



invoke

**How We Received  
The First Copyright for a  
Single Image Created Entirely  
with AI-Generated Material**





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# Introduction

In a historic ruling, the U.S. Copyright Office has granted copyright protection to Invoke for *A Single Piece of American Cheese*, marking the first time a work created entirely with AI-assisted material has received legal recognition. This decision establishes a new precedent for the industry, showing that **AI-assisted works can qualify for copyright protection.**

Up until January 2025, the U.S. Copyright Office (USCO) had rejected all AI-generated works on the basis that they lacked sufficient human authorship. Invoke originally submitted a claim for *A Single Piece of American Cheese* in August 5, 2024, and on January 30, 2025, that claim was approved.

The USCO wrote that **this work met the necessary legal standard through the selection, coordination, and arrangement of AI-generated elements**, which are key principles that form the foundation of copyrightable compilations.



Keirse, Kent (Founder and CEO of Invoke). *A single piece of American Cheese*. 2024. Created using Invoke.

# Introduction

This ruling is a major advancement in the legal recognition of works created with the support of generative AI tools and models. It provides clarity to the thousands of artists and businesses that have already begun to incorporate AI techniques into their creative workflows but need protection.

## IN THIS REPORT, WE WILL SHARE:

- The decisions that the U.S. Copyright Office have made that led up to this moment
- The step-by-step process for how we created *A Single Piece of American Cheese* and the legal standard that we demonstrated
- What we see as implications for the creative industry

We hope that others can use this as a guide to obtain copyrights for their own works, and institute company-wide policies that allow artists to use generative AI techniques in their day-to-day work.





# The Legal Precedent

From the outset, the U.S. Copyright Office (USCO) has held that purely machine-generated content created without meaningful human intervention cannot be copyrighted. Copyrightable works must be the product of human authorship. Through their decisions, they have reiterated that providing only a text prompt or command to an AI model, without additional human creative involvement, fails to meet this standard and will not result in a copyright.

Over the past several years, USCO has reviewed multiple applications involving AI-generated material. In several high-profile instances, the Office concluded that the AI system, not a human author, was responsible for the creative aspects of the work. The key decisions include:



# The Legal Precedent

## BACKGROUND

In 2022, Jason Allen used Midjourney to create *Théâtre D'opéra Spatial*, which won first place in a Colorado State Fair art competition, sparking widespread debate over AI-generated art.



Allen, Jason. *Théâtre D'opéra Spatial*. 2022. Created using Midjourney and Photoshop.

## COPYRIGHT RULING

In its decision, the Copyright Review Board denied Allen's copyright registration because the image was created using Midjourney, and Allen refused to disclaim the AI-generated content.

The Copyright Office ruled that Midjourney's output was not the result of traditional human authorship, but rather an autonomous process where AI interpreted text prompts. Although Allen used Photoshop to refine details, his modifications were deemed insufficient to qualify as original authorship without disclaiming the AI-generated material.

The Review Board upheld the refusal, reaffirming that human creativity must be present in the final work itself, not just in the prompting process. The decision reinforced that selecting, adjusting, and refining AI outputs does not automatically confer copyright protection unless significant human authorship is evidence and separable from the AI's contributions.



Copyright Review Board  
United States Copyright Office · 101 Independence Avenue SE · Washington, DC 20559-6000

September 5, 2023

Tamara Pester, Esq.  
Tamara S. Pester, LLC  
PO Box 6601  
Denver, CO 80206

Re: **Second Request for Reconsideration for Refusal to Register *Théâtre D'opéra Spatial* (SR # 1-11743923581; Correspondence ID: 1-515320R)**

Dear Ms. Pester:

The Review Board of the United States Copyright Office ("Board") has considered Jason M. Allen's ("Mr. Allen") second request for reconsideration of the Office's refusal to register a two-dimensional artwork claim in the work titled "*Théâtre D'opéra Spatial*" ("Work"). After reviewing the application, deposit copy, and relevant correspondence, along with the arguments in the second request for reconsideration, the Board affirms the Registration Program's denial of registration. The Board finds that the Work contains more than a *de minimis* amount of content generated by artificial intelligence ("AI"), and this content must therefore be disclaimed in an application for registration. Because Mr. Allen is unwilling to disclaim the AI-generated material, the Work cannot be registered as submitted.

### I. DESCRIPTION OF THE WORK

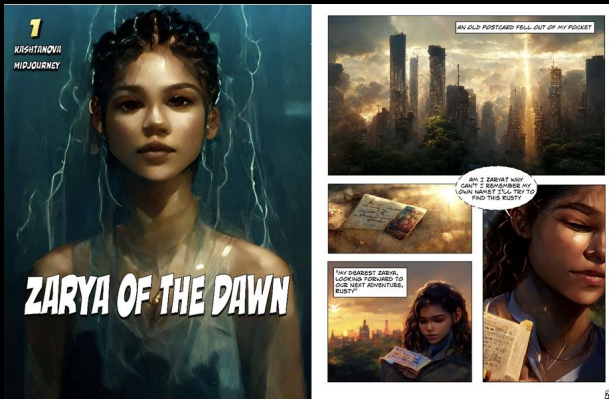
The Work is a two-dimensional artwork, reproduced below:



# The Legal Precedent

## BACKGROUND

Kris Kashtanova is an artist and AI advocate best known for *Zarya of the Dawn*, a graphic novel that gained attention for its use for AI-generated imagery. Kashtanova wrote the story and used Midjourney and Photoshop to generate and edit the illustrations, arranging them into a cohesive book.



Kashtanova, Kris. *Zarya of the Dawn*. 2022. Story and human-created elements copyrighted by Kris Kashtanova. Images generated using Midjourney.

## COPYRIGHT RULING

The Copyright Review Board initially granted copyright, but upon review, determined that the AI-generated images created with Midjourney were **not protectable**.

Kashtanova was granted a copyright for the text as well as the selection, coordination, and arrangement of the Midjourney images. Essentially, the compilation itself was protected, but the individual images used were not.

The Copyright Office ruled that Midjourney's output was **not the result of traditional human authorship**, as the AI independently determined artistic expression. Even though Kashtanova refined prompts, the lack of direct human control over the image creation process led to the exclusion of the AI-generated images from copyright protection.



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.<sup>1</sup> 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.

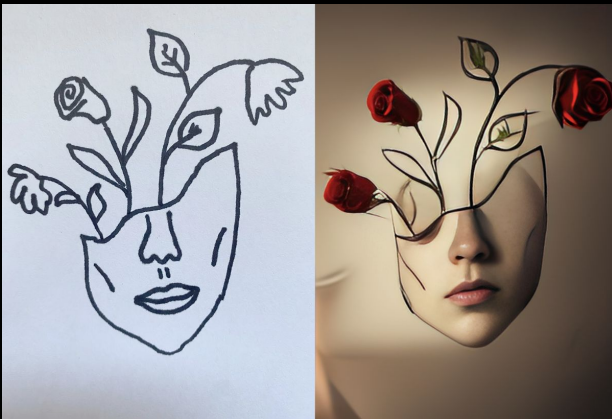
The Office's reissuance of the registration certificate will not change its effective date—the new registration will have the same effective date as the original: September 15, 2022. The public record will be updated to cross-reference the cancellation and the new registration, and it will briefly explain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

<sup>1</sup> 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.

# The Legal Precedent

## BACKGROUND

Shortly after submitting *Zarya of the Dawn*, Kashtanova submitted another copyright request for *Rose Enigma*, an image she created by providing a hand-drawn illustration of a stylized mask, flowers, and facial outlines as an input for a Stable Diffusion AI model. She also included a text prompt describing a young cyborg woman. The AI model was used to transform the drawing into a fully rendered image while following the guidance of her sketch.



Kashtanova, Kris. *Rose Enigma*. 2023. Image on left created with pen on paper. Image on the right created with Stable Diffusion with the sketch as input.

## COPYRIGHT RULING

The Copyright Office granted registration for *Rose Enigma*, but limited the protection to the original human-drawn elements that remained discernible in the final work.

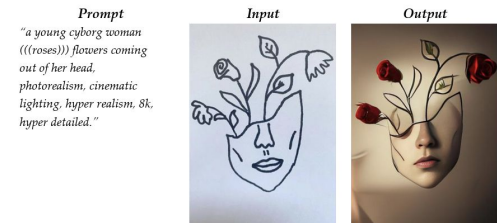
In their [2025 report on Copyright and Artificial Intelligence](#), the USCO explains that the protection was “limited to unaltered human pictorial authorship that is clearly perceptible in the deposit and separate from the non-human expression that is excluded from the claim.” Essentially, any AI-generated elements, such as enhanced lighting, shadows, and 3D details, were excluded from the protection.

In practice, this creates a legal gray area—if someone were to use or reproduce the final AI-enhanced image, enforcement could be difficult since the disclaimed elements are not protected. However, if someone were to copy or trace the original sketch, they would likely be infringing on Kashtanova's copyright.

### U.S. Copyright Office Copyright and Artificial Intelligence, Part 2: Copyrightability

As an example, in the following work submitted to the Office for registration, the author had created a hand-drawn illustration and used it as an input, along with the prompt shown below.<sup>123</sup>

The AI system produced this output:



The drawing itself is a copyrightable work, and its expressive elements are clearly perceptible in the output, including the outline of the mask, the position of the nose, mouth, and cheekbones relative to the shape of the mask, the arrangement of the stems and rosebuds, and the shape and placement of the four leaves.

The applicant disclaimed “any non-human expression” appearing in the final work, such as the realistic, three-dimensional representation of the nose, lips, and rosebuds, as well as the lighting and shadows in the background. After reviewing the information provided in the application, the Office registered the work with an annotation stating: “Registration limited to unaltered human pictorial authorship that is clearly perceptible in the deposit and separate from the non-human expression that is excluded from the claim.”<sup>124</sup>

<sup>123</sup> *Rose Enigma*, VAu001528922 (Mar. 21, 2023). More about the artist Kris Kashtanova's creation of this work is available on their website. *Portfolio: Rose Enigma*, KRIS KASHTANOVA, <https://www.kris.art/portfolio-2/rose-enigma> (last visited Jan. 17, 2025).

<sup>124</sup> *Rose Enigma*, VAu001528922 (Mar. 21, 2023). By contrast, the Office's Review Board upheld a refusal to register an image produced by an AI system with a human author's photograph as an input. U.S. Copyright Office Review Board, *Decision Affirming Refusal of Registration of Surgast* at 1 (Dec. 11, 2023), <https://copyright.gov/rulings-filings/review-board/docs/SURJAST.pdf>. The applicant disclosed that the image was generated by “RAGHAV Artificial Intelligence Painting App” (“RAGHAV”), which had been trained on Vincent van Gogh's *The Starry Night*—with an instruction to apply the style of *The Starry Night* to the photograph. *Id.* at 2. The Board found that the resulting image did not “contain sufficient human authorship necessary to sustain a claim to copyright” because the applicant “exerted insufficient creative control over RAGHAV's” generation of the output. *Id.* at 3, 7–8. Unlike *Rose Enigma*, the output did not clearly show the copyrightable work input by the applicant. *See id.* at 7–8.



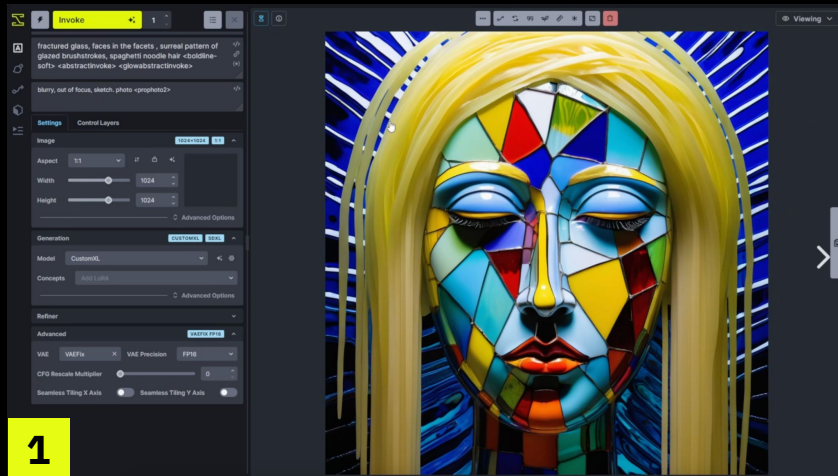
# How A *Single Piece of American Cheese* was made

Given the USCO's previous rejections of AI-assisted works, to demonstrate sufficient human authorship, Invoke focused on submitting a work that highlighted:

<b>A</b>	<b>A multi-stage process</b>
<b>B</b>	<b>Iterative refinement</b>
<b>C</b>	<b>Creative decision making</b>

We needed to make an argument that if enough creative decisions were made in the process of creating the image, and if those decisions were made using an interface that allows for a high level of artistic control, then **copyright should be issued for the selection, refinement, and arrangement of the AI-generated material into the final image.**

# How A Single Piece of American Cheese was made

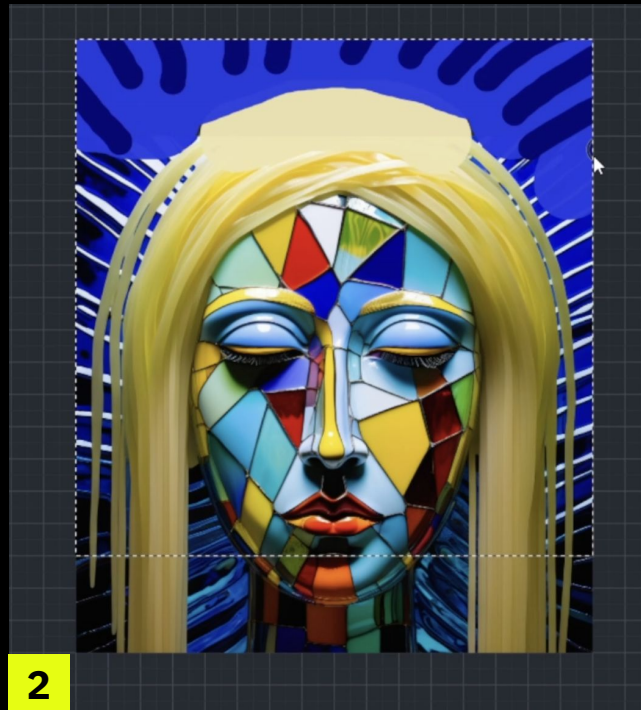
**1**

The positive prompt

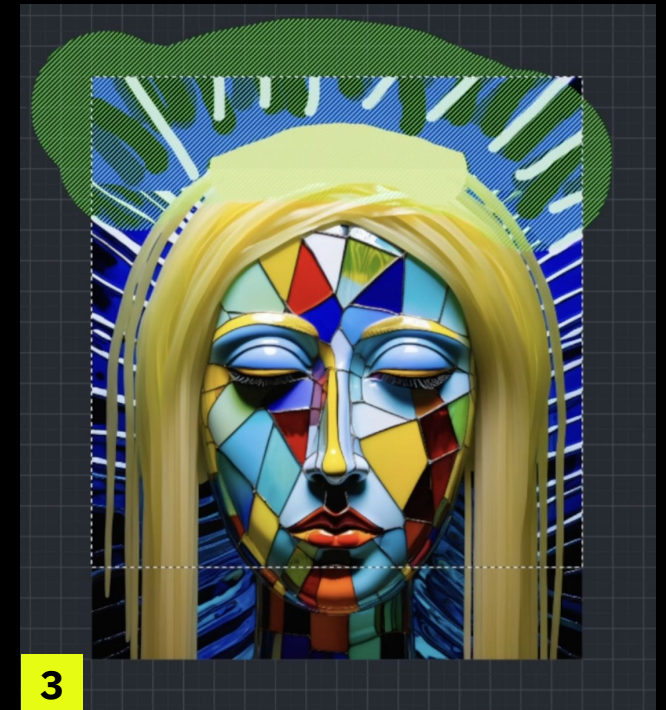
"fractured glass, faces in the facets , surreal pattern of glazed brushstrokes, spaghetti noodle hair <boldline-soft> <abstractinvoke> <glowabstractinvoke>" and negative prompt "blurry, out of focus, sketch. photo <prophoto>"

was used to create three 1024×1024 images using a finetuned SDXL model called CustomXL.

We selected one of those images and added it to our canvas to refine.

**2**

On the canvas, we expanded the working area of the image and brushed in additional color detail.

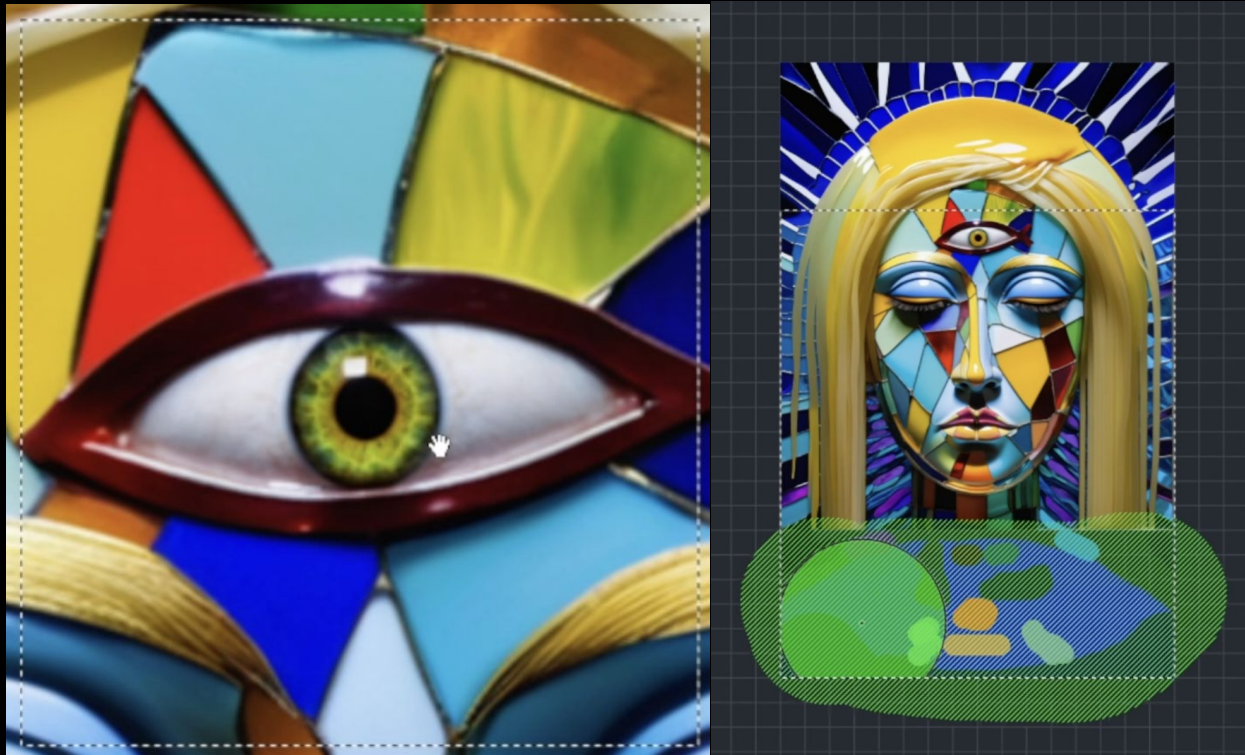
**3**

We *inpainted* that region (an AI technique where you regenerate part of an image according to various settings, like denoising strength, prompts, models, while preserving other parts of the image).

# How A Single Piece of American Cheese was made



We repeated the inpainting process more than 35 times across a ten minute period, refining existing elements and adding new concepts to the image, like a third eye, the melting cheese, an upper body, and internal organs.



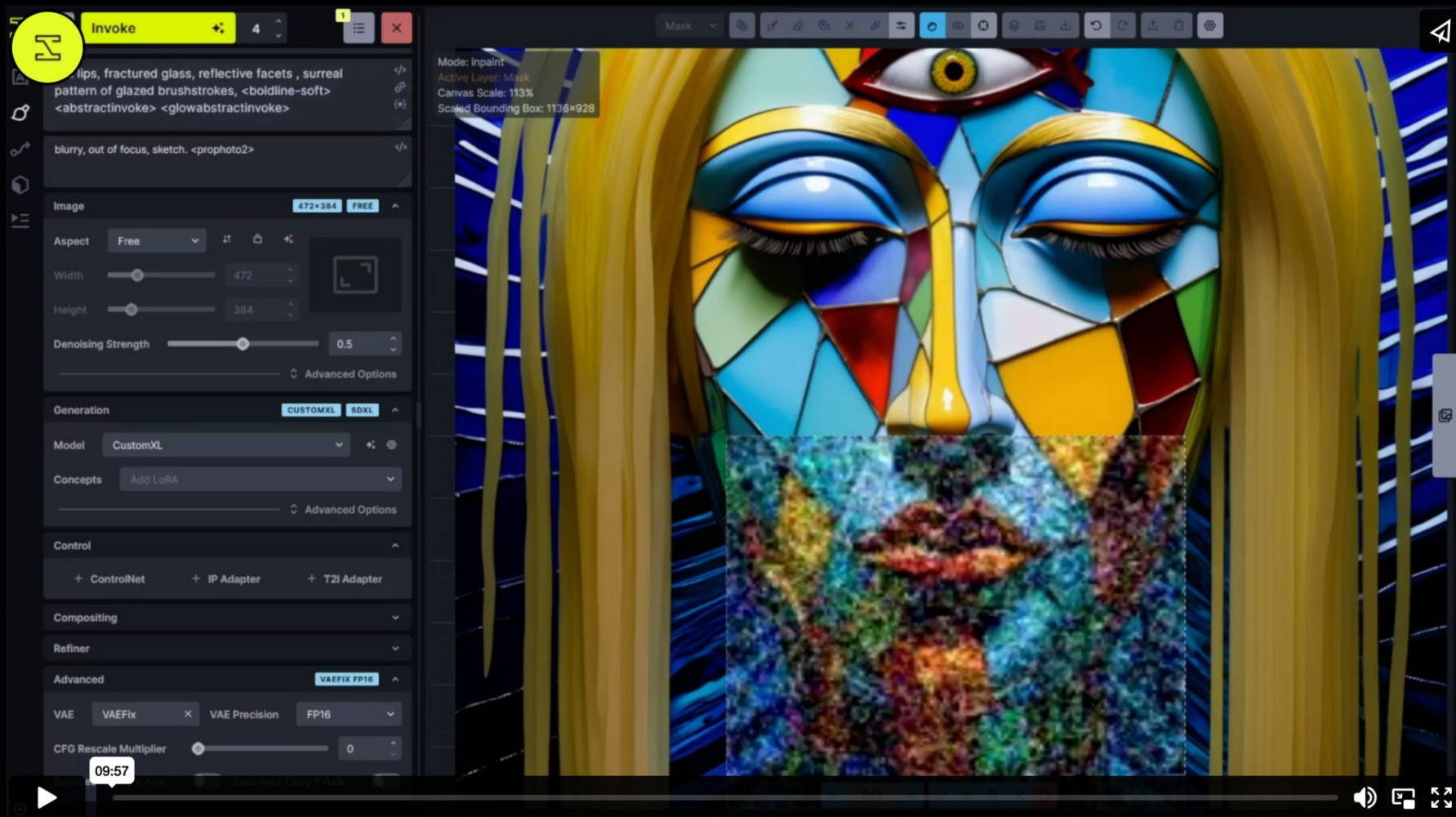
## What is inpainting?

**Inpainting** in generative AI is the process of selectively modifying or regenerating parts of an image while maintaining consistency with the surrounding elements. Invoke's canvas is uniquely designed to give artists a high degree of control, allowing them to precisely define where and how regions are regenerated.





# Video: *A Single Piece of American Cheese*



[Click to watch the full workflow video for \*A Single Piece of American Cheese\*.](#)



# How A Single Piece of American Cheese was made

## BACKGROUND

*A Single Piece of American Cheese* was submitted by Cooley LLP on behalf of Invoke for copyright registration on August 5, 2024. Initially, the Copyright Office denied the application in September 2024, but reversed its decision in January 2025 after a request for reconsideration argued the work met the legal standard for selection, coordination, and arrangement.



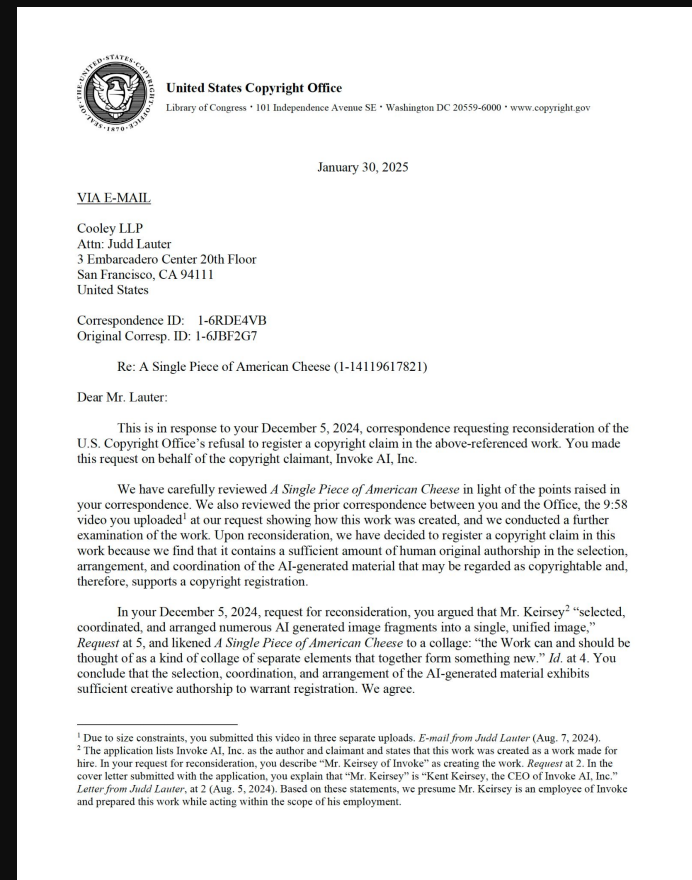
## COPYRIGHT RULING

The Copyright Office ruled that *A Single Piece of American Cheese* met the threshold for copyright because the creator actively selected, coordinated, and arranged numerous AI-generated image fragments into unified composition.

The Office agreed that this creative decision-making process mirrors that of a collage artist, where individual components are curated and structured into a cohesive whole.

Similarly to the *Zarya of the Dawn* case, the Copyright Office maintained the precedent set over purely AI-generated material, holding that the raw AI outputs used in the generation process (eg. the individual inpainted and outpainted regions) were not copyrightable.

However, because we selected, coordinated, and arranged the AI-generated material into a composition, that final image was given copyright protection.



# Implications for Creative Industry



**Businesses** can start to use generative AI in more creative production workflows as legal & compliance begin approving more use cases.



**The industry** will likely move towards AI tools that prioritize hands-on artistic engagement to ensure they can claim and protect their work.



**Artists** can likely obtain copyright on their works if they use a tool that allows them to show sufficient selection, coordination, and arrangement.



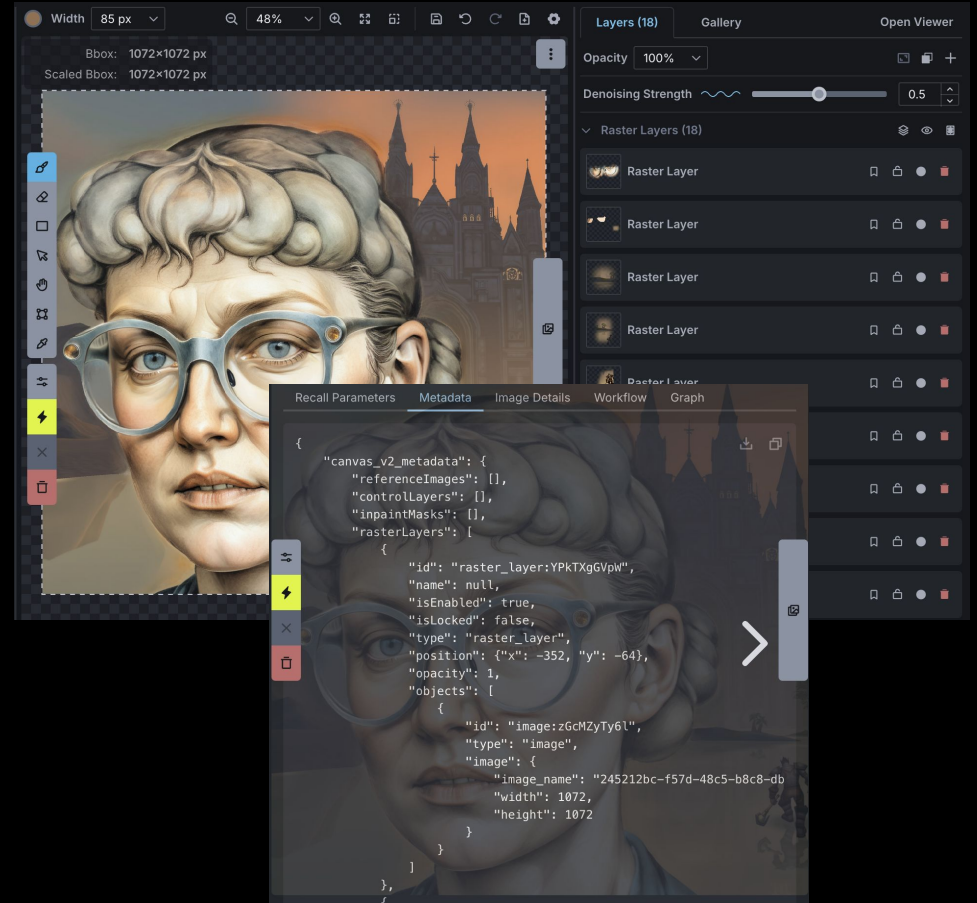
**Tools** that lack structured canvas-based editing tools and rely solely on node-based workflows or prompt-based generation may need to adapt to be viable to an enterprise audience.

# Securing Copyright Claims with Provenance Records in Invoke

Securing copyright for AI-assisted works requires clear documentation of human authorship. Invoke's Provenance Records tracks and embeds metadata, providing a transparent record of user-driven edits.

Users can see models, reference images, inpainting adjustments, and settings applied to their image. Each accepted inpainted region is stored as a separate raster layer, preserving a history of modifications.

Provenance Records is enabled by default for all Invoke users, with future updates planned to further align with U.S. Copyright Office requirements.



# Conclusion

One of the most important takeaways from this case is how **attainable copyright protection is**, if you are using the right tools. *A Single Piece of American Cheese* only took 10 minutes to create from start to finish, yet it met the legal standard for authorship.

Our goal with this piece wasn't to create a masterpiece (obviously). We wanted to see where the "floor" was for the U.S. Copyright Office to grant copyright protection to an AI-assisted work.

We know most artists and creative professionals spend far more than 10 minutes on any individual piece and make hundreds if not thousands of creative micro-decisions in the process. We hope that those people can now feel confident that their work can be protected, at least in the United States.





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