

Jason Allen's A.I.-generated work, "Théâtre D'opéra Spatial"

"This isn't going to stop, art is dead, dude. It's over. A.I. won. Humans lost."



Jason M. Allen via Midjourney

MUNI LAW

Artificial intelligence and intellectual property law

Matěj Myška



Resources used

- European Commission, Directorate-General for Communications Networks, Content and Technology, Hartmann, C., Allan, J., Hugenholtz, P., et al., *Trends and developments in artificial intelligence : challenges to the intellectual property rights framework : final report*, Publications Office, 2020, <https://data.europa.eu/doi/10.2759/683128> = **Report**
- Guadamuz, Andres, A Scanner Darkly: Copyright Infringement in Artificial Intelligence Inputs and Outputs (February 26, 2023). Available at SSRN: <https://ssrn.com/abstract=4371204> or <http://dx.doi.org/10.2139/ssrn.4371204> = **Guadamuz, 2023**
- Guadamuz, Andres, Do Androids Dream of Electric Copyright? Comparative Analysis of Originality in Artificial Intelligence Generated Works (June 5, 2020). Intellectual Property Quarterly, 2017 (2), Available at SSRN: <https://ssrn.com/abstract=2981304>

Topic mapping

- Protection of AI
 - AI programme
 - Invention
- **Protection of AI creations**
 - “Works“
 - **Databases**
 - **Object of rights related to copyright**
 - ??? Sui generis protection
 - “Inventions“
- IPR infringement by AI
 - Training AI
 - Creations AI

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AI specification

Understanding of AI

(MYŠKA, Matěj a Jan ZIBNER. Umělá inteligence: výzva autorství. Iurium Scriptum. Olomouc: Nugis Finem, 2019, roč. 2019, č. 1, s. 1-18. ISSN 2570-5679.)

- Activity

- Machine intelligence
- Turing

- Oblast zkoumání

- Science field – Functioning of non-human entities and computational capabilities
- Nilsson

- Software

- Machine
- Komuves, Schafer

- *“computer-based systems that are developed to mimic human behaviour”*

- *“discipline of computer science that is aimed at developing machines and systems that can carry out tasks considered to require human intelligence, with limited or no human intervention.”*

- *“systems that focus on solving concrete application problems”*

[Repport]

AI as Technology

- Supervised / Unsupervised learning
- Transformative / Generative AI (variational autoencoders, (VAEs), autoregressive models, generative adversarial networks (GANs), diffusion models)
- *„...common misconception that a generative operation is akin to putting together a collage of pre-existing images“, Guadamuz, 2023, s. 7*
- *„Just as with other generative models, the output is not an exact replica of the training data, it is a statistical approximation of it.“ Ibid., s. 9*
- *„This is vital in understanding the issue of generating outputs, training models do not hold every piece of data in their training, they hold data representations clustered into similar works.“ Ibid., s. 9*

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Protection of AI

Ochrana AI

– Copyright law

- Computer program – original
- But not: programming language, data, graphical user interfaces, methods, algorithms, functionality

– Patent law (EPO – EPC)

- Patentable subject-matter (CP per se excluded! Art. 52(2) EPC)

Computational models and algorithms – excluded – non-technical character

E.g. classification of text documents ([T 1358/09](#))

BUT computer-implemented invention

Technical effect - the use of a neural network in a heart-monitoring apparatus for the purpose of identifying irregular heartbeats makes a technical contribution. The classification of digital images, videos, audio or speech signals based on low-level features (e.g. edges or pixel attributes for images) are other typical technical applications of AI (https://www.epo.org/law-practice/legal-texts/html/guidelines/e/g_ii_3_3.htm)

- Novelty, the result of an inventive step, industrial applicability

Protection of AI creations

https://www.youtube.com/watch?v=jnQ0zEQPu_A

Ochrana výtvorů AI

- Creative process (Report)
 - conception
 - execution, and/or
 - finalisation (or redaction)
- Two basic questions:
 - Is it a work?
 - Who is the author?

International Law

- Art. 2: (1) RBC
 - 'The expression 'literary and artistic works' shall include all creations in the literary, scientific and artistic domain, whatever may be the mode or form of their expression...'
 - Original...
 - Human intellectual endeavor or creativity
 - HOWEVER, it does not exclude a work created by technical means
- DOES NOT DEFINE THE AUTHOR autora ALE fyzická osoba –
čl. 6b – moral right
- PEOPLE NOT MACHINES [Ginsburg]
- Human rights argument: Universal Declaration of Human Rights -
Art. 27 odst. 2
 - Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.

EU Law

- 2006/116/EC - work within the meaning of the RBC
- CJEU > Concept of the work – RBC [*Levola Hengelo*, bod 39]
- CJEU *Infopaq*, *Levola Hengelo*, *Funke Medien*
 - author's own intellectual creation - the holy mantra

Czech Law

- § 2 CCC: (1) *The subject of copyright is a literary and other artistic work and a scientific work that is a **unique result of the author's creative activity** and is expressed in any objectively perceivable form, including electronic form, permanently or temporarily, regardless of its scope, purpose or significance (hereinafter referred to as the "work").*
- § 5 CCC: (1) *The author is the natural person who created the work.*

–

SPOILER ALERT: The International Association for the Protection of Intellectual Property

- AIPPI World Congress London, September 2019, a [Resolution](#)
- AI generated works should only be eligible for protection by copyright **if there is human intervention in the creation of the work**, and provided that the other conditions for protection are met. AI generated works should not be protected by copyright without human intervention.
- In the case of genuine copyright protection for a work generated by AI the protection regime should be identical to other works protected by copyright. This is true in particular for economic rights, moral rights, term of protection, exceptions and limitations, and initial ownership.
- AI generated works may be **eligible for protection through a related right**, even where there is no human intervention. AI generated works should not be precluded from obtaining protection by existing related rights on the basis they are AI generated, and should obtain that protection as long as they meet the required criteria for obtaining protection.
- As AI is still developing, **it is too early for AIPPI to take a position** on the question of whether AI generated works not covered by such existing protection should be eligible for exclusive rights protection as a related right.

Conceptual features of a work of authorship (EU) (four-step test)

1. Domain test (?)

- Creation - literature, science, art
- it is not very clear whether it actually applies (*FAPL* - a football match has been excluded from copyright protection because it is not original)
- **2. Human intellectual effort**
- It is not explicitly stated, but "anthropocentric" regulation
 - CJEU - The author must make creative choices [Painer, 90], reflection of the author's personality [Cofemel, 30]
- *Luksan, Reprobel* - the rights guaranteed by the InfoSoc Directive belong to the author-human entity, not to the legal entity
- AG Trstenjak [Painer, 121] - art. 6 term directive – „*only human creations are therefore protected, which can also include those for which the person employs a technical aid, such as a camera*“.

Conceptual features of a work of authorship (EU) (four-step test)

3. Originality/Kreativität

- the author's own intellectual creation - i.e. not copied
- the author's own intellectual creation - that is, the original
 - it reflects the personality of its author, while being an expression of his decisions made on the basis of his creative freedom [Cofemel, 30 > Painer, Renckhoff]
 - Literary work [Infopaq, 45]: "Only the selection, arrangement and combination of these words enable the author to express his creative spirit in an original way and to achieve a result which constitutes an intellectual creation."
 - it is not an artistic/aesthetic value/quality [Midjourney!]
- The economic cost, even 'skill and labour', do not justify protection [*Football Dataco*, 42; *Funke Medien*, 23]

Conceptual features of a work of authorship (EU) (four-step test)

- Restrictions on creative choice - “free and creative choices“
 - rule-based
 - style is taken out (pastiche?), not procedures, methods, ideas, rules of the game (football), Football Dataco - creation (structures) of the database: technical considerations, rules or constraints that leave no room for creative choices
 - technical/functional
 - [BSA, 49-50] - indissociable idea and expression
 - informational
 - descriptiveness - expression determined by content (military reports *Funke Medien*)

Conceptual features of a work of authorship (EU) (four-step test)

- *Painer* – use of technology and creative process
- 90 *As regards a portrait photograph, the photographer can make free and creative choices in several ways and at various points in its production.*
- 91 *In the preparation phase, the photographer can choose the background, the subject's pose and the lighting. When taking a portrait photograph, he can choose the framing, the angle of view and the atmosphere created. Finally, when selecting the snapshot, the photographer may choose from a variety of developing techniques the one he wishes to adopt or, where appropriate, use computer software.*
- 92 *By making those various choices, the author of a portrait photograph can stamp the work created with his 'personal touch'.*
- 93 *Consequently, as regards a portrait photograph, the freedom available to the author to exercise his creative abilities will not necessarily be minor or even non-existent.*
- 94 *In view of the foregoing, a portrait photograph can, under Article 6 of Directive 93/98, be protected by copyright if, which it is for the national court to determine in each case, such photograph is an intellectual creation of the author reflecting his personality and expressing his free and creative choices in the production of that photograph.*
- manifest itself at different stages of the process > even the concept can be original and therefore protected
- preparatory conceptual materials ABSOLUTELY CRUCIAL CONSIDERATION computer-based code is protectable
- + low level of originality

Conceptual features of a work of authorship (EU) (four-step test)

- Report, p. 74
- *We may conclude from the jurisprudence of the CJEU that for an AI-assisted output to pass the test of originality/creativity it is sufficient that the output be the result of creative choices. These choices may occur at several stages of the creative process: **conception, execution, and/or finalisation (or redaction)**. As we will discuss in some depth later, the Court's case law therefore does not rule out a finding of originality in cases where the (human-authored) design is executed by an AI system without any further human intervention.*

Conceptual features of a work of authorship (EU) (four-step test)

4. Expression

- Creative freedom/activity must be expressed in the work, so ideas cannot be protected only (*Infopaq*, 45; BSA, 50)
- causal relationship creative act => expression
- general authorial intent > refers to the concept of the work
- criterion „sufficient precision and objectivity“ - *Levola Hengelo* - taste of cheese NO

Conceptual features of a work of authorship (EU) (four-step test)

- Report, p. 76
- *As long as the output reflects creative choices by a human being at any stage of the production process, an **AI-assisted output is likely to qualify for copyright protection**. This is true even if the AI system has played a significant or even predominant role in the entire creative process.*

Application on AI creations

- **Step 1 – Production in literary, scientific or artistic domain**
 - "archetypal production"
 - no problem
- **Step 2 – Human intellectual effort**
 - *Painer* - works can be created using tools/machines
 - There is always human intervention

Application on AI creations

- **Step 3 – Originality/creativity (creative choice)**
- The most important criterion
- conception, execution, redaction
 - Conception/preproduction > „creation“ of AI
 - Execution - the creation of creations itself - AI is dominant
 - Redaction - "post-production" - Zarya! (see below)
- „almost ready to use“
- Selection only? (4 Midjourney pictures)
- „ready-made“ objects – Marcel Duchamp
 - Kummer - Presentation theory
 - "personal selection"

Aplikace na výtvořy AI



Application on AI creations

- *"This leaves both the design choices in the conception phase, some calibration in the execution phase, and the editing and post-production choices at the redaction phase for human authors."*
Report, s. 81
- *"Copyright doctrine and case law lend support to our conclusion that the production of an artefact executed by a largely autonomous AI system could qualify as a work protected under EU copyright law on condition that a human being initiated and conceived the work and subsequently redacted the AI-assisted output in a creative manner. That is to say, mere human intervention at the conception and redaction stages could suffice for copyright protection."* Report, s. 82

Application on AI creations

- *„The human input as regards the creation of machine generated programs may be relatively modest, and will be increasingly modest in the future. Nevertheless, a human ‘author’ in the widest sense is always present, and must have the right to claim ‘authorship’ of the program”.*
- Explanatory Memorandum to Directive Draft L 1989 OJ. (C 91) 4, p. 21.

Aplikace na výtvořy AI

Step 4 – Expression

- General authorial intent
- But where to identify creative choice/expression?
 - ChatGPT-3, Midjourney, Stability

USA: A Recent Entrance to Paradise



Simon Thaler

USA: Zarva of the Dawn

Matt Ford / March 3, 2023

FACSIMILES

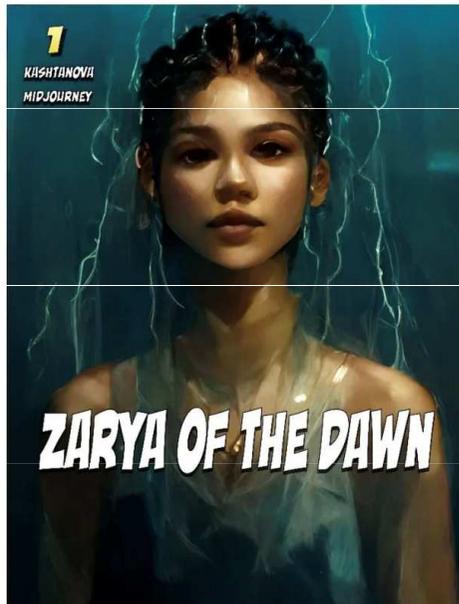
Artificial Intelligence Meets Its Worst Enemy: the U.S. Copyright Office

Washington's legal eagles have held that these technical entities are incapable of creating art. At least one chatbot we spoke with agrees.



ARTIFICIAL INTELLIGENCE / TECH / POLICY

The US Copyright Office says you can't copyright Midjourney AI-generated images



A reproduction of the cover page and the second page of *Zarya of the Dawn*, from the US Copyright Office's letter. Image: *Zarya of the Dawn* – Kris Kashtanova / Midjourney

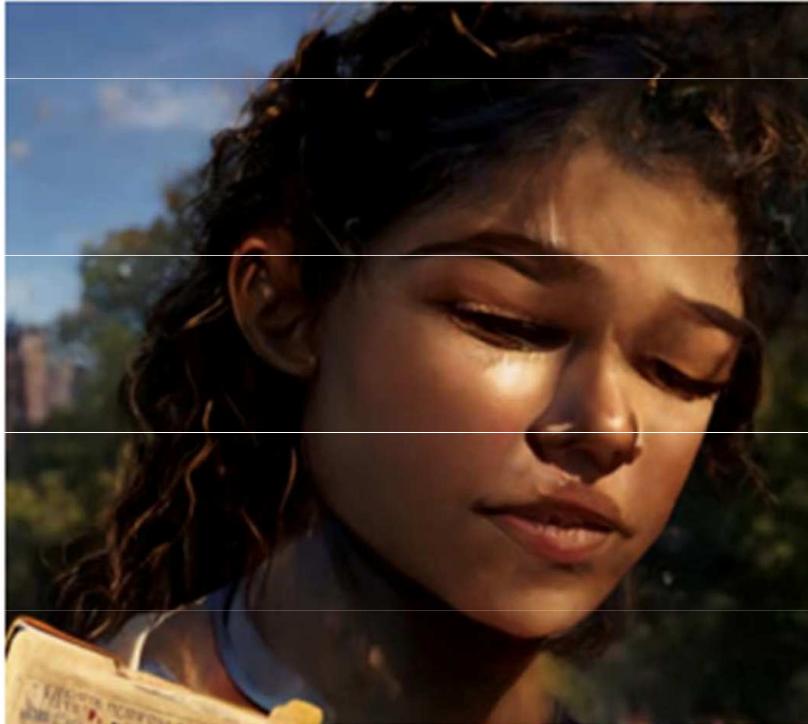
/ A copyright registration granted to the *Zarya of the Dawn* comic book has been partially canceled, because it included “non-human authorship” that hadn't been taken into account.

By **RICHARD LAWLER** / @rjcc

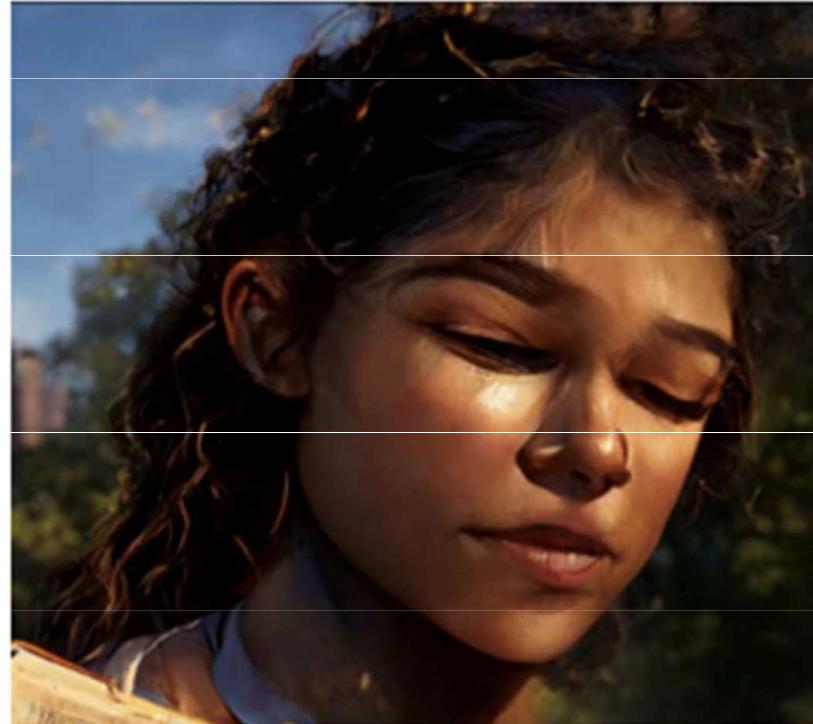
Feb 23, 2023, 3:06 AM GMT+1 | [31 Comments](#) / [31 New](#)



Detail before Photoshop

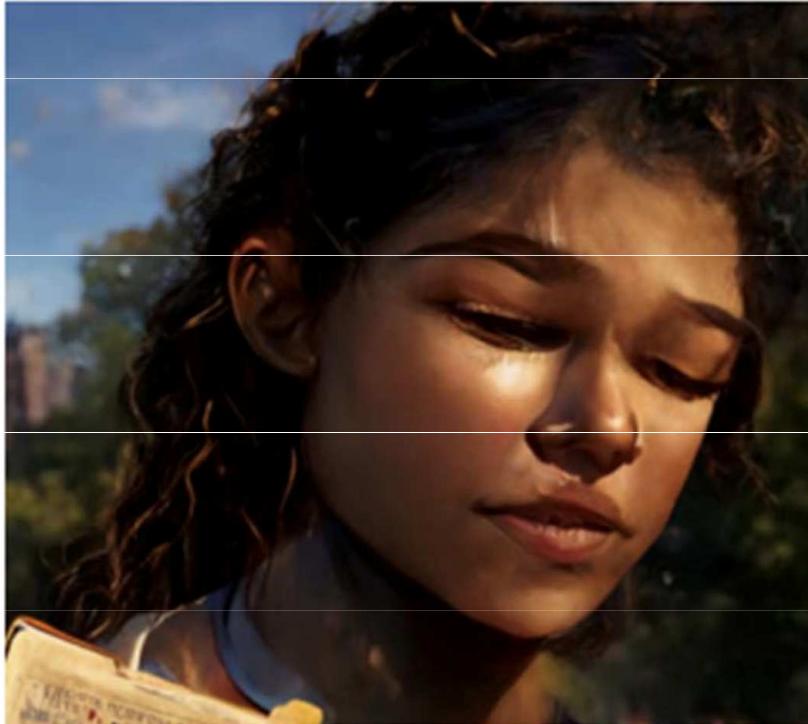


Detail after Photoshop

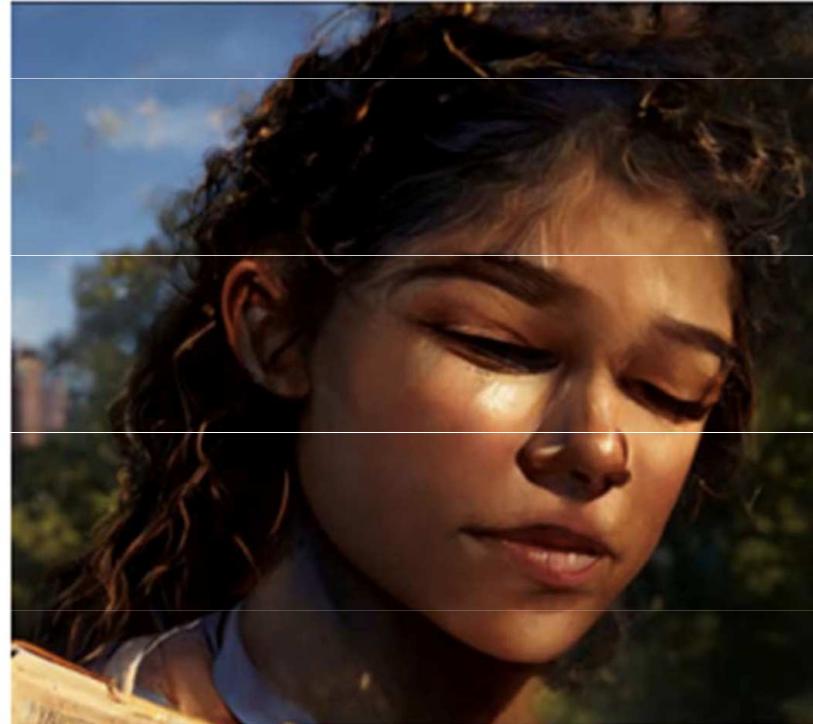


<https://copyright.gov/docs/zarya-of-the-dawn.pdf>

Detail before Photoshop



Detail after Photoshop



<https://copyright.gov/docs/zarya-of-the-dawn.pdf>

Author and authorship

- KDO? The one who realizes creative activity, freedom of choice and whose creativity is expressed by the creation (work)
- Art. 2 para. 1 SoftD
- AI creator, data „producer“, user, AI?
- Prompt > “player of the game”
- Creator of the AI (system)
 - But it must be a work – but he certainly did not anticipate anything of the kind – in the context of what it creates
 - Is that a prompt derivative work?
- Co-authorship?
 - By default, however, there will be no cooperation - it must be in order to be protected
 - The Next Rembrandt
- Allocation of authorship/copyright ownership
 - Commercial AlaaS > economically unsuitable

Current contractual regulation

- ChatGPT (<https://openai.com/policies/terms-of-use>) & Dall-E
- Art. 3 Content
 - (a) Your Content. You may provide input to the Services (“**Input**”), and receive output generated and returned by the Services based on the Input (“**Output**”). Input and Output are collectively “Content.” As between the parties and to the extent permitted by applicable law, **you own all Input**, and subject to your compliance with these Terms, **OpenAI hereby assigns to you** all its right, title and interest in and to **Output**. OpenAI may use Content as necessary to provide and maintain the Services, comply with applicable law, and enforce our policies. **You are responsible for Content**, including for ensuring that it does not violate any applicable law or these Terms.
 - (b) Similarity of Content. Due to the nature of machine learning, **Output may not be unique** across users and the Services may generate the same or similar output for OpenAI or a third party. For example, you may provide input to a model such as “What color is the sky?” and receive output such as “The sky is blue.” Other users may also ask similar questions and receive the same response. Responses that are requested by and generated for other users are not considered your Content.
- **Don’t mislead your audience about AI involvement.**

<https://labs.openai.com/policies/content-policy>

Current contractual regulation

- Art. 4 Rights You give to **Midjourney**
- *By using the Services, **You grant to Midjourney**, its successors, and assigns a perpetual, worldwide, non-exclusive, sublicensable no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute text, and image prompts You input into the Services, or Assets produced by the service at Your direction. This license survives termination of this Agreement by any party, for any reason.*
- *Subject to the above license, **You own all Assets You create** with the Services, to the extent possible under current law. This excludes upscaling the images of others, which images remain owned by the original Asset creators. Midjourney makes no representations or warranties with respect to the current law that might apply to You. Please consult Your own lawyer if You want more information about the state of current law in Your jurisdiction. Your ownership of the Assets you created persists even if in subsequent months You downgrade or cancel Your membership. However, You do not own the Assets if You fall under the exceptions below.*

Current contractual regulation

- *If You are an employee or owner of a company with more than \$1,000,000 USD a year in gross revenue and You are using the Services on behalf of Your employer, You must purchase a “Pro” membership for every individual accessing the Services on Your behalf in order to own Assets You create. If You are not sure whether Your use qualifies as on behalf of Your employer, please assume it does.*
- *If You are not a Paid Member, **You don’t own the Assets You create**. Instead, Midjourney grants You a license to the Assets under the Creative Commons Noncommercial 4.0 Attribution International License (the “Asset License”). The full text is accessible as of the Effective Date here:*
<https://creativecommons.org/licenses/by-nc/4.0/legalcode>.

Current contractual regulation

- *Please note: Midjourney is an open community which allows others to use and remix Your images and prompts whenever they are posted in a public setting. By default, Your images are publically viewable and remixable. As described above, You grant Midjourney a license to allow this. If You purchase a "Pro" plan, You may bypass some of these public sharing defaults.*
- *If You purchased the Stealth feature as part of Your "Pro" subscription or through the previously available add-on, we agree to make best efforts not to publish any Assets You make in any situation where you have engaged stealth mode in the Services.*
- *Please be aware that any image You make in a shared or open space such as a Discord chatroom, is viewable by anyone in that chatroom, regardless of whether Stealth mode is engaged.*

Current contractual regulation

- DeepL (<https://www.deepl.com/en/pro-license?tab=pro>)
- **7.4 All rights** regarding the Content, Processed Content and/or Customer Training Data **remain with Customer**. However, Customer grants DeepL the non-exclusive worldwide right to use the Content and/or Customer Training Data solely in order to provide DeepL's services to Customer. In particular, Customer grants to DeepL the right to temporarily store, modify, process, translate and transmit the Content and/or Customer Training Data, and to sublicense the foregoing rights to its subcontractors, to the extent required to provide the services set out in this Agreement.
- **7.5 DeepL does not assume any copyrights to the translations made by Customer using the Products**. In the event that the translations made by Customer using the Products are deemed to be protected under copyright laws to the benefit of DeepL, DeepL grants to Customer, upon creation of such translations, all exclusive, transferable, sublicensable, worldwide perpetual rights to use the translations without limitation and for any existing or future types of use, including without limitation the right to modify the translations and to create derivative works.

Current contractual regulation

- Stable Diffusion (<https://stablediffusionweb.com/license>)
- *Art. 6 The Output You Generate. Except as set forth herein, Licensor claims no rights in the Output You generate using the Model. You are accountable for the Output you generate and its subsequent uses. No use of the output can contravene any provision as stated in the License.*
- Appendix A

Rightholders

- Copyfraud? Presumption of authorship
- + UK / IRE regulation
- „Computer-generated works“
 - „Person who undertook the arrangements necessary for its creation“
 - Is that even copyright?

Protection by rights related to copyright and database rights?

- There is no condition of originality, they are transferable and the holder can be anyone
- 1960 Rome Convention a 1996 WPPT, Directive 2006/115/ES, InfoD
 - audio recording/phonogram recording – user of the system
- GA Szpunar, *Pelham*, 30: A phonogram is not an intellectual creation consisting of a composition of elements such as words, sounds, colours etc. A phonogram is a fixation of sounds which is protected, not by virtue of the arrangement of those sounds, but rather on account of the fixation itself. Consequently, although, in the case of a work, it is possible to distinguish the elements which may not be protected, such as words, sounds, colours etc., from the subject-matter which may be protected in the form of the original arrangement of those elements, such a distinction is not, however, possible in the case of a phonogram. A phonogram is not made up of small particles that are not protectable: it is protected as an indivisible whole. Moreover, in the case of a phonogram, there is no requirement for originality, because a phonogram, unlike a work, is protected, not by virtue of its creativeness, but rather on account of the financial and organisational investment.
- DTTO
 - Rights of broadcasters, rights of producers of audio-visual recordings
 - Rights of the publisher of a press publication? - imprimatur

Infringement of IPR by AI

https://www.youtube.com/watch?v=jnQ0zEQPu_A

Evropská unie

- Paul Keller (<https://openfuture.eu/blog/protecting-creatives-or-impeding-progress/>)
 - The [European Parliament's summary published after the adoption of the Directive](#) makes this explicit by noting that “the co-legislators agreed to enshrine in EU law another mandatory exception for general text and data mining (Article 4) in order to contribute to the development of data analytics and artificial intelligence”
 - This analysis is based on the generally accepted understanding that trained ML models do not contain copies of the works that they have been trained on. While there are [studies that show that in some cases diffusion models can “memorize” works contained in their training data](#) this seems to be an extreme outlier.
- DSMD art. 3 and 4

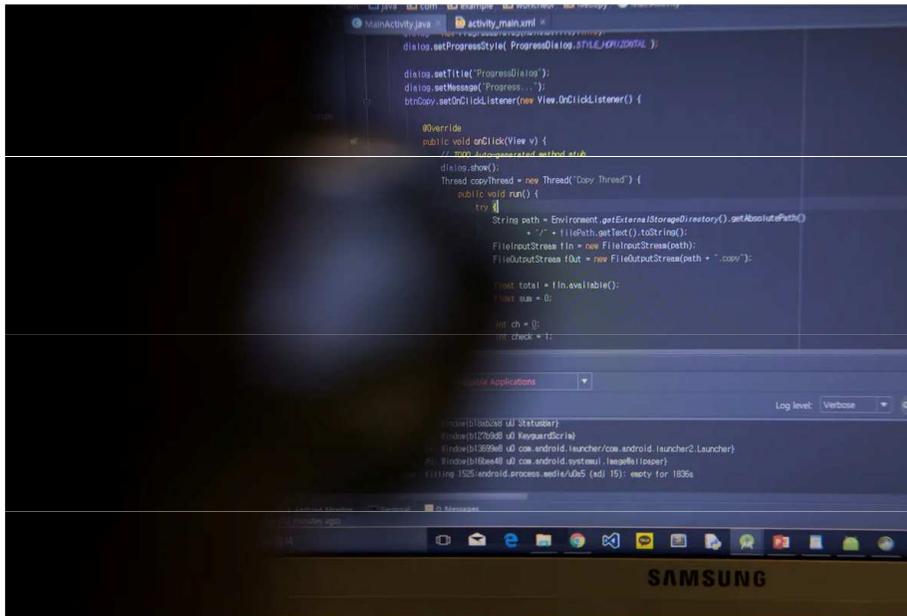
USA – “software piracy on an unprecedented scale.”



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ARTIFICIAL INTELLIGENCE / TECH / LAW

The lawsuit that could rewrite the rules of AI copyright



The key question in the lawsuit is whether open-source code can be reproduced by AI without attached licenses. Credit: Getty Images

/ Microsoft, GitHub, and OpenAI are being sued for allegedly violating copyright law by reproducing open-source code using AI. But the suit could have a huge impact on the wider world of artificial intelligence.

By JAMES VINCENT

Nov 8, 2022, 5:09 PM GMT+1 | □



<https://www.theverge.com/2022/11/8/23446821/microsoft-openai-github-copilot-class-action-lawsuit-ai-copyright-violation-training-data>

45 <https://www.theverge.com/2023/1/28/23575919/microsoft-openai-github-dismiss-copilot-ai-copyright-lawsuit>

LAW

ARTIFICIAL INTELLIGENCE / TECH / LAW

Getty Images sues AI art generator Stable Diffusion in the US for copyright infringement



An illustration from Getty Images' lawsuit, showing an original photograph and a similar image (complete with Getty Images watermark) generated by Stable Diffusion. Image: Getty Images

/ Getty Images has filed a case against Stability AI, alleging that the company copied 12 million images to train its AI model 'without permission ... or compensation.'

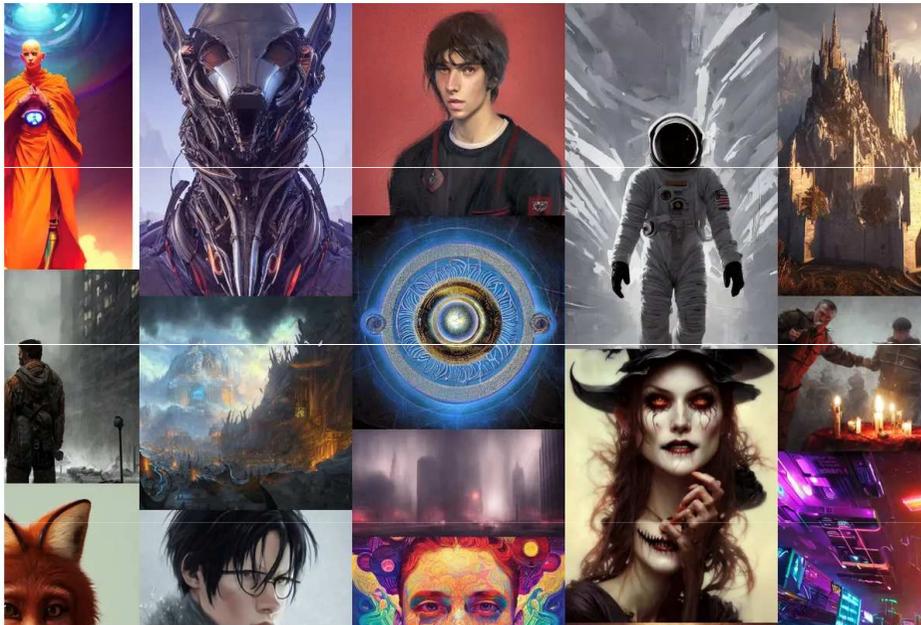
By **JAMES VINCENT**

Feb 6, 2023, 5:56 PM GMT+1 | [16 Comments](#) / [16 New](#)



ARTIFICIAL INTELLIGENCE / TECH / CREATORS

AI art tools Stable Diffusion and Midjourney targeted with copyright lawsuit



A collage of AI-generated images created using Stable Diffusion. Image: [The Verge via Lexica](#)

/ The suit claims generative AI art tools violate copyright law by scraping artists' work from the web without their consent.

By **JAMES VINCENT**

Jan 16, 2023, 12:28 PM GMT+1 | [28 Comments](#) / [28 New](#)



<https://stablediffusionlitigation.com/pdf/00201/1-1-stable-diffusion-complaint.pdf>

USA

- Doe 1 et al v. GitHub et al, Case No. 4:2022cv06823 (N.D. Cal.)
- Andersen et al v. Stability AI et al, Case No. 3:23-cv-00201 (N.D. Cal.)
- Getty Images v. Stability AI, Case No. 1:2023cv00135 (D. Del.)
- Getty Images v Stability AI (England), Case IL-2023-000007

Art stealing

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BY SHANTI ESCALANTE-DE MATTEI December 9, 2022 3:04pm



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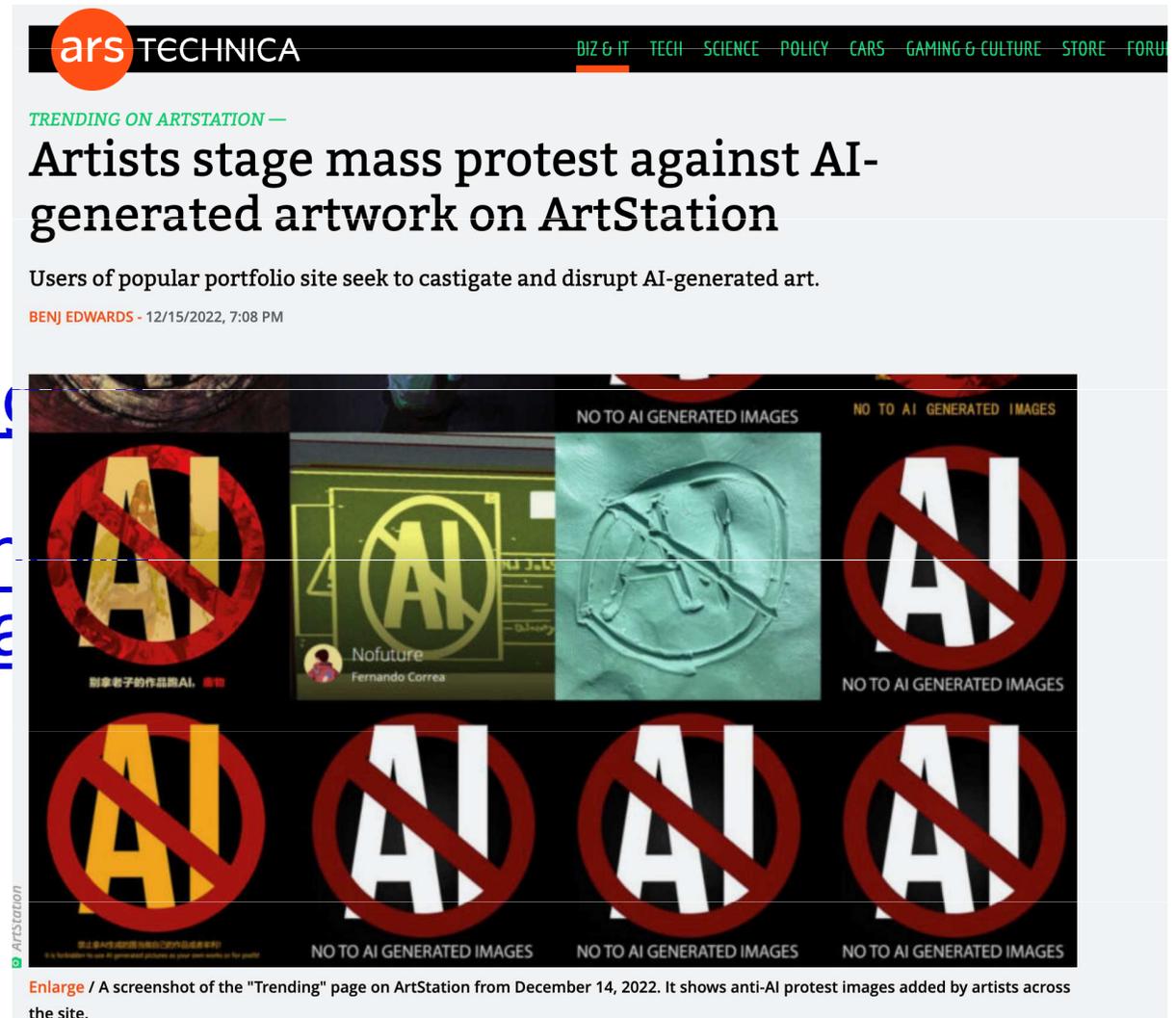
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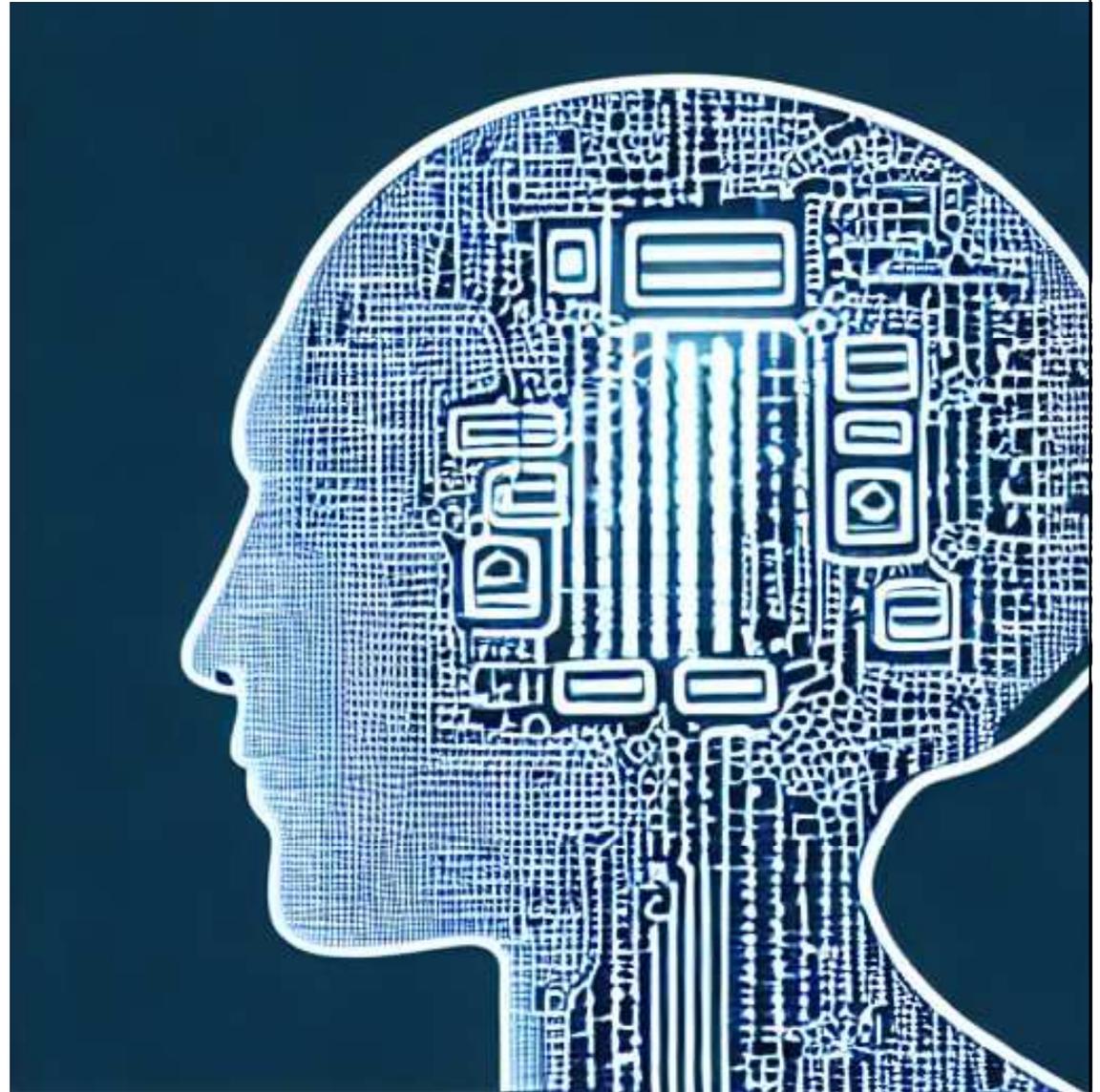
Reaction of the artistic community

- haveibeentrained.com
- spawning.ai
- AI opt-out
- <https://news.uchicago.edu/story/uchicago-scientists-develop-rapid-response-tool-protect-artists-artists-ai-mimicry>
- Cloaking



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**Thank you for your
attention!
@matejmyska**



Recommended: John Oliver on AI

– <https://www.youtube.com/watch?v=Sqa8Z>