individuals and entities. They seek to obtain injunctive relief and recover damages as a result and consequence of Defendants' unlawful conduct.

11. Jurisdiction and venue are proper in this judicial district pursuant to Defendants' unauthorized use of Plaintiffs' and the Class's intellectual property in violation of the Copyright Act, 17 U.S.C. § 501, the Digital Millennium Copyright Act, 17 U.S.C. §§ 1201–1205 (the "DMCA"); Unjust Enrichment, and Unfair Competition; California's right of publicity, contract, negligence, privacy, and unfair competition statutes and case law.

12. A substantial part of the events giving rise to Plaintiffs' claims occurred in this District.

13. Defendant Midjourney is headquartered in San Francisco. Plaintiff Karla Ortiz resides in San Francisco, California, a substantial portion of the affected interstate trade and commerce was carried out in this District, and the Defendants are licensed to do business in this District.

14. Each Defendant has transacted business, maintained substantial contacts, and/or committed illegal acts that harmed Plaintiffs and the Class throughout the United States, including in this District. Defendants' conduct has had the intended and foreseeable effect of causing injury to persons residing in, located in, or doing business throughout the United States, including in this District.

III. INTRADISTRICT ASSIGNMENT

15. Pursuant to Civil Local Rule 3.2 (c) and (e), assignment of this case to the San Francisco Division of the United States District Court for the Northern District of California is proper because Plaintiff Karla Ortiz and a large portion of the Class reside in this District. In addition, a substantial amount of the development of the Stable Diffusion product as well as of the interstate trade and commerce involved and affected by Defendants' conduct giving rise to the claims herein occurred in this Division.

IV. DEFINITIONS

16. *"AI Image Product"* refers to the allegedly AI-based image generation products that were created, maintained, marketed, sold, and/or distributed by Defendants, namely Stable Diffusion, the Midjourney Product, DreamStudio, and DreamUp.

17. *"Artificial Intelligence"* or "*AI*." AI is a software program that algorithmically simulates human reasoning or inference, often using statistical or mathematical methods.

18. "*Derivative Work*" as used herein refers to the output of AI Image Products as well as the AI Image Products themselves—which contain compressed copies of the copyrighted works they were trained on.

19. *"Diffusion"* is a specific machine-learning application that results in a model that stores a compressed copy of each item in the training dataset. A more detailed description of

diffusion appears below. Stable Diffusion is an AI software program that includes a diffusion model.

20. *"Generative AI"* is a subset of machine learning where the program copies training data and uses it to produce derivative works of that training data. Stable Diffusion is an example of a generative AI system, because it is trained using copied images, and produces similar images. Other generative AI systems exist that produce conversational text, software code, and music, in each case similar to the respective training data.

21. *"Machine Learning"* or *"ML"* is a type of AI process in which the behavior of the software program is derived from copying a corpus of material called *training data*. In this context, the term "learning" is metaphorical. The process bears very little similarity to human learning. In this context, it denotes a technique for developing a software program through massive data input and statistical operations, calculations, and linear algebra, rather than line-by-line coding using a programming language. Machine-learning programs can find patterns or make calculations based on datasets or training data. The operator of the algorithm is sometimes called a "trainer." Machine learning will be referred to as "AI" unless further distinction is necessary. Stable Diffusion, the Midjourney Product, DreamStudio, and DreamUp all include both AI programs and ML programs.

22. "*Model*" denotes the software component of an AI program that is the output of a machine-learning process. The model is a computer file that contains all the information that has been extracted from analyzing the training data, including the rules and data structures produced by the algorithm.

23. A "*Software Library*" is a self-contained software program that is designed to provide certain functions or services to another software program, such as a desktop or smartphone application, thereby reducing the development time. When used as a Software Library, Stable Diffusion provides image-generating services to the other program. Stable Diffusion has been used as a Software Library within multiple programs, including DreamStudio, DreamUp, and, on information and belief, the Midjourney Product.

24. A "*Text Prompt*" is a textual description that is used as an interface to certain generative AI systems to produce output, including the AI Image Products. For instance, a user of Stable Diffusion can input the text prompt "a dog wearing a baseball cap while eating ice cream," and Stable Diffusion will attempt to generate an image that corresponds to that text prompt. Because randomness is injected into the generative process alongside the text prompt, a particular text prompt will usually produce a varied set of results. In a generative AI system like Stable Diffusion, a text prompt is not part of the training data. It is part of the end-user interface for the tool. Thus, it is more akin to a text query passed to an internet search engine. Just as the internet search engine looks up the query in its massive database of web pages to show us matching results, a generative AI system uses a text prompt to generate output based on its massive database of training data.

25. A "*Training Image*" is an image, or image paired with a descriptive text caption, that is included among the training data for a machine-learning process. Training images are often gathered through web scraping. For its training data, Stable Diffusion has taken billions of Training Images scraped from public websites.

26. "*Web Scraping*" refers to the harvesting, copying, or extracting data from websites by using automated tools, including bots or web crawlers. Usually, the scope and quantity of data so "scraped" is massive. Web scraping can be used to harvest any kind of data available on public websites, especially copyrighted data such as text, images, or software code. These collections of scraped copyrighted data are used as input for other computer programs, such as search engines and machine-learning processes. The training data for all AI Image Products are collected via web scraping. For example, the training data for Stable Diffusion—a database of billions of captioned images—was collected via web scraping.

27. "*Work*" or "*Works*" refers to any image that was used to train any version of Stable Diffusion that was offered directly and/or incorporated into another product by one or more Defendants during the Class Period.

V. PARTIES

A. Plaintiffs

28. Plaintiff Sarah Andersen is a resident of the State of Oregon. Ms. Andersen is a full-time cartoonist and illustrator and relies on the income therefrom. Her semi-autobiographical comic strip, *Sarah's Scribbles*, finds the humor in living as an introvert. Her graphic novel *FANGS* was nominated for an Eisner Award. Ms. Andersen has created and owns a copyright interest in over two hundred Works included in the Training Data.[1] Ms. Andersen has complied with the statutory requirements for registration and has applied for and owns copyright registrations for sixteen collections that include Works used as Training Images. Copies of these registrations as reflected in the Copyright Office's records are attached as Exhibits 1 through 16 and are valid and enforceable. Ms. Andersen was, and continues to be, injured during the Class Period as a result of Defendants' unlawful conduct alleged herein.

29. Plaintiff Kelly McKernan is a resident of the State of Tennessee. Mx. McKernan is a full-time artist and relies on their income therefrom. Kelly creates original watercolor and acryla gouache paintings for galleries, private commissions, and their online store. Mx. McKernan has created and owns a copyright interest in over thirty Works used as Training Images.[2] Mx. McKernan was, and continues to be, injured during the Class Period as a result of Defendants' unlawful conduct alleged herein.

30. Karla Ortiz is a resident of the State of California. Ms. Ortiz is a Puerto Rican, internationally recognized, award winning full-time artist and relies on the income therefrom. Ms. Ortiz is renowned for her exceptional design sense, realistic renders, and character-driven narratives, and has contributed to many big-budget projects in the film, television, and video-game industries. Ms. Ortiz is also a regular illustrator for major publishing and role playing game companies. Lastly, Ms. Ortiz is a recognized fine artist, and her deeply personal fine art has been

[1] Examples of Ms. Andersen's Works included in the Training Data can be found here: https://haveibeentrained.com/?search_text=sarah%20andersen.

[2] Examples of Mx. McKernan's Works included in the Training Data can be found here: https://haveibeentrained.com/?search_text=kelly%20mckernan and https://laion-aesthetic.datasette.io/laion-aesthetic-6pls/images?_search=kelly+mckernan&_sort=rowid.

showcased in notable galleries such as Spoke Art and Hashimoto Contemporary in San Francisco; Nucleus Gallery, Thinkspace, and Maxwell Alexander Gallery in Los Angeles; and Galerie Arludik in Paris. Ms. Ortiz has created and owns a copyright interest in at least twelve Works that were used as Training Images.[3] Ms. Ortiz was, and continues to be, injured during the Class Period as a result of Defendants' unlawful conduct alleged herein.

B. Defendants

31. Defendant Stability AI Ltd. is a UK corporation with its principal place of business located at 88 Notting Hill Gate, London, England, W11 3HP. Stability AI Ltd. is a party to the unlawful conduct alleged herein.

32. Defendant Stability AI, Inc. is a Delaware corporation with its principal place of business located at 88 Notting Hill Gate, London, England, W11 3HP. Stability AI, Inc. is a party to the unlawful conduct alleged herein. Stability AI, Inc. conducts business in this judicial district. On information and belief, Defendant Stability AI, Inc. is a wholly owned subsidiary of Defendant Stability AI Ltd.

33. Stability AI Ltd. and Stability AI, Inc. jointly created, trained, and maintain Stable Diffusion, an AI Image Product. Stable Diffusion is used to derive the output images of Stability's DreamStudio product. DreamStudio is a web-based app that outputs images in response to text prompts. DreamStudio requires Stable Diffusion to function; the images are produced by Stable Diffusion. DreamStudio provides a user interface and access to a trained version of Stable Diffusion. As noted above, Defendant Stability AI, Inc. is referred collectively with Defendant Stability AI Ltd. as "Stability."

34. Defendant Midjourney, Inc.[4] is a Delaware corporation with its principal place of business located at 333 Harrison Street, Apt. 605, San Francisco, California 94105. Midjourney created, sells, markets, and distributes the Midjourney Product, which is an AI Image Product.

[3] Examples of Ms. Ortiz's Works included in the Training Data can be found here: https://laion-aesthetic.datasette.io/laion-aesthetic-6pls/images?_search=karla+ortiz.

[4] To avoid confusion between Midjourney's eponymous product and the entity itself, Midjourney, Inc. is referred to herein as "Midjourney," and the image-generating product the company offers is referred to as the "Midjourney Product."

Like Stable Diffusion, the Midjourney Product is a commercial product that produces images in response to text prompts. On information and belief, Stable Diffusion was used in iterations of the Midjourney Product. On information and belief, the version of the Midjourney Product currently available was trained on a subset of the images used to train Stable Diffusion. Midjourney is a party to the unlawful conduct alleged herein.

35. Defendant DeviantArt, Inc. ("DeviantArt") is a Delaware corporation with its principal place of business located at 100 Gansevoort Street, New York, New York 10014. DeviantArt created, sells, markets, and distributes DreamUp, which is an AI Image Product. Like Stable Diffusion and the Midjourney Product, DreamUp is a commercial product that relies on Stable Diffusion to produce images. DreamUp is sold directly on the internet as well as other sales channels throughout the United States, including in this District. DeviantArt released DreamUp on November 9, 2022. DeviantArt is a party to the unlawful conduct alleged herein.

VI. AGENTS AND CO-CONSPIRATORS

36. The unlawful acts alleged against the Defendants in this class action complaint were authorized, ordered, or performed by the Defendants' respective officers, agents, employees, representatives, or shareholders while actively engaged in the management, direction, or control of the Defendants' businesses or affairs.

37. The Defendants' agents operated under the explicit and apparent authority of their principals.

38. Each Defendant, and its subsidiaries, affiliates and agents operated as a single unified entity.

39. Various persons and/or firms not named as Defendants herein may have participated as co-conspirators in the violations alleged herein and may have performed acts and made statements in furtherance thereof.

40. Each acted as the principal, agent, or joint venture of, or for other Defendants with respect to the acts, violations, and common course of conduct alleged herein.

VII. CLASS ALLEGATIONS

A. Class Definitions

41. Plaintiffs bring this action for damages and injunctive relief on behalf of themselves and all others similarly situated as a class action pursuant to Rules 23(a), 23(b)(2), and 23(b)(3) of the Federal Rules of Civil Procedure, on behalf of the following Classes:

"Injunctive Relief Class" under Rule 23(b)(2):

> All persons or entities nationalized and/or domiciled in the United States that own a copyright interest in any work that was used to train any version of an AI Image Product that was offered directly and/or incorporated into another product by one or more Defendants during the Class Period.

"Damages Class" under Rule 23(b)(3):

> All persons or entities nationalized and/or domiciled in the United States that own a copyright interest in any work that was used to train any version of an AI Image Product that was offered directly and/or incorporated into another product by one or more Defendants during the Class Period.

"DeviantArt Damages Subclass" under Rule 23(b)(3):

> All members of the Damages Class who (1) maintained an account on DeviantArt; (2) posted copyrighted work on DeviantArt; and (3) had that work used to train any version of an AI Image Product.

These "Class Definitions" specifically exclude the following person or entities:

a. Any of the Defendants named herein;

b. Any of the Defendants' co-conspirators;

c. Any of Defendants' parent companies, subsidiaries, and affiliates;

d. Any of Defendants' officers, directors, management, employees, subsidiaries, affiliates, or agents;

e. All governmental entities; and

f. The judges and chambers staff in this case, as well as any members of their immediate families.

B. Numerosity

42. Plaintiffs do not know the exact number of Class members, because such information is in the exclusive control of Defendants. Plaintiffs are informed and believe that

there are at least thousands of Class members geographically dispersed throughout the United States such that joinder of all Class members in the prosecution of this action is impracticable.

C. Typicality

43. Plaintiffs' claims are typical of the claims of their fellow Class members because Plaintiffs' claims arise out of the same course of conduct from which their injuries result. Plaintiffs and all Class own copyrights in the Works. Plaintiffs and the Class created or owned Works that were published on the internet by themselves or others. The Works were used to train various AI Image Products without permission. Plaintiffs and absent Class members were damaged by this and other wrongful conduct of Defendants as alleged herein. Damages and the other relief sought herein are common to all members of the Class.

D. Commonality & Predominance

44. Numerous questions of law or fact common to the entire Class arise from Defendants' conduct—including, but not limited to those identified below:

i. Direct Copyright Infringement

- Whether Defendants violated the copyrights of Plaintiffs and the Class when they downloaded and stored copies of the Works.
- Whether Defendants violated the copyrights of Plaintiffs and the Class when they used copies of the Works to train AI Image Products.

ii. Vicarious Copyright Infringement

- Whether Defendants vicariously violated the copyrights of Plaintiffs and the Class when third parties used Defendants' products to create Fakes, as defined herein.

iii. DMCA Violations

- Whether Defendants violated the DMCA by removing copyright management information ("CMI") from the Works and/or causing their respective AI Image Products to omit CMI from their output images.

iv. Right of Publicity Violations

- Whether Defendants violated Plaintiffs' and the Class's rights of publicity when they designed their AI Image Products to respond to prompts requesting output images "in the style" of specific individuals, namely Plaintiffs and the Class.

v. Unlawful-Competition

- Whether Defendants' AI Image Products are being used by Defendants to engage in Unfair Competition under the Lanham Act and/or California law.

vi. Injunctive Relief

- Whether this Court should enjoin Defendants from engaging in the unlawful conduct alleged herein. And what the scope of that injunction would be.

vii. Anticipated Defenses

- Whether any affirmative defense excuses Defendants' conduct, including but not limited to whether some or all of Defendants' conduct is allowed under the Fair Use Doctrine.

45. These and other questions of law and fact are common to the Class and predominate over any questions affecting the Class members individually.

E. Adequacy

46. Plaintiffs will fairly and adequately represent the interests of the Class because they have experienced the same harms as the Class and have no conflicts with any other members of the Class. Furthermore, Plaintiffs have retained sophisticated and competent counsel ("Class Counsel") who are experienced in prosecuting federal and state class actions throughout the United States and other complex litigation and have extensive experience advising clients and litigating intellectual property, competition, contract, and privacy matters.

F. Other Class Considerations

47. Defendants have acted on grounds generally applicable to the Class, thereby making final injunctive relief appropriate with respect to the Class as a whole.

48. This class action is superior to alternatives, if any, for the fair and efficient adjudication of this controversy. Prosecuting the claims pleaded herein as a class action will eliminate the possibility of repetitive litigation. There will be no material difficulty in the management of this action as a class action.

49. The prosecution of separate actions by individual Class members would create the risk of inconsistent or varying adjudications, establishing incompatible standards of conduct for Defendants.

VIII. FACTUAL ALLEGATIONS

50. This class action against Defendants concerns a DeviantArt software product called DreamUp, a Midjourney software product, and a Stability software product called DreamStudio, all of which are AI-Image Products and, upon information and belief, built on a Stability Software Library called Stable Diffusion.

A. Stability AI

51. Stability was founded in London, England in 2020 by Mohammad Emad Mostaque, a former hedge-fund manager. Mostaque is currently the Chief Executive Officer of Stability.

52. Stability released Stable Diffusion in August 2022. Stable Diffusion is an AI Image Product that produces images in response to Text Prompts. Stable Diffusion is being updated rapidly, and has had several major releases: version 1.1, version 1.2, version 1.3, version 1.4, and the current version is 2.1. Stability is developing an updated version 3.0.

53. Stable Diffusion is software released under a permissive open-source license.[5] Under this open-source license, programmers and users can download for free the software and

[5] *See* https://github.com/Stability-AI/stablediffusion/blob/main/LICENSE.

its associated machine-learning models derived from the Training Images and then use the software according to the terms of the open-source license.

54. Stability's choice to release Stable Diffusion under an open-source license—rather than under a traditional paid license—has led to rapid adoption of Stable Diffusion, with many programmers devising and releasing their own software based on Stable Diffusion.

55. In August 2022, the same month that Stable Diffusion was released, Stability released DreamStudio (https://dreamstudio.ai). DreamStudio is a web-server-based AI Image Product through which users can generate images with Text Prompts. DreamStudio relies on Stable Diffusion as its underlying Software Library, meaning that DreamStudio relies on Stable Diffusion to generate images from Text Prompts.

56. DreamStudio is billed in packages of "credits," priced at $1 for 100 credits, with a minimum purchase of 1000 credits for $10. New DreamStudio users receive a certain number of credits for free, after which they must buy more. The credits generally represent computer-processing resources on Stability's cloud-based servers. For each image generated with DreamStudio, a certain number of credits are redeemed. DreamStudio represents that the number of credits consumed per image depends on user-controlled settings related to the quality and size of the requested image, and the computing resources used. With 1000 credits, Stability estimates that a user can make "approximately 5000 images with default settings."

57. Stability scraped, and thereby copied over five billion images from websites as the Training Images used as training data for Stable Diffusion. Stability did not seek consent from either the creators of the Training Images or the websites that hosted them from which they were scraped.

58. Stability did not attempt to negotiate licenses for any of the Training Images. Stability simply took them. Stability has embedded and stored compressed copies of the Training Images within Stable Diffusion.

59. Stable Diffusion uses the compressed copies in generating its output in response to Text Prompts. Since launching its DreamStudio app or Stable Diffusion, Stability has not

attempted to negotiate any licenses for any of the Training Images and is not sharing any of the revenue with the artists who created the Training Images nor any other owners of the Works.

60. DreamStudio has been lucrative for Stability. In October 2022, Stability announced it had raised $100 million, led by Coatue and Lightspeed Venture Partners. At the time, Stability was valued at approximately $1 billion.

B. Midjourney

61. Midjourney was incorporated on September 16, 2020 by David Holz. Midjourney launched an open beta of the first public version of its Midjourney Product on July 12, 2022. Since then, it has released Versions 2 and 3, and, most recently, an alpha iteration of Version 4.

C. DeviantArt

62. DeviantArt was founded in 2000, DeviantArt has been primarily known as an online community (https://deviantart.com) where digital artists post and share their work, primarily in the form of digital images. Today DeviantArt bills itself as "the world's largest art community." DeviantArt hosts millions of such images.

63. Thousands—and possibly millions—of the Training Images for Stability's Stable Diffusion product were scraped and copied from DeviantArt.

64. In November 2022, DeviantArt released DreamUp (https://deviantart.com/dreamup). Like Stability's DreamStudio, DreamUp is a web-based app that generates images in response to Text Prompts. Like DreamStudio, DreamUp relies on Stability's Stable Diffusion software as its underlying software engine.

D. How Stable Diffusion Works: A 21st-Century Collage Tool

65. As mentioned above, Stable Diffusion is an AI Image Product released by Stability. It has been incorporated as an image-generating engine into many other software programs, including DreamStudio (by Stability), the Midjourney Product, and DreamUp (released by DeviantArt). Thus, the description that follows of how Stable Diffusion works also describes the operation of DreamStudio, the Midjourney Product, and DreamUp, because they rely on Stable Diffusion as an embedded image-generating engine.

66. The word "diffusion" in its name refers to the technique the software uses to generate output images that are similar to those found in its training data.

67. The diffusion technique was invented in 2015 by a team of researchers led by Jascha Sohl-Dickstein at Stanford University and introduced in their paper "Deep Unsupervised Learning Using Nonequilibrium Thermodynamics" (2015).[6] The technique can be applied to any kind of data, but the paper focuses on its application to digital images.

68. Diffusion operates in two phases. The first phase of diffusion is to take an image and progressively add more noise to it in a series of steps. In this case, "noise" refers to something seen rather than heard, but the connotation is the same: random fluctuations that we perceive as chaotic and unstructured. At each step, the program records how the addition of noise changes the image. By the last step, the image has been "diffused" into essentially random noise.

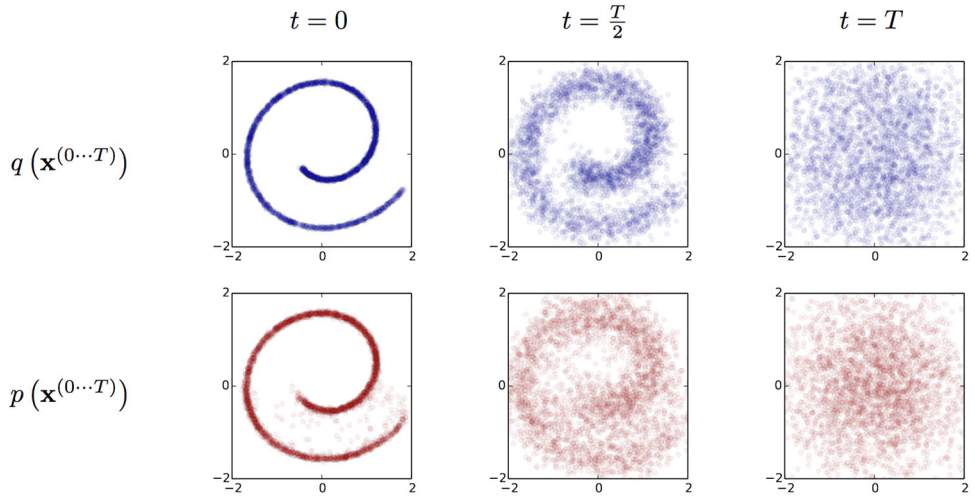
69. The second phase is like the first but reversed. Having recorded the process of turning a certain image into noise over many steps, the program can then run the sequence backwards. Starting with some random noise, the program applies the steps in reverse order. As it progressively removes noise (or "denoises") the data, the program is eventually able to reconstruct the original image.

70. The program relies on complicated mathematics, linear algebra, and a series of algorithms and requires powerful computers and computer processing to recognize underlying relationships in the data.

[6] *Available at* https://arxiv.org/abs/1503.03585

71. The diagram below, taken from the Sohl-Dickstein paper, illustrates the two phases of the diffusion process using a spiral image as the example training data.

72.



73. The first row of the diagram (with the blue spiral) reads left to right. It depicts the first phase of diffusion, with noise being progressively added to the spiral image (not every step is shown). The middle image shows the spiral halfway through the diffusion process. The rightmost image shows the end of the diffusion process—the spiral has become a field of random noise.

74. The second row of the diagram (with the red spiral) **reads right to left**. It shows the reverse process: a patch of random noise (second row, rightmost image) is progressively un-diffused, or "denoised" by reversing the sequence of steps learned in the first phase. The middle image in the second row shows the denoising process at the halfway point. The leftmost image in the second row shows the end result of the denoising process: the spiral has reappeared.

75. Three facts about the diffusion technique are apparent from this diagram.

a. Diffusion is a way for a machine-learning model to calculate how to reconstruct a copy of its Training Images. For each Training Image, a diffusion model finds the sequence of denoising steps to reconstruct that specific image. Then it stores this sequence of steps. The diagram above shows a spiral as an example. In practice, this training would be repeated for many images—likely millions or billions. A diffusion model is then able to reconstruct copies of each Training Image. Furthermore, being able to reconstruct copies of the Training Images is not an

incidental side effect. The **primary goal** of a diffusion model is to reconstruct copies of the training data with maximum accuracy and fidelity to the Training Image. It is meant to be a duplicate.

b. These reconstructed copies do not perfectly match the originals. For instance, in the diagram, the reconstructed spiral (in red) has some fuzzy parts in the lower half that the original spiral (in blue) does not. Though the red spiral is plainly a copy of the blue spiral, in computer terms it is known as a *lossy* copy, meaning small, unimportant, or insignificant details are lost as the data is compressed into a smaller size. This is true of many digital data formats, including MP3, AAC, and JPEG, that also make highly compressed copies of digital data by omitting small, unimportant, or insignificant details. This technique is called *lossy compression.* A diffusion model is a form of lossy compression applied to the Training Images.

c. Because a trained diffusion model can produce a copy of any of its Training Images—which could number in the billions—the diffusion model can be considered an alternative way of storing a copy of those images. In essence, it's similar to having a directory on your computer of billions of JPEG image files. But the diffusion model uses statistical and mathematical methods to store these images in an even more efficient and compressed manner.

76. In December 2020, the diffusion technique was improved by a team of researchers at UC Berkeley led by Jonathan Ho. These ideas were introduced in their paper "Denoising Diffusion Probabilistic Models".[7]

77. Ho's paper described two improvements to the diffusion technique.

78. First, Ho introduced what he called "progressive lossy compression", a way for a diffusion model to store its training data more efficiently without impacting its ability to reconstruct high-quality copies of the training data. These compressed versions of Training

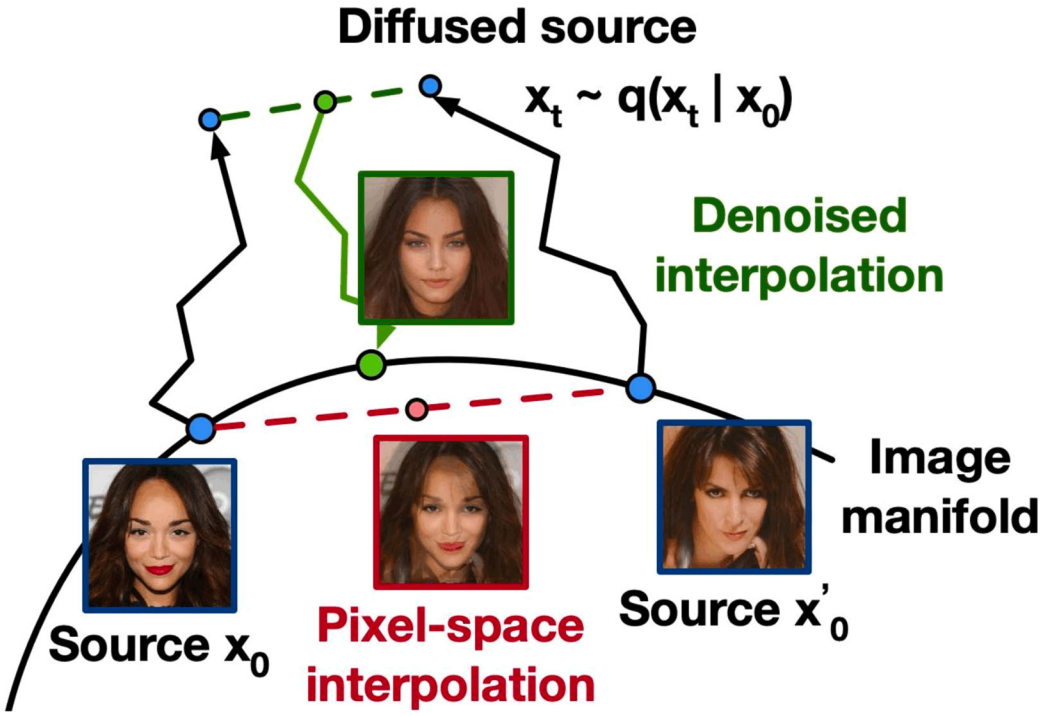
[7] Available from https://arxiv.org/abs/2006.11239

Images have come to be known as *latent image representations* (or just *latent images*). Ultimately, a latent image is just another copy of an image from the training dataset.

79. Second, Ho showed how a latent image could be interpolated—meaning, blended mathematically—to produce new derivative images. Rather than combine two images pixel by pixel—which gives unappealing results—Ho showed how Training Images can be stored in the diffusion model as latent images and then interpolated as a new latent image. This interpolated latent image can then be converted back into a standard pixel-based image.

80. The diagram below, taken from Ho's paper, shows how this process works, and demonstrates the difference in results between interpolating pixels and interpolating latent images.

81.



82. In the diagram, two photos are being blended: the photo on the left labeled "Source x_0," and the photo on the right labeled "Source x'_0."

83. The image in the red frame has been interpolated pixel by pixel, and is thus labeled "pixel-space interpolation." This pixel-space interpolation simply looks like two translucent face images stacked on top of each other, not a single convincing face.

84. The image in the green frame, labeled "denoised interpolation", has been generated differently. In that case, the two source images have been converted into latent images (illustrated by the crooked black arrows pointing upward toward the label "Diffused source"). Once these latent images have been interpolated (represented by the green dotted line), the newly interpolated latent image (represented by the smaller green dot) has been reconstructed into pixels (a process represented by the crooked green arrow pointing downward to a larger green dot). This process yields the image in the green frame. Compared to the pixel-space interpolation, the difference is apparent: the denoised blended interpolation looks like a single convincing human face, not an overlay or combination of images of two faces.

85. A enlarged detail of the two interpolated images is shown below.

86. Despite the difference in results, these two modes of interpolation are equivalent: they both generate derivative works from the source images. In the pixel-space interpolation (the red-framed image), the source images themselves are being directly interpolated to make a derivative image. In the denoised interpolation (the green-framed image), (1) the source images are being converted to latent images, which are lossy-compressed copies; (2) those latent images are being interpolated to make a derivative latent image; and then (3) this derivative latent image is decompressed back into a pixel-based image.

87. In April 2022, the diffusion technique was further improved by a team of researchers led by Robin Rombach at Ludwig Maximilian University of Munich. These ideas were introduced in his paper "High-Resolution Image Synthesis with Latent Diffusion Models."

88. Rombach is also employed by Stability as one of the primary developers of Stable Diffusion, which is a software implementation of the ideas in his paper.

89. Rombach's diffusion technique offered one key improvement over previous efforts. Rombach devised a way to supplement the denoising process by using extra information, so that latent images could be interpolated in more complex ways. This process is called *conditioning*. The most common tool for conditioning is short text descriptions, previously introduced as *Text Prompts*, that might describe elements of the image, e.g.—"a dog wearing a baseball cap while eating ice cream". This metric uses Text Prompts as conditioning data to select latent images that are already associated with text captions indicating they contain "dog," "baseball cap," and "ice cream." The text captions are part of the Training Images, and were scraped from the websites where the images themselves were found.

90. The resulting image is necessarily a derivative work, because it is generated exclusively from a combination of the conditioning data and the latent images, all of which are copies of copyrighted images. It is, in short, a 21st-century collage tool.

91. The result of this conditioning process may or may not be a satisfying or accurate depiction of the Text Prompt. Below is an example of output images from Stable Diffusion (via the DreamStudio app) using this Text Prompt—"a dog wearing a baseball cap while eating ice cream". All these dogs in the resulting images seem to be wearing baseball hats. Only the one in the lower left seems to be eating ice cream. The two on the right seem to be eating meat, not ice cream.

92.

93. In general, none of the Stable Diffusion output images provided in response to a particular Text Prompt is likely to be a close match for any specific image in the training data. This stands to reason: the use of conditioning data to interpolate multiple latent images means that the resulting hybrid image will not look exactly like any of the Training Images that have been copied into those latent images.

94. But it is also true that the only thing a latent-diffusion system can do is interpolate latent images into hybrid images. There is no other source of visual information entering the system.

95. Every output image from the system is derived exclusively from the latent images, which are copies of copyrighted images. For these reasons, every hybrid image is necessarily a derivative work.

96. A latent-diffusion system can never achieve a broader human-like understanding of terms like "dog," "baseball hat," or "ice cream." Hence, the use of the term "artificial intelligence" in this context is inaccurate.

97. A latent-diffusion system can only copy from latent images that are tagged with those terms. The system struggles with a Text Prompt like "a dog wearing a baseball cap while eating ice cream" because, though there are many photos of dogs, baseball caps, and ice cream among the Training Images (and the latent images derived from them) there are unlikely to be any Training Images that combine all three.

98. A human artist could illustrate this combination of items with ease. But a latent-diffusion system cannot because it can never exceed the limitations of its Training Images.

99. In practice, the quality of the latent-diffusion images depends entirely on the breadth and quality of the Training Images used to generate the latent images. If that weren't true, then it wouldn't matter where Stable Diffusion (or any other AI-Image Product) got its Training Images.

100. In actuality, the provenance of an AI-Image-Product's Training Images matters very much. According to Emad Mostaque, CEO of Stability, Stable Diffusion has "compress[ed] the knowledge of over 100 terabytes of images."[8] Though the rapid success of Stable Diffusion has been partly reliant on a great leap forward in computer science, it has been even more reliant on a great leap forward in appropriating copyrighted images.

E. The source of the Stable Diffusion training data: LAION

101. LAION (acronym for "Large-Scale Artificial Intelligence Open Network") is a nonprofit organization based in Hamburg, Germany. LAION is led by Christoph Schuhmann.

[8] *See* Kyle Wiggers, *This Startup is Setting a DALL-E 2-Like AI Free, Consequences Be Damned*, TechCrunch (Aug. 12, 2022, 3:55 PM), https://techcrunch.com/2022/08/12/a-startup-wants-to-democratize-the-tech-behind-dall-e-2-consequences-be-damned/

LAION's stated goal is "to make large-scale machine learning models, datasets and related code available to the general public." All of LAION's projects are made available for free.

102. One of LAION's most well-known projects is the image datasets it used train AI systems.

103. In August 2021, LAION released LAION-400M, a dataset of 400 million Training Images that included text captions. The Training Images in LAION-400M and their text captions were copied or scraped from web pages or other sources without the consent of the image owners or website operators. At the time, LAION-400M was the largest freely available dataset of its kind.

104. Stability paid LAION to create LAION-5B, a new dataset of 5.85 billion Training Images—more than 14 times bigger than LAION-400M. The only reason LAION-5B exists is because Stability paid for it, so that Stability could have sufficient Training Images for Stable Diffusion.

105. At the time, Stability was in the process of developing Stable Diffusion. As admitted by Mostaque, Stability needed a bigger set of training images for training Stable Diffusion.

106. Mostaque has publicly acknowledged the importance of using licensed training images, saying that future versions of Stable Diffusion would be based on "fully licensed" training images.[9] But for the current version, he took no steps to obtain or negotiate suitable licenses.

107. Stability also paid LAION to create LAION-Aesthetics, a subset of LAION-5B containing the images rated most highly for beauty and visual appeal by testers of Stable Diffusion. To improve the quality of the output images, Stable Diffusion received more concentrated training on version 2.5 of the LAION-Aesthetics dataset,[10] which contains 600 million Training Images.

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[9] *See* @EMostaque, Twitter (Dec. 15, 2022, 8:03 AM), https://twitter.com/EMostaque/status/1603390169192833027.

[10] *See* Stable Diffusion v1 Model Card, GitHub, https://github.com/CompVis/stable-diffusion/blob/main/Stable_Diffusion_v1_Model_Card.md#training (last visited Dec. 21, 2022).

108. Because LAION releases its datasets to the public, it is possible to study the sources of the data, including the websites that the Training Images were scraped or copied from.

109. The LAION-Aesthetics dataset is heavily reliant on scraping and copying images from commercial image-hosting services: according to one study, 47% of the images in the dataset were scraped from only 100 web domains.[11] The sources of some of the copies and scrapes are stock-image sites, including Getty Images, Shutterstock, and Adobe Stock, as well as shopping sites (like Shopify, Pinterest, Wix, and Squarespace). Significantly, websites featuring user-generated content were a huge source of images, including sites like Smugmug, Flickr, Wikimedia, Tumblr, and DeviantArt.

110. DeviantArt is the source of a significant portion of the LAION-Aesthetic dataset amounting to an estimate of one out of every fifty images. Reasonable estimates show that there are likely 3.3 million images from DeviantArt in the LAION-Aesthetics dataset.

F. DeviantArt's betrayal of its artist community by embracing generative AI images

111. In 2000, Angelo Sotira, Scott Jarkoff, and Matthew Stephens founded DeviantArt.

112. In 2017, Wix acquired DeviantArt. Wix acquired all of DeviantArt's corporate stock for $36 million.

113. Shortly afterward, in March 2017, Moti Levy became Chief Operating Officer (COO) of DeviantArt. In April 2022, Levy was promoted to Chief Executive Officer (CEO) of DeviantArt.

114. Since its founding in 2000, DeviantArt has held itself out as an online community friendly to artists, colloquially known on the site as "deviants." A primary activity of artists on DeviantArt is sharing digital images of their artwork, colloquially called "deviations." Today, DeviantArt bills itself as "the world's largest art community," hosting millions of such images.

115. DreamUp is a commercial product for DeviantArt and available only to customers who pay DeviantArt. DeviantArt offers paid subscriptions to its artist members called "Core

[11] Andy Baio, *Exploring 12 Million of the 2.3 Billion Images Used to Train Stable Diffusion's Image Generator*, Waxy (Aug. 30, 2022), https://waxy.org/2022/08/exploring-12-million-of-the-images-used-to-train-stable-diffusions-image-generator/.

Plans." Custom Core Plans typically range in price from $3.95 to $14.95 per month. To use DreamUp, a member must first subscribe to a Core Plan. A Core Plan subscriber is allowed to use DreamUp for a certain number of Text Prompts per month. For instance, the $9.95 "Pro" level permits 200 DreamUp Text Prompts per month. Core Plan members can purchase additional Text Prompts by purchasing packages of "points." DeviantArt charges $1 for 80 points, with a minimum purchase of 400 points for $5.

116. Stability copied thousands—and possibly millions—of the Training Images from DeviantArt created by artists and other DeviantArt subscribers.

117. DeviantArt claims that DreamUp "lets you create AI art knowing that creators and their work are treated fairly."

118. This statement is false and misleading.

119. Like Stability, DeviantArt has not attempted to negotiate licenses for any of the Training Images. Like Stability, DeviantArt is not sharing any of the revenue from the DreamUp app with the artists or other owners of the Training Images.

120. DeviantArt has betrayed its artist community. Rather than standing up for the rights of its members by rejecting Stable Diffusion and other sources of AI-generated art, DeviantArt has gone the opposite direction: it has built an app called DreamUp that is based on Stable Diffusion.

121. By releasing DreamUp as a paid product, DeviantArt is a co-conspirator in the illegal use of copyrighted works.

122. In addition, by offering for sale AI-generated work based on Stable Diffusion, DeviantArt is in fact competing with and displacing the work of the artists and other subscribers to DeviantArt.

123. DeviantArt's choice to embrace Stable Diffusion by incorporating it into their website via the DreamUp app violates their own terms of service and privacy policy and represents unfair competition against their artist customers.

124. DeviantArt's terms of service have long contained a strict prohibition against using content on the site "for any commercial purpose," and also says no "commercial activities

are permitted on or through the Service without DeviantArt's written approval." The terms of service elsewhere state that "You may not reproduce, distribute, publicly display or perform, or prepare derivative works based on any of the [DeviantArt-hosted artworks] without the express, written consent of DeviantArt or the appropriate owner of copyright in such works."

125. DeviantArt was aware or reasonably should have been aware that Stability was acting in violation of those terms. Thus, having been put on notice that DeviantArt images had been used for a commercial purpose—namely, training Stable Diffusion—DeviantArt could have taken legal action against Stable Diffusion for violating those terms.

126. DeviantArt did not do so.

127. There is no evidence that DeviantArt, despite its professed dedication to its terms of service, has ever challenged Stability's violation of the terms of service by training Stable Diffusion on the work of DeviantArt members.

128. The scope of DeviantArt's betrayal of its artist community by embracing Stable Diffusion was evident in a group audio session held by DeviantArt management on November 11, 2022, from approximately 1:00–2:30 pm Pacific Time. DeviantArt scheduled the discussion specifically to allay the well-founded concerns of DeviantArt members that DeviantArt's embrace of AI art was a complete repudiation of its longstanding community principles, as well as economically and legally unfair.

129. At one point in the audio session, CEO Moti Levy explicitly took ownership of the decision to bring Stable Diffusion onto DeviantArt via the DreamUp app: "The reason why we're using Stable Diffusion because it's the only option for us to take an open source [software engine] and modify it . . . . The other platforms or the other companies do not allow it. . . . [A]nd by the way, that was my decision. **That's our decision by me as the CEO. That's my decision to take Stable Diffusion**." (Emphasis added.)

130. Shortly after the end of this audio session, DeviantArt updated its terms of service. DeviantArt added a new paragraph about "Data Scraping & Machine Learning Activities" that explicitly *permits* this kind of usage under certain circumstances, so that Stable Diffusion and future generative AI services can continue to scrape DeviantArt for images. In so

doing, DeviantArt has reneged on its promises. It plainly switched its loyalties from its artist members to the AI companies, like Stability, infringing Plaintiffs' and the Class's intellectual property rights in the work of those members. According to the Internet Archive, this new data-scraping provision was added to the DeviantArt terms of service on November 11, 2022, sometime between 1:41pm and 4:22pm Pacific Time.

131. Furthermore, although the new "Data Scraping" provision acknowledges that certain kinds of data scraping will continue to be an "unauthorized use" of the DeviantArt website, that "owners of the works are responsible for policing their own works". In other words, despite its professed interest in using its terms of service to protect artists, DeviantArt is washing its hands of the matter. Instead of standing up for artists and using its resources to combat illegal AI data scraping, it is forcing artists to take matters into their own hands.

G. Midjourney: the 21st-century collage tool (in)famous for its artistic style

132. Midjourney is a generative AI company based in San Francisco, California.

133. Midjourney was founded in August 2021 by David Holz, who also serves as CEO. According to its website, Midjourney is "self-funded" and employs "11 full-time staff".

134. Midjourney's main product is an online AI-based image generator offered under the name "Midjourney." Like DreamUp and DreamStudio, the Midjourney image generator uses Text Prompts as input and produces digital images as output. Just like DreamUp and DreamStudio, Midjourney relies on Stable Diffusion as its underlying software engine for generating images.

135. Midjourney released the first version of its service in March 2022, and has continued to update the product continually since. Version 2 was launched in April 2022. Version 3 was launched in July 2022. On November 10, 2022, the alpha iteration of Version 4 was launched.

136. Midjourney has deployed its service through an internet-chat system called Discord. Users can visit certain Discord servers where Midjourney is enabled and use the command "\imagine . . ." in a group chat room to introduce a Text Prompt. Midjourney will take

this Text Prompt and return an image within the chat-room window. These chat rooms are shared by other users, so everyone can see each others' Text Prompts, and the images that result.

137. Midjourney allows anyone to sample its service for free by providing a small number of image outputs in response to Text Prompts. Midjourney offers a number of paid subscription plans. For instance, its "Standard" plan costs $30 per month and allows unlimited Text Prompts and digital image outputs. For an additional $20 per month, a customer can get "Private Visibility", allowing users to keep private Text Prompts, images, and digital output. Midjourney also has a "Corporate" plan for $600 per year per person that is "required for employees" of companies with "over $1Million/year [sic] in gross revenue."

138. Though Holz has described Midjourney as a "diverse research lab" that is "not really financially motivated," Holz intends for Midjourney to make money by enrolling corporate and other professional customers to generate images. Holz has said that "Millions are using [Midjourney] … maybe 30%-50% of our users right now are professionals."

139. Midjourney subscribers also receive access to the Midjourney web app, similar to DreamStudio or DreamUp, which lets users access the Midjourney service through a web interface.

140. In its terms of service, Midjourney calls the images generated by its service "Assets." The terms of service require that users grant Midjourney an "irrevocable copyright license . . . [in the] Assets produced by the service at your direction." Midjourney is therefore necessarily asserting that the images generated by its system are copyrightable, and that the copyright inheres in the subscriber who makes the image.

141. According to Holz, Midjourney distinguishes itself from competitors like DreamUp and DreamStudio by being "focused toward making everything beautiful and artistic looking."

142. In September 2022, New York resident Kris Kashtanova sought and received U.S. copyright registration for a comic book titled *Zarya of the Dawn*, featuring images generated by Midjourney. In December 2022, the U.S. Copyright Office revoked this registration, deeming the work ineligible for registration because it was generated by AI.

143. Also in September 2022, Colorado resident Jason Allen used Midjourney to generate an image that he submitted to an art competition at the Colorado State Fair, which later won. In response to artists who felt he had cheated, Allen later told the *New York Times*, "Art is dead, dude. It's over. A.I. won. Humans lost." He also said that while using Midjourney, "I felt like … some otherworldly force was involved."

144. But the secret to Midjourney isn't some "otherworldly force". Just like DreamUp and DreamStudio, Midjourney relies on appropriating millions of copyrighted images created by artists and using these images as Training Images.

145. Thus, just like DreamUp and DreamStudio, Midjourney is a collage tool, only capable of producing images that are remixed and reassembled from the copyrighted work of others.

146. Holz has been sanguine about the copyright-infringement aspect of Midjourney, saying that "To my knowledge, every single large AI model is basically trained on stuff that's on the internet. And that's okay, right now. **There are no laws specifically about that**." (Emphasis added.)

147. That statement is false. There are a number of laws that protect and preserve the rights and interests with respect to their art.

148. Holz has been cagey when asked direct questions about the source of Midjourney's Training Images. When asked how the dataset of Training Images was built, he said "It's just a big scrape of the internet. We use the open data sets that are published and train across those. And I'd say that's something that 100% of people do. We weren't picky."

149. On information and belief, because the LAION image datasets are the only large "open data sets that are published," Holz's comment implies that Midjourney has used the LAION image datasets for training. In August 2022, Midjourney released a beta version that used SD.

150. When asked whether he sought consent from the creators of the Training Images, Holz said "No. **There isn't really a way to get a hundred million images and know where they're coming from**. . . . There's no way to find a picture on the internet, and then

automatically trace it to an owner and then have any way of doing anything to authenticate it." (Emphasis added.)

151. Holz's statement is false. LAION and other open datasets are simply lists of URLs on the public web. Many of those URLs are derived from a small handful of websites that maintain records of image ownership. Thus, many images could be traced to their owner. Holz and LAION possess information sufficient to perform such tracing.

152. But Holz is correct that the project of licensing artworks ethically and complying with copyright is not automatic—on the contrary, it is difficult and expensive. This is why Holz was able to say in August 2022, one year after Midjourney's founding: "To be honest, we're already profitable, and we're fine." This stands to reason: Midjourney skipped the expensive part of complying with copyright and compensating artists, instead helping themselves to millions of copyrighted works for free.

IX. CLAIMS FOR RELIEF

COUNT I
DIRECT COPYRIGHT INFRINGEMENT
17 U.S.C. §§ 106, *et seq.*
(All Defendants)

153. Plaintiffs and the Class hereby repeat and incorporate by reference each preceding and succeeding paragraph as though fully set forth herein.

154. As the owners of the copyright rights associated with the Works and/or Training Images, Plaintiffs and the Class hold the exclusive rights under 17 U.S.C. § 106.

155. Defendants had access to but were not licensed by Plaintiffs or the Class to train any machine learning, AI, or other computer program, algorithm, or other functional prediction engine using the Works.

156. Defendants had access to but were not licensed by Plaintiffs nor the Class to incorporate the Works into the products offered by Stability, DeviantArt, Midjourney, or related software applications.

157. Defendants had access to but were not licensed by Plaintiffs or the Class to download, store, or distribute copies of the Works for use in training or otherwise creating AI Image Products.

158. Defendants had access to but were not licensed by Plaintiffs nor the Class to create Derivative Works based upon the Works.

159. Defendants had access to but were not licensed by Plaintiffs nor the Class to distribute the Works.

160. Defendants directly infringed Plaintiffs' and the Class's rights because they have:

a. reproduced one or more of the Works in violation of 17 U.S.C. § 106(1);

b. prepared Derivative Works based upon one or more of the Works in violation of 17 U.S.C. § 106(2);

c. distributed copies of one or more of the Works to the public in violation of 17 U.S.C. § 106(3);

d. performed one or more of the Works publicly in violation of 17 U.S.C. § 106(4); and/or

e. displayed one or more of the Works publicly in violation of 17 U.S.C. § 106(5).

161. Plaintiffs and the Class have been damaged by Defendants' actions.

162. Defendants have directly and indirectly profited from their acts of infringement.

163. Defendants have infringed the Training Images for commercial purposes.

164. Defendants are using copies of the Training Images interconnected with their AI Image Products to generate digital images and other output that are derived exclusively from the Training Images, and that add nothing new.

165. Defendants' AI Image Products produce digital images and other output that act as market substitutes for the underlying Training Images, thereby competing with Plaintiffs and members of the Class.

166. Defendants' AI Image Products contain copies of every image in the set of Training Images and are capable at any time of producing as output a copy of any of the Training Images.

167. Defendants' AI Image Products, because they generate images derived from the Training Images, will substantially negatively impact the market for the work of Plaintiffs and the Class.

168. The conduct of Defendants is causing and, unless enjoined and restrained Court, will continue to cause Plaintiffs and the Class great and irreparable injury that cannot fully be compensated or measured in money and have no adequate remedy at law.

COUNT II
VICARIOUS COPYRIGHT INFRINGEMENT
17 U.S.C. §§ 106, *et seq.*
(All Defendants)

169. Plaintiffs and the Class hereby repeat and incorporate by reference each preceding and succeeding paragraph as though fully set forth herein.

170. As the owners of the copyright rights, Plaintiffs and the Class hold the exclusive rights under 17 U.S.C. § 106.

171. Individuals have used AI Image Products to create works using the names of Plaintiffs and the Class in prompts and passed those works off as original works by the artist whose name was used in the prompt. Such individuals are referred to herein as "Imposters" By using a particular artist's name, Imposters can cause the AI Image Product to rely more heavily on that artist's prior works to create images that can pass as original works by that artist. These output images are referred to herein as "Fakes."

172. The ability of AI Image Products to respond to prompts containing specific artists' names was designed by Defendants with either the knowledge of or reckless disregard for the fact that this functionality could easily be used to create Fakes.

173. Imposters have sold Fakes on ArtStation, Kickstarter, the Unreal Engine Marketplace, and elsewhere.

174. Plaintiffs and the Class have been damaged by Imposters' actions.

175. The Defendant-owner of the AI Image Product used to create each Fake is vicariously liable for any infringements committed by Imposters.

176. Defendants have directly and indirectly profited from acts of infringement by Imposters.

177. The conduct of Defendants and Imposters is causing and, unless and until enjoined and restrained by this Court, will continue to cause Plaintiffs and the Class great and irreparable injury that cannot fully be compensated or measured in money and have no adequate remedy at law.

COUNT III
VIOLATION OF THE DIGITAL MILLENNIUM COPYRIGHT ACT
17 U.S.C. §§ 1201–1205
(All Defendants)

178. Plaintiffs and the Class hereby repeat and incorporate by reference each preceding and succeeding paragraph as though fully set forth herein.

179. Plaintiffs and members of the Class own the copyrights to Works used to train AI Image Products. The AI Image Products were trained on billions of images found on the internet.

180. Plaintiffs and members of the Class included the following Copyright Management Information (as defined in Section 1202(c) of the DMCA) ("CMI") in the Works:

a. copyright notices;

b. the title and other information identifying the Works;

c. the name of, and other identifying information about, the creators of the Works; and

d. the name of, and other identifying information about, the copyright owners of the Works.

181. Defendants did not contact Plaintiffs nor the Class to obtain authority to remove or alter CMI from the Works within the meaning of the DMCA.

182. Defendants knew that they did not contact Plaintiffs nor the Class to obtain authority to remove or alter CMI from the Works within the meaning of the DMCA.

183. As part of the scheme, Defendants did not attempt to contact Plaintiffs to obtain authority to remove or alter CMI from the Works within the meaning of the DMCA. In fact, Defendants' removal of CMI made it difficult or impossible to contact Plaintiffs and the Class to

obtain authority to remove or alter CMI from the Works within the meaning of the DMCA. Rather, Defendants removed or altered CMI from images that are owned by Plaintiffs and the Class by training Stable Diffusion on those images and designing it to omit any CMI as part of the output.

184. Without the authority of Plaintiffs and the Class, Defendants intentionally removed or altered CMI from the Works after they were posted on DeviantArt or other websites.

185. Defendants had access to but were not licensed by Plaintiffs nor the Class to train any machine learning, AI, or other pseudo-intelligent computer program, algorithm, or other functional prediction engine using the Works.

186. Defendants had access to but were not licensed by Plaintiffs nor the Class to incorporate the Works into their AI Image Products.

187. Defendants had access to but were not licensed by Plaintiffs nor the Class to create Derivative Works based upon the Works.

188. Defendants had access to but were not licensed by Plaintiffs nor the Class to distribute the Works as they do through Defendants' AI Image Products.

189. Without the authority of Plaintiffs and the Class, Defendants distributed CMI knowing that the CMI had been removed or altered without authority of the copyright owner or the law with respect to the Works.

190. Defendants distributed copies of the Works knowing and intending that CMI had been removed or altered without authority of the copyright owner or the law, with respect to the Works.

191. Defendants removed or altered CMI from the Works knowing and intending that it would induce, enable, facilitate, or conceal infringement of copyright. Both in the dataset used to source the Training Images as well as the places on the Internet where the Training Images were found set forth CMI, such as the creator's name. CMI is also incorporated into the Works in the form of artist's signatures. When any of Defendants' AI Image Products output an image, the CMI that was previously included with the Works the image is based upon is removed.

192. Without the CMI associated with the Works, users of AI Image Products are induced or enabled to copy the Works and/or make Derivative Works based on them. Without the CMI, copyright infringement is facilitated or concealed, because Plaintiffs and the Class are prevented from knowing or learning that the Output is based upon one or more of the Works.

193. Defendants removed or altered CMI from Works owned by Plaintiffs and the Class while possessing reasonable grounds to know that it would induce, enable, facilitate, and/or conceal infringement of copyright in violation of the DMCA. By omitting and concealing CMI from Output, Defendants have reasonable grounds to know that innocent infringers are induced or enabled to copy the Works, because CMI has been removed. Without the CMI, Defendants have reasonable grounds to know copyright infringement is facilitated or concealed, because Plaintiffs and the Class have the difficult or impossible task of proving the Works belong to them.

194. The profits attributable to Defendants' violation of the DMCA include the revenue from: any AI Image Products they offer that incorporate Stable Diffusion and other AI Image Products trained on copyrighted images owned by Plaintiffs and/or the Class. The Works add nearly all value to these products because the purpose of them is to provide images and the source of those images are the Works. Without the Works, these products would not be functional.

195. On information and belief, Defendants could have trained their AI Image Products to include any CMI associated with the Works relied on to create a given Output when providing that Output.

196. Defendants did not request or obtain permission from Plaintiffs and the Class to use the Works to train their AI Image Products.

197. Unless Defendants are enjoined from violating the DMCA, Plaintiffs and the Class will suffer great and irreparable harm by depriving them of the right to identify and control the reproduction and/or distribution of their copyrighted works and to pursue copyright-infringement remedies. Defendants will not be damaged if they are required to comply with the DMCA. Plaintiffs and the Class members are therefore entitled to an injunction barring Defendants from violating the DMCA and impounding any device or product that is in the

custody or control of Defendants and that the court has reasonable cause to believe was involved in a violation of the DMCA.

198. Plaintiffs and the Class are further entitled to recover from Defendants the actual or statutory damages Plaintiffs and the Class sustained pursuant to 17 U.S.C. § 1203(c) and for Plaintiffs' and the Class's costs and attorneys' fees in enforcing the Licenses. Plaintiffs and the Class are also entitled to recover as restitution from Defendants for any unjust enrichment, including gains, profits, and advantages that Defendants have obtained as a result of their breach of the Licenses.

199. Defendants conspired together and acted jointly and in concert pursuant to their scheme to commit the acts that violated the DMCA alleged herein.

200. Defendants induced their customers to unknowingly violate the DMCA by withholding attribution and other information as described herein.

COUNT IV
VIOLATION OF THE STATUTORY RIGHT OF PUBLICITY
***Cal. Civ. Code* § 3344**
(All Defendants)

201. Plaintiffs and the Class hereby repeat and incorporate by reference each preceding and succeeding paragraph as though fully set forth herein.

202. Defendants knowingly used Plaintiffs' names in Defendants' AI Image Products. At no time did Plaintiffs consent to Defendants' use of their names in this capacity.

203. Defendants appropriated Plaintiffs' names to Defendants' advantage, including for the purposes of advertising, selling, and soliciting purchases through Defendants' AI Image Products. Defendants' AI Image Products can be directed to prioritize inclusion of specific artists' Works by invoking the name of the artist or artists. This was a function designed and promoted by Defendants as a product feature.

204. Plaintiffs have invested considerable energy, effort, ingenuity, and creativity into the development of their distinct artistic identities and have successfully built careers as artists. Plaintiffs' names are uniquely associated with their art and artistic styles and are recognizable to

the public. Plaintiffs have derived value from their names, identities, and distinctive artistic styles.

205. There is a direct connection between Defendants' misappropriation of Plaintiffs' names and Defendants' commercial purposes, because Defendants used Plaintiffs' names to advertise art "in the style" of Plaintiffs' work. Defendants used Plaintiffs' names and advertised their AI's ability to copy or generate work in the artistic style that Plaintiffs popularized in order to sell Defendants' products and services. Defendants' ability to market art similar to and associated with Plaintiffs' names also enabled Defendants to establish an advantage over actual and prospective competitors.

206. Defendants' use of Plaintiffs' names was not incidental. Rather, Defendants specifically and knowingly used Plaintiffs' names because these names were uniquely related to specific artistic styles, and Defendants generated valuable business from their ability to sell artworks "in the style" that Plaintiffs popularized. Thus, the use of Plaintiffs' names contributed value to Defendants' platform and services.

207. Defendants used Plaintiffs' names to link and associate the art generated by its AI with Plaintiffs' specific styles and artistic accomplishments. This link uniquely enhanced the marketability of Defendants' AI art-generating services to consumers and the public.

208. Defendants' emphasized the ability of AI Image Products to create images based on "in the style" prompts that included specific Class members' names. This functionality was prominent and used throughout Defendants' apps, website, and social media posts.

209. Thus, Defendants' misappropriation of Plaintiffs' names is directly connected with Defendants' advertising and sale of their products and services.

210. Because Defendants advertise the ability of their systems to generate artwork "in the style" of Plaintiffs' work—and explicitly used Plaintiffs' work to train their AI algorithms—the art generated by Defendants' AI products is not transformative. Defendants' misappropriation merely capitalizes on Defendants' theft of Plaintiffs' artistic work and the associated value of Plaintiffs' names.

211. Defendants appropriated Plaintiffs' names exclusively for commercial purposes. Defendants' appropriation was not done in connection with any news, public affairs, sports broadcast or account, or political campaign.

212. Because of Defendants' unlawful appropriation of Plaintiffs' names, Plaintiffs have suffered injury. Plaintiffs have a right to protect the goodwill that is associated with their names, and that goodwill is compromised by a proliferation of AI-generated art created without Plaintiffs' consent but associated with Plaintiffs' names. Further, the value of Plaintiffs' name recognition—and thus the value of their art itself—is diluted in a market flooded with AI-generated copies associated with Plaintiffs' names and artistic styles. Rather than generating revenue by licensing their own images, Plaintiffs also suffer injury through having to compete with knock-off images generated from Plaintiffs' work and associated with Plaintiffs' names.

COUNT V
VIOLATION OF THE COMMON LAW RIGHT OF PUBLICITY
Common Law
(All Defendants)

213. Plaintiffs and the Class hereby repeat and incorporate by reference each preceding and succeeding paragraph as though fully set forth herein.

214. Plaintiffs' identities are distinctly tied to their work as artists and their specific artistic styles. Plaintiffs have invested considerable energy, effort, ingenuity, and creativity into the development of their distinct artistic identities and name-recognition. Plaintiffs have also built careers as artists and have derived value from their names, identities, and distinctive artistic styles.

215. Plaintiffs' names and artistic identities are not limited to a specific copyrighted image or work developed by Plaintiffs. Rather, they extend to Plaintiffs' entire corpus of work and allow consumers and the public to identify work "in the style of" Plaintiffs. Thus, Defendants did not only misappropriate work fixed in a tangible medium of expression, but also misappropriated Plaintiffs' names and artistic identities.

216. Plaintiffs did not consent to Defendants' use of their names or identities.

217. Defendants knowingly used Plaintiffs' names and identities to further Defendants' commercial advantage, including for the purposes of advertising, selling, and soliciting purchases through Defendants' AI art-generating system.

218. Defendants used Plaintiffs' names and distinct artistic identities to link and associate the art generated by its AI with Plaintiffs' specific styles and artistic accomplishments. This link uniquely enhanced the marketability of Defendants' AI art-generating services to consumers and the public.

219. Defendants' use of Plaintiffs' names and identities was prominent and used throughout Defendants' apps, website, and social media posts.

220. Thus, Defendants' misappropriation of Plaintiffs' names and identities is directly connected with Defendants' advertising and sale of their products and services.

221. Because Defendants advertise the ability of their systems to generate artwork "in the style" of Plaintiffs' work—and explicitly used Plaintiffs' work to train the algorithms—the art generated by Defendants' AI products is not transformative. Defendants' misappropriation merely capitalizes on Defendants' theft of Plaintiffs' artistic work and the associated value of Plaintiffs' names and identities.

222. Because of Defendants' unlawful appropriation of Plaintiffs' names and identities, Plaintiffs have suffered injury. The goodwill associated with Plaintiffs' names and distinct identities is compromised by a proliferation of AI-generated art associated with Plaintiffs' names and identities, but created without Plaintiffs' consent. The value of Plaintiffs' name recognition and Plaintiffs' distinct artistic styles—and thus the value of their art itself—is diluted in a market flooded with AI-generated copies built on Plaintiffs' unique artistic identities. Plaintiffs also suffer injury through having to compete with knock-off images generated from Plaintiffs' work and associated with Plaintiffs' names.

COUNT VI

UNFAIR COMPETITION

15 U.S.C. § 1125; *Cal. Bus. & Prof. Code* §§ 17200, *et seq.*; and Common Law
(All Defendants)

223. Plaintiffs and the Class hereby repeat and incorporate by reference each preceding and succeeding paragraph as though fully set forth herein.

224. Defendants have engaged in unlawful business practices, including:

a. Infringement of Plaintiffs' and the Class's copyrights; and

b. Violations of Plaintiffs' and the Class's rights under the DMCA.

The details of the unlawful business practices are set forth herein.

225. Plaintiffs and the Class have suffered monetary damages as a result of Defendants' conduct.

226. The conduct of Defendants is causing and, unless enjoined and restrained by this Court, will continue to cause Plaintiffs and the Class great and irreparable injury that cannot fully be compensated or measured in money.

COUNT IX

BREACH OF CONTRACT
VIOLATION OF DEVIANTART POLICIES

***Cal. Bus. & Prof. Code* § 22575–22579; *Cal. Civ. Code* § 1798.150; and Common Law**
(Against Defendant DeviantArt Only)

227. Plaintiffs and the Class hereby repeat and incorporate by reference each preceding and succeeding paragraph as though fully set forth herein.

228. DeviantArt Plaintiffs and the DeviantArt Class are DeviantArt users who have accepted DeviantArt's Terms of Service. As a result, Plaintiffs and the Class have formed a contract, the terms of which are set forth in DeviantArt's Terms of Service.

229. Plaintiffs and the Class are DeviantArt users who have accepted DeviantArt's Privacy Statement. As a result, Plaintiffs and the Class have formed a contract.

230. DeviantArt's Privacy Statement and Terms of Service share definitions and refer to each other. As such, they are collectively referred to herein as "DeviantArt's Policies" unless a distinction is necessary. Copies of the November 11, 2022 version of the DeviantArt Terms of

Service and copies of the current DeviantArt Terms of Service and Privacy Policy are attached as Exhibit 17.

231. Plaintiffs and the Class have performed each of the conditions, covenants, and obligations imposed on them by the terms of DeviantArt's Policies.

232. DeviantArt has substantially and materially breached DeviantArt's Policies in the following ways:

a. Sharing Plaintiffs' and the Class's personal data with unauthorized third parties in violation of the DeviantArt Privacy Statement;

b. Selling and distributing Plaintiffs' and the Class's personal data in contravention of the DeviantArt's Policies;

c. Use of Plaintiffs' and the Class's personal data after the DeviantArt Privacy Statement explicitly claims it will be deleted;

d. Use and distribution of Plaintiffs' and the Class's personal data outside the limitations set forth in the DeviantArt Privacy Statement.

233. Plaintiffs and the Class have suffered monetary damages as a result of DeviantArt's conduct.

234. DeviantArt's conduct is causing and, unless enjoined and restrained by this Court, will continue to cause Plaintiffs and the Class great and irreparable injury that cannot fully be compensated or measured in money.

235. As a direct and proximate result of these material breaches by DeviantArt, Plaintiffs and the Class are entitled to an injunction requiring DeviantArt to comply with all the terms of the DeviantArt Policies.

236. Plaintiffs and the Class are further entitled to recover from DeviantArt the damages Plaintiffs and the Class sustained—including consequential damages—for Plaintiffs' and the Class's costs in enforcing DeviantArt's Policies. Plaintiffs and the Class are also entitled to recover as restitution from DeviantArt for any unjust enrichment, including gains, profits, and advantages that it has obtained as a result of its breaches of the DeviantArt Policies.

COUNT VII
DECLARATORY RELIEF
28 U.S.C. § 2201(a) and Cal. Code Civ. Proc. § 1060
(All Defendants)

237. Plaintiffs and the Class hereby repeat and incorporate by reference each preceding and succeeding paragraph as though fully set forth herein.

238. An actual controversy exists between the Class (including Plaintiffs) and Defendants due to Defendants' operation of AI Image Products, which violate Plaintiffs' and the Class's rights, including but not limited to their rights under the Copyright Act, DMCA Section 1202, Cal. Civ. Code § 3344, and Cal. Civ. Code § 17200 as alleged herein.

239. Plaintiffs are entitled to a judgment declaring that Defendants' actions are unlawful and, specifically, that Defendants violated the Copyright Act, DMCA Section 1202, Cal. Civ. Code § 3344, and Cal. Civ. Code § 17200.

X. DEMAND FOR JUDGMENT

WHEREFORE, Plaintiffs requests that the Court enter judgment on their behalf and on behalf of the Class defined herein, by adjudging and decreeing that:

240. This action may proceed as a class action, with Plaintiffs serving as Class Representatives, and with Plaintiffs' counsel as Class Counsel;

a. Judgment in favor of Plaintiffs and the Class and against Defendants;

b. An award of statutory and other damages pursuant to 17 U.S.C. § 504 for violations of Plaintiffs' and the Class's copyright interests by Defendants, both directly and vicariously through others;

c. Permanent injunctive relief, including but not limited to making changes to its Defendants' AI Image Products to ensure that all applicable information set forth in 17 U.S.C. § 1203(b)(1) is included with any Output incorporating a Work that had such information associated with it where Defendants found it on the internet;

d. An order of costs and allowable attorney's fees pursuant to 17 U.S.C. § 1203(b)(4)–(5);

e. An award of statutory damages pursuant to 17 U.S.C. § 1203(b)(3) and 17 U.S.C. § 1203(c)(3), or, in the alternative, an award of actual damages and any additional profits pursuant to 17 U.S.C. § 1203(c)(2) (including tripling damages pursuant to 17 U.S.C. § 1203(c)(4) if applicable);

f. An award of damages, including punitive damages, for harms resulting from Defendants acts of unfair competition;

g. An award of damages sufficient to compensate Plaintiffs and the Class for harms resulting from Defendants unjust enrichment; and

h. An award of damages, including punitive damages, for harms resulting from Defendants violations of Plaintiffs' and the Class's rights of publicity.

241. Injunctive relief sufficient to alleviate and stop Defendants' unlawful conduct alleged herein.

242. Plaintiffs and the Class are entitled to prejudgment and post-judgment interest on the damages awarded them, and that such interest be awarded at the highest legal rate from and after the date this class action complaint is first served on Defendants;

243. Defendants are to be jointly and severally responsible financially for the costs and expenses of a Court approved notice program through post and media designed to give immediate notification to the Class.

244. Plaintiffs and the Class receive such other or further relief as may be just and proper.

XI. JURY TRIAL DEMANDED

Pursuant to Federal Rule of Civil Procedure 38(b), Plaintiffs demand a trial by jury of all the claims asserted in this Complaint so triable.

Dated: January 13, 2023

By: */s/ Joseph R. Saveri*
Joseph R. Saveri

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Copyright and Artificial Intelligence Literary Works Including Software USCO Listening Session

Wednesday April 19, 2023

During the Spring of 2023, the Copyright Office will be hosting four virtual listening sessions on the use of Artificial Intelligence (AI) to generate works in creative fields. The first listening session took place on Wednesday, April 19 and focused on literary works (including software). The session included remarks from the Register of Copyrights, Shira Perlmutter, and was comprised of two panels.

Opening Remarks:
Shira Perlmutter, **Register of Copyrights,** opened the listening session by acknowledging that the issue of copyright in the training and use of AI systems is a matter of intense discussion and debate within the copyright community, and something the office is watching very closely. She noted that there are many questions surrounding the application of current copyright laws to AI and whether they need to be updated to account for this emerging technology. She stated that these listening sessions are part of a larger initiative aimed at developing a process that can guide future decisions on copyright and AI by the Copyright Office. Register Perlmutter also highlighted the strong interest in this topic, stating that more than 1,000 people registered to attend this first session. Looking ahead, written input will be solicited from stakeholders in the coming months to further inform the ongoing conversation and decision-making process.

Session One Panelists included: **Rachel Brooke** (Authors Alliance), **Ali Sternburg** (Computer and Communications Industry Association), **Keith Kupferschmid** (Copyright Alliance), **Matthew Sag** (Emory University), **Leigh Hennig** (Humanity in Fiction), **Jonathan Band** (Library Copyright Alliance), **Jule Sigall** (Microsoft), **Edward Hasbrouck** (National Writers Union), **Mary Rasenberger** (The Authors Guild), and **Chris Callison-Burch** (University of Pennsylvania)

Panelist Introductions:
Rachel Brooke of the Authors Alliance supported the idea that AI could aid authorship and creativity and was in favor of AI/generative large language models (LLMs).

Ali Sternburg of CCIA stated her belief that current copyright law will be able to keep up with these new AI technologies, but cautioned against regulation as that could be detrimental to their development.

Keith Kupferschmid of the Copyright Alliance stated that AI is the biggest copyright issue currently and emphasized the need to support the responsible and ethical advancement of AI technology while also

respecting the rights of creators and copyright owners. While not against AI technology, Kupferschmid further emphasized that caution should be exercised in any decision-making related to AI development.

Matthew Sag, a law professor at Emory University stated his belief that copying required to collect training data for large AI models is fair use, yet also said it is possible for LLM's to produce infringing works.

Leigh Hennig of Humanity and Fiction acknowledged the numerous ways that AI can benefit creators and noted that his group does not consider generative AI as an enemy, as long as its development is done responsibly and ethically. Hennig also stressed the importance of calling on regulatory bodies for thoughtful regulation.

Jonathan Band of the Library Copyright Alliance asserted that the current US copyright framework is sufficiently flexible and robust to address issues related to AI. He emphasized the need to continue to foster the development of these AI systems and that he believes legislation for AI at this point in time is premature.

Jule Sigall of Microsoft stated that Microsoft is committed to using AI in a responsible and ethical way and believes that both AI tools and users must respect copyright. In addition, Sigall advocated for the need to afford copyright protection to AI-produced works and mentioned that Microsoft is seeking to form new partnerships in the creative community.

Edward Hasbrouck of the National Writers Union argued that the training of AI involves copying, which he, and the Union, believe to be a violation of writers' rights. Additionally, Hasbrouck emphasized the need for a means of redress, even if the copying/training of copyrighted material is considered fair use. He also stated that Congress should not wait for the courts to address this issue but should act now. He mentioned that in order for authors to be fairly compensated for the use of their works in AI training, collective licensing may be required. Furthermore, Hasbrouck emphasized the importance of small creators, such as authors, being able to organize and act collectively without fear of running afoul of antitrust violations.

Mary Rasenberger of the Authors Guild emphasized the need for guardrails to be put in place with regards to the use and training of AI as it relates to creative works. She also highlighted the importance of not granting copyright protection to AI-generated works, and advocated for the need for collective licensing to ensure that writers are properly compensated.

Chris Callison Burch, from the University of Pennsylvania, stated his belief that creative works produced using generative AI should be copyrightable by a human. Additionally, he argued that the use of copyrighted works for training AI should be considered fair use, as he believes the learning/training process is transformative.

<u>The questions asked during the first panel included:</u>

1. What AI technologies are you/your industries using in the creation of your works?

2. What do you think the USCO should know about how AI systems generate literary material (fiction, nonfiction, and code)?
    a. **Edward Hasbrouck** stated that the quality of training data used to develop a successful LLM, or generative AI model, is crucial. He argued that if the training data is of poor quality, the resulting outputs will also be of poor quality. Since copyrighted works are used as training data for these models, he suggested that access to high-quality copyrighted works is necessary to ensure the success of these technologies which is why creators and owners of these materials need to be compensated.
    b. **Mary Rasenberger** expressed a desire to avoid hindering the progress of AI development while also advocating for collective licensing to ensure fair compensation for writers' past contributions to AI training, as it appears a lot of the training data was pirated.
    c. **Keith Kupferschmid** highlighted that although the Google Books case was found to be fair use, that does not mean fair use would be found in these situations.

3. How is the training or the output of artificial intelligence affecting your field or industry?
    a. **Mary Rasenberger** stated that he use of generative AI in producing books and written material could harm the literature and journalism industry by decreasing the income of authors and traditional publishers, while also resulting in a decline in the quality of published works. Additionally, she said there is a need to protect writing jobs and prevent a breakdown of the writing profession caused by AI.

4. Are you aware of the offices, registration guidance with respect to works containing AI generated material? And if so, what questions or concerns do you have about that?
    a. **Leigh Hennig** stated that there is a clear distinction in the utility and application of AI, as it relates to things like writing versus research, coding, or academic work. Overall, they want to encourage the office and others to consider how to be flexible in the consideration and application of potential regulation as we don't want to completely close ourselves off to the ability to use AI.
    b. **Keith Kupferschmid** stated that further guidance would be helpful.
    c. **Chris Callison Burch** advocated for a more expansive view of what constitutes human authorship.
    d. **Rachel Brooke** made the point that copyright is not only about protecting the rights of copyright holders, but incentivizing creativity for the benefit of the public. Therefore, these new forms of creation made possible through generative AI can incentivize people who wouldn't otherwise create, to do so, bringing more people into these creative industries and adding new creative expression to the world.
    e. **Edward Hasbrouck** restated the imperative to include moral rights throughout this inquiry.

Panel 2:

Session Two Panelists included: **Sy Damle** (Andreessen Horowitz), **Terry Hart** (Association of American Publishers), **Tracy Chabala** (Author), **Catherine Zaller Rowland** (Copyright Clearance Center), **Derek Slater** (Creative Commons), **Peter Routhier** (Internet Archive), **Cynthia Arato** (News/Media Alliance), **Betsy Rosenblatt** (Organization for Transformative Works), **Chris Mohr** (Software & Information Industry Association), and **Mehtab Khan** (Yale Law School)

Opening Remarks

Sy Damle of Andreessen Horowitz emphasized the need to maintain the legality and accessibility of responsibly designed AI technologies, stating that there is a lot of confusion regarding the output of AI models and its relationship to copyrighted works. He argues that the majority of the time, the output of content generation is not substantially similar to any specific copyrighted work used to train the model, making copyright infringement unlikely, and suggests that these tools require massive amounts of data to be trained without the need for licensing. The rest of the panel disagreed with Damle's statements.

Terry Hart of the Association of American Publishers cautioned against sacrificing copyright for the advancement of AI and proposed that licensing solutions can facilitate AI development while preserving the rights of copyright owners and incentivizing creators. He also deemed any alterations to the current copyright law framework as premature.

Tracy Chabala, an author, proposed leveraging copyright to ensure transparency in identifying AI-created works, to prevent market saturation with low-quality articles and disinformation, and to highlight the value of human-generated works.

Catherine Zeller Rowland of the Copyright Clearance Center supported a functional copyright system that respects ownership and enables lawful use, while addressing the challenges of copyright and AI's intersection, such as using copyrighted works in AI's corpus and copyrightable software outputs.

Cynthia Arato of the News/Media Alliance stressed the importance of fair credit and compensation for creators in the growth of generative AI. She highlighted the negative impact of disassociated outputs and advocated for more guardrails, transparency, and respect for publishers' rights to negotiate fair compensation to strengthen AI innovation.

Betsy Rosenblat suggested dividing the copyright-AI relationship into three separate questions: (1) When does crawling/scraping infringe, (2) Who is responsible for infringement when AI generates a similar work, and (3) Who owns the copyright in AI-generated works? She highlighted the concern of the absence of agency for artists to give consent or receive attribution for their contributions.

Chris Mohr emphasized the importance of transparency and ethical practices in AI development and stated that existing copyright law is technologically neutral and does not require changes to handle AI output. He also expressed support for the National Institute of Scient and Technology's (NIST) efforts and believes that fair use doctrines are adequate to differentiate proper and improper AI uses.

Mehtab Khan emphasized that navigating copyright issues in creating tools is complex, and multiple factors beyond copying and fair use need consideration. Khan stressed the need to look beyond determining unauthorized copying and fair use and highlighted a disconnect between copyright holders and where they should direct their complaints, particularly regarding the output.

<u>The questions asked during the first panel included:</u>

1. What AI technologies are you/your industries using in the creation of your works?

2. What do you think the USCO should know about how AI systems generate literary material (fiction, nonfiction, and code)?
    a. **Betsy Rosenblatt** expressed significant concerns about the potential deceptive use of AI without proper disclosure. She emphasized the need to consider all the learning models, works, and how they are scraped and used to create new works. Rosenblatt highlighted the limitations and drawbacks of limiting scraping to only public domain works, which perpetuates bias and outdated ideas. She also stressed the importance of ensuring the feasibility of opt-out options.
    b. **Tracy Chabala** emphasized that the use of large language models is broad and encompasses many different types of writing. He asserted that there is a need to differentiate between using AI in different qualities and situations. For example, to follow the style of an author versus using AI to write an entire book or between research-based works and literary works.
    c. **Mehtab Khan** urged caution when examining the relationship between copyright works and bias, stating that using copyrighted works does not guarantee biased or unbiased output. Instead, the output will reflect existing features and representations.

3. Are you aware of the offices, registration guidance with respect to works containing AI generated material? And if so, what questions or concerns do you have about that? *[There was broad agreement among all panelists that the registration guidance was a great first step, but that further clarification and elaboration will be necessary.]*
    a. **Terry Hart** commended the Copyright Office for its approach but urged for greater transparency and stakeholder consultation going forward, both externally and internally. He emphasized the need for clarity on the degree of human involvement required to establish copyright authorship over generative AI works and how to differentiate authorship between humans and tools. Terry also flagged concerns over the disclosure rule for AI-generated content, which may impose an additional burden on registrants who may not be aware of the tools used by authors.
    b. **Chris Mohr** identified a few aspects of the guidance that require further elaboration. He noted that the prescribed punitive measures may appear excessively stringent, potentially causing issues for those who have previously registered their works under different assumptions. Additionally, Chris highlighted Terry's earlier reference to the guidance's mention of de minimis contributions, suggesting that providing specific examples in a revision or compendium could enhance clarity and comprehension.

c. **Tracy Chabala** brought up that the process of prompt engineering can demonstrate creativity and innovation, and with the advent of new technological advancements in the future, there could be a possibility of arguments made for its entitlement to copyright protection, particularly given the amount of revisions and effort involved in the process.
d. **Betsy Rosenblatt** pointed out that future guidance will involve challenging distinctions, such as between works generated with AI assistance but not "by" AI, and between deep original authorship and detailed prompting. She also noted the difficulty in distinguishing between the selection and arrangement of AI-created works and the creation of AI works themselves. Finally, Betsy expressed concern that the rules may encourage authors to deceive themselves about their own creative input.
e. **Peter Routhier** believes It's important to consider all interests involved in using training data for machine learning, as it's often unclear where the data comes from. Additionally, when discussing copyright reform, he asserted that appropriate distinctions should be made between commercial and non-commercial uses**.**
f. **Sy Damle** believes that large language models have benefits to society, but imposing new costs on the creators of AI models can result in less competition and innovation**.**

4. How is the training or the output of artificial intelligence affecting your field or industry?
    a. **Sy Damle** asserted that there is significant confusion surrounding the output of AI models and how it relates to copyrighted works. He stated that the majority of the time, the output of content generation is not substantially similar to any particular copyrighted work used to train the model, therefore, making prima facie copyright infringement rare. He argues that for these tools to exist practically, they must be trained on massive amounts of data without having to license that data.
    b. Most panelists answered this question by disagreeing with Damle. For example,
        i. **Terry Hart** stated that any large language model or AI trained on textual works would likely make some use or reproduction of a copyrighted work that could be considered protected by one of the six exclusive rights.
        ii. **Cynthia Arato** stated that Damle's claim, "ignores reality" and disagrees with the idea that the output of generative AI systems would not be substantially similar to creative content, and gives an example of artwork and text.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

GETTY IMAGES (US), INC. Plaintiff, v. STABILITY AI, LTD. and STABILITY AI, INC. Defendants.	)))))))))	C.A. No. 23-135 (GBW) **DEMAND FOR JURY TRIAL**

AMENDED COMPLAINT

Plaintiff Getty Images (US), Inc. ("Getty Images" or "Plaintiff"), by and through its undersigned attorneys, for its Amended Complaint against Defendants Stability AI, Ltd. and Stability AI, Inc. (collectively "Stability AI" or "Defendants"), hereby alleges as follows:

NATURE OF ACTION

1. This case arises from Stability AI's brazen infringement of Getty Images' intellectual property on a staggering scale. Upon information and belief, Stability AI has copied *more than 12 million* photographs from Getty Images' collection, along with the associated captions and metadata, without permission from or compensation to Getty Images, as part of its efforts to build a competing business. As part of its unlawful scheme, Stability AI has removed or altered Getty Images' copyright management information, provided false copyright management information, and infringed Getty Images' famous trademarks.

2. Getty Images brings this action to recover damages that it has suffered and is continuing to suffer, and to prevent the irreparable harm caused by Stability AI's intentional and willful acts in violation of United States and Delaware law.

3. Getty Images is one of the world's leading creators and distributors of digital content. At great expense, over the course of nearly three decades, Getty Images has curated a

collection of hundreds of millions of premium quality visual assets, most of which are still, photographic images. Many of these images were created by Getty Images staff photographers as works made-for-hire, others have been acquired by Getty Images from third parties with an assignment of the associated copyrights, and the remainder have been licensed to Getty Images by its hundreds of content partners or hundreds of thousands of contributing photographers, who rely on the licensing income Getty Images generates for them.

4. Getty Images makes hundreds of millions of visual assets available to customers throughout the world and in this District via websites, including but not limited to www.gettyimages.com and www.istock.com. The visual assets on Getty Images' websites are accompanied by: (i) titles and captions which are themselves original and creative copyrighted expression; (ii) watermarks with credit information and content identifiers that are designed to deter infringing uses of the content; and (iii) metadata containing other copyright management information.

5. Getty Images serves creative, corporate, and media customers in more than 200 countries around the world, and its imagery helps its customers produce work which appears every day in the world's most influential newspapers, magazines, advertising campaigns, films, television programs, books and websites. In appropriate circumstances, and with safeguards for the rights and interests of its photographers and contributors and the subjects of the images in its collection, Getty Images also licenses the use of its visual assets and associated metadata in connection with the development of artificial intelligence and machine learning tools. Getty Images has licensed millions of suitable digital assets to leading technology innovators for a variety of purposes related to artificial intelligence and machine learning.

6. Getty Images' visual assets are highly desirable for use in connection with artificial intelligence and machine learning because of their high quality, and because they are accompanied by content-specific, detailed captions and rich metadata.

7. Upon information and belief, Stability AI was founded in 2020 by Emad Mostaque, a former hedge fund executive, as a for-profit company. According to press reports in October 2022, Stability AI raised more than $100 million from venture capital investors and was already valued at $1 billion. According to more recent press reports, Stability AI is now seeking to raise even more money at a valuation of approximately $4 billion. On the back of intellectual property owned by Getty Images and other copyright holders, Stability AI has created an image-generating model called Stable Diffusion that uses artificial intelligence to deliver computer-synthesized images in response to text prompts. In additional to offering open-source versions of Stable Diffusion, Stability AI offers a revenue-generating user interface called DreamStudio that is powered by its Stable Diffusion model. DreamStudio enables users to obtain images from the Stable Diffusion model on their own personal computers without the need for software installation or coding knowledge, and Stability AI charges fees for that service.

8. Rather than attempt to negotiate a license with Getty Images for the use of its content, and even though the terms of use of Getty Images' websites expressly prohibit unauthorized reproduction of content for commercial purposes such as those undertaken by Stability AI, Stability AI copied at least 12 million copyrighted images from Getty Images' websites, along with associated text and metadata, in order to train its Stable Diffusion model.

9. Stability AI now competes directly with Getty Images by marketing Stable Diffusion and its DreamStudio interface to those seeking creative imagery, and its infringement of Getty Images' content on a massive scale has been instrumental to its success to date.

10. Upon information and belief, Stability AI was well aware that the content it was scraping without permission from Getty Images' websites was protected by U.S. copyright law.

11. Often, the output generated by Stable Diffusion has contained a modified version of a Getty Images watermark, creating confusion as to the source of the images and falsely implying an association with Getty Images. While some of the output generated through the use of Stable Diffusion is aesthetically pleasing, other output is of much lower quality and at times ranges from the bizarre to the grotesque. Stability AI's incorporation of Getty Images' marks into low quality, unappealing, or offensive images dilutes those marks in further violation of federal and state trademark laws.

12. Getty Images therefore brings this action alleging claims under the Copyright Act of 1976, 17 U.S.C. §101 *et seq.*, the Lanham Act, 15 U.S.C. § 1051 *et seq.*, and Delaware trademark and unfair competition laws to bring an end to Stability AI's blatantly infringing conduct in the United States and in Delaware and to obtain redress for Stability AI's callous disregard for its intellectual property rights.

PARTIES

13. Plaintiff Getty Images (US), Inc. is a New York corporation with headquarters in Seattle, Washington. It is the owner or exclusive licensee of the copyrights subject to the copyright infringement claims at issue and the owner of the trademarks at issue.

14. Upon information and belief, Defendant Stability AI, Inc. is a Delaware corporation with headquarters in London, UK.

15. Upon information and belief, Defendant Stability AI, Ltd. is a UK corporation with headquarters in London, UK. As set forth more fully below, Defendants Stability AI, Ltd. and Stability AI, Inc. are alter egos of one another and operate as a single enterprise.

JURISDICTION AND VENUE

16. This action arises under the Copyright Act of 1976, 17 U.S.C. §101 *et seq.*, the Lanham Act, 15 U.S.C. § 1051 *et seq.*, and Delaware trademark and unfair competition laws. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1338, and 1367.

17. This Court has personal jurisdiction over Defendant Stability AI, Inc. because Stability AI, Inc. is incorporated in Delaware.

18. Defendant Stability AI, Ltd. is an alter ego of and operates as a single enterprise with Defendant Stability AI, Inc. The two corporations share the same CEO and founder: Mr. Mostaque. Upon information and belief, in addition to serving as CEO and Director of Stability AI, Inc., Mr. Mostaque controls 75% or more of the voting rights, 75% or more of the shares, and has the right to appoint or remove a majority of the board of directors of Stability AI, Ltd. Stability AI, Inc. and Stability AI, Ltd. also present themselves as a single enterprise: their principal offices are located at the same physical London address and share both an email domain (@stability.ai) and website (https://stability.ai/).

19. According to Dun & Bradstreet, Stability AI, Ltd. is a subsidiary of Stability AI, Inc. and, as of November 2022, Stability AI, Ltd.'s sole share was owned by Stability AI, Inc. And, according to the records of the Delaware Secretary of State, Stability AI, Inc.'s corporate charter was voided for non-payment of taxes and/or failure to file a complete annual report in 2022, and Stability AI, Inc. subsequently filed a certificate to revive its charter, indicating that Stability AI, Inc. is not an independently-operating company.

20. Upon information and belief, Stability AI, Ltd. employs all of the company's employees and conducts all of the company's activities, while Stability AI, Inc. is a shell holding company, which has no employees or day-to-day operations. But, according to SEC filings, in

October 2022, Stability AI, Inc. raised over $75 million through a securities offering (including around $11 million of convertible indebtedness and accrued interest). Upon information and belief, the funds raised by Stability, AI, Inc. are used to fund the activities of Stability AI, Ltd., including those described in this Amended Complaint.

21. This Court also has personal jurisdiction over Defendant Stability AI, Ltd. based on Stability AI, Ltd.'s contacts with Delaware and the United States.

22. Stability AI, Ltd. operates a website that is accessible to internet users in Delaware and elsewhere in the United States. From that website, users throughout the United States, including in Delaware, can access Stability AI's offerings, such as Stable Diffusion and DreamStudio.

23. The Stability AI, Ltd. website does not specifically target users in any one state of the United States, and instead targets users across the United States, including users located in Delaware.

24. Upon information and belief, Stability AI, Ltd. maintains cloud computing and physical server resources in the United States.

25. The Stability AI, Ltd. website expressly states that the site (i.e., https://stability.ai/) and its content are "protected by copyright, trade dress, trademark, moral rights, and other intellectual property laws in the United States, the United Kingdom, and other international jurisdictions." As a result, Stability AI, Ltd. has demonstrated its intent to avail itself of jurisdiction and the legal protections of the United States.

26. Accordingly, Stability AI, Ltd. has sufficient contacts with the United States to be subject to personal jurisdiction in Delaware. *See* Fed. R. Civ. P. 4(k)(2).

27. Venue is proper in this District pursuant to 28 U.S.C. § 1391(b) because Defendant Stability AI, Inc. is subject to personal jurisdiction in this District. Venue is also proper in this District pursuant to 28 U.S.C. § 1400(a), because Stability AI or its agents reside or may be found in this District.

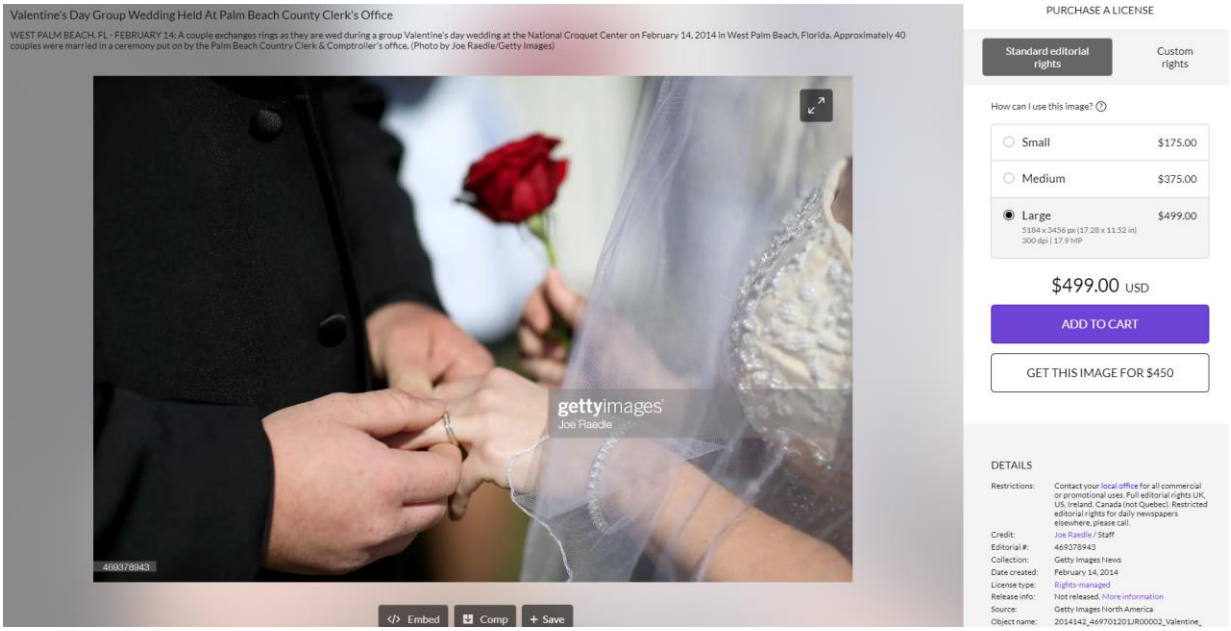
ALLEGATIONS COMMON TO ALL CLAIMS FOR RELIEF

A. Getty Images, Its Extensive Collection, and Its Worldwide Reputation for Premium Visual Content

28. Getty Images is a preeminent global visual content creator and a leading source for visual content around the world. Getty Images operates websites for the purpose of licensing its works, including, *inter alia*, at www.gettyimages.com and www.istock.com. Its collection, which currently contains hundreds of millions of visual assets, is renowned worldwide for its unmatched depth, breadth, and quality. That visual content is included in a robust database (the "Database") that also contains detailed, original text titles and captions associated with the individual photographs and rich, image-specific metadata to provide the highest quality user experience to customers and to ensure appropriate compensation for contributors and content partners.

29. By visiting Getty Images' websites, its customers and potential customers can search and browse its collection before purchasing a license for specific content. For example, customers looking for an image from a wedding might search "a couple exchanges rings." Among the search results, they might find the following image available for license with an accompanying title that reads, "Valentine's Day Group Wedding Held at Palm Beach County Clerk's Office," a caption that reads, "A couple exchanges rings as they are wed during a group

Valentine's day wedding at the National Croquet Center on February 14, 2014 in West Palm Beach, Florida" and a photo credit that reads "(Photo by Joe Readle/Getty Images)":[1]



30. As the foregoing example reflects, the search results contain, in addition to images responsive to the search terms, watermarks on the images to deter infringing uses, credits and other metadata, and options for purchasing a license for further use.

31. Getty Images has more than 500,000 contributors (80,000 of which are exclusive to Getty Images), over 300 premium content partners, more than 115 staff photographers, videographers, and other content experts who guide and contribute to the creation of award-winning content, and a unique and comprehensive visual archive collection covering a broad range of subject matter. Contributors choose to work with Getty Images to benefit from its reputation and goodwill as a preeminent content licensor, its robust platform, its global distribution network, and the royalty income Getty Images generates for them.

[1] https://www.gettyimages.com/detail/news-photo/couple-exchanges-rings-as-they-are-wed-during-a-group-news-photo/469378943?phrase=a%20couple%20exchanges%20rings&adppopup=true.

32. Getty Images' customers come to Getty Images for its easy-to-use platform, its comprehensive suite of content (including certain types of content for which authorized copies are exclusive to Getty Images), its variety of licensing options and services, and the assurance that the images they obtain from Getty Images will not infringe third-party copyrights.

B. Getty Images' Intellectual Property Rights and Terms of Use

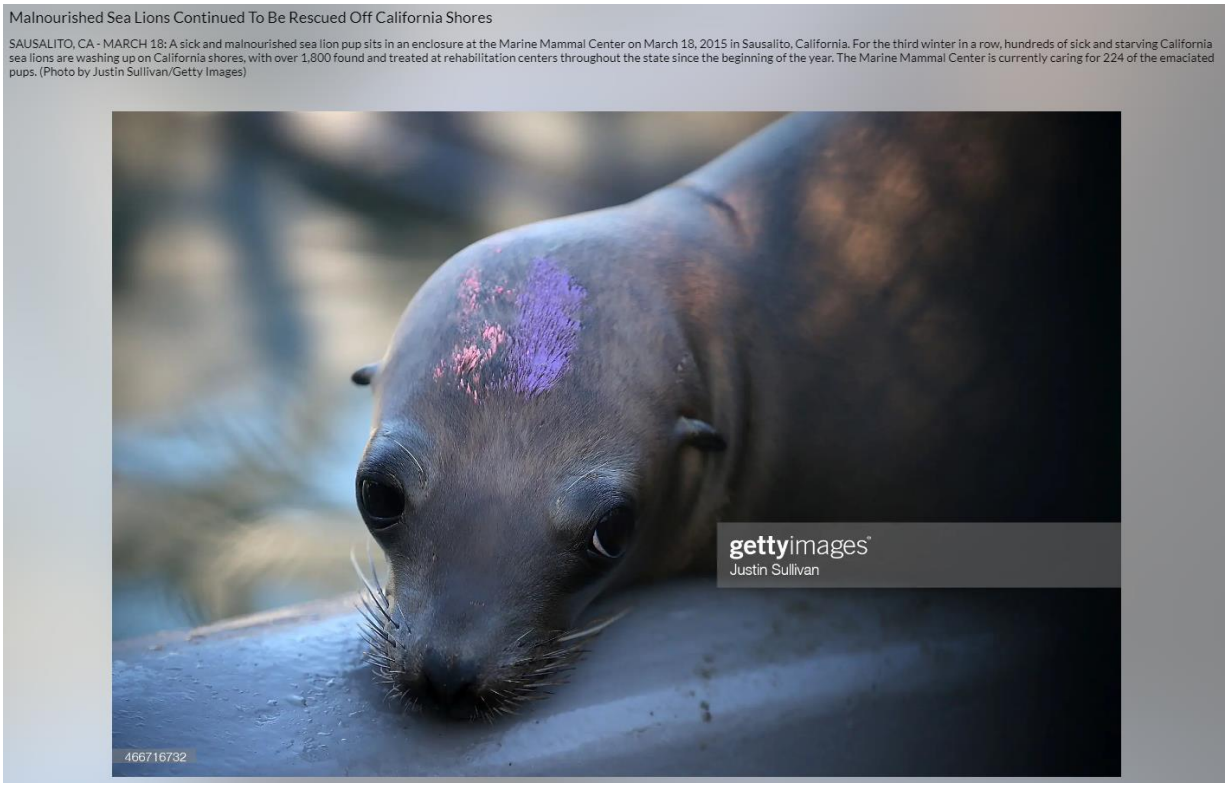
1. Copyright

33. Most of the images and videos displayed on Getty Images' websites are original, creative works that enjoy protection under U.S. copyright laws. For many of these visual assets, including all of the assets subject to the copyright infringement claims at issue in this action, Getty Images either owns the copyright or is an exclusive licensee; for others, Getty Images is a non-exclusive licensee.

34. For purposes of the copyright infringement claims set forth herein and establishing the unlawful nature of Stability AI's conduct, Getty Images has selected 7,216 examples from the millions of images that Stability AI copied without permission and used to train one or more versions of Stable Diffusion. The copyrights for each of these images (as well as for many other images) have been registered with the U.S. Copyright Office. A list of these works, together with their copyright registration numbers, is attached as Exhibit A.

35. As noted above, for the images displayed on its websites, Getty Images also typically provides a detailed corresponding title and caption. Image titles and captions, which are authored either by a Getty Images staff member or by an image contributor or partner, typically reflect originality and creative choices. For example, for the image below, the accompanying title reads, "Malnourished Sea Lions Continued To Be Rescued Off California Shores" and the accompanying caption reads: "A sick and malnourished sea lion pup sits in an

enclosure at the Marine Mammal Center on March 18, 2015 in Sausalito, California. For the third winter in a row, hundreds of sick and starving California sea lions are washing up on California shores, with over 1,800 found and treated at rehabilitation centers throughout the state since the beginning of the year. The Marine Mammal Center is currently caring for 224 of the emaciated pups."[2]



36. Each of the images available through Getty Images' websites has an associated page that contains a unique URL pointing to a location where the image is stored together with an "alt text" tag containing the image title and caption. The image URLs, titles, and captions, along with other current metadata for each image, such as keywords and author and ownership data, are populated from the Database.

[2] https://www.gettyimages.com/detail/news-photo/sick-and-malnourished-sea-lion-pup-sits-in-an-enclosure-at-news-photo/466716732

37. Getty Images has spent years coordinating and arranging the Database, including, *inter alia*, by setting criteria for inclusion of images, selecting specific images for inclusion, creating and incorporating detailed captions and other text paired with images, creating and assigning unique asset identifiers that can be linked to specific contributors, and arranging the contents of the Database so that the Database is searchable and results can be filtered. Additionally, Getty Images has and continues to invest significantly in maintaining the contents of the Database. Between 2017 and 2020 alone, Getty Images and its affiliates invested more than $200 million to maintain the Database.

38. Getty Images has registered its copyright of the Database with the United States Copyright Office. The copyright registration number is TXu002346096.

2. Trademarks and Goodwill

39. Getty Images' name and trademarks are renowned in the U.S. and around the world. Customers perform over 2.7 billion searches annually on the Getty Images' websites, which exist in 23 languages. Through its full range of content solutions, Getty Images served over 836,000 purchasing customers in the last year alone, with customers from almost every country in the world, ranging from media outlets, advertising agencies, and corporations of all sizes to individual creators. Customers rely on Getty Images for the best content and service, and trust the trademarks and service marks associated with its content.

40. Since its founding in 1995, Getty Images has been using its name and associated trademarks in commerce continuously in connection with the distribution, promotion, and marketing of its services and visual content in the United States, including the uses described above. Getty Images has used its name and trademarks exclusively and extensively in the United

States and in Delaware, and its trademarks are widely recognized as representing premium quality visual content.

41. Getty Images uses its name and trademarks prominently on the Getty Images websites. Each image available for viewing and purchase prominently displays a watermark that contains an affiliated trademark, as illustrated in the images depicted in paragraphs 29 and 35 above.

42. Getty Images owns trademarks registered on the Principal Register in the United States Patent & Trademark Office ("USPTO") relating to its iconic brand. True and correct copies of the federal registration certificates evidencing Getty Images' ownership of the trademarks shown below are attached hereto as Exhibit B.

Mark Name	Reg. Number	Reg. Date
GETTY IMAGES	2,656,652	12/03/2002
GETTY IMAGES	2,837,208	04/27/2004
GETTY IMAGES	2,842,851	05/18/2004
GETTY IMAGES	2,844,647	05/25/2004
GETTY IMAGES	3,603,335	04/07/2009
GETTY IMAGES	4,968,996	05/31/2016
GETTY IMAGES	4,968,997	05/31/2016
GETTY IMAGES	5,200,414	05/09/2017

43. Getty Images also owns common law rights in the mark GETTY IMAGES. Together with Getty Images' federally registered trademarks, these are referred to collectively as the "Getty Images Marks."

3. Website Terms and Conditions

44. Stability AI accessed Getty Images' collection of visual assets through Getty Images' public-facing websites. The Getty Images websites from which Stability AI copied images without permission are subject to express terms and conditions of use which, among other things, expressly prohibit, *inter alia*: (i) downloading, copying or re-transmitting any or all

of the website or its contents without a license; and (ii) using any data mining, robots or similar data gathering or extraction methods. Such restrictions apply not only to the photographic images and videos that Getty Images licenses, but also to the valuable and proprietary title and caption information, keywords, and other metadata associated with the visual assets, all of which is highly desirable for use in connection with developing AI tools such as Stable Diffusion.

C. Stability AI Infringes Getty Images' Copyrights on an Enormous Scale and Exploits Getty Images' Resources for its Commercial Benefit

45. Upon information and belief, Stability AI was founded in 2020 and is engaged in the development of tools and models to generate digital content using artificial intelligence.

46. Stability AI created and maintains a model called Stable Diffusion. Upon information and belief, Stability AI utilizes the following steps from input to output:

a. First, Stability AI copies billions of text-and-image pairings—like those available on Getty Images' websites—and loads them into computer memory to train a model.

b. Second, Stability AI encodes the images, which involves creating smaller versions of the images that take up less memory. Separately, Stability AI also encodes the paired text. Stability AI retains and stores copies of the encoded images and text as an essential element of training the model.

c. Third, Stability AI adds visual "noise" to the encoded images, *i.e.*, it further alters the images so that it is incrementally harder to discern what is visually represented because the images have been intentionally degraded in visual quality in order to "train" the model to remove the "noise." By intentionally adding visual noise to the existing images with associated text, Stability AI teaches the model to generate output images to be consistent with a particular text description

(*e.g.*, "a dog playing on the beach during sunset").

d. Fourth, the model decodes the altered image and teaches itself to remove the noise by comparing the decoded image to the original image and text descriptions that have been copied and stored. By learning to decode noise, the model learns to deliver images similar to—and, in some cases, substantially similar to—the original without noise.

47. Upon information and belief, the third and fourth steps described in the preceding paragraph are part of "training" the model to allow Stable Diffusion to understand the relationships between text and associated images and to use that knowledge to computationally produce images in response to text prompts, as explained further below.

48. Stable Diffusion was trained on 5 billion image-text pairs from datasets prepared by non-party LAION, a German entity that works in conjunction with and is sponsored by Stability AI. Upon information and belief, Stability AI provided LAION with both funding and significant computing resources to produce its datasets in furtherance of Stability AI's infringing scheme.

49. Upon information and belief, LAION created the datasets of image-text pairs used by Stability AI by scraping links to billions of pieces of content from various websites, including Getty Images' websites.

50. Upon information and belief, Stability AI followed links included in LAION's dataset to access specific pages on Getty Images' websites and copied many millions of copyrighted images and associated text. Such copying was done without Getty Images' authorization and in violation of the express prohibitions against such conduct contained in its websites' terms of use.

51. Upon information and belief, Stability AI then created another copy of the content to encode it into a form its model could interpret.

52. Upon information and belief, Stability AI then created yet additional copies with visual noise added, while retaining encoded copies of the original images without noise for comparison to help train its model.

53. Upon information and belief, the unauthorized copies of Getty Images' content made by Stability AI are neither transitory nor ephemeral, and they were made with the express aim of enabling Stability AI to supplant Getty Images as a source of creative visual imagery.

54. To date, Getty Images has identified over 12 million links to images and their associated text and metadata on its websites contained in the LAION datasets that were used to train Stable Diffusion. Among the millions of links was a link to the photograph of the couple exchanging rings displayed in paragraph 29 above as well as to each of the other images identified in Exhibit A.

55. Getty Images' content is extremely valuable to the datasets used to train Stable Diffusion. Getty Images' websites provide access to millions of high quality images and a vast array of subject matter. High quality images such as those offered by Getty Images on its websites are more useful for training an AI model such as Stable Diffusion than low quality images because they contain more detail or data about the image that can be copied. By contrast, a low quality image, such as one that has been compressed and posted as a small thumbnail on a typical social media site, is less valuable because it only provides a rough, poor quality framework of the underlying image and may not be accompanied by detailed text or other useful metadata.

56. Stability AI has developed and released different versions of Stable Diffusion over time, including, upon information and belief, to users located in Delaware. The core dataset used to train Stable Diffusion version 2 was a subset of LAION 5B called LAION-Aesthetics,[3] which was created to exclude images that were not sufficiently aesthetically pleasing.[4] Targeting its copying in this way allowed Stability AI to further benefit from Getty Images' efforts over many years to amass its renowned collection of high quality images and from the significant investments required to generate such a collection and to develop and maintain the Database in which it is stored.

57. Second, Getty Images' websites include both the images and corresponding detailed titles and captions and other metadata. Upon information and belief, the pairings of detailed text and images has been critical to successfully training the Stable Diffusion model to deliver relevant output in response to text prompts. If, for example, Stability AI ingested an image of a beach that was labeled "forest" and used that image-text pairing to train the model, the model would learn inaccurate information and be far less effective at generating desirable outputs in response to text prompts by Stability AI's customers. Furthermore, in training the Stable Diffusion model, Stability AI has benefitted from Getty Images' image-text pairs that are not only accurate, but detailed. For example, if Stability AI ingested a picture of Lake Oroville in California during a severe drought with a corresponding caption limited to just the word "lake," it would learn that the image is of a lake, but not which lake or that the photograph was taken during a severe drought. If a Stable Diffusion user then entered a prompt for "California's Lake Oroville during a severe drought" the output image might still be one of a lake, but it would

[3] https://stability.ai/blog/stable-diffusion-announcement.

[4] https://laion.ai/projects/.

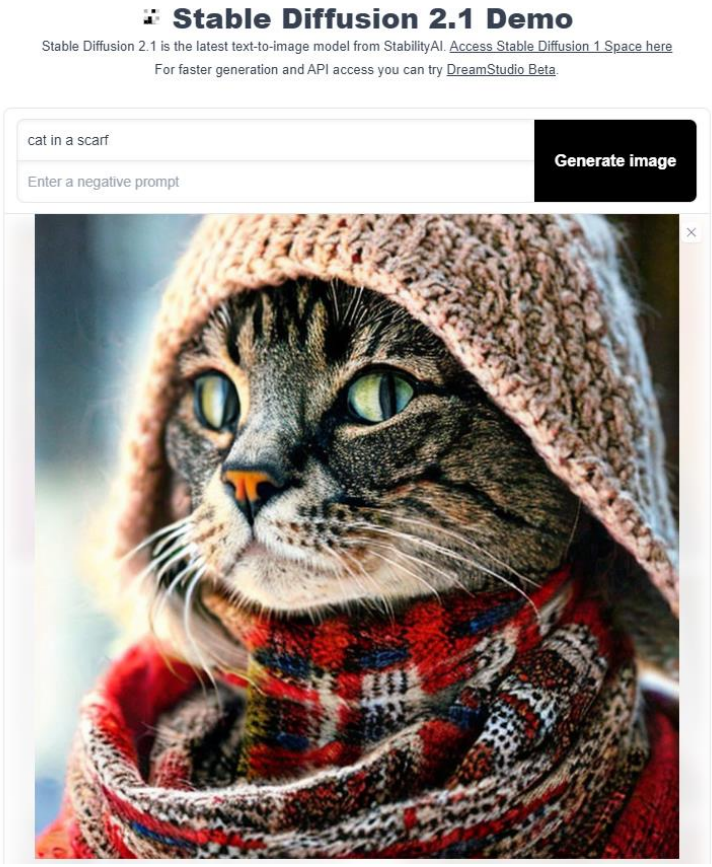
be much less likely to be an image of Lake Oroville during a severe drought because the synthesis engine would not have the same level of control that allows it to deliver detailed and specific images in response to text prompts.

58. Upon information and belief, when Stability AI ingested the image below of Lake Oroville with a corresponding caption that reads "A section of Lake Oroville is seen nearly dry on August 19, 2014 in Oroville, California. As the severe drought in California continues for a third straight year, water levels in the State's lakes and reservoirs is reaching historic lows. Lake Oroville is currently at 32 percent of its total 3,537,577 acre feet,"[5] its use of the accompanying text enabled the model to learn even more about the image and its contents and thus generate output that competes with Getty Images' own offerings much more effectively.

[5] https://www.gettyimages.com/detail/news-photo/section-of-lake-oroville-is-seen-nearly-dry-on-august-19-news-photo/453834006

D. Stability AI Competes Commercially with Getty Images

59. Once an artificial intelligence model like Stable Diffusion has been trained on enough data to learn the relationship between text prompts and images, it can be used to generate new images derived from the images and text the model's creator has copied. For example, if a model has been trained with image-text pairs of cats and image-text pairs of clothing, then a user can use the text prompt "cat in a scarf" and the model will generate an image that looks like a cat in a scarf:



60. To be clear, the image above is not a photograph of an actual cat wearing an actual scarf. It is a computer-synthesized image that *resembles* a cat wearing a scarf. Upon information and belief, Stability AI was able to generate the image above because it used enough images of real cats paired with rich text captions and images of real scarves with rich text

captions to train Stable Diffusion that the model can generate this type of output. Stable Diffusion is able to combine what it has learned to generate this artificial image, but only because it was trained on proprietary content belonging to Getty Images and others.

61. As a result, Stable Diffusion at times produces images that are highly similar to and derivative of the Getty Images proprietary content that Stability AI copied extensively in the course of training the model. Indeed, independent researchers have observed that Stable Diffusion sometimes memorizes and regenerates specific images that were used to train the model.[6]

62. In many cases, and as discussed further below, the output delivered by Stability AI includes a modified version of a Getty Images watermark, underscoring the clear link between the copyrighted images that Stability AI copied without permission and the output its model delivers. In the following example, the image on the left is another original, watermarked image copied by Stability AI and used to train its model and the watermarked image on the right is output delivered using the model:

[6] *See, e.g.*, Nicholas Carlini et al., Extracting Training Data from Diffusion Models (2023), https://arxiv.org/pdf/2301.13188.pdf; *see also* Gowthami Somepalli et al., Diffusion Art or Digital Forgery? Investigating Data Replication in Diffusion Models (2022), https://arxiv.org/pdf/2212.03860.pdf.

63. Upon information and belief, Stability AI offers Stable Diffusion as open source software, meaning that Stability AI permits third party developers to access, use, and further develop the model without paying license fees to Stability AI. Those third parties benefit from Stability AI's infringement of Getty Images' copyrights and, in turn, Stability AI benefits from the widespread adoption of its model.

64. While Stability AI has made Stable Diffusion open source, Stability AI is also directly monetizing the tool through a commercial platform it calls DreamStudio. DreamStudio allows customers to access Stable Diffusion to generate images without the need for any of their own heavy-duty processing power, software installation, or coding knowhow. According to Mr. Mostaque, Stability AI plans to further monetize Stable Diffusion by training and deploying customized, non-open source versions of Stable Diffusion for customers for use on a large scale,

and Stability AI reportedly was valued at $1 billion by late 2022 and is seeking additional funding at a valuation of approximately $4 billion.[7]

65. Upon information and belief, although Stability AI only released DreamStudio in August 2022, millions of people already have used DreamStudio and collectively created hundreds of millions of images. Yet Stability AI has not paid a cent to Getty Images or other content owners from which it reproduced copyrighted content without permission to train its highly lucrative model.

66. The gravity of Stability AI's brazen theft and freeriding is compounded by the fact that, by utilizing Getty Images' copyrighted content for artificial intelligence and machine learning, Stability AI is stealing a service that Getty Images already provides to paying customers in the marketplace for that very purpose. Getty Images has licensed millions of suitable digital assets for a variety of purposes related to artificial intelligence and machine learning in a manner that respects personal and intellectual property rights. While Getty Images licenses its proprietary content to responsible actors in appropriate circumstances, Stability AI has taken that same content from Getty Images without permission, depriving Getty Images and its contributors of fair compensation, and without providing adequate protections for the privacy and dignity interests of individuals depicted.

E. Stability AI's Attempts to Circumvent Getty Images' Watermarks

67. As noted in paragraph 41 above, each copyrighted image on Getty Images' public-facing websites contains a watermark that is intended to indicate provenance and prevent

[7] https://techcrunch.com/2022/10/17/stability-ai-the-startup-behind-stable-diffusion-raises-101m/; https://fortune.com/2023/03/04/stability-ai-raise-funds-4-billion-valuation-artificial-intelligence-captivates-investors/.

infringement. The watermark includes both a Getty Images-owned mark and credit information for the image.

68. Upon information and belief, Stability AI has knowingly removed Getty Images' watermarks from some images in the course of its copying as part of its infringing scheme. At the same time, however, as discussed above, the Stable Diffusion model frequently generates output bearing a modified version of the Getty Images watermark, even when that output is not bona fide Getty Images' content and is well below Getty Images' quality standards. Examples of this practice include:

69. Making matters worse, Stability AI has caused the Stable Diffusion model to incorporate a modified version of the Getty Images' watermark to bizarre or grotesque synthetic imagery that tarnishes Getty Images' hard-earned reputation, such as the image below:

70. Upon information and belief, Stability AI is well aware that Stable Diffusion generates images that include distorted versions of Getty Images' watermark and other watermarks, but it has not modified its model to prevent that from happening.

71. Upon information and belief, unless enjoined by this Court, Stability AI intends to continue to infringe upon Getty Images' copyrights and trademarks in the United States and otherwise to profit from its unauthorized use of Getty Images' intellectual property. Getty Images has no adequate remedy at law to redress all of the injuries that Stability AI has caused, and intends to continue to cause, by its conduct. Getty Images will continue to suffer irreparable harm until Stability AI's infringing conduct is enjoined by this Court.

CLAIM I

Copyright Infringement (17 U.S.C. § 101 *et seq.*)

72. Getty Images realleges and incorporates by reference herein the allegations set forth in paragraphs 1 through 71 above.

73. Getty Images is the owner or exclusive licensee of copyrights identified in Exhibit A, and therefore is entitled to the exclusive rights under copyright law associated therewith, including the rights set forth in 17 U.S.C § 106.

74. Getty Images has obtained copyright registrations in the United States for each of the works identified in Exhibit A.

75. Getty Images is the owner of, and has obtained a U.S. copyright registration for, the Database.

76. Stability AI obtained access to the registered images and the associated titles, captions, and other metadata in the Database through Getty Images' websites.

77. By and through the actions alleged above, Stability AI has infringed and will continue to infringe Getty Images' copyrights in the United States by, *inter alia*, reproducing Getty Images' copyrighted works and creating derivative works therefrom without any authorization from Getty Images.

78. Stability AI's acts of copyright infringement have been intentional, willful, and in callous disregard of Getty Images' rights. Stability AI knew at all relevant times that the content on Getty Images' websites is copyrighted, that Getty Images is in the business of licensing visual content, and that its acts were in violation of the terms of use of Getty Images' websites.

79. Stability AI engaged in the infringing acts described herein for its own commercial benefit.

80. As a direct and proximate result of Stability AI's wrongful conduct, Getty Images has been substantially and irreparably harmed in an amount not readily capable of determination and, unless permanently enjoined from further acts of infringement and continuing to use and distribute Stable Diffusion models trained using Getty Images' copyrighted content without permission, Stability AI will cause additional irreparable harm for which there is no adequate remedy at law. Getty Images is thus entitled to permanent injunctive relief preventing Stability AI, its agents, affiliates, employees and all persons acting in concert with it from engaging in any further infringement of Getty Images' content.

81. Getty Images is further entitled to recover from Stability AI the damages it has sustained and will sustain as a result of the infringing acts alleged above, together with any additional profits obtained by Stability AI. The amount of such damages and profits cannot be fully ascertained by Getty Images at present but will be established according to proof at trial.

82. For any infringing acts in the United States occurring after registration of the applicable Getty Images' copyrights, Getty Images is entitled, at its election, as an alternative to an award of actual damages and any additional profits earned by Stability AI, to recover statutory damages of up to $150,000 for each infringed work.

83. Getty Images is entitled to recover its full costs in prosecuting its copyright infringement claims in this action and its attorneys' fees.

CLAIM II

Providing False Copyright Management Information in Violation of 17 U.S.C. § 1202(a)

84. Getty Images realleges and incorporates by reference herein the allegations set forth in paragraphs 1 through 83 above.

85. The watermarks that Getty Images applies to images made available on its public-facing websites constitute copyright management information for purposes of Section 1202 of the Copyright Act, 17 U.S.C. § 1202.

86. By applying a modified version of Getty Images' watermarks to output generated through use of Stable Diffusion and the DreamStudio interface, Stability AI has provided false copyright management information in violation of 17 U.S.C. § 1202(a). Stability AI's provision of false copyright management information has been done knowingly and with the intent to induce, enable, facilitate, or conceal infringement of Getty Images' copyrights.

87. As a direct and proximate result of Stability AI's wrongful conduct, Getty Images has been substantially and irreparably harmed in an amount not readily capable of determination and, unless permanently enjoined from further acts of providing false copyright management information, Stability AI will cause additional irreparable harm for which there is no adequate remedy at law. Getty Images is thus entitled to permanent injunctive relief preventing Stability

AI, its agents, affiliates, employees and all persons acting in concert with it from providing false copyright management information.

88. Getty Images is further entitled to recover from Stability AI the damages it has sustained and will sustain as a result of the unlawful acts alleged above, together with any additional profits obtained by Stability AI. The amount of such damages and profits cannot be fully ascertained by Getty Images at present but will be established according to proof at trial.

89. Getty Images is entitled, at its election, as an alternative to an award of actual damages and any additional profits earned by Stability AI, to recover statutory damages of up to $25,000 for each violation of Section 1202(a).

90. Getty Images is entitled to recover its full costs and attorneys' fees in prosecuting its claims under Section 1202(a).

CLAIM III

Removal or Alteration of Copyright Management Information in Violation of Section 1202(b)

91. Getty Images realleges and incorporates by reference herein the allegations set forth in paragraphs 1 through 90 above.

92. Stability AI has intentionally removed or altered Getty Images' watermarks and metadata associated with the images Stability AI impermissibly copied from Getty Images' websites. Such watermarks and metadata contain copyright management information. Stability AI's removal or alteration of Getty Images' copyright management information has been done knowingly and with the intent to induce, enable, facilitate, or conceal infringement of Getty Images' copyrights.

93. As a direct and proximate result of Stability AI's wrongful conduct, Getty Images has been substantially and irreparably harmed in an amount not readily capable of determination

and, unless permanently enjoined from further acts of removing or altering copyright management information, Stability AI will cause additional irreparable harm for which there is no adequate remedy at law. Getty Images is thus entitled to permanent injunctive relief preventing Stability AI, its agents, affiliates, employees and all persons acting in concert with it from removing or altering Getty Images' copyright management information.

94. Getty Images is further entitled to recover from Stability AI the damages it has sustained and will sustain as a result of the unlawful acts alleged above, together with any additional profits obtained by Stability AI. The amount of such damages and profits cannot be fully ascertained by Getty Images at present but will be established according to proof at trial.

95. Getty Images is entitled, at its election, as an alternative to an award of actual damages and any additional profits earned by Stability AI, to recover statutory damages of up to $25,000 for each violation of Section 1202(b).

96. Getty Images is entitled to recover its full costs and attorneys' fees in prosecuting its claims under Section 1202(b).

CLAIM IV

Trademark Infringement in Violation of Section 32 of the Lanham Act, 15 U.S.C. § 1114(1)

97. Getty Images realleges and incorporates by reference herein the allegations set forth in paragraphs 1 through 96 above.

98. Getty Images has expended substantial time, money, and resources collecting, distributing, promoting, marketing, and advertising the millions of images it offers on its websites and the Getty Images Marks associated therewith.

99. The Getty Images Marks are in full force and effect. Getty Images has never abandoned them, nor has Getty Images ever abandoned the goodwill of its businesses in

connection thereto. For example, Getty Images continues to use and prominently display Getty Images Marks on its websites, as well as on and in connection with the many millions of images it offers. Getty Images intends to continue to preserve and maintain its rights with respect to the Getty Images Marks.

100. The Getty Images Marks are distinctive and have become associated in the minds of the public with Getty Images, its brand, and its reputation for high-quality visual content.

101. The Getty Images Marks and the goodwill of the business associated with them in the United States are of great and significant value to Getty Images.

102. Getty Images' use of the Getty Images Marks and Stability AI's infringing uses of the same marks are in competitive proximity to one another, as they are both used in connection with, *inter alia*, the marketplace for visual content.

103. Stability AI's unauthorized use of Getty Images Marks in connection with synthetic images generated through the use of Stable Diffusion and DreamStudio constitutes trademark infringement in violation of Section 32 of the Lanham Act, 15 U.S.C § 1114(1), as such use likely has caused and will continue to cause members of the consuming public to be confused, mistaken or deceived into believing that Getty Images has granted Stability AI the right to use the Getty Images Marks and/or that Getty Images sponsored, endorsed, or is otherwise associated, affiliated, or connected with Stability AI and its synthetic images, all to the damage and detriment of Getty Images' reputation and good will.

104. Upon information and belief, Stability AI is and has been at all relevant times aware of Getty Images' prior use, and/or ownership of the Getty Images Marks. Thus, Stability AI's conduct, as described above, is willful, intentional, in bad faith, and designed specifically to

permit Stability AI to profit from such misuse in violation of Getty Images' rights in the Getty Images Marks.

105. As a direct and proximate result of Stability AI's wrongful conduct, Getty Images has been substantially and irreparably harmed in an amount not readily capable of determination and, unless permanently enjoined from further acts of trademark infringement, Stability AI will cause additional irreparable harm for which there is no adequate remedy at law. Getty Images is thus entitled to permanent injunctive relief preventing Stability AI, its agents, affiliates, employees and all persons acting in concert with it from infringing the Getty Images Marks.

106. Getty Images is further entitled to recover from Stability AI the damages it has sustained and will sustain as a result of the unlawful acts alleged above, together with the profits obtained by Stability AI. The amount of such damages and profits cannot be fully ascertained by Getty Images at present but will be established according to proof at trial.

107. Getty Images is entitled to recover treble damages or profits, whichever is greater, for Stability AI's use of a counterfeit mark.

108. Getty Images is entitled, at its election, as an alternative to an award of actual damages and profits earned by Stability AI, to recover statutory damages of up to $2,000,000 per counterfeit mark used.

109. Getty Images is entitled to recover its full costs and attorneys' fees in prosecuting its claims for trademark infringement.

CLAIM V

Unfair Competition in Violation of Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a)

110. Getty Images realleges and incorporates by reference herein the allegations set forth in paragraphs 1 through 109 above.

111. Stability AI's unauthorized use of the Getty Images Marks in the United States in connection with synthetic images generated through the use of Stable Diffusion and DreamStudio constitutes unfair competition and false designation of origin in violation of Section 43(a) of the Lanham Act, 15 U.S.C § 1125(a), as such use likely has caused and will continue to cause members of the consuming public to be confused, mistaken or deceived into believing that Getty Images has granted Stability AI the right to use the Getty Images Marks and/or that Getty Images sponsored, endorsed, or is otherwise associated, affiliated, or connected with Stability AI and its synthetic images, all to the damage and detriment of Getty Images' reputation and good will.

112. Upon information and belief, Stability AI is and has been at all relevant times aware of Getty Images' prior use, and/or ownership of the Getty Images Marks. Thus, Stability AI's conduct, as described above, is willful, intentional, in bad faith, and designed specifically to permit Stability AI to profit from such misuse in violation of Getty Images' rights in the Getty Images Marks.

113. As a direct and proximate result of Stability AI's wrongful conduct, Getty Images has been substantially and irreparably harmed in an amount not readily capable of determination and, unless permanently enjoined from further acts of trademark infringement, Stability AI will cause additional irreparable harm for which there is no adequate remedy at law. Getty Images is thus entitled to permanent injunctive relief preventing Stability AI, its agents, affiliates, employees and all persons acting in concert with it from competing unfairly with Getty Images.

114. Getty Images is further entitled to recover from Stability AI the damages it has sustained and will sustain as a result of the unlawful acts alleged above, together with the profits

obtained by Stability AI. The amount of such damages and profits cannot be fully ascertained by Getty Images at present but will be established according to proof at trial.

115. Getty Images is entitled to recover treble damages or profits, whichever is greater, for Stability AI's use of a counterfeit mark.

116. Getty Images is entitled, at its election, as an alternative to an award of actual damages and profits earned by Stability AI, to recover statutory damages of up to $2,000,000 per counterfeit mark used.

117. Getty Images is entitled to recover its full costs and attorneys' fees in prosecuting its claims for unfair competition and false designation of origin.

CLAIM VI

Trademark Dilution in Violation of Section 43(c) of the Lanham Act, 15 U.S.C. § 1125(c)

118. Getty Images realleges and incorporates by reference herein the allegations set forth in paragraphs 1 through 117 above.

119. The Getty Images Marks are distinctive and famous.

120. Stability AI has used the Getty Images Marks in commerce in the United States, and Stability AI's commercial use of the Getty Images Marks commenced after those marks became famous.

121. Stability AI's use of the Getty Images Marks on lower quality, and in some cases bizarre or grotesque images, dilutes the quality of the Getty Images Marks by blurring or tarnishment. Upon information and belief, Stability AI's use of the Getty Images Marks on lower quality, and in some cases bizarre or grotesque images, has been and continues to be knowing, willful, and in bad faith.

122. Stability AI's unauthorized use of the Getty Images Marks in connection with lower quality synthetic images generated through the use of Stable Diffusion and DreamStudio constitutes trademark dilution in violation of Section 43(c) of the Lanham Act, 15 U.S.C § 1125(c).

123. As a direct and proximate result of Stability AI's wrongful conduct, Getty Images has been substantially and irreparably harmed in an amount not readily capable of determination and, unless permanently enjoined from further acts of trademark dilution, Stability AI will cause additional irreparable harm for which there is no adequate remedy at law. Getty Images is thus entitled to permanent injunctive relief preventing Stability AI, its agents, affiliates, employees and all persons acting in concert with it from diluting the Getty Images Marks.

124. Getty Images is further entitled to recover from Stability AI the damages it has sustained and will sustain as a result of the unlawful acts alleged above, together with the profits obtained by Stability AI. The amount of such damages and profits cannot be fully ascertained by Getty Images at present but will be established according to proof at trial.

125. Getty Images is entitled to recover its full costs and attorneys' fees in prosecuting its claims for trademark dilution.

CLAIM VII

Deceptive Trade Practices in Violation of Delaware's Uniform Deceptive Trade Practices Act

126. Getty Images realleges and incorporates by reference herein the allegations set forth in paragraphs 1 through 125 above.

127. Stability AI's unauthorized use of the Getty Images Marks in connection with synthetic images generated through the use of Stable Diffusion and DreamStudio constitutes a deceptive trade practice in violation of Delaware law, as such use likely has caused and will

continue to cause members of the consuming public, including in Delaware, to be confused, mistaken or deceived into believing that Getty Images has granted Stability AI the right to use the Getty Images Marks and/or that Getty Images sponsored, endorsed, or is otherwise associated, affiliated, or connected with Stability AI and its synthetic images, all to the damage and detriment of Getty Images' reputation and good will.

128. Upon information and belief, Stability AI is and has been at all relevant times aware of Getty Images' prior use, and/or ownership of the Getty Images Marks. Thus, Stability AI's conduct, as described above, is willful, intentional, in bad faith, and designed specifically to permit Stability AI to profit from such misuse in violation of Getty Images' rights in the Getty Images Marks.

129. As a direct and proximate result of Stability AI's wrongful conduct, Getty Images has been substantially and irreparably harmed in an amount not readily capable of determination and, unless permanently enjoined from further deceptive acts, Stability AI will cause additional irreparable harm for which there is no adequate remedy at law. Getty Images is thus entitled to permanent injunctive relief preventing Stability AI, its agents, affiliates, employees and all persons acting in concert with it from engaging in deceptive trade practices.

130. Getty Images is further entitled to recover from Stability AI treble the damages it has sustained and will sustain as a result of Stability AI's acts in violation of Delaware law. The amount of such damages cannot be fully ascertained by Getty Images at present but will be established according to proof at trial.

131. Getty Images is entitled to recover its full costs and attorneys' fees in prosecuting its claims for deceptive trade practices.

CLAIM VIII

Trademark Dilution in Violation of Section 3313 of the Delaware Trademark Act

132. Getty Images realleges and incorporates by reference herein the allegations set forth in paragraphs 1 through 131 above.

133. The Getty Images Marks are distinctive and famous.

134. Stability AI has used the Getty Images Marks in commerce, and Stability AI's commercial use of the Getty Images Marks commenced after those marks became famous.

135. Stability AI's use of the Getty Images Marks on lower quality, and in some cases bizarre or grotesque images, dilutes the quality of the Getty Images Marks by blurring or tarnishment. Upon information and belief, Stability AI's use of Getty Images Marks on lower quality, and in some cases bizarre or grotesque images, has been and continues to be knowing, willful, and in bad faith.

136. Stability AI's unauthorized use of the Getty Images Marks in connection with lower quality synthetic images generated through the use of Stable Diffusion and DreamStudio constitutes trademark dilution in violation of Section 3313 of the Delaware Trademark Act.

137. As a direct and proximate result of Stability AI's wrongful conduct, Getty Images has been substantially and irreparably harmed in an amount not readily capable of determination and, unless permanently enjoined from further acts of trademark dilution, Stability AI will cause additional irreparable harm for which there is no adequate remedy at law. Getty Images is thus entitled to permanent injunctive relief preventing Stability AI, its agents, affiliates, employees and all persons acting in concert with it from diluting the Getty Images Marks.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Getty Images respectfully requests judgment in its favor and against Defendants Stability AI as follows:

A. Finding that Stability AI has infringed Getty Images' copyrights;

B. Finding that Stability AI's copyright infringement was willful;

C. Finding that Stability AI has provided false copyright management information;

D. Finding that Stability AI has removed or altered copyright management information;

E. Finding that Stability AI has infringed Getty Images' trademarks;

F. Finding that Stability AI has diluted Getty Images' trademarks;

G. Finding that Stability AI has tarnished Getty Images' trademarks;

H. Finding that Stability AI's trademark infringement, unfair competition, trademark dilution, and deceptive trade practices were willful and in bad faith;

I. Finding that there is a substantial likelihood that Stability AI will continue to infringe Getty Images copyrights and trademarks unless enjoined from doing so;

J. Issuing a permanent injunction enjoining Stability AI and its agents, servants, employees, successors and assigns, and all persons, firms and corporations acting in concert with it, from directly or indirectly infringing Getty Images' copyrights, from providing false copyright management information, from removing or altering Getty Images' copyright management information, and from infringing, diluting, or tarnishing Getty Images' trademarks;

K. Ordering the destruction of all versions of Stable Diffusion trained using Getty Images' content without permission;

L. Ordering Stability AI to provide a full and complete accounting to Getty Images for Stability AI's profits, gains, advantages, and the value of the business opportunities received from its infringing acts;

M. Entering judgment for Getty Images against Stability AI for all damages suffered by Getty Images and for any profits to or gain by Stability AI attributable to its infringement of Getty Images' copyrights and its acts in violation of 17 U.S.C. § 1202

N. Entering judgment for Getty Images against Stability AI for all damages suffered by Getty Images for any profits to or gain by Stability AI attributable to its infringement and dilution of Getty Images trademark and its unfair competition and deceptive trade practices in amounts to be determined at trial, with the greater of such damages and profits trebled;

O. Entering judgment for Getty Images for statutory damages for Stability AI's willful acts of copyright infringement, its provision of false copyright management information, and its removal or alteration of Getty Images' copyright management information;

P. Entering judgment for Getty Images for statutory damages for Stability AI's willful acts of trademark infringement and unfair competition;

Q. Awarding Getty Images its costs and reasonable attorneys' fees;

R. Awarding Getty Images pre-judgment and post-judgment interest to the fullest extent available; and

S. Granting such other and further relief as the Court deems just and proper.

DEMAND FOR JURY TRIAL

Plaintiff Getty Images demands a trial by jury on all issues so triable.

Dated: March 29, 2023

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IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF WASHINGTON D.C.

Stephen Thaler, an individual *Plaintiff*, v. Shira Perlmutter, in her official capacity as Register of Copyrights and Director of the United States Copyright Office; and The United States Copyright Office; *Defendants*.	Case No. : 1:22-cv-01564 **COMPLAINT**

Plaintiff Stephen Thaler ("Dr. Thaler") complains and alleges against Defendant Shira Perlmutter (the "Register"), in her official capacity as the Register of Copyrights and Director of the United States Copyright Office, and Defendant the United States Copyright Office ("USCO," and together with Register, the "Defendants") as follows:

NATURE OF ACTION

1. Dr. Thaler is in the business of developing and applying advanced artificial intelligence (AI) systems capable of generating creative output that would historically qualify for copyright protection and that are made under conditions in which no natural person contributed to the work as a traditional author ("AI-Generated Works").

2. Dr. Thaler filed to register copyright for an AI-Generated Work with USCO. The application named the AI as the author and Dr. Thaler as the owner of the copyright in the work.

3. Defendants, in a final agency action, denied the copyright registration application on the basis that an AI-Generated Work "lacks the human authorship necessary to support a copyright claim."

4. Defendants also denied the copyright registration on the basis that Dr. Thaler was not entitled to apply for copyright registration for his submitted work.

5. The denial creates a novel requirement for copyright registration that is contrary to the plain language of the Copyright Act ("Act"), contrary to the statutory purpose of the Act, and contrary to the Constitutional mandate to promote the progress of science.

6. The denials are subject to judicial review under the Administrative Procedure Act (APA) 5 U.S.C. § 704. Plaintiff seeks injunctive and other relief as set forth below.

7. AI is continually getting better at creating AI-Generated Works. These works are going to be profoundly economically and socially disruptive, as they evolve from essentially academic pursuits to those having significant commercial value, including in the context of personalized music, journalism, and digital art.

JURISDICTION AND VENUE

8. This Court has subject matter jurisdiction and is authorized to issue the relief sought under 5 U.S.C. §§ 701-06, 28 U.S.C. §§ 1331, 1338(a), 1361, and 2201-2022.

9. Venue is proper in this district under 28 U.S.C. § 1391(e).

PARTIES

10. Plaintiff Dr. Stephen Thaler is an individual who resided in the State of Missouri at all times relevant to this complaint.

11. As described more fully below, Plaintiff is the applicant for the copyright registration.

12. Defendant Shira Perlmutter is named in her official capacity as the Register of Copyrights and Director of the United States Copyright Office. Under 17 U.S.C. § 701, the powers and duties of the Copyright Office are vested in the Register.

13. Defendant the United States Copyright Office (USCO) is a department of the Library of Congress, responsible for registering copyright claims and maintaining records of copyright ownership.

FACTUAL BACKGROUND

I. HISTORY OF THE APPLICATION

14. Plaintiff is in the business of developing and using AI systems including those capable of creating "AI-Generated Works," here referring to output that would traditionally qualify for copyright protection and made under conditions in which no natural person contributed to the work as a traditional author.

15. The present case involves Plaintiff's application to register a copyright for an AI-Generated Work produced by one of Plaintiff's AI systems referred to as a "Creativity Machine." The work is the two-dimensional artwork ("The Work") titled "A Recent Entrance to Paradise," reproduced below:

16. On November 3, 2018, Plaintiff filed an application (#1-7100387071) to register the Work with the USCO.

17. In the application, Plaintiff identified the author of the Work as the "Creativity Machine," and noted it was "Created autonomously by machine." Plaintiff listed himself as the "Copyright Claimant" alongside a transfer statement labelled "Ownership of the Machine."

18. Plaintiff separately noted in the application that the Work was autonomously created by a computer and that he was entitled to own the copyright in the Work including by virtue of the work made for hire doctrine.

19. On August 12, 2019, the USCO refused to register the claim based on the lack of human authorship. That refusal stated, "We cannot register this work because it lacks the human authorship necessary to support a copyright claim. According to your application this work was 'created autonomously by machine.'" The refusal did not address Dr. Thaler's entitlement to any copyright in the Work.

II. PLAINTIFF'S REQUESTS FOR RECONSIDERATION

20. Plaintiff filed two requests for reconsideration to the USCO on September 23, 2019, and May 27, 2020, respectively. Plaintiff confirmed that the submission lacked traditional human authorship. However, Plaintiff argued that the USCO's human authorship requirement was unsupported by law.

21. In denying the first request for reconsideration, the USCO reiterated its response that the copyright law only protects "the fruits of intellectual labor" that "are founded in the creative powers of the mind." Citing to *In re Trade-Mark Cases*, 100 U.S. 82, 94 (1879). The USCO stated that since copyright law is limited to "original intellectual conceptions of the author," it refused to register the claim because it determined a human being did not create the Work. The USCO again cited to *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884), 17 U.S.C. § 102(a), and the Compendium of U.S. Copyright Office Practices § 306 (3d ed. 2017).

22. On February 14, 2022, the USCO reconsidered Plaintiff's request the second time, and again refused to register the Work. The USCO accepted that the Work was autonomously created by artificial intelligence without any creative contribution from a human actor. Citing again to *In re Trade-Mark Cases*, the USCO stated that Plaintiff had failed to either provide evidence that the Work is the product of human authorship or convince the USCO to "depart from a century of copyright jurisprudence." Since there was no issue of human author involvement, the USCO limited its review to whether the human authorship requirement was unconstitutional and unsupported by case law.

23. The USCO acknowledge that the phrase "original work of authorship" was "purposefully left undefined" by Congress in order to "incorporate without change the standard

of originality established by the courts under the [1909] copyright statute[,]" citing to H.R. Rep. No. 94-1476, at 51 (1976). The USCO also acknowledged that the Act leaves "unquestionably other areas of existing subject matter that [Bill 94-1476 did] not propose to protect but that future Congresses may want to."

24. The USCO cited again to *Burrow-Giles Lithographic Co.*, stating that copyright was afforded to photographers because photographs are "representatives of original intellectual conceptions of [an] author." *Id.*, at 57-59. Pointing out that the court referred to "authors" as human there. *Id.*, at 58. Citing to *Mazer v. Stein*, the USCO stated that the Supreme Court defined an author as someone who "may be viewed as an individual who writes an original composition," stating "the term in its constitutional sense, has been construed to mean an 'originator,' 'he to whom anything owes its origin.'" USCO argues this requires human authorship as an essential element of protection.

25. Providing additional examples for its decision, the USCO also referred to *Urantia Found v. Kristen Maaherra*, 114 F.3d 955, 957-959 (9th Cir. 1997), arguing the court refused to extend copyright protection to non-human creations. The USCO additionally referred to *Naruto v. Slater*, 888 F.3d 418, 426 (9th Cir. 2018) arguing a monkey cannot register a copyright because the Act specifically referred to an author's "children," "widow," "grandchildren," and "widower," which necessarily implied humans and excluded animals. The USCO acknowledged that it was unaware whether a court had considered the authorship of a copyright by artificial intelligence, but held that the decisions rejecting registration for non-human spiritual beings and animals supported its position.

26. The USCO also cited to the National Commission on New Technological Uses of Copyrighted Works ("CONTU") as support of its position. CONTU was mandated, in part, to

study the "creation of new works by the application or intervention of [] automatic systems of machine reproduction." In the final report in 1979, CONTU determined that the existing judicial construction requiring human authorship sufficiently enabled protection for works created with the use of computers, and that no amendment to copyright law was needed. CONTU specifically stated that eligibility of registration did not depend on the use of devices in its creation, but rather if there was the presence of at least minimal human creative effort at the time it was produced. The USCO failed to recognize that the language cited from CONTU did not specifically address works created solely by computers as it was assumed it was not possible for a machine to create autonomously at the time.

27. However, it stated that CONTU's position mirrored that of the USCO. The USCO stated that the practice manual for the office — the Compendium of U.S. Copyright Office Practices — "has long mandated human authorship for registration." The original Compendium implied that a work must owe its origin to a human being, and that materials provided solely by nature, by plants, or by animals were not copyrightable. Following that reasoning, the current Compendium provided examples of works that were not copyrightable, including automated computer translations, derivative sound recordings made purely by mechanical processes, human performance required for choreography and pantomimes, machine produced expression in visual arts works such as linoleum flooring, x-rays and other medical imaging, or hypertext markup language if created by a human being rather than a website design program.

28. Finally, the USCO stated that its position was supported by a recent report from the U.S. Patent and Trademark Office, where it sought public comment on whether a "work produced by an AI algorithm or process, without the involvement of a natural person… qualif[ies] as a work of authorship under the Copyright Act." It indicated in its report that the

"vast majority of commenters acknowledged that existing law does not permit a non-human to be an author [and that] this should remain the law." U.S. PATENT AND TRADEMARK OFFICE, PUBLIC VIEWS ON ARTIFICIAL INTELLIGENCE AND INTELLECTUAL PROPERTY POLICY at 19-21 (2020).

III. USCO'S DENIAL OF COPYRIGHT REGISTRATION IS AN ARBITRARY AND CAPRICIOUS AGENCY ACTION AND NOT IN ACCORDANCE WITH THE LAW

A. The Plain Language of the Act Allows Protection of AI-Generated Works

29. The Act affords protection to "original works of authorship," a phrase which Congress left purposely undefined and for interpretation by the courts. 17 U.S.C. § 102(a). At no point does the Act limit authorship to natural persons. Indeed, corporations and other non-human entities have been considered "authors" for purposes of the Act for over a century. 17 U.S.C. § 101.

30. The bar for originality is low. "To qualify for copyright protection, a work must be original to the author." *Feist Publications, Inc. v. Rural Telephone Service Company, Inc.*, 499 U.S. 340, 345 (1991) (citation omitted). "Original, as the term is used in copyright, means only that the work was independently created by the author (as opposed to copied from other works), and that it possesses at least some minimal degree of creativity." *Id.*, at 345 (citation omitted).

31. The Work meets all the requirements for copyright protection. Indeed, if Dr. Thaler had submitted the same AI-Generated Work with his company listed as the author, USCO would have granted his company a registration, and no one would have known the work was AI-Generated. The USCO argues that this is not cause for concern because "[a]pplicants who mislead the Office do so at their peril." But contrary to the USCO's argument, the USCO does

not test, or have a means to test, to see if a registration is being submitted for an AI-Generated Work, and USCO does not require, at least for works made for hire, that a human author be disclosed in a registration filing. It is very likely that other applicants have successfully registered copyright in AI-Generated Works without exhibiting Dr. Thaler's level of transparency.

32. Copyright protection for AI-Generated Works is entirely consistent with the text and purpose of the Act. It would promote the use and development of creative AIs which would generate socially and commercially valuable works, and it would protect the moral rights of human authors by preventing someone from falsely claiming credit for work done by a machine.

B. No Case Law Stands for the Proposition that an AI-Generated Work is Ineligible for Copyright Protection

33. The USCO cites to *In re Trade-Mark Cases*, 100 U.S. 82, 94 (1879) and to *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 57 (1884) in support of its Human Authorship Requirement. *Compendium of U.S. Copyright Office Practices, Third Edition*, Section 306. This Human Authorship Requirement, of course, is a Copyright Office policy—not something created by statute. In fact, it is contrary to statute.

34. Certainly, any number of judicial opinions have discussed originality in the context of human-centric mental activity, but none of those opinions have considered an AI-Generated Work. It is hardly surprising that judgments from the Gilded Age would fail to consider the possibility of AI stepping into the shoes of a person and generating something creative. Dicta from such cases should therefore not be taken out of context to create a blanket prohibition on an entire field of publicly beneficial activity.

35. The appropriate takeaway from *Burrow-Giles*—which involved the Supreme Court holding for the first time that a photograph was eligible for copyright protection—is not that an AI cannot be an author, but rather that our courts have a long history of purposive interpretation of the Act in light of technological evolution.

36. Technology has advanced considerably since CONTU determined that AI-Generated Works were too speculative to consider in 1979. See NAT'L COMM'N ON NEW TECH. USES OF COPYRIGHTED WORKS, FINAL REPORT ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS 44 (1979). Today, AI can autonomously create works indistinguishable from a human being in terms of original and creative output. Applications allowing users and companies to utilize such AI to create AI-Generated Works are commercially available and rapidly increasing in use. *See, e.g.*, https://aiartists.org/ai-generated-art-tools.; *see, generally*, https://aiindex.stanford.edu/report/. AI, including Dr. Thaler's AI, are capable of producing creative output that, at least functionally, is equivalent to "the fruits of intellectual labor" that "are founded in the creative powers of the mind." *In re Trade-Mark Cases*, 100 U.S. 82, 94 (1879).

37. Courts associating mental activity with originality have not been using terms precisely or meaningfully in the context of AI-Generated Works. The problem of speaking precisely about such concepts with regards to computers was identified by Alan Turing, one of the founders of computer science, who in 1950 considered the question, "Can machines think?" *See* A.M. Turing, Computing Machinery and Intelligence, 59 MIND 433, 433–51 (1950). He found the question to be ambiguous, and the term "think" to be unscientific in its colloquial usage. *Id.*

38. Turing decided the better question to address was whether an individual could tell the difference between responses from a computer and an individual; rather than asking whether machines "think," he asked whether machines could perform in the same manner as thinking entities. *Id*. Turing's analysis from more than sixty years ago demonstrates that a test based on whether a machine is exhibiting "mental activity" would be ambiguous, challenging to administer, and of uncertain utility. The real question is whether a machine can make something indistinguishable from a person for purposes of copyright protection. The answer, as an undisputed factual matter here, is yes.

39. In addition to cases where courts have used human-centric language, USCO cites to two 9th Circuit cases it argues involves facts analogous to AI activity: animal art and works allegedly authored by spirits. First, neither is an appropriate analogy to AI-Generated Works. Second, neither case stands for the proposition claimed by USCO.

40. *Naruto v. Slater* involved a series of images that a black crested black macaque, named Naruto, took of himself in Indonesia. Naruto, by and through his Next Friends, People for the Ethical Treatment of Animals, Inc. (PETA), sued David Slater, who owned the camera used by Naruto and who subsequently used Naruto's photographs without permission. While USCO is correct that the case was dismissed, this was not based on the USCO's Human Authorship Requirement. The case was dismissed based on standing. As the 9th Circuit Court articulated, "We must determine whether a monkey may sue humans, corporations, and companies for damages and injunctive relief arising from claims of copyright infringement. Our court's precedent requires us to conclude that the monkey's claim has standing under Article III of the United States Constitution. Nonetheless, we conclude that this monkey—and all animals, since

they are not human—lacks statutory standing under the Copyright Act. We therefore affirm the judgment of the district court." *Naruto v. Slater*, 888 F.3d 418, 420 (9th Cir. 2018).

41. The present case, unlike *Naruto*, involves a human being suing for his ownership rights to property made by his machine. There is clearly no standing issue of the sort at issue in *Naruto*. If anything, *Naruto* emphasizes the importance of a purposive approach to statutory interpretation rather than a hyper-literal, textualist approach combined with over-reliance on dicta. Because, of course, if the 9th Circuit had literally intended for animals to be unable to sue under the Act, such a holding would prohibit many lawsuits. Human beings are, obviously, animals.

42. USCO also cites to, *Urantia Foundation v. Maaherra*, 114 F.3d 955 (9th Cir. 1997), which involved a book allegedly authored in part by a spiritual being. While a very interesting case in its own right and for a variety of reasons unrelated to AI-Generated Works, the 9th Circuit found that the book was protected by copyright regardless of any spiritual influences. "For copyright purposes, however, a work is copyrightable if copyrightability is claimed by the first human beings who compiled, selected, coordinated, and arranged the Urantia teachings, 'in such a way that the resulting work as a whole constitutes an original work of authorship.'" *Id*. at 958. "We hold that the human selection and arrangement of the revelations in this case could not have been so 'mechanical or routine as to require no creativity whatsoever.' We conclude, therefore, that the 'extremely low' threshold level of creativity required for copyright protection has been met in this case. *Id*. at 959 (citing *Feist*, *supra*, 499 at 345 ("The vast majority of works make the grade quite easily, as they possess some creative spark, 'no matter how crude, humble, or obvious it might be.'")

43. The 9th Circuit even noted that, "The copyright laws, of course, do not expressly require 'human' authorship, and considerable controversy has arisen in recent years over the copyrightability of [AI-Generated Works]." *Id*. at 958. Without addressing the protectability of AI-Generated Works, the 9th Circuit held that, "[a]t the very least, for a worldly entity to be guilty of infringing a copyright, that entity must have copied something created by another worldly entity." *Id*. at 958. The present case lacks, on information and belief, any divine intervention.

44. There is nothing mystical about AI-Generated Works—Dr. Thaler's AI is the result of decades of his research and investment. Investment which the Act is intended to promote, along with the distribution of creative works. "Nothing in the text of the Copyright Clause confines the "Progress of Science" exclusively to "incentives for creation." *Golan v. Holder*, 565 U.S. 302 (2012). In *Golan*, the Supreme Court notes that inducing the dissemination of works by itself is an appropriate means to promote science.

C. Dr. Thaler is Entitled to The Work Under Common Law Principles of Property Ownership Including Accession and First Possession

45. Copyright in a work can initially vest in an author. "Copyright in a work protected under this title vests initially in the author or authors of the work." 17 U.S.C. § 201(a). However, it is often the case that copyright in a work will instead initially vest in an author's employer, or in a party for whom a work was prepared. "In the case of a work made for hire, the employer or other person for whom the work was prepared is considered the author for purposes of this title, and, unless the parties have expressly agreed otherwise in a written instrument signed by them, owns all of the rights comprised in the copyright." 17 U.S.C. § 201(b). In addition, the ownership of copyright may be transferred by operation of law. "The ownership of a copyright may be

transferred in whole or in part by any means of conveyance or by operation of law, and may be bequeathed by will or pass as personal property by the applicable laws of intestate succession." 17 U.S.C. § 201(d)(1).

46. An AI is not a legal person and does not have rights. It is therefore not possible for an AI to "own" intellectual property. An AI that creates an AI-Generated Work does not do so as a legal "employee" per se. It does so, at least in the present case, in its capacity as personal property.

47. Dr. Thaler owns and operates the AI which created The Work. He is therefore entitled to property created by his AI under principles and rules of property ownership including accession and first possession.

48. It is generally the case that where property creates additional property, the owner of the original property is entitled to the subsequent property. This rule, sometimes referred to as *accession*, applies in a variety of contexts. If a person owns a cow that births a calf, the cow's owner becomes calf's owner. If a person owns a fruit tree that bears fruit, the tree's owner owns the fruit. The tree owner derives title to the fruit through the tree, but this does not require the tree to execute a written document that transfers title to the fruit—the title to the fruit initially vests in the tree's owner by virtue of her relationship to the fruit tree.[1] *See generally* Thomas W. Merrill, Accession and Original Ownership, JOURNAL OF LEGAL ANALYSIS, 459-505 (2009).

[1] In some cases, third parties may have conflicting entitlement claims, such as a party picking fruit, but there are no conflicting claims to entitlement in the present case. Dr. Thaler is the only possible owner of The Work.

49. Here, Dr. Thaler's AI generated a piece of intellectual property that Dr. Thaler owns because he owns the AI. If the AI had been a 3D printer that created a physical painting of The Work, Dr. Thaler would own that painting as personal property. There is no reason why Dr. Thaler should be any less entitled to the property in a digital painting made by his AI.

50. Alternately, or in addition, if the Court holds that an AI-Generated Work is indeed proper subject matter for copyright protection, then Dr. Thaler owns copyright in The Work by virtue of being the first party to possess it. "[T]he common and civil law (both of which accept the desirability of private ownership) have responded with the proposition that the taking possession of unowned things is the only possible way to acquire ownership of them." Richard A. Epstein, Possession as the Root of Title, 13 Georgia Law Review 1221, 1222 (1979). The rule of first possession is simple, but like accession, foundational to functioning systems of private property. If the AI made a piece of property, and if no other party was entitled to ownership by virtue of their relationship to the AI, then The Work was unowned property which Dr. Thaler took title to by virtue of first possession.

51. Although the work for hire doctrine provides one statutory mechanism for a party other than an author to claim initial ownership, nowhere does the Act prohibit other ownership mechanisms including pursuant to common law rules of entitlement.

D. Dr. Thaler is Also Entitled to The Work Under the Work for Hire Doctrine

52. While an AI is not an employee, the Work for Hire Doctrine is sufficiently flexible to apply in this case. Dr. Thaler built and controlled the AI which generated The Work, The Work was only created by the AI at Dr. Thaler's insistence, and The Work only exists due to Dr. Thaler's investment.

53. The Supreme Court in *Community for Creative Non-Violence v. Reid*, 490 U.S. 730 (1989) identified factors that characterize an employment relationship under agency law. Those factors, including the employer's control over the work, control over the employee, and the status and conduct of an employee, all weigh heavily in favor of The Work being treated as a work for hire. *Id*., at 751-752. The AI is controlled by Dr. Thaler, the AI only operates at Dr. Thaler's direction, and the AI is owned as property by Dr. Thaler.

54. The central concern with overapplication of the work for hire doctrine is that it has the potential to exploit human authors. Employers might acquire copyrights not contemplated at the time of contracting and which would not be reflected in the agreed-upon price for employment or a work. *See, e.g.*, Anne Marie Hill, Work for Hire Definition in the Copyright Act of 1976: Conflict Over Specially Ordered or Commissioned Works, 74 Cornell L. Rev. 559, 569 (1989). Here, where the author is a machine that has no legal rights, there can be no concern about exploitation.

55. In addition to works created within the scope of employment, certain works created by independent contractors are also considered works-for-hire. 17 U.S.C. § 101. This requires that the parties "expressly agree in a written instrument signed by them that the work shall be considered a work for hire." *Id*. However, that requirement was again motivated by the desire to protect human authors. *See, e.g.*, Anne Marie Hill, Work for Hire Definition in the Copyright Act of 1976: Conflict Over Specially Ordered or Commissioned Works, 74 Cornell L. Rev. 559, 569 (1989). In this case, again, The Work was created by the AI while the AI was under his control and at Dr. Thaler's request and expense. In the case of an AI-Generated Work, because an AI has no rights to protect, there is no need for a written instrument for its benefit.

56. While an AI is neither a legal employee nor an independent contractor capable of executing a contract, it functionally behaves as an employee or independent contractor in creating AI-Generated Works.

E. AI Authorship is Consistent with the Purpose of the Act and the Constitution

57. It is important to interpret the Act consistent with its purpose and with the Constitution. Copyright protection is intended to promote the creation of socially valuable works. It is "intended definitely to grant valuable, enforceable rights to authors, publishers, etc., without burden-some requirements; 'to afford greater encouragement to the production of literary [or artistic] works of lasting benefit to the world.'" *Washingtonian Co. v. Pearson*, 306 U.S. 30, 36. It is also intended to promote dissemination of those works. *See, e.g., Golan v. Holder*, 132 S. Ct. 873, 888 (2012). The Copyright Clause of the Constitution likewise is intended to promote the creation and dissemination of new works. Art. I, § 8, cl. 8. The Constitution provides for Copyright protection, "[n]ot primarily for the benefit of the author, but primarily for the benefit of the public, such rights are given." H.R. Rep. No 60-2222, at 7 (2d Sess. 1909).

58. Allowing protection of AI-Generated Works is required by the plain language of the Act. In 1973, the Supreme Court noted that the terms "Writings" and "Authors," have "not been construed in their narrow literal sense but, rather, with the reach necessary to reflect the broad scope of constitutional principles." *Goldstein v. California*, 412 U.S. 546, 561 (1973).

59. The Supreme Court has also articulated, "[w]hen technological change has rendered its literal terms ambiguous, the Copyright Act must be construed in light of its basic purpose." *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975). For instance, in *Aiken*, the issue was whether playing a radio in a restaurant constituted a performance and thus

an infringement. The meaning of performance was therefore ambiguous given the technology invented after the 1909 Copyright Act. The Supreme Court held that playing a radio in a restaurant was not a "performance." *Id.*, at 162. This was because of a simple logic that a passive listener cannot be a performer, and "those who listen do not perform, and therefore do not infringe." *Id.*, at 159 (citation omitted).

60. The Supreme Court has directly stated that "our inquiry cannot be limited to ordinary meaning and legislative history, for this is a statute that was drafted long before the development of the electronic phenomena with which we deal here." *Fort. Corp. v. United Artists Television, Inc.*, 392 U.S. 390, 395 (1968). Thus, "[w]e must read the statutory language of 60 years ago in the light of drastic technological change." *Id.* In doing so, the Supreme Court defined an airing over its airwaves as a "performance" of copyright work. *Id.* Like *Aiken*, the court looked at the actual relationship between performers and listeners, to essentially determine what was going on within the ambit of the Act.

CAUSES OF ACTION

FIRST CAUSE OF ACTION

(Administrative Procedure Act Violation for Denial of Plaintiff's Application)

61. Plaintiff re-alleges and incorporates by reference every allegation contained in the proceeding paragraphs.

62. The USCO's second refusal to register the Work constituted final agency action and Plaintiff seeks to reverse that refusal here.

63. For the reasons stated above, requiring human authorship for registration of copyright in a work is contrary to law.

64. Defendants' refusal to register the copyright claim in the work is contrary to law.

65. The agency actions here were arbitrary, capricious, an abuse of discretion and not in accordance with the law, unsupported by substantial evidence, and in excess of Defendants' statutory authority.

66. The refusal to register the copyright claim in the Work should be set aside and the application reinstated.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that the Court:

1. Issue an order compelling Defendants to set aside their refusal to register the Work.

2. Award of costs and its reasonable attorney's fees to Plaintiff; and

3. All other relief as may be appropriate.

Dated: June 2, 2022

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Trustworthy AI: Managing the Risks of Artificial Intelligence

Overview

On Thursday, September 29, 2022, the Subcommittee on Research and Technology of the Committee on Science, Space, and Technology held a hearing to discuss tools, best practices, and challenges in the design, development, testing, and deployment of trustworthy artificial intelligence (AI) systems. The Subcommittee examined efforts in academia, industry, and government to create a culture of responsibility around AI systems, identify and remove harmful bias in AI applications, improve transparency of applications, and mitigate other risks associated with AI. The Subcommittee explored the National Institute of Standards and Technology's (NIST) ongoing efforts to create an artificial intelligence risk management framework. Watch the full hearing here.

Opening Statements

Chairwoman Haley Stevens (D-MI-11) started her opening statement by recalling some key elements of the definition of an AI. She explained that the applications of AI in people's everyday lives range from simple improvements in daily life (a recommendation of movies based on preferences) to drastic changes in people's lives (life-saving medical AI). AI allows for large amount of data analysis to become summarized. Chairwoman Stevens recalled that applications of AI can be harmful, with inequitable outcomes because the AI can make biased and discriminatory decisions, causing unprecedented harm to affected populations. She ended her opening statement by explaining that there is a need to develop the tools to ensure that AI products and services are secure, accurate and trustworthy.

Ranking Member Randy Feenstra (R-IA-04) started his opening statement saying artificial intelligence technologies are revolutionizing every aspect of people's lives, hence the importance of creating a safe and trustworthy AI. This AI must however correspond to certain criteria: accuracy, privacy, reliability, transparency, fairness, and accountability. To meet these criteria, NIST is creating a framework for managing risks of AI.

Witnesses

- Ms. **Elham Tabassi**, Chief of Staff, Information Technology Laboratory, National Institute of Standards and Technology
- Dr. **Charles Isbell**, Dean and John P. Imlay, Jr. Chair of the College of Computing, Georgia Institute of Technology
- Mr. **Jordan Crenshaw**, Vice President of the Chamber Technology Engagement Center, U.S. Chamber of Commerce
- Ms. **Navrina Singh**, Founder and Chief Executive Officer, Credo AI

Overarching questions

- What are the risks that can arise from the development and deployment of AI systems, including how harmful biases can arise in these systems?

- What are the activities being undertaken by academia, industry, and the government to develop, test, and responsibly deploy trustworthy AI systems?

- How should the United States encourage more organizations to think critically about risks that arise from AI systems, including at the earliest stages of development?

- Where should the Federal government focus efforts to promote the development and deployment of trustworthy artificial intelligence across every sector of the economy?

Q&A

- **Ranking member Feenstra** (R-IA-04) asked how NIST works with industry in developing the AI risk management framework. **Jordan Crenshaw** responded by saying that it is thanks to transparency. Each step of the AI risk management framework development is done in total transparency: numerous detailed reports are sent so that each stakeholder is aware of the progress made.

- **Rep. Bill Foster** (D-IL-11) questioned **Jordan Crenshaw** on the importance of education in the field of AI. Crenshaw responded there is a real need for a knowledge baseline to get into the AI field, and that the US need more coders: "*We need a trained and skilled diverse workforce to build a more accurate and trustworthy AI, […] and a widespread access to computer resources.*" He also recalled that the US must avoid at all costs the brain drain once they are trained in the US.

- **Rep. Frank Lucas** (R-OK-03) questioned **Elham Tabassi** on the definition of trustworthiness. She responded with fairness is one of the aspects of trustworthiness. Lucas then asked why it is important for democratic nations to lead the development of international standards for trustworthy AI systems. Tabassi responded that it is important to affirm our shared democratic values of openness, protection of the democracy, and human rights.

- **Rep. Deborah Ross** (D-NC-02) asked **Charles Isbell** "how can transparency increase the ability of individuals to protect their information and avoid undue scrutiny and to whom should individuals direct their concerns if they believe their data has been misused?" Isbell responded that there must be policy and infrastructure in place, this a role that the government must provide. This is not a thing which will naturally come from industries but initiated from the legal system. Ross then asked Isbell if he can discuss any law enforcement practices that the subcommittee should be aware of as they're considering changes to the legal system. He responded that the subcommittee must look at the way some systems are being used on a case-by-case basis.

- **Rep. Jim Baird** (R-IN-04) questioned **Elham Tabassi** on whether the Republic of China or any allies have already developed a similar tool to AI risk management framework. She answered that the US is already interacting with allies at events like the Trade and technology council, providing a strong, robust engagement.

- **Rep. Jerry McNerney** (D-CA-09) asked **Elham Tabassi,** how can the EU and US work together to build a trustworthy AI? Tabassi responded that it can only be possible by expert-to-expert work on standardization research. McNerney then asked **Jordan Crenshaw** on the importance of an AI regulatory law in the US. Crenshaw responded it's presumptuous to discuss perspective regulations given the state of the technology.

Government action

In December 2020, Congress enacted the National Artificial Intelligence Initiative Act or NAIIA (P.L. 116-283). This bipartisan legislation, which was led by the House Science Committee, accelerated, and coordinated Federal investments and new public-private partnerships in research, standards, and education in trustworthy artificial intelligence. The law establishes interagency coordination and strategic planning efforts in AI research, development, standards, and education through an Interagency Coordination Committee and a coordination office managed by the Office of Science and Technology Policy (OSTP). The legislation also created the National AI Advisory Committee (NAIAC) to assess the implementation of the law, track advancements in AI science, and propose recommendations to advance U.S. competitiveness in AI. The Department of Commerce selected members for the NAIAC in May 2022, with the plan to publish a report in 2023. Finally, the legislation directed the Department of Energy (DOE), the National Science foundation (NSF), and Department of Commerce research agencies to conduct AI-related activities, many of which are designed to assess and mitigate AI-related risks.

Sources

https://science.house.gov/hearings/trustworthy-ai-managing-the-risks-of-artificial-intelligence

https://science.house.gov/imo/media/doc/HSST%20Hearing%20Charter_Trustworthy%20AI-Managing%20the%20Risks%20of%20Artificial%20Intelligence_9.29.22.pdf

United States Copyright Office

Library of Congress · 101 Independence Avenue SE · Washington DC 20559-6000 ·
www.copyright.gov

February 21, 2023

Van Lindberg
Taylor English Duma LLP
21750 Hardy Oak Boulevard #102
San Antonio, TX 78258

Previous Correspondence ID: 1-5GB561K

Re: Zarya of the Dawn (Registration # VAu001480196)

Dear Mr. Lindberg:

The United States Copyright Office has reviewed your letter dated November 21, 2022, responding to our letter to your client, Kristina Kashtanova, seeking additional information concerning the authorship of her work titled *Zarya of the Dawn* (the "Work"). Ms. Kashtanova had previously applied for and obtained a copyright registration for the Work, Registration # VAu001480196. We appreciate the information provided in your letter, including your description of the operation of the Midjourney's artificial intelligence ("AI") technology and how it was used by your client to create the Work.

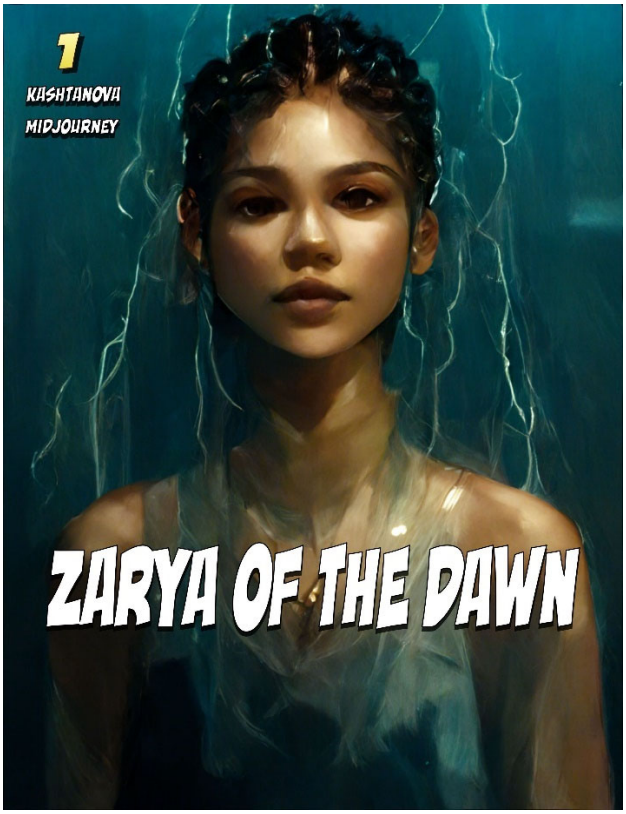
The Office has completed its review of the Work's original registration application and deposit copy, as well as the relevant correspondence in the administrative record.[1] We conclude that Ms. Kashtanova is the author of the Work's text as well as the selection, coordination, and arrangement of the Work's written and visual elements. That authorship is protected by copyright. However, as discussed below, the images in the Work that were generated by the Midjourney technology are not the product of human authorship. Because the current registration for the Work does not disclaim its Midjourney-generated content, we intend to cancel the original certificate issued to Ms. Kashtanova and issue a new one covering only the expressive material that she created.

The Office's reissuance of the registration certificate will not change its effective date—the new registration will have the same effective date as the original: September 15, 2022. The public record will be updated to cross-reference the cancellation and the new registration, and it will briefly explain that the cancelled registration was replaced with the new, more limited registration.

[1] The Office has only considered correspondence from Ms. Kashtanova and her counsel in its analysis. While the Office received unsolicited communications from third parties commenting on the Office's decision, those communications were not considered in connection with this letter.

I. DESCRIPTION OF THE WORK

As described in the application and accompanying deposit materials provided by Ms. Kashtanova, the Work is a "comic book" consisting of eighteen pages, one of which is a cover. The cover page consists of an image of a young woman, the Work's title, and the words "Kashtanova" and "Midjourney." The remaining pages consist of mixed text and visual material. A reproduction of the cover page and the second page are provided below:



II. SUMMARY OF ADMINISTRATIVE RECORD

On September 15, 2022, Ms. Kashtanova submitted an application for the Work and copies of each page of the Work as the deposit copy. In her application, Ms. Kashtanova listed the author of the Work as "Kristina Kashtanova" and stated that she had created a "[c]omic book." The application did not disclose that she used artificial intelligence to create any part of the Work, nor did she disclaim any portion of the Work.[2] The Office reviewed the application on the same day and registered the Work as registration number VAu001480196.

Shortly after registering the Work, the Office became aware of statements on social media attributed to Ms. Kashtanova that she had created the comic book using Midjourney artificial intelligence. Because the application had not disclosed the use of artificial intelligence,

[2] As we explained in our previous letter, while the word "Midjourney" appears on the cover page of the Work, there is no indication of the intent or meaning of the word on the cover. Letter from U.S. Copyright Office to Kristina Kashtanova at 2 (Oct. 28, 2022).

the Office determined that the application was incorrect, or at a minimum, substantively incomplete. In a letter dated October 28, 2022, the Office notified Ms. Kashtanova that it intended to cancel the registration unless she provided additional information in writing showing why the registration should not be cancelled.[3] Letter from U.S. Copyright Office to Kristina Kashtanova (Oct. 28, 2022).

On November 21, 2022, the Office received a timely response from Ms. Kashtanova's attorney, Mr. Van Lindberg. Letter from Van Lindberg, Taylor English Duma LLP, to U.S. Copyright Office (Nov. 21, 2022) ("Kashtanova Letter"). The letter describes Ms. Kashtanova's creation of the Work, including specific information about her use of Midjourney. Mr. Lindberg argues that the Work's registration should not be cancelled because (1) Ms. Kashtanova authored every aspect of the work, with Midjourney serving merely as an assistive tool, and, (2) alternatively, portions of the work are registrable because the text was authored by Ms. Kashtanova and the Work is a copyrightable compilation due to her creative selection, coordination, and arrangement of the text and images.

III. DISCUSSION

A. Legal Standards

Before turning to our analysis of the Work, we summarize here the legal principles that guide that analysis. The Copyright Act defines the scope of copyright protection. Under the Act, a work may be registered if it qualifies as an "original work[] of authorship fixed in any tangible medium of expression." 17 U.S.C. § 102(a). The Supreme Court has explained that the term "original" in this context consists of two components: independent creation and sufficient creativity. *See Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991). First, the work must have been independently created by the author. *Id.* Second, the work must possess sufficient creativity. *Id.* Only a modicum of creativity is necessary, but the Supreme Court has ruled that some works—such as the alphabetized telephone directory at issue in *Feist*—fail to meet even this low threshold. *Id.* The Court observed that "[a]s a constitutional matter, copyright protects only those constituent elements of a work that possess more than a *de minimis* quantum of creativity." *Id.* at 363. It found that there can be no copyright in a work in which "the creative spark is utterly lacking or so trivial as to be virtually nonexistent." *Id.* at 359.

Courts interpreting the phrase "works of authorship" have uniformly limited it to the creations of human authors. For example, in *Burrow-Giles Lithographic Co. v. Sarony*, the Supreme Court held that photographs were protected by copyright because they were "representatives of original intellectual conceptions of the author," defining authors as "he to whom anything owes its origin; originator; maker; one who completes a work of science or literature." 111 U.S. 53, 57–59 (1884). In doing so, the Court rejected the argument that a photograph was merely "a reproduction on paper of the exact features of some natural object or of some person" made by a machine. *Id.* at 56. But the Court explained that if photography was

[3] Under 37 C.F.R. § 201.7(c)(4), if the Office becomes aware that an issued registration does not satisfy the statutory requirements for copyright "or that information essential to registration has been omitted entirely from the application or is questionable," the Office will correspond with the copyright claimant "in an attempt to secure the required information . . . or to clarify the information previously given on the application." If the claimant does not reply in 30 days, the Office will cancel the registration. *Id.*

a "merely mechanical" process, "with no place for novelty, invention or originality" by the human photographer, then "in such case a copyright is no protection." *Id.* at 59.[4]

In cases where non-human authorship is claimed, appellate courts have found that copyright does not protect the alleged creations. For example, the Ninth Circuit held that a book containing words "'authored' by non-human spiritual beings" can only gain copyright protection if there is "human selection and arrangement of the revelations." *Urantia Found. v. Kristen Maaherra*, 114 F.3d 955, 957–59 (9th Cir. 1997). The *Urantia* court held that "some element of human creativity must have occurred in order for the Book to be copyrightable" because "it is not creations of divine beings that the copyright laws were intended to protect." *Id.*

The Office's registration practices follow and reflect these court decisions. The Office collects its understanding of the law in the *Compendium of U.S. Copyright Office Practices (Third Edition)*, which provides standards for examining and registering copyrighted works. Following the cases described above, the *Compendium* explains that the Office "will refuse to register a claim if it determines that a human being did not create the work." U.S. COPYRIGHT OFFICE, COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES § 313.2 (3d ed. 2021) ("COMPENDIUM (THIRD)") (providing examples of works lacking human authorship such as "a photograph taken by a monkey" and "an application for a song naming the Holy Spirit as the author of the work").[5]

Having considered the requirements for copyright protection, the Office turns to the elements of the Work as described in your letter.

B. The Work's Text

The Office agrees that the text of the Work is protected by copyright. Your letter states that "the text of the Work was written entirely by Kashtanova without the help of any other source or tool, including any generative AI program." Kashtanova Letter at 2. Based on this statement, the Office finds that the text is the product of human authorship. Moreover, the Office finds that the text in the Work contains more than the "modicum of creativity" required for protection under *Feist*. *See* 499 U.S. at 346. For this reason, the text of the Work is registrable.[6]

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[4] This echoed the Court's decision five years earlier in the *Trade-Mark Cases*, which noted that "the writings which are to be protected [under the Copyright Clause] are the fruits of intellectual labor, embodied in the form of books, prints, engravings and the like." 100 U.S. 82, 94 (1879). The Court's later cases have similarly articulated a nexus between human expression and copyright. In *Mazer v. Stein*, the Court cited *Sarony* for the proposition that a work "must be original, that is, the author's tangible expression of his ideas." 347 U.S. 201, 214 (1954). And in *Goldstein v. California*, the Court again cited *Sarony* for the proposition that "[w]hile an 'author' may be viewed as an individual who writes an original composition, the term, in its constitutional sense, has been construed to mean an 'originator,' 'he to whom anything owes its origin.'" 412 U.S. 546, 561 (1973).

[5] The Office has refused to register a visual work created autonomously by an AI. *See* U.S. Copyright Office Review Board, *Decision Affirming Refusal of Registration of A Recent Entrance to Paradise* (Feb. 14, 2022), https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf.

[6] The Work is described as "an adaption of Kashtanova's original story about Zarya." Kashtanova Letter at 3–4. This would make the Work a derivative of the original story and require that the Work contain separate textual authorship from the story that is itself sufficiently creative for copyright protection. *See* COMPENDIUM (THIRD)

C. The Selection and Arrangement of Images and Text

The Office also agrees that the selection and arrangement of the images and text in the Work are protectable as a compilation. Copyright protects "the collection and assembling of preexisting materials or of data that are selected, coordinated, or arranged" in a sufficiently creative way. 17 U.S.C. § 101 (definition of "compilation"); *see also* COMPENDIUM (THIRD) § 312.1 (providing examples of copyrightable compilations). Ms. Kashtanova states that she "selected, refined, cropped, positioned, framed, and arranged" the images in the Work to create the story told within its pages. Kashtanova Letter at 13; *see also id.* at 4 (arguing that "Kashtanova's selection, coordination, and arrangement of those images to reflect the story of Zarya should, at a minimum, support the copyrightability of the Work as a whole."). Based on the representation that the selection and arrangement of the images in the Work was done entirely by Ms. Kashtanova, the Office concludes that it is the product of human authorship. Further, the Office finds that the compilation of these images and text throughout the Work contains sufficient creativity under *Feist* to be protected by copyright. Specifically, the Office finds the Work is the product of creative choices with respect to the selection of the images that make up the Work and the placement and arrangement of the images and text on each of the Work's pages. Copyright therefore protects Ms. Kashtanova's authorship of the overall selection, coordination, and arrangement of the text and visual elements that make up the Work.

D. The Individual Images

Turning to the individual images in the Work, the Office must consider the impact of Ms. Kashtanova's use of Midjourney's artificial intelligence technology in its copyrightability analysis. The majority of the Kashtanova Letter focuses on how Ms. Kashtanova used Midjourney to create these images. Before addressing the question of whether the images are copyrightable, the Office describes its understanding of Midjourney and how it works. The Office's understanding is based on the letter's description of the artificial intelligence service,[7] the Office's own knowledge, and Midjourney's public documentation, of which the Office takes administrative notice.[8]

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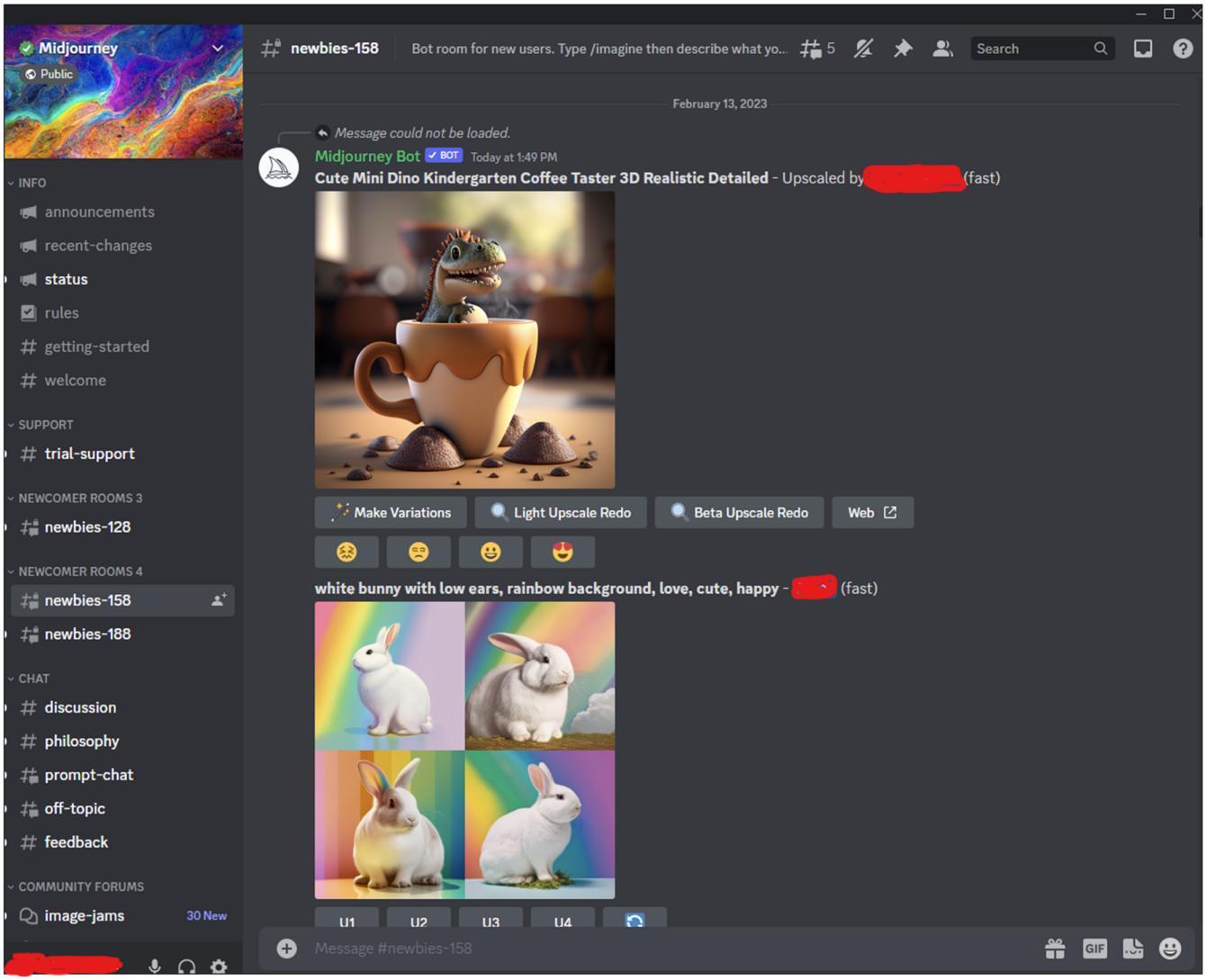
§§ 507.1, 507.2 (discussing derivative works). Ms. Kashtanova has provided a narrative passage in her letter, *see* Kashtanova Letter at 3–4, but it is unclear whether the passage is an excerpt of the short story or the story in full. In any event, the story was not submitted as part of the deposit for the Work, so the Office does not need to address it in connection with this application.

[7] Midjourney is a subscription service that allows users to pay to generate images, with subscription plans corresponding to the computational time it uses to generate images. *See Fast and Relax Mode*, MIDJOURNEY, https://docs.midjourney.com/docs/fast-relax ("Midjourney uses powerful Graphics Processing Units (GPUs) to interpret and process each prompt. When you purchase a subscription to Midjourney, you are purchasing time on these GPUs."); *Subscription Plans*, MIDJOURNEY, https://docs.midjourney.com/docs/plans (providing information about different subscription plans). Unless stated otherwise, all websites were last visited on February 17, 2023.

[8] "Ordinarily, the Office does not conduct investigations or make findings of fact to confirm the truth of any statement made in an application." COMPENDIUM (THIRD) § 602.4(C). But the Office "may take administrative notice of facts or matters that are known by the Office or the general public," and the Office may use that knowledge to evaluate an application that appears to be based on inaccurate or incomplete information. *Id.*

1. How Midjourney Works

Midjourney offers an artificial intelligence technology capable of generating images in response to text provided by a user. Midjourney operates on top of an unaffiliated third-party communication service called Discord, which is made up of individual servers operated by its users.[9] In order to use Midjourney, users must first join the Midjourney Discord server, which contains public "channels" where users can enter text.[10] Midjourney primarily operates through an automated account on these channels that reads user-entered text and generates images based on it. An example of a public channel depicting the use of Midjourney by individuals to generate images is provided below:



[9] Discord is a communication service that allows users to create "servers" that contain individual "channels" for text or voice communication. *See* Librarian, *Beginner's Guide to Discord*, DISCORD, https://support.discord.com/hc/en-us/articles/360045138571-Beginner-s-Guide-to-Discord.

[10] *See Quick Start*, MIDJOURNEY, https://docs.midjourney.com/docs/quick-start (explaining that the first step for using Midjourney is to "go directly to the Midjourney Discord").

Users operate Midjourney through "prompts," which are text commands entered in one of Midjourney's channels. As Midjourney explains, prompts must start with the text "/imagine" and contain text describing what Midjourney should generate.[11] Users also have the option to include (1) a URL of one or more images to influence the generated output, or (2) parameters directing Midjourney to generate an image in a particular aspect ratio or providing other functional directions.[12]

After a user provides Midjourney with a prompt, the technology will generate four images in response. The images are provided in a grid, and buttons underneath the grid allow users to request that Midjourney provide a higher-resolution version of an image (*e.g.*, U1, U2, U3, U4), create new variations of an image (*e.g.*, V1, V2, V3, V4), or to generate four new images from scratch (see light blue circular icon at far right below). For example, entering the prompt "/imagine cute baby dinosaur shakespeare writing play purple" resulted in the following response from Midjourney:

It is relevant here that, by its own description, Midjourney does not interpret prompts as specific instructions to create a particular expressive result. Because Midjourney "does not understand grammar, sentence structure, or words like humans," it instead converts words and phrases "into smaller pieces, called tokens, that can be compared to its training data and then used to generate an image." *Prompts*, MIDJOURNEY, https://docs.midjourney.com/docs/prompts. Generation involves Midjourney starting with "a field of visual noise, like television static, [used] as a starting point to generate the initial image grids" and then using an algorithm to refine

[11] *See id.*; *see also Prompts*, MIDJOURNEY, https://docs.midjourney.com/docs/prompts.
[12] For a list of parameters, see *Parameter List*, MIDJOURNEY, https://docs.midjourney.com/docs/parameter-list.

that static into human-recognizable images. *Seeds*, MIDJOURNEY, https://docs.midjourney.com/docs/seeds.[13]

The process by which a Midjourney user obtains an ultimate satisfactory image through the tool is not the same as that of a human artist, writer, or photographer. As noted above, the initial prompt by a user generates four different images based on Midjourney's training data. While additional prompts applied to one of these initial images can influence the subsequent images, the process is not controlled by the user because it is not possible to predict what Midjourney will create ahead of time. *See, e.g.*, Kashtanova Letter at 8 (describing the process of "provid[ing] the Midjourney service with [] prompts and inputs" so that it will "render[] another iteration" of the input "Raya as a hologram").

2. Application of Copyright Law to Midjourney Images

Based on the record before it, the Office concludes that the images generated by Midjourney contained within the Work are not original works of authorship protected by copyright. *See* COMPENDIUM (THIRD) § 313.2 (explaining that "the Office will not register works produced by a machine or mere mechanical process that operates randomly or automatically without any creative input or intervention from a human author"). Though she claims to have "guided" the structure and content of each image, the process described in the Kashtanova Letter makes clear that it was Midjourney—not Kashtanova—that originated the "traditional elements of authorship" in the images.

Ms. Kashtanova claims that each image was created using "a similar creative process." Kashtanova Letter at 5. Summarized here, this process consisted of a series of steps employing Midjourney. First, she entered a text prompt to Midjourney, which she describes as "the core creative input" for the image. *Id.* at 7–8 (providing example of first generated image in response to prompt "dark skin hands holding an old photograph --ar 16:9").[14] Next, "Kashtanova then picked one or more of these output images to further develop." *Id.* at 8. She then "tweaked or changed the prompt as well as the other inputs provided to Midjourney" to generate new intermediate images, and ultimately the final image. *Id.* Ms. Kashtanova does not claim she created any visual material herself—she uses passive voice in describing the final image as "created, developed, refined, and relocated" and as containing elements from intermediate images "brought together into a cohesive whole." *Id.* at 7. To obtain the final image, she describes a process of trial-and-error, in which she provided "hundreds or thousands of descriptive prompts" to Midjourney until the "hundreds of iterations [created] as perfect a rendition of her vision as possible." *Id.* at 9–10.

[13] While Midjourney starts with a randomly chosen number, called a "seed," as the "starting point" for an image grid, users can use a parameter to specify a particular seed for the image-generation process. *See Seeds*, MIDJOURNEY, https://docs.midjourney.com/docs/seeds.

[14] As described above, the text "--ar 16:9" is a "parameter," or command, instructing Midjourney to generate an image in a 16:9 aspect ratio. *See Parameter List*, MIDJOURNEY, https://docs.midjourney.com/docs/parameter-list (adding "--aspect, or --ar" to a prompt instructs Midjourney to "[c]hange the aspect ratio of a generation"). *See also* Kashtanova Letter at 8 ("This input also contains a direction to the Midjourney service to constrain the output image to a 16:9 aspect ratio").

Rather than a tool that Ms. Kashtanova controlled and guided to reach her desired image, Midjourney generates images in an unpredictable way. Accordingly, Midjourney users are not the "authors" for copyright purposes of the images the technology generates. As the Supreme Court has explained, the "author" of a copyrighted work is the one "who has actually formed the picture," the one who acts as "the inventive or master mind." *Burrow-Giles*, 111 U.S. at 61. A person who provides text prompts to Midjourney does not "actually form" the generated images and is not the "master mind" behind them. Instead, as explained above, Midjourney begins the image generation process with a field of visual "noise," which is refined based on tokens created from user prompts that relate to Midjourney's training database. The information in the prompt may "influence" generated image, but prompt text does not dictate a specific result. *See Prompts*, MIDJOURNEY, https://docs.midjourney.com/docs/prompts (explaining that short text prompts cause "each word [to have] a more powerful influence" and that images including in a prompt may "influence the style and content of the finished result"). Because of the significant distance between what a user may direct Midjourney to create and the visual material Midjourney actually produces, Midjourney users lack sufficient control over generated images to be treated as the "master mind" behind them.

The fact that Midjourney's specific output cannot be predicted by users makes Midjourney different for copyright purposes than other tools used by artists. *See* Kashtanova Letter at 11 (arguing that the process of using Midjourney is similar to using other "computer-based tools" such as Adobe Photoshop). Like the photographer in *Burrow-Giles*, when artists use editing or other assistive tools, they select what visual material to modify, choose which tools to use and what changes to make, and take specific steps to control the final image such that it amounts to the artist's "own original mental conception, to which [they] gave visible form."[15] *Burrow-Giles*, 111 U.S. at 60 (explaining that the photographer's creative choices made the photograph "the product of [his] intellectual invention"). Users of Midjourney do not have comparable control over the initial image generated, or any final image. It is therefore understandable that users like Ms. Kashtanova may take "over a year from conception to creation" of images matching what the user had in mind because they may need to generate "hundreds of intermediate images." Kashtanova Letter at 3, 9.

Nor does the Office agree that Ms. Kashtanova's use of textual prompts permits copyright protection of resulting images because the images are the visual representation of "creative, human-authored prompts."[16] *Id.* at 10. Because Midjourney starts with randomly generated noise that evolves into a final image, there is no guarantee that a particular prompt will

[15] For this reason, the cases cited by Ms. Kashtanova regarding Photoshop do not alter our conclusion. *See* Kashtanova Letter at 11 n.13. Both cases involved situations where the artist had made deliberate, intentional edits to an image using Photoshop. In *Etrailer Corp. v. Onyx Enters., Int'l Corp.*, the court credited the plaintiff's statement that she used Photoshop to "smooth, crop, saturate, and burn" photographs of trailer accessories. Case No. 4:17-CV-01284-AGF, 2018 U.S. Dist. LEXIS 19916, at *4 (E.D. Mo. Feb. 7, 2018) (rejecting motion to dismiss that photographs were not protected by copyright). And in *Payton v. Defend, Inc.*, the court found a triable issue on copyrightability where the plaintiff used Photoshop to create a shirt design containing a silhouette of an AR-15 rifle based on a preexisting "picture of a model AR-15 Airsoft gun." No. 15-00238 SOM/KSC, 2017 U.S. Dist. LEXIS 208358, at *9 (D. Haw. Dec. 19, 2017).

[16] While Ms. Kashtanova suggests that her text prompts are copyrightable because they are similar to poems, she did not submit them in the application and is not seeking to register the text prompts themselves, either separately or as part of the Work. *See* Kashtanova Letter at 9–10. Accordingly, the Office has not addressed the question of copyrightability of prompts here.

generate any particular visual output. Instead, prompts function closer to suggestions than orders, similar to the situation of a client who hires an artist to create an image with general directions as to its contents. If Ms. Kashtanova had commissioned a visual artist to produce an image containing "a holographic elderly white woman named Raya," where "[R]aya is having curly hair and she is inside a spaceship," with directions that the image have a similar mood or style to a "Star Trek spaceship," "a hologram," an "octane render," "unreal engine," and be "cinematic" and "hyper detailed," Ms. Kashtanova would not be the author of that image. *See id.* at 8 (text of prompt provided to Midjourney). Absent the legal requirements for the work to qualify as a work made for hire,[17] the author would be the visual artist who received those instructions and determined how best to express them. And if Ms. Kashtanova were to enter those terms into an image search engine, she could not claim the images returned in response to her search were "authored" by her, no matter how similar they were to her artistic vision.

The Office does not question Ms. Kashtanova's contention that she expended significant time and effort working with Midjourney. But that effort does not make her the "author" of Midjourney images under copyright law. Courts have rejected the argument that "sweat of the brow" can be a basis for copyright protection in otherwise unprotectable material.[18] The Office "will not consider the amount of time, effort, or expense required to create the work" because they "have no bearing on whether a work possesses the minimum creative spark required by the Copyright Act and the Constitution." COMPENDIUM (THIRD) § 310.7.

The Office's determination here is based on the specific facts provided about Ms. Kashtanova's use of Midjourney to create the Work's images. It is possible that other AI offerings that can generate expressive material operate differently than Midjourney does. However, on the administrative record before the Office, Ms. Kashtanova is not the author for copyright purpose of the individual images generated by Midjourney.

3. Images Edited by Ms. Kashtanova

Finally, Ms. Kashtanova suggests that she personally edited some of the images created by Midjourney. Her letter points to two specific images contained in the Work. While the Office accepts the statement that the changes were made directly by Ms. Kashtanova, it cannot definitively conclude that the editing alterations are sufficiently creative to be entitled to copyright.

First, Ms. Kashtanova explains that she "modif[ied] the rendering of Zarya's lips and mouth" in an image on page 2 of the Work. Kashtanova Letter at 12.

[17] *See* 17 U.S.C. § 101 (definition of "work made for hire").
[18] Copyright protection cannot serve "a reward for the hard work that went into" creating an otherwise unprotectable work, because otherwise "sweat of the brow" would permit copyright to extend further than the author's original contributions. *Feist*, 499 U.S. at 352–53.

Detail before Photoshop *Detail after Photoshop*

The changes to Zarya's mouth, particularly her upper lip, are too minor and imperceptible to supply the necessary creativity for copyright protection. The Office will register works that contain otherwise unprotectable material that has been edited, modified, or otherwise revised by a human author, but only if the new work contains a "sufficient amount of original authorship" to itself qualify for copyright protection. COMPENDIUM (THIRD) § 313.6(D). Ms. Kashtanova's changes to this image fall short of this standard. *Contra Eden Toys, Inc. v. Florelee Undergarment Co*., 697 F.2d 27, 34–35 (2d Cir. 1982) (revised drawing of Paddington Bear qualified as a derivative work based on the changed proportions of the character's hat, the elimination of individualized fingers and toes, and the overall smoothing of lines that gave the drawing a "different, cleaner 'look'").

Second, Ms. Kashtanova points to an image on page 12 of the Work depicting an old woman with her eyes closed. She describes this work as created "using both the Midjourney service and Photoshop together," with edits in Photoshop made to "show[] aging of the face, smoothing of gradients[,] and modifications of lines and shapes." Kashtanova Letter at 11. The image as it appears in the Work is displayed below:

Based on Ms. Kashtanova's description, the Office cannot determine what expression in the image was contributed through her use of Photoshop as opposed to generated by Midjourney. She suggests that Photoshop was used to modify an intermediate image by Midjourney to "show[] aging of the face," but it is unclear whether she manually edited the youthful face in a previous intermediate image, created a composite image using a previously generated image of an older woman, or did something else. To the extent that Ms. Kashtanova made substantive edits to an intermediate image generated by Midjourney, those edits could provide human authorship and would not be excluded from the new registration certificate.

IV. CONCLUSION

For the reasons explained above, the Office concludes that the registration certificate for *Zarya of the Dawn*, number VAu001480196 was issued based on inaccurate and incomplete information. Had the Office known the information now provided by Ms. Kashtanova, it would have narrowed the claim to exclude material generated by artificial intelligence technology. In light of the new information, the Office will cancel the previous registration pursuant to 37 C.F.R, § 201.7(c)(4) and replace it with a new registration covering the original authorship that Ms. Kashtanova contributed to this work, namely, the "text" and the "selection, coordination, and arrangement of text created by the author and artwork generated by artificial intelligence." Because these contributions predominantly contain textual material, they will be reregistered as an unpublished literary work.[19] The new registration will explicitly exclude "artwork generated by artificial intelligence."

The public record will reflect this decision. First, the record for the cancelled registration will indicate that the cancellation was due to a failure to exclude non-human authorship contained in the work. Second, the record will reflect that a new, more limited registration for this work has been issued in Class TXu and will include a cross-reference to that new registration. Third, the new registration will include a cross-reference to the cancelled registration in the "Prior Registration Cancelled" field. Finally, the Office will add the following annotation to the new certificate: "Reason for Reregistration: VAU001480196 cancelled pursuant to 37 CFR 201.7(c)(4) for failure to exclude non-human authorship." The new registration will have the same effective date as the cancelled registration: September 15, 2022.

The Office will cancel the original certificate of registration and issue a new certificate reflecting these changes and mail it to Ms. Kashtanova under separate cover.

Sincerely,

Robert J. Kasunic
Associate Register of Copyrights and
Director of the Office of Registration Policy & Practice

[19] To be clear, this reclassification is made solely for purposes of registration. It "has no significance with respect to the subject matter of copyright or the exclusive rights" in this work. 17 U.S.C. 408(c)(1).

Enclosures:
U.S. Copyright Office Letter (Oct. 28, 2022)
Kris Kashtanova Letter (Nov. 21, 2022)

United States Copyright Office
Library of Congress · 101 Independence Avenue SE · Washington DC 20559-6000 · www.copyright.gov

October 28, 2022

Kristina Kashtanova
347 West 57th Street, Apt 4B
New York, NY 10019

Correspondence ID: 1-5GB561K

RE: Zarya Of The Dawn

Dear Ms. Kashtanova:

We are writing you regarding the copyright registration that you obtained for the work titled *Zarya Of The Dawn* (the "Work") on September 15, 2022 (Registration # VAu001480196). The application you submitted for the Work identified yourself as the sole author and did not disclaim any portions of the Work. The only information available to the Registration Specialist during examination was what you provided in the application and the deposit copy of the Work. Based on this information, the U.S. Copyright Office (the "Office") registered the Work and issued a certification of registration that reflected you as the sole author.

Soon after the Work was registered, the Office was contacted by a reporter in response to public statements you made regarding the creation of the Work. You stated that an artificial intelligence tool was used to create some or all of the content in the Work. This information was not provided to the Office in your application. Based on these comments, we have preliminarily concluded that the information in your application was incorrect or, at a minimum, substantively incomplete. Pursuant to 37 C.F.R. § 201.7(c)(4), by this letter, we are initiating cancellation of U.S. Copyright Office Registration VAu001480196 because by your own admission, you are not the sole author of the entire work and, at a minimum, the claim should have been limited to exclude non-human authorship. You have thirty days to respond in writing to show cause why this registration should not be cancelled.

Copyright's Human Authorship Requirement

The U.S. Copyright Office will register an original work of authorship only if the work was created by a human being. *U.S. Copyright Office, Compendium of U.S. Copyright Office Practices* § 306 (3d ed. 2021). The copyright law only protects "the fruits of intellectual labor" that "are founded in the creative powers of the mind." *Trade-Mark Cases*, 100 U.S. 82, 94 (1879). Because copyright law is limited to "original intellectual conceptions of the author," the Office will refuse to register a claim if it determines that a human being did not create the work. *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53, 58 (1884). *See also* 17 U.S.C. § 102(a); *Compendium (Third)* § 306.

Consistent with the law, the Office will not knowingly register works produced by a machine or mere mechanical process that operates randomly or automatically without sufficient creative input or intervention from a human author. *See* 17 U.S.C. § 102(b) (The Copyright Act prohibits copyright protection for "any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work."); *Compendium (Third)* § 313.2. The Office recently discussed its requirement of human authorship in a written decision affirming the denial of an application for a 2D visual work claimed to be solely created by an artificial intelligence machine. *See* Copyright Review Board Letter to Ryan Abbott, dated February 14, 2022 (available at https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf).

The Application for Registration of the Work

Upon submission of your application, you signed a certification confirming that all of the statements in the application are true to the best of your knowledge.[1] In the space for "author," you identified yourself. Because the "limitation of claim" and "Note to C.O." spaces on the application were left blank and there was no cover letter explaining how the work was created, the Registration Specialist examining the application had no reason to conclude that you were not the sole author of the entire work as stated on your application). Nothing in the deposit copy of the Work contradicted this conclusion. The material deposited for registration consists of eighteen (18) individual files containing .jpg images. Each of the images contain text and graphical material. While the word "Midjourney" appears on the cover page of the work, there is no indication of the intent or meaning of the word on the cover. Based on the information submitted, the Registration Specialist appropriately approved the registration without correspondence or annotation per Copyright Office practices. The effective date of this registration is September 15, 2022.

After the registration was approved, the Office became aware of public statements and online articles in which you discuss the creation of *Zarya Of The Dawn*.[2] After reviewing these statements, the Office now understands that "Midjourney" is an artificial intelligence tool you used to create some or all of the material contained in the work. In those public statements, you claim that your reliance on this artificial intelligence tool was clearly disclosed in your application. However, the word "Midjourney" appears only once within eighteen (18) individual files of material submitted to the Office for registration. This cryptic inclusion of the name of the tool was by no means an obvious or clear indication that you may not have created some or all of the material included in this work—contrary to the information you provided in your application. Had you included such a clear statement in an appropriate space on the application, the Registration Specialist would have corresponded with you to determine if this work was created by a human author, and if so, to clarify the appropriate scope of your claim. The fact that the

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[1] 37 C.F.R. § 202.3(c)(3)(iii). Knowingly making a false representation of a material fact in an application for copyright registration, or in any written statement filed in connection with the application, is a crime that is punishable under 17 U.S.C. § 506(e).

[2] *See* Kris.Kashtanova, Instagram, (September 22, 2022), Kris Kashtanova on Instagram: "I got Copyright from the Copyright Office of the USA on my Ai-generated graphic novel. I was open how it was made and put Midjourney on…"; *Artist Claims First U.S. Copyright for Graphic Novel Featuring AI Art,* Gizmodo, Kyle Barr (September 26, 2021, 1:15 PM) https://gizmodo.com/ai-art-shutterstock-getty-fur-infinity-1849574917; *SO IT IS POSSIBLE—Artist receives first known US copyright registration for latent diffusion AI art,* Ars Technica, Benj Edwards (September 22, 2022, 5:38 PM) https://arstechnica.com/information-technology/2022/09/artist-receives-first-known-us-copyright-registration-for-generative-ai-art/.

word "Midjourney" appears on the cover page of a Work does not constitute notice to the Office that an AI tool created some or all of the Work.

Cancellation

The Copyright Office may cancel a completed registration where it is clear that no registration should have been made because the work does not constitute copyrightable subject matter or fails to satisfy the other legal and formal requirements for obtaining a registration. 37 C.F.R. § 201.7(b)(1). The Copyright Office will cancel a completed registration where it is clear that no registration should have been made because "information essential to registration has been omitted entirely from the application or is questionable." 37 C.F.R. § 201.7(c)(4).

In such instances, the Copyright Office will notify the copyright claimant named on the original registration in writing of the proposed cancellation, and the claimant will be given thirty (30) days from the date of this communication, to show cause in writing why the registration should not be cancelled. *Id*. If the claimant fails to respond within the thirty (30) day period, or if after considering the claimant's response, the Copyright Office determines that the registration was made in error and not in accordance with the law, the registration will be cancelled. *Id*.

Conclusion

After carefully reviewing your numerous public statements describing the facts surrounding the creation of the Work registered under VAu001480196, the Office finds that the Work should not have been registered because it cannot be determined that it contains enough original human authorship to sustain a claim to copyright.

Should you choose to respond as provided in 37 C.F.R. § 201.7(c)(4), your response must be received no later than thirty (30) days from the date of this message. If you choose to respond, you should explain in detail exactly how the Work was created, including your reliance on pre-existing photographs, artificial intelligence tools, or any other material incorporated into the work, which you did not author.

Please email your response as an attachment to *registrationprogramoffice@copyright.gov*.

Sincerely,

Robert J. Kasunic
Associate Register of Copyrights and
Director of Registration Policy and Practice
U.S. Copyright Office, Library of Congress

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21 November 2022

Robert J. Kasunic
Associate Register of Copyrights and
Director of Registration Policy and Practice
U.S. Copyright Office, Library of Congress

Sent via email to registrationprogramoffice@copyright.gov

RE: Response under 37 C.F.R. § 201.7(c)(4) to the correspondence of Oct 28, 2022
RE: Registration of Zarya of the Dawn, Reg. No. VAu001480196
(Correspondence ID: 1-5GB561K)

Dear Mr. Kasunic:

We are writing in response to your correspondence of October 28, 2022 as counsel to Kristina Kashtanova. Kashtanova was recently granted copyright registration no. VAu001480196 for her work “Zarya of the Dawn” (the “Work”).

Subsequent to Kashtanova’s successful registration of the Work, the Office initiated cancellation of her registration on the basis that “the information in [her] application was incorrect or, at a minimum, substantively incomplete” due to Kashtanova’s use of an artificial intelligence generative tool (“the Midjourney service”) as part of her creative process. The concern of the Office appears to be that the Work does not have human authorship, or alternatively that Kashtanova’s claim of authorship was not limited to exclude elements with potential non-human authorship.

We are writing to affirm Kashtanova’s authorship of the entirety of the Work, despite her use of Midjourney’s image generation service as part of her creative process.

In this letter, we will describe the creative process that Kashtanova used to author every element of the Work. Accordingly, Kashtanova had no reason to recite any limitations of the claim or to provide notes to the Office, for the same reason that photographers do not

typically recite that they "used a camera" to create an image and authors do not disclaim portions of an image that they used Adobe Photoshop to create or modify.

We note that Kashtanova previously replied to your letter, providing some details of her creative work. That reply, however, was made without benefit of counsel and did not address all the issues raised. This letter supersedes any previous replies and constitutes Kashtanova's full response.[1]

Copyright Status of the Text

Before describing the creative process resulting in the images in the Work, we note that the text of the Work was written entirely by Kashtanova without the help of any other source or tool, including any generative AI program. As such, we assume that there is no dispute about the human authorship or copyrightability of the textual elements of the Work.

Legal Basis for Registration

The Copyright Office has recognized and registered works generated with the help of machines since *Burrow-Giles Lithographic Co. v. Sarony*.[2] In *Burrow-Giles*, the Supreme Court says that authorship "involves originating, making, producing, as the inventive or master mind, the thing which is to be protected," and "the author is the [person] who really represents, creates, or gives effect to the idea, fancy, or imagination."[3]

As stated in the *Compendium of U.S. Copyright Office Practices* (3d ed. 2021), the Office will not register works produced by a machine or mere mechanical intervention from a human author. The crucial question is "**whether the 'work' is basically one of human authorship, with the computer [or other device] merely being an assisting instrument,** or whether the traditional elements of authorship in the work (literary, artistic, or musical expression or elements of selection, arrangement, etc.) were actually conceived and executed not by man but by a machine."[4]

As described below, Kashtanova engaged in a creative, iterative process which she describes as "working with the computer to get closer and closer to what I wanted to express." This process included multiple rounds of composition, selection, arrangement, cropping, and editing for each image in the Work. Her efforts make her the author of the Work, including authorship of each image in the Work. The computer programs she used,

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[1] We are also aware that one or more third parties also reached out to comment on your letter. No other parties represent Kashtanova and no other communications should be considered part of her response.
[2] 111 U.S. 53, 4 S. Ct. 298 (1884).
[3] *Id.* at 61, 283, internal citations and quotation marks omitted.
[4] *Compendium of U.S. Copyright Office Practices* (3d ed. 2021) at § 313.2, quoting U.S. Copyright Office, Report to the Librarian of Congress by the Register of Copyrights 5 (1966), emphasis added.

including the Midjourney image creation service, were but “an assisting instrument” to Kashtanova.

The Press Accounts Oversimplify Kashtanova’s Creative Process

Per your correspondence of October 28, we understand that the Office reviewed various press accounts describing the creation of the Work. Those accounts oversimplified Kashtanova’s process and improperly characterized the role of the Midjourney service for dramatic effect. Even without detailing all the steps taken by Kashtanova, the fact that the Work took over a year from conception to creation makes it clear that it was not an unguided, “push-button” process. Developing each individual image took hours; finalizing each individual page took a day or more.

The Work Embodies the Original Conception of Kashtanova

The initial inspiration for the Work came in September 2021. As described by Kashtanova:

> I was taking self-portraits and creating different worlds using Cinema4D and Photoshop. I lost my best friend in August and my grandmother (Raya) in February. At that time, I didn't know I would experience more loss, but it felt that the year was painfully difficult. Photography wasn't bringing any income, and I tried to learn 3D and get a job in that area (unsuccessfully). Those worlds were my escape, and it was less about visuals and more about writing.

The loss of Kashtanova’s grandmother had a powerful influence on her, so she set out to create a story exploring her grief through the perspective of a girl who is transported to a new world and has to discover where she is from the clues around her:

> There was a postcard in my pocket with a beautiful view that said: “Zarya, lead me on a journey. Rusty”
>
> I assumed Zarya was me. I didn’t remember who Rusty was. Later that day I found Raya, my interworld ship, and I also discovered that I could travel through the worlds and I could adjust to any of them without any additional equipment. My only strength is adaptability. I get tired a lot and often need a nap. I can’t fly or jump. Some days I find it hard to leave my ship and explore. So I’m pretty ordinary, I don’t have superpowers.
>
> Every world I have visited so far was uninhabited. Today’s world looked familiar even though I haven’t been here before. It was Zaraya. A world of everlasting dawn. It wasn’t until I stood on the rock looking at its sun that froze above the horizon when I realized it was the same view as I had on my postcard. Rusty saw this view, whoever this Rusty was! I felt deeply connected to this entity I knew nothing about, and a longing to find

> someone in those worlds. I stood there for a long time and imagined how one day I'll tell Rusty about my adventures.

The Work at issue in this registration is an adaptation of Kashtanova's original story about Zarya. It is designed to communicate–through words *and* pictures–the experience of a girl who wakes up in an abandoned world with no memory and only a postcard in her pocket, traveling around different worlds to find clues about what happened to the Earth.

The Work, Including the Images, is Registrable as a Compilation Under the Copyright Act

There are no tools, of any sort, that can take the original conception of Kashtanova and, un-guided by humans, create the type of immersive and integrated story that exists in the Work. Each picture communicates an essential element of the story, supporting and expanding upon the text written by Kashtanova.

Our position is that every element of the Work reflects Kashtanova's authorship. But if we were to assume for the sake of argument that some individual images didn't meet the legal standard, the Work would still be copyrightable as a compilation under § 101 of the Copyright Act.[5] The Copyright Act defines a compilation as "a work formed by the collection and assembling of preexisting materials *or of data* that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship."[6] This definition does not require that the materials used to create a compilation be themselves copyrightable. Even under the most limited interpretation, the Midjourney-associated images used in the Work are "data." Kashtanova's selection, coordination, and arrangement of those images to reflect the story of Zarya should, at a minimum, support the copyrightability of the Work as a whole.

The Structure and Content of Each Image was Guided by Kashtanova

In addition to the copyrightability of the Work as a whole, each individual picture is itself the result of a creative process that yields a copyrightable work. Kashtanova could extract any single image from the Work and submit it to the Office and correctly assert her authorship of that image.

Unlike the "autonomously generated" picture known as "A Recent Entrance to Paradise,"[7] all the images in the Work were *designed* by Kashtanova. The visual structure of each image, the selection of the poses and points of view, and the juxtaposition of the various visual elements within each picture were consciously chosen. These creative selections are similar to a photographer's selection of a subject, a time of day, and the angle and framing of an image. In this aspect, Kashtanova's process in using the Midjourney tool to create the images in the Work was essentially similar to the artistic process of

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[5] 17 U.S.C. § 101 *et. seq.*
[6] *Id*. at 101, emphasis added.
[7] https://www.copyright.gov/rulings-filings/review-board/docs/a-recent-entrance-to-paradise.pdf

photographers - and, as detailed below, was more intensive and creative than the effort that goes into many photographs. Even a photographer's most basic selection process has been found sufficient to make an image copyrightable.[8] The same reasoning and result should apply to the images in Kashtanova's Work.

The Creative Process Resulting in Each Image

Each image in the Work went through a similar creative process. We will describe the process with regard to a few particular images as examples, but each and every image in the Work was created in a similar fashion.

Image: Zarya Holding a Postcard

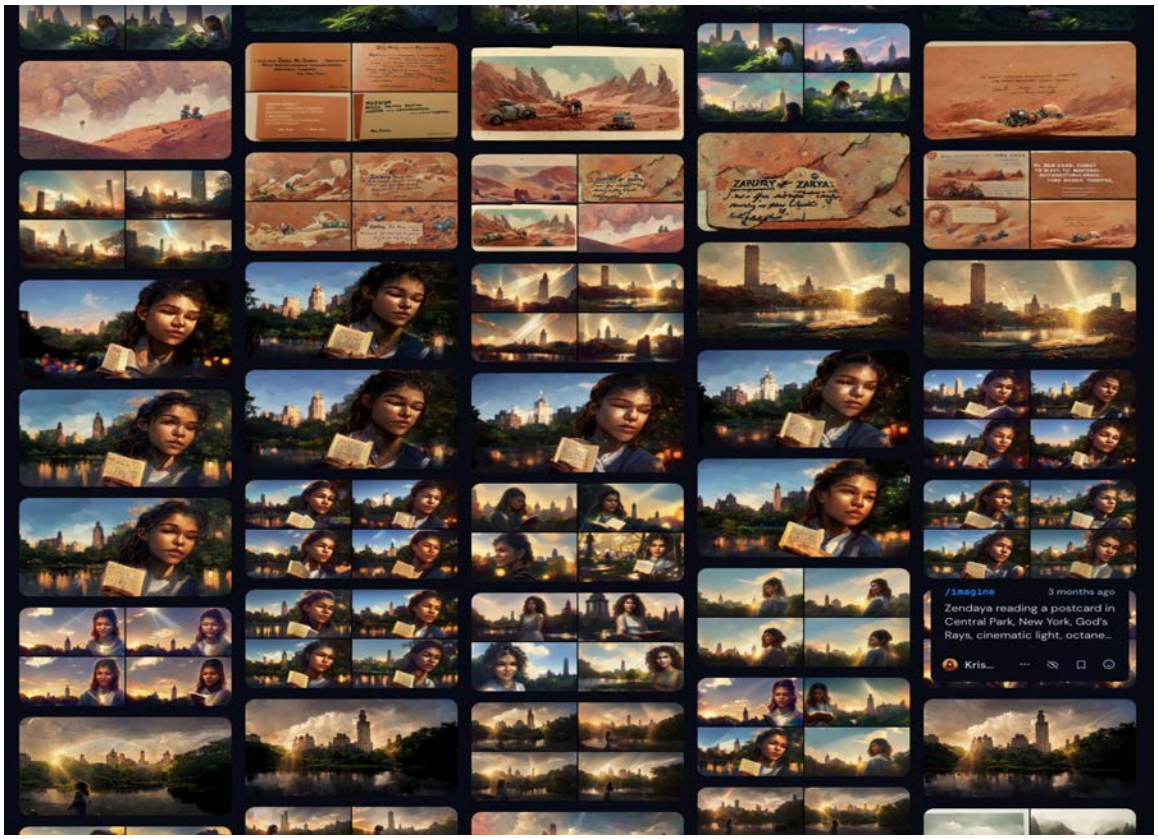
This image, "Zarya Holding a Postcard," is one of the most important images in the Work. It is contained within the first pages of the story and is used to establish Zarya's character and the setting for the story. This was the final image resulting from Kashtanova's creative process before it was cropped and placed in context in the Work.

The first version of "Zarya Holding a Postcard"–shown to the right–was much less refined. So how did Kashtanova develop this initial image into the final version shown above? She went through an extensive iterative process involving hundreds of versions as shown below.

Screenshot #1 of intermediate versions of "Zarya Holding a Postcard":

[8] *see Bleistein v. Donaldson Lithographing Co.*, 188 U.S. 239, 23 S. Ct. 298 (1903).

Screenshot #2 of intermediate versions of “Zarya Holding a Postcard”:



Screenshot #3 of intermediate versions of “Zarya Holding a Postcard”:

Looking at the intermediate versions of “Zarya Holding a Postcard” gives some insight into the thought process involved in creating the final image. Different elements of the final image are created, developed, refined, and relocated. The final image includes multiple elements from different generations of intermediate images all brought together into a cohesive whole. The evolution of the image under the direction of Kashtanova, and her selection, arrangement, compositing, and visual juxtaposition of various image elements all show how her authorial intent guided her use of the Midjourney tool.

Prompt Engineering and Copyrightable Expression

Further insight into Kashtanova’s authorship can be seen through an analysis of Kashtanova’s “prompts.” Midjourney’s image creation service can take various types of inputs:

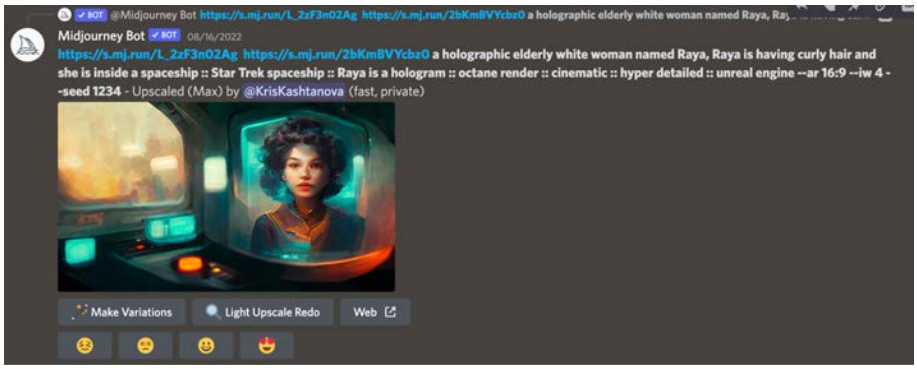
- A “prompt,” a English description of a scene or objects in a scene
- One or more pre-existing images including aspects of the layout, textures, or “feel” desired by the artist
- “Masks” that isolate portions of an input image to allow or disallow generation in defined portions of the input image
- Options that constrain various aspects of the generative process (such as size and aspect ratio)
- Options that modify the generative process, making the final images more refined, or closer/farther from a chosen input

These inputs are the tools by which an author, such as Kashtanova, guides the Midjourney service’s generation of images consistent with the author’s creative vision.[9] For example, the text prompt corresponding to the very first version of “Zarya Holding a Postcard” can be seen in the included image. It reads: “dark skin hands holding an old photograph –ar 16:9”.

[9] This letter does not address the use of the “mask” input type because it was not used by Kashtanova in creation of her Work.

This input, while simple, contains the core creative input that went into *this initial version* of the "Zarya Holding a Postcard" image. Kashtanova specified a subject ("hands"), an object ("a … photograph"), and descriptive context ("dark skin," "holding," and "old.") This input also contains a direction to the Midjourney service to constrain the output image to a 16:9 aspect ratio. Responsive to her inputs, the service generated four output images based upon Kashtanova's inputs. Kashtanova then picked one or more of these output images to further develop. Subsequent iterations tweaked or changed the prompt as well as the other inputs provided to Midjourney.

For another example, this screenshot shows some of the inputs for an intermediate version of the image "Raya as a Hologram."



The inputs for this intermediate image included two images previously developed by Kashtanova, each identified by a URL:

The prompt includes a description of a scene ("a holographic elderly white woman named Raya, raya is having curly hair and she is inside a spaceship") as well as some mood and style-related directions ("Star Trek spaceship," "Raya is a hologram," "octane render," "cinematic," "hyper detailed," "unreal engine"). The inputs also include constraints on the output ("--ar 16:9" and "--iw 4") as well as a technical option modifying the generative path taken by the service ("-seed 1234"). After Kashtanova provided the Midjourney service with her prompt and inputs, including the multiple previously-authored intermediate images of different subjects, the tool rendered another iteration of the "Raya as a Hologram" image.

The Supreme Court has said that only "a modicum of creativity" is necessary to make a work copyrightable.[10] As shown in the screenshot evidence above, each one of the

[10] *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 342, 111 S. Ct. 1282, 1286 (1991).

images, including each intermediate image above, is the result of Kashtanova's creative input by means of the prompts and inputs provided to the Midjourney service. Kashtanova visibly guided the creation of each image in accord with her artistic vision.

When further considering the Work at issue here, the creative input associated with each image in the final Work is multiplied. *Each* of the hundreds of intermediate images used to produce a final image required the composition of inputs and prompts, followed by one or more selections to use in the next iteration. The Copyright Act does not dictate that an author's creative input be provided in a particular form or that an artist use a particular tool.[11] So long as the creative output is fixed into a tangible medium of expression, any tool that allows the author's creative expression to "be perceived, reproduced, or otherwise communicated" is eligible for copyright. This includes works created by using the Midjourney service.

The Creative Inputs to the Midjourney Service Show Human Authorship

As described above, each iteration of each image is the result of a unique set of inputs composed by Kashtanova. These inputs include hundreds or thousands of descriptive prompts. For example, one prompt written by Kashtanova reads as follows:

sci-fi scene future empty New York,
Zendaya leaving gates of Central Park
and walking towards an empty city,
no people, tall trees,
New York Skyline forest punk,
crepuscular rays, epic scene,
hyper realistic, photo realistic,
overgrowth,
cinematic atmosphere, ethereal lighting.

Kashtanova paired this poetic scene description with an intermediate image, previously created by Kashtanova, that captured some aspects of her vision for the final work (shown to the right).

This example image is not unusual or unique in having Kashtanova's

[11] "Copyright protection subsists ... in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device." 17 U.S.C. 102(a) (1994).

authorial input. The Midjourney service does not generate images randomly. It takes creative, human-authored prompts and inputs and renders them in another form. Each and every image included in the Work was rendered in similar fashion in response to inputs provided by Kashtanova. All the images used in the Work are simply alternative representations of the creative input provided to the Midjourney service by the author.

We believe that had Kashtanova applied to register this set of inputs alone, the Office would have recognized the creative input and human authorship inherent in the composed text and selected image. Likewise with almost all of Kashtanova's prompts. Although many of the prompts are short, some are much longer, up to hundreds of words in length. However, length and complexity are not requirements for copyrightability. Many poems are short–and just like a poem, each Midjourney prompt was crafted by Kashtanova to succinctly paint a word picture of a particular scene. If Kashtanova's scene description and input image selection are themselves creative and copyrightable, then the alternative rendering of those inputs generated by the Midjourney service should be equally copyrightable.

Further, each final image in the Work was not the result of a single creative input. Kashtanova painstakingly shaped each set of inputs and prompts over hundreds of iterations to create as perfect a rendition of her vision as possible.

The Cropping, Juxtaposition, and Framing of the Images Shows Human Authorship

After writing all the text for the story and generating hundreds of potential images, Kashtanova's work on each image was not done. She selected which images to use and sequenced and arranged them into a unique and personal Work, like a collage. Further, every image in the final Work was cropped, framed, and placed to better convey the story and feel Kashtanova had in mind.

Even in the final arrangement and cropping of the images, Kashtanova's authorship shines through. Using again the example of the image "Zarya Holding a Postcard," Kashtanova made the decision to closely crop the image, obscuring part of Zarya's face and almost entirely removing the city background she had painstakingly developed. Her crop changed the horizontally-oriented source image into a vertically-oriented image, which she placed at the lower right hand corner of the page. She did this to create a sense of expectation, movement, and intrigue.

This imposition of meaning and expectation on the image demonstrates Kashtanova's "creative spark,"[12]

[12] *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345, 111 S. Ct. 1282, 1287 (1991).

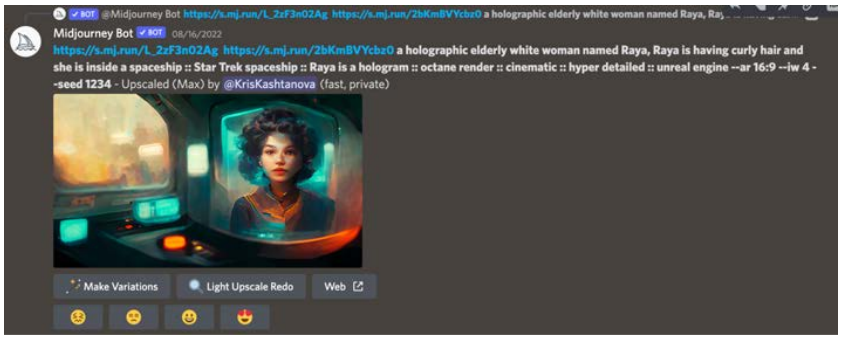
the minimal amount of originality needed to make this image her own. Kashtanova used tools to perform this cropping, juxtaposition, and arrangement–in this case a tool called "Comic Life 3"–but no tool could independently imbue it with emotional meaning as Kashtanova did.

Use of Computer Tools is Already Allowed by the Copyright Office

The use of computer-based tools is already allowed by the Office. The refinement process illustrated above is similar to the processes used in other images registered by the Office every day. Artists use programs such as Adobe Photoshop as part of an iterative process to refine images to match their expressive intent. These final works are recognized by courts and by the Office as having human authorship in spite of the use of Photoshop as a tool for generating and refining the image.[13] Kashtanova's use of the Midjourney service is no different.

In fact, at times the Midjourney service was not enough and Kashtanova used Photoshop to perform the type of creative refinement typical of the process for similar works.

For example, page 12 of the Work includes an image based on Kashtanova's grandmother. This image was developed using both the Midjourney service and Photoshop together.



As with other images from the Work, Kashtanova used the Midjourney service to iteratively create and refine the image. She then used Photoshop to alter the image into its final form (as shown to the right). This final form shows aging of the face, smoothing of gradients and modification of lines and shapes, and cropping for effect. Once Kashtanova had all of the images necessary for a page, she used the previously-mentioned "Comic Life 3" to crop and place the images into her desired arrangement.

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[13] In contrast, some courts have found that *using* a tool like Photoshop to make any adjustment to an input is sufficient to meet the legal standards for copyrightability. *See, e.g., Etrailer Corp. v. Onyx Enters., Int'l Corp.,* No. 4:17-CV-01284-AGF, 2018 U.S. Dist. LEXIS 19916 (E.D. Mo. Feb. 7, 2018), *Payton v. Defend, Inc.,* No. 15-00238 SOM/KSC, 2017 U.S. Dist. LEXIS 208358 (D. Haw. Dec. 19, 2017).

Similarly, Kashtanova used Photoshop to refine the image “Zarya Holding a Postcard” discussed earlier, by modifying the rendering of Zarya’s lips and mouth:

Detail before Photoshop *Detail after Photoshop*


Kashtanova used the Midjourney service, Photoshop, and Comic Life 3 to create this image and place it in the Work–but she could have created the exact same image using similar tools already included in Photoshop. There is a plugin called “Stability” that embeds AI-powered image generation functionality directly into Photoshop.[14] Similar AI-powered content generation tools (such as Adobe’s “Context-Aware Fill”[15]) have been available in Photoshop for years. The cropping and placement functions could have been performed entirely in Photoshop, but Kashtanova–like many other artists today–was experimenting with the new generative tools to explore their capabilities. Kashtanova’s choice to use one tool over another should have no bearing on the copyrightability of her creative output. If this image would have been copyrightable had she used only Photoshop, it should be equally copyrightable using tools such as the Midjourney service and Comic Life 3.

Kashtanova’s Registration Should Be Affirmed

The question raised in the correspondence of October 28th was whether the Work provided to the Office for registration was the result of human authorship or was the result of a purely mechanical or autonomous computer process.

Our response is that the Work, “Zarya of the Dawn,” is wholly the result of Kashtanova’s authorship and input. Each and every part of the Work was guided by her creative input and reflects her authorship. In the language of *Burrow-Giles,* Kashtanova was the

[14] https://exchange.adobe.com/apps/cc/114117da/stable-diffusion
[15] https://helpx.adobe.com/photoshop/how-to/fills-masks-sensei.html

mastermind, "the one who really represents, creates, or gives effect to the idea, fancy, or imagination."[16]

While Kashtanova used the Midjourney service to assist her in creating some of the images in the Work, the use of that tool does not diminish the the human mind that conceived, created, selected, refined, cropped, positioned, framed, and arranged all the different elements of the Work into a story that reflects Kashtanova's personal experience and artistic vision. As such, the Work is the result of human authorship and Kashtanova's registration should be affirmed.

As shown by the recent attempt to register the purely AI-generated work "A Recent Entrance to Paradise," it is possible for AI-powered systems to autonomously create aesthetically pleasing pictures. This response cannot comment on how the work "A Recent Entrance to Paradise" was autonomously generated. But having a computer program spontaneously generate an aesthetically pleasing picture is similar to finding an aesthetically pleasing piece of driftwood or a beautiful geode. Given the current status of the law regarding human authorship, the decision to refuse registration of "A Recent Entrance to Paradise" was correct. That said, the law and policy of the Office should not focus on the specific tools authors use, but how those tools can be used to create works that meet the legal standards for copyrightability.

In contrast to the system that created "A Recent Entrance to Paradise," every use of the Midjourney service requires human input, guidance, and selection. Accordingly, the use of the Midjourney service is completely consistent with Copyright Office rules, the text of the Copyright Act, and article 1, clause 8 of the constitution.

Accordingly, we ask that the Office's prior decision to register Kashtanova's Work "Zarya of the Dawn" be affirmed.

Sincerely,

Van Lindberg
Taylor English Duma, LLP

[16] *Burrow-Giles*, 111 U.S. at 61, 4 S. Ct. at 283.

USPTO Webinar: AI/ET Partnership Series #3: AI-driven innovation

The Artificial Intelligence (AI) and Emerging Technologies (ET) Partnership Series held its third meeting virtually and in person at the Arts District Mansion in Dallas, Texas on Wednesday, February 8. This meeting was held in collaboration with Dallas Bar Association (DBA), Intellectual Property (IP) section, and State Bar of Texas IP section.

During the event, panelists from the United States Patent and Trademark Office (USPTO) and diverse stakeholders from academia, industry, and law firms explored various IP policy issues with respect to AI-driven innovation. The session was split into three sections: (1) AI-Driven Innovation – The Current State of Play, (2) AI Inventorship, and (3) Unanticipated IP Challenges from AI-Driven Innovation.

Panel 1: AI-Driven Innovation – The Current State of Play

This panel dove into the current state of AI-driven innovation in different technology areas and potential IP considerations relating to these AI-driven innovations.

Moderator: **Korin Munsterman**, *Director of Legal Education Technology and Professor of Practice, University of North Texas Dallas College of Law*

Dave Copps, *Chief Executive Officer, Worlds*

Romelia Flores, *IBM Distinguished Engineer and Master Inventor, IBM Client Engineering*

Dr. Corey Clark, *Deputy Director, Research & Assistant Professor, Computer Science and Engineering; Human and Machine Intelligence (HuMIn) Game Lab, Southern Methodist University*

Panel 1 Summary:

Dave Copps spoke first and said that he believes AI innovation is going to go "straight up from here." He said in the past, we have had "AI Winters" where interest and use slowed down or deteriorated. Due to the recent advancements and widespread public interest, Copps predicted that there will be no more "AI Winters" and that instead AI development and advancement will continue to grow exponentially. Speaking to his current work at Worlds, he explained that they are building AI-based technology that can capture the world in 2D and re-express it live in a 4D model. Worlds brings all the data from the Internet of Things (IoT) into one platform and one data set which helps us to better understand what is happening. The goal at Worlds is to build a new 4D infrastructure for measuring, analyzing, and building AI-based automation directly into the ground floor operations of supply chain companies. Concluding his introduction, Dave stated that "AI is becoming infrastructure… Infrastructure for the next generation of measuring and improving the world."

Romelia Flores first spoke generally about how AI is currently used across multiple different industries such as: Manufacturing, Energy/Utilities, Healthcare, Transportation/Supply Chain, Retail, Real Estate, Media and Entertainment, Public Safety, Agriculture, and Financial Services. She said that IBM's goal with AI innovation is to solve client challenges. She made a point to say that although it seems we have blown past expectations and are ahead of our predictions in terms of our use of AI technologies, she stressed that we are still in the very early stages on ways to utilize and innovate with AI.

Some of the projects she mentioned that IBM is currently working on in the AI space are listed below.

- DFW Airport uses Digital Human Concierge to Elevate Customer Experience
    - Creation of "Iris" – an interactive digital human concierge – with IBM and partner Soul Machines to provide travelers real time data using IBM Watson assistant.
- USPTO – IP Advisor
    - Provides IP analysis based on 3,646,906 US Patents granted since 2012. Inventors perform IP landscape analysis to assess technologies, competitors, and trends across patent sets, analyze prior art, and find similar patents. Leverages Watson AI Discovery and Conversational technology.
- Texas A&M – IBM Sustainability Accelerator
    - When to water decision support to farmers in arid regions in order to increase crop yield while decreasing economic and environmental costs. The solution provides weather data, analysis of crop types as well as analysis of soil properties that affect water retention.

Dr. Corey Clark stated that the HuMIn Lab at SMU's goal is to integrate humans and machine learning together so they can be mutually beneficial to each other. He said that AI needs human assistance, particularly in the area of cleaning available data so it can be used within an AI system. He joked that we are "nowhere near terminator status." His lab takes complex and "messy" data and incorporates it into a videogame-like experience for users to use in an effort to make the data usable for an AI system. He explained that they are doing this with Macular Degeneration data, cancer research, Covid treatment research, and named entity recognition. The most coherent example he gave was with the named entity recognition data that is helping to fight human trafficking. They created a game that has players label data sets so that AI can better understand information within press releases for human trafficking victims. Dr. Clark stated that it is often hard for an AI system to distinguish or label the difference between a named attorney, victim, or offender without assistance from humans.

<u>Panel 1 Q&A:</u>

What do you believe is the short-, medium-, and long-term outlook for AI innovation?

- **Dave Copps**: The sky is the limit.We are going to have to evolve with the technology because generative AI will be a part of the future.

- **Dr. Corey Clark**: ChatGPT made AI visible to the public and has unlocked the imagination of industry on what AI can do and how transformational it is. The important question is how are we going to link these models together? We are just seeing the tip of the iceberg as to the capabilities of this technology. "This will have a dramatic impact." The rate we are seeing is faster than I expected because end users are able to see and understand how impressive this technology is due to the popularity of models like ChatGPT.

- **Romelia Flores**: The important questions are how do we get effective language processing and machine learning processing? And, How do we apply AI to examining processing that is currently on going? That is the midterm of what we are seeing. For the future, there will be a lot of things we haven't even imagined, and quantum capabilities will open many doors.

- **Dr. Corey Clark**: This will also unlock the creative side of things. "Being able to have an AI assistant with a chat capability to personalize my learning process is incredibly helpful." Creative automation will be powerful.

Granting AI as an inventor?

- **Romelia Flores**: I use AI (as a tool) to help me do things and implement things. When do we involve AI as an inventor? They are already an artist…

- **Dave Copps**: We are in a different time now. AI is not capable of original thought… yet (It cannot prompt itself to do something). The question is how do we grow AI to create unique content (not just one central database that produces similar answers)?

- **Dr. Corey Clark**: It is helping us find optimized solutions (it is a tool, because we are guiding it). Just as we use search engines in the past, we are using AI now. You wouldn't credit Excel as your inventor. As we get closer to the point that AI goes faster than us, the business it will generate will be interesting.
    - Will it handle finance, and find opportunities in the marketplace?
    - Will there be opportunities for AI to create a business? (If it then designs a patent that's when you get into this inventor question.)
    - Could create automated business generation.

- **Romelia Flores**: Businesses are going through a digital transformation today because society demands it. If you are not into AI as a business in the future and have a goal to encourage innovation, you are going to fall behind. If you want to survive you will have to include AI in some capacity.

Panel 2: AI Inventorship

This panel included perspectives from various stakeholders on the current state of AI technology in the invention creation process and how to address inventions created with significant AI contributions.

Moderator: **Nalini Mummalaneni**, Senior Legal Advisor, Office of Patent Legal Administration, USPTO

Rus Holloway, Deputy General Counsel – Intellectual Property, Bell Textron Inc.

Brian Kearns, Director, Patent Unit USA, Ericsson

Denise Canales, Assistant Vice President Technology Commercialization, University of Texas Southwestern Medical Center

Mackenzie Martin, Co-Chair Global Patent Practice, Baker McKenzie

Panel 2 Summary:

The panel opened up with a background/review of *Thaler v. Vidal*. The cases addressed who or what can be an "inventor" under the Patent Act. According to the court, the text is unambiguous. The Patent Act expressly provides that inventors are "individuals." The Supreme Court defines the word "individual" as referring to human beings, unless there is evidence that Congress intended a different reading. The Federal Circuit decided there was no intention to refer to non-human beings, and therefore, individuals must be natural persons – not corporations or sovereigns. However, the court's holding left the door open for future discussions on the issue. It did not address "the question of whether inventions made by humans with the assistance of AI are eligible for patent protection."

The panel then talked about using AI as a tool to understand and review data and leveraging it to drive innovation, but not as an inventor. They noted that the subsequent development for AI will be AGI – Artificial General Intelligence. The panelists agreed that even with general intelligence, an AI system will still be unable to rise to the level of inventorship. Some of the panelists stated that they are currently using AI as a tool for invention but not designating the AI as an inventor on the output or final product.

The panelists noted that the "magic" is when humans and AI interact with each other – one would never use ChatGPT solo. Instead, one would prompt ChatGPT on the front-end and then review it on the back end. They noted that the question to ask is "Would the final product have been created without any human interaction?" There are too many legal questions right now surrounding AI and patent protection, and the panelists acknowledged that these will have to be flushed out at some point in the future. Essentially, the panel agreed that there are a lot of questions but not a lot of answers at this point in time.

The second panel concluded by marveling at the rate of evolution in the AI space and agreed that even those working deeply in the field are impressed by the advancements. They noted that there are still many questions without answers at this point, but the future holds a great deal of potential for AI-driven innovation.

Panel 3: Unanticipated IP Challenges from AI-Driven Innovation

This panel discussed some of these challenges from an enforcement perspective. For example, what downstream impacts to IP enforcement and litigation arise from introducing black-box AI to the inventive process? Do applicants have to disclose AI-contributions in their patent applications to ensure validity of their patents? This panel explored such questions in an attempt to help identify the novel ways in which AI will shape tomorrow's IP ecosystem.

Moderator: **Michael Chu**, Assistant U.S. Attorney, U.S. Department of Justice

Hilda Galvan, Partner-in-Charge, Jones Day

Jay Johnson, Managing Director, Deputy Chief Counsel, Charles Schwab

Professor David Taylor, Co-Director of the Tsai Center for Law, Science and Innovation and Professor of Law, Southern Methodist University

Panel 3 Summary:

Professor David Taylor discussed whether AI-generated inventions are eligible for patent protections. He mentioned that this question is currently being debated in the US courts, with some arguing that AI-generated inventions should not be eligible for patent protection because they are not the product of human ingenuity. Additionally, Professor Taylor highlighted how AI "muddies the water," particularly in respect to the "ordinary skill standard." This standard is used by courts in the US to determine whether a claimed invention would have been obvious to a person having ordinary skill in the relevant field at the time the invention was made and is used to evaluate whether an invention is eligible for a patent. He posed the question of whether a person of ordinary skill should be thought of as someone who uses AI, and if so, warns this will make obtaining a patent more difficult.

Hilda Galvan discussed disclosure of AI-contributions in their patent applications. She used Dr. John Koza's "Invention Machine" as an example, which received a patent from the US Patent Office and only years later did Koza reveal AI had generated it. She asserted that disclosing the use of AI in patent applications is not currently required by law, but it's important for inventors and companies to consider the benefits of doing so, nonetheless. Specifically, she mentioned that disclosing the use of AI in a patent application can provide valuable information to potential licensees, investors, and competitors about the technology being patented and its unique features.

Jay Johnson spoke about the issue of biases in AI systems. He pointed out that biases in AI can come from a variety of sources, including the creators of the AI systems themselves who may inadvertently bring their own biases into the system, and training sets that may have been created using data that reflects past biases and prejudices. Johnson also highlighted the lack of transparency and explain-ability in AI systems, as AI users are not provided with information on where the outputs are coming from, making it difficult to understand why biases in the predictions are being made. He emphasized the importance of addressing these issues to ensure that AI systems are fair and unbiased, and to build trust in their use and deployment.

Hilda Galvan then discussed ways to overcome these biases in AI Systems. Galvan emphasized that both proactive and reactive approaches are important in overcoming biases in AI systems and that a comprehensive approach is necessary to ensure that these systems are fair and unbiased. On the proactive side, she stressed the importance of examining the training data used to develop AI systems. She suggested asking questions of AI inventors throughout the development process to determine where their data sets are coming from. On the reactive side, Galvan recommended testing the algorithm for biases repeatedly overtime.