Generative Fill with Firefly 5

Let's explore a powerful new feature in our imaging software: the Firefly Image 5 model for Generative Fill. This isn't just an incremental update; it fundamentally changes how we approach generative editing. Instead of creating entirely new elements from scratch, this model is designed to intelligently modify your existing image, preserving details and ensuring precise alignment.

Understanding the Firefly Image 5 Advantage

In the past, when you used generative fill to alter an image, it would often replace existing content entirely. Imagine wanting to add a tan and shave off a beard in a photo of yourself; the result might not have looked like you at all because all the original detail was discarded. This led to alignment issues, especially when trying to blend edits with masks or adjust opacity.

The new Firefly Image 5 model addresses these challenges. It acts as an instructional model, making changes to your image while carefully maintaining its original integrity. This means pixels align perfectly, allowing for seamless blending with layer masks and opacity adjustments.

This preserves the overall look and feel of your image, making it ideal for color correction, retouching, and a wide range of other modifications.

Current Limitations and Future Outlook

It's important to note that Firefly Image 5 is currently limited to 2.4 megapixels. If you're working with higher resolution images, the output will be scaled, which can sometimes result in slightly soft images. However, I anticipate this limitation will be addressed in future updates.

Example 1: Aging an Image

Our first example involves an old wedding photograph. My goal was to give it the look of a preserved 1920s picture.

1. **Select the Image:** I started by selecting the entire image by typing Command-A.

2. **Access Generative Fill:** I then accessed Generative Fill through the contextual taskbar. If you don't see the taskbar, you can find Generative Fill under the Edit menu.

3. **Choose the Model:** In the Generative Fill window, I selected the Firefly Image 5 model. Be aware that using this preview model will consume 10 generative credits each time you use it and only so many are included in your plan each month.

4. **Enter the Prompt:** My prompt was: "Age the entire image to look like a perfectly preserved 1920s hand-tinted photograph on original nitrate film stock, complete with subtle color shifts and grain, while keeping every facial feature and pose identical."

5. **Observe the Results:** When I toggle the generated layer on and off, you can see that no elements have moved. This precise alignment is crucial for further editing. This means I can now adjust the opacity to blend the effect or use a layer mask to apply it selectively. For instance, I could isolate the effect to just one person, as demonstrated with David.
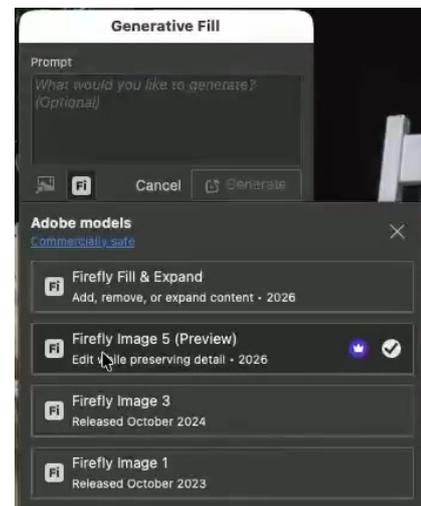
Example 2: Transforming Materials

Here, I wanted to see how Firefly Image 5 could handle material transformations. I decided to make the chrome on this truck look like liquid metal.

1. **Prompt the Transformation:** My prompt was: "Make the all the chrome appear as if it is slowly melting and pouring like liquid mercury in real time, with perfect surface tension and reflections, but frozen mid-pour"

2. **Refine with Layer Masks:** The beauty of this model is that the changes align perfectly with the original. If I didn't want the liquid metal effect on the door, I could simply use a layer mask and paint with black to remove it from that area. This wouldn't have been possible with older models, where the generated content might not line up correctly.


Understanding Firefly's Training Data

It's important to understand that Firefly models are trained on rights-managed images. This means they are generally safer for commercial use, as they avoid copyrighted internet content. Unlike other models that might generate branded elements, Firefly's output is less likely to cause copyright issues.

Example 3: Simulating Long Exposures

I wanted to simulate a long exposure effect on a night sky to create star trails.

1. **Prompt for Star Trails:** I selected the image and used the prompt: "make it a four-hour long exposure, star trails, that give you circular arcs around the North Star."

2. **Addressing Unwanted Changes:** While the star trails looked great, the model altered the distant mountains. To fix this, I used a layer mask, limiting the effect only to the sky area.
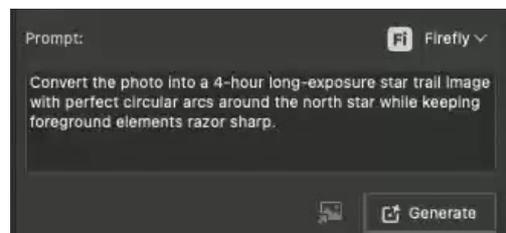
Example 4: Rack Focus and Depth of Field
This next example is quite impressive. I wanted to simulate a rack focus, making the background sharp and the foreground blurry.

1. **Instructing Focus Change:** My prompt was: "Change the focused point so the area in the person in the background is in sharp focus while the drink in the foreground is soft, just as blurry as the current background."
2. **Comparing AI to Reality:** The result was astonishingly good, capturing a likeness of my wife, Karen, in the background. When compared to the original iPhone portrait mode edit, the AI's rendition, while simplified in some areas, was remarkably close.

Example 5: Motion Blur
For the image below I used the prompt of "Freeze the motion of all the vehicles in this photograph to make it look as if it was taken with a 1/1000 second shutter speed".

Example 6: Converting Materials: Then, I experimented with material transformations: "Convert the entire chair into transparent optical glass with realistic refraction, and caustics while keeping every structural detail and shadow casting identical."

"Make the entire scene appear as if it is constructed out of paper-thin cardboard, with realistic edge thickness and paper texture visible only from the side angles."

The key benefit here is that these transformations perfectly align with the underlying image, allowing for easy masking and blending to achieve the desired effect.

Example 7: X-Ray View
To showcase the model's understanding of form, I tried generating an X-ray view of my hand.

1. **Prompting for an X-ray:** My prompt was: "Overlay a photorealistic X-ray view of the bones and veins inside the hand that perfectly aligns with the external skin, as if the hand is semi-transparent."

2. **Detailed Generation:** The result accurately depicted the bones and even veins, and it could be easily masked or have its opacity adjusted.

Examples 8 & 9: Working Around Firefly's Limitations with External Prompts
Since Firefly isn't trained on copyrighted material like movie references, you might need to use other AI tools to generate specific prompts.

1. **Utilize Other AI for Prompts:** For instance, if you want a cinematic look from a specific movie, use tools like Grok or ChatGPT to create a prompt describing the movie's aesthetic *without* mentioning the movie title itself.
2. **Integrate the Prompt:** Then, feed this AI-generated prompt into Firefly. This approach helps overcome Firefly's limitations with copyrighted content.

Emulating Photographer Styles
Similarly, you can emulate the style of a particular photographer.


1. **Prompt for Style Emulation:** Use an AI tool to generate a prompt that captures the essence of a photographer's style, focusing on elements like color palettes and composition.
2. **Apply to Firefly:** Input this detailed prompt into Firefly. You can then fine-tune the result by adjusting the opacity for a more subtle effect.

Example 10: Practical Example - Skin Tones
Let's look at a real-world example scenario. I wanted to improve the skin tone and background separation in this portrait.

1. **Select the Area:** I made a selection around the skin area.
2. **Voice-to-Prompt:** I used my computer's voice-to-text feature to describe my issues: "I don't like the appearance of the skin tones in this image. There's something odd about the darker parts of the skin potentially having too much color in them?. It might be that the skin tone needs to be warmer or something to make it separate a little more from the background and appear to be more natural lookingI don't like the appearance of the skin tones in this image. There's something odd about the darker parts of the skin potentially having too much color in them?. It might be that the skin tone needs to be warmer or something to make it separate a little more from the background and appear to be more natural looking."
3. **Refine with Masks:** The generated result improved the skin tone. To ensure the changes only affected the person and not the background, I used a layer mask, inverting it and filling it with black to hide the effect everywhere else.
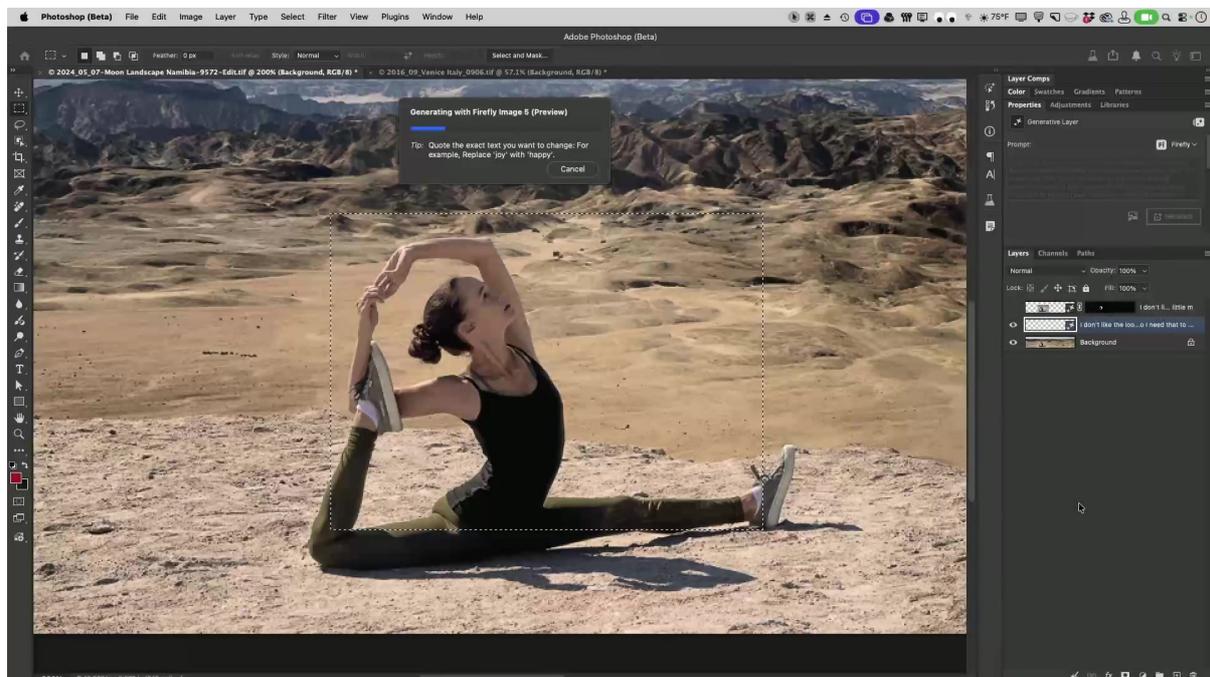
Enhancing Prompts for Precision
To prevent unintended changes, especially regarding the composition or elements within the scene, I often add a specific phrase to my prompts. This phrase helps ensure that the AI respects the existing elements.

For example, adding: "while keeping every single person, object, structure, pose, position, facial expression, clothing detail, perspective, composition, and exact layout of the original photograph 100% identical and unchanged — modify only lighting, color palette, saturation, vibrancy, contrast, brightness, shadows, highlights, atmospheric effects, grain, and overall mood to enhance the visual style.

**Example 11: A Workflow Showcase - Venice Scene**

Let's walk through a more complex edit of a Venice scene, demonstrating a potential future Photoshop workflow.

1. **Coloring Gondolas:** I started by saying, "Change the color of every other one of the gondolas to red instead of the current blue." While it applied red to all of them, I could have refined this with a layer mask if needed.

2. **Altering Text:** Next, I selected the text on a sign and instructed, "change the text on the white sign from GONDOLA SERVICE to SERVIZEO GONDOLE"

3. **Selective Object Removal:** I then painted a green area on a new layer and prompted, "Remove all of the objects that I have covered with green in this image, while retaining all of the objects that surround them were partially overlap them" This instruction was interpreted a bit too aggressively, removing people. I then used Photoshop's layer mask tools to selectively reintroduce them.

4. **Changing Awning Color:** I selected the awning and requested, "Change the color of this awning the same red that covers the gondolas"
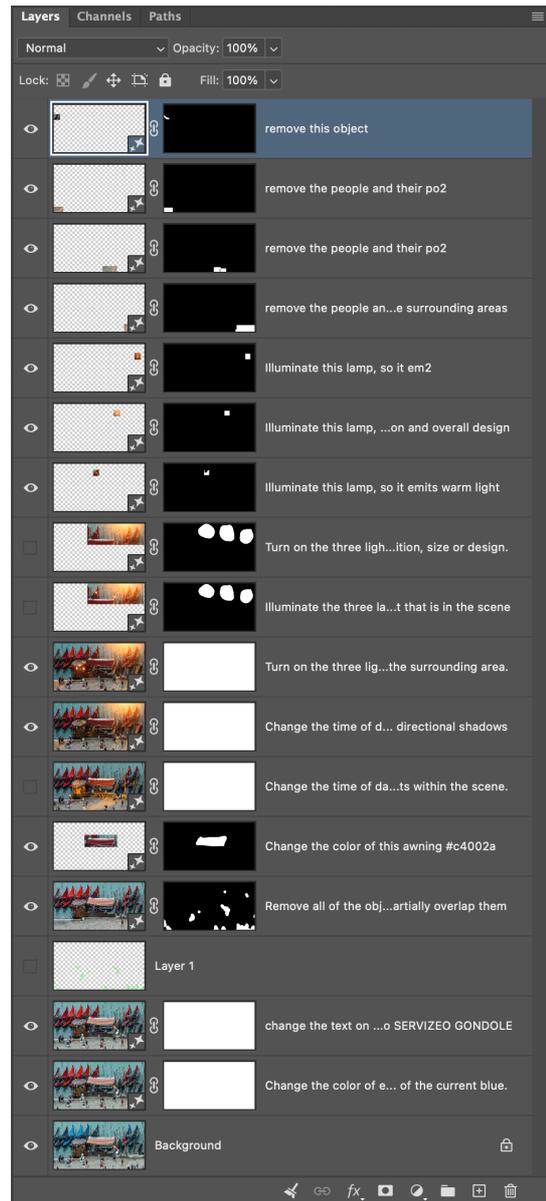
5. **Time of Day Adjustment:** Then, I selected all and prompted, "Change the time of day to the golden hour just before sunset where you have very warm light and directional shadows"

6. **Illuminating Streetlights:** I then targeted specific streetlights and instructed, "illuminate the three lights that are attached to the streetlight post near the small building on the left side of the photo. Make it look as if there were gas lamps that emit warm light and have light illuminate some of the buildings that is directly behind the street lamp. Do not change the size, position."

7. **Refining Illumination:** When a second attempt at illuminating background lights changed the lamp design, I refined my prompt to be more specific: "turn on the three lights shown in this area so that they emit warm light. Do not change their position, size, or design."

8. **Blending Mode for Lighting:** To ensure the lighting effect only brightened areas and didn't darken them, I changed the layer's blending mode to "Lighten".

9. **Removing People and Objects:** I proceeded to remove people and other objects from specific areas by making selections and using prompts such as "remove the people and their possessions leaving just clean sidewalk similar to the surrounding areas".

This comprehensive process, from initial edits to final touches, illustrates how powerful and flexible Generative Fill with Firefly Image 5 can be.

The Future of Photoshop
As we've seen, the future of tools like Photoshop might involve more intuitive, voice-driven interactions. Your skill will increasingly lie in your ability to articulate your vision and navigate the AI's responses when it deviates from your expectations. It's about describing what you desire and then using your existing Photoshop knowledge to refine the results.

The ability to describe your desired outcome and possess the vision to transform an image remains invaluable, as not everyone has the same creative foresight.