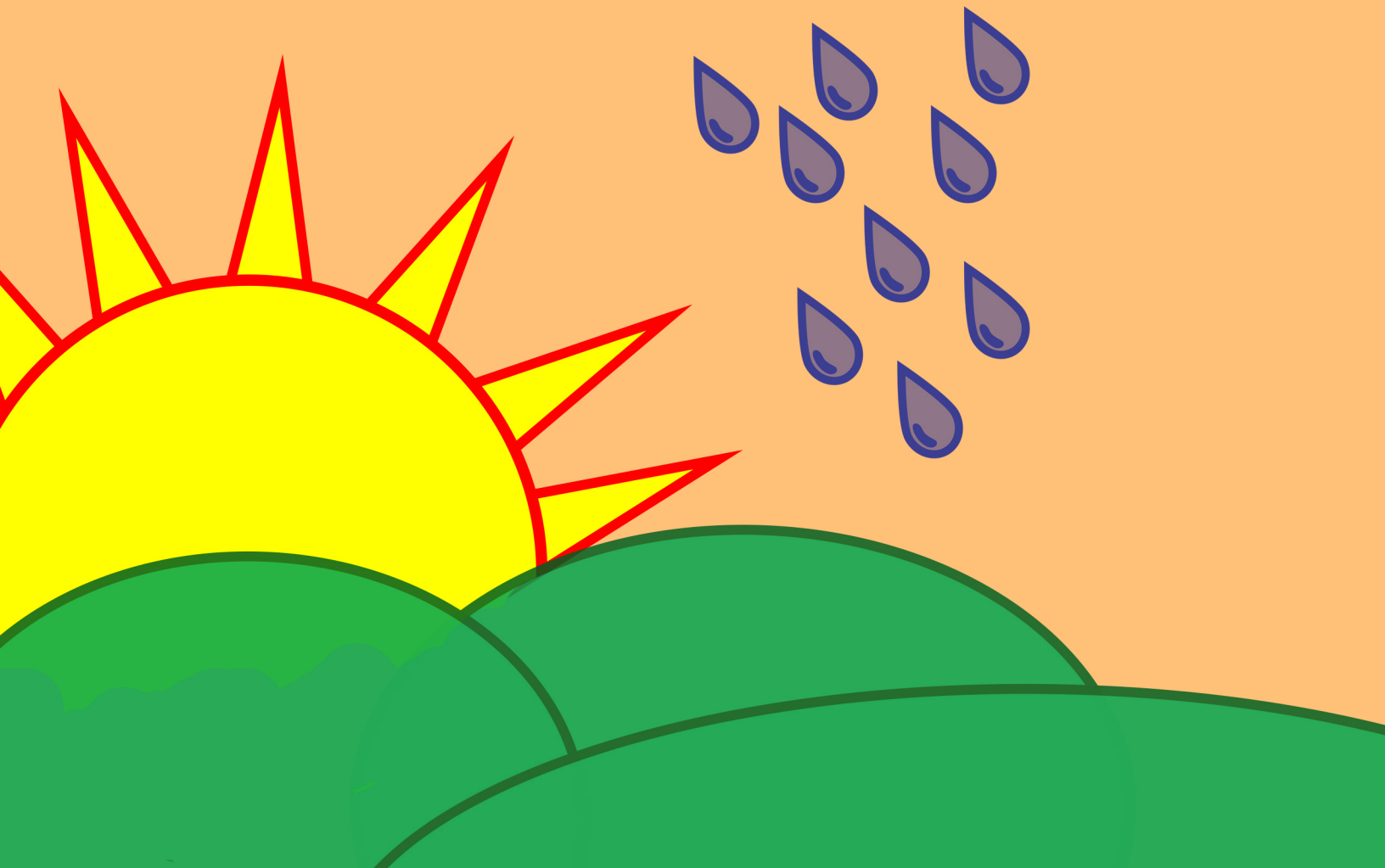
Document Magic

Growing Brilliant Communications with Adobe Photoshop and the Creative Cloud



Abstract

Adobe Photoshop is the essential tool for the modern technical communicator. Its inherent functions are numerous, and its possible applications are limitless. In this document the author outlines Photoshop's interesting origins, demonstrates a few basic features, explores the ethical issues surrounding Photoshop's utility, and finally ends the discussion by weighing Photoshop's price point against its creative utility.

Why does every technical writer need access to Photoshop?

There is a notion that technical writers are mere practitioners of the written word, and therefore incapable of delving into the realm of graphic design. And some may believe an imaginary wall separates these two creative disciplines. Historically, writers were writers and artists were artists, and to combine these skillsets was not always possible for respective practitioners.

Early graphic design required skill with rudimentary art tools such as pencils, inks, paints, paper, protractors, and rulers. A modicum of artistic ability was also requisite.

In contrast, writers possess their own esoteric skillset that often frustrates and eludes many aspiring practitioners today (Goldstein).

Both the graphic and written arts are areas of focus that possess nuance and complex understanding. However, as computing power advances, the margins between these two disciplines is becoming unclear. To soundly bridge that gap, persons that we have traditionally known as technical writers have come to be associated with the more inclusive moniker, *technical communicator* (Goldstein).

Technical communicators can now be found working in every career field. Their contributions to communications are perhaps as numerous as the individuals living on Earth. They tend to work in teams, headed by project managers, amongst peers of varying skillsets. They are required to brainstorm and contribute creative ideas for professional quality productions (Mehlenbacher).

The evolution from technical writer to technical communicator coincides with the merger of word processing and graphic design technology. Software manufacturers are now endeavoring to create programs that synthesize across many different platforms. Job postings for technical communicators often include Adobe Photoshop, InDesign and Illustrator as basic job requirements (Booker).

Photoshop encompasses most tools a technical communicator needs to produce high quality documentation. Even if a writing department is operating on a tight budget, there are great open source alternatives such as GIMP which mirror many of the features of Photoshop (Brathwaite).

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Photoshop's origins

Photoshop was originally named "Display" and was created in 1990 by brothers John and Thomas Knoll. The initial program was rendered with a rudimentary black and white graphic user interface (GUI). It was designed to manipulate individual movie frames for the purposes of design and alteration (Chiriguayo). After its success, the Knoll brothers ascended to relative fame within the film industry.

John Knoll is the Academy award winning Special Effects Supervisor and Executive Creative Director at Industrial Lights and Magic (ILM). ILM was founded in 1975 by Lucasfilm creator George Lucas.

ILM has played an integral role in the production of countless blockbuster movies and television series. Their long list of film achievements includes *Star Wars, the Avengers, Jurassic Park, Black Panther, and the Abyss* to name a few (Industrial Lights and Magic).

The first film to utilize Photoshop was *the Abyss*. Its usefulness garnered attention and in 1995 Adobe purchased Photoshop from the Knoll brothers for $34.5 million (Chiriguayo). Adobe now claims that 90% of the world's creative professionals use Adobe Photoshop (Adobe *Fast facts*).

Aside from Photoshop's illustrious beginnings it has since demonstrated many potential uses. This includes photography improvements, restoration, digital paintings, graphic design, image writing, project layout, branding, web design, GIF making, video editing, digital compositing, and document production (Edelmayer) (*Uses of Photoshop*).

In the following sections we will explore a few commonly used Photoshop features.

Figure 1: The author and a friend photoshopped into a "science fiction movie" (image by Scott Dills)

A few techniques for document building in Photoshop

Figure 2: Fabric marketing banner (image by Scott Dills)

A hallmark of Photoshop's ingenuity is the use of layering. Graphic artists use layering to render composite images that employ many different design objects.

The banner concept in **Figure 2** possesses twenty-three separate design objects. This includes texture elements, enclosures, individual branding icons, a QR code, text, and artwork.

It was rendered at 300 dpi (pixels per square inch) and designed to include a 1-inch bleed on the left, right, and top margins. A 3-inch bleed was used on the bottom margin.

Printing companies determine the bleed specifications. Bleed allows space for the fabric to be cut. It also creates the illusion that an image continues off the side margins.

The end-product was printed on a durable waterproof fabric measuring 8 x 3-feet.

A closer examination of the design will reveal how layering creates a three-dimensional image that is both engaging and pleasing to the eye.

In the background, the letters GB can be seen. They were rendered as a vector high resolution image, then duplicated across the ground in rows of 3 x 9.

A slightly darker color blue was used to offset the background, then Photoshop's opacity controls were employed to make the letters translucent. This creates the illusion of texture on the image.

The ordering of the layers is also significant. On **Figure 3** you can see the blue background is the

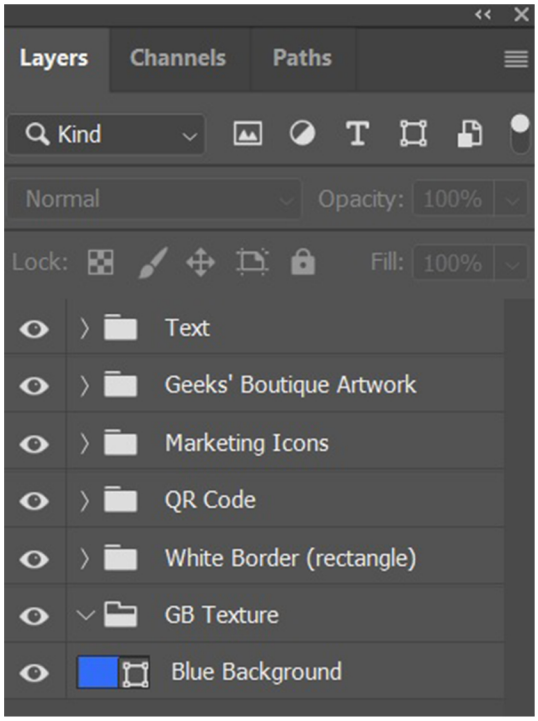

Figure 3: Layers panel from Adobe Photoshop CC 2019

bottom layer, followed by the field of GB texture, then the white rectangular border, the QR Code, marketing icons (i.e. iTunes, Facebook, etc.), the Geeks' Boutique artwork, and finally the readable text.

Another useful feature of Photoshop is the ability to resize, reshape, and orient images (see **Figure 4**).

Its preferable to select the highest resolution images available. Once imported, it can then be turned into a "smart object." Smart objects are vector images, meaning Photoshop will attempt to maintain the maximum possible resolution at any size.

This prevents pixilation and keeps your productions snappy. After a desired size has been achieved the image can then be rasterized to reduce file size (Patterson *Smart Obiect*).

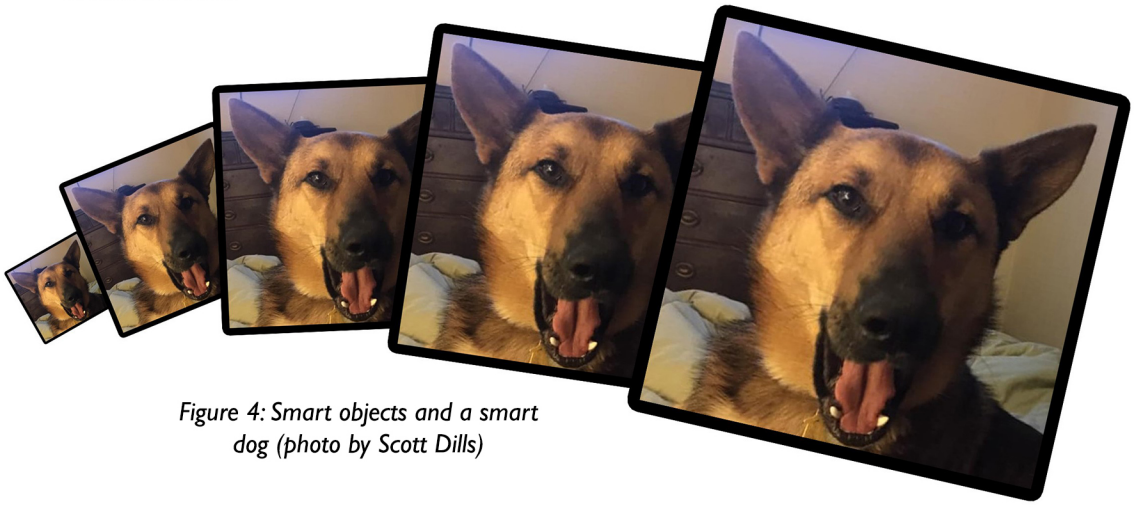

Figure 4: Smart objects and a smart dog (photo by Scott Dills)

A great implement in Photoshop's tools is the eyedropper (see **Figure 5**). This is useful for creating cohesion within a document.

Simply select a color in a picture to color-match. Photoshop will allow the user to utilize that specific color in other features of the document (Patterson *Colorful*).

Figure 5: The background was color-matched with the blue shirt (image by Scott Dills)

Layering can also be used in more traditional document production such as the border that is used in this white document!

Stroke is another useful feature of Photoshop. It allows you to place a border around any object (including text). This is especially useful if your heading does not contrast well with the ground. "Busy" backgrounds will also require this feature.

Find a color that adequately contrasts (especially black or white) and apply it to a given text. The stroke will provide contrast and delineate an image against the background. **Figure 6** is an example of the different thicknesses of stroke (Patterson, *Strokes*).

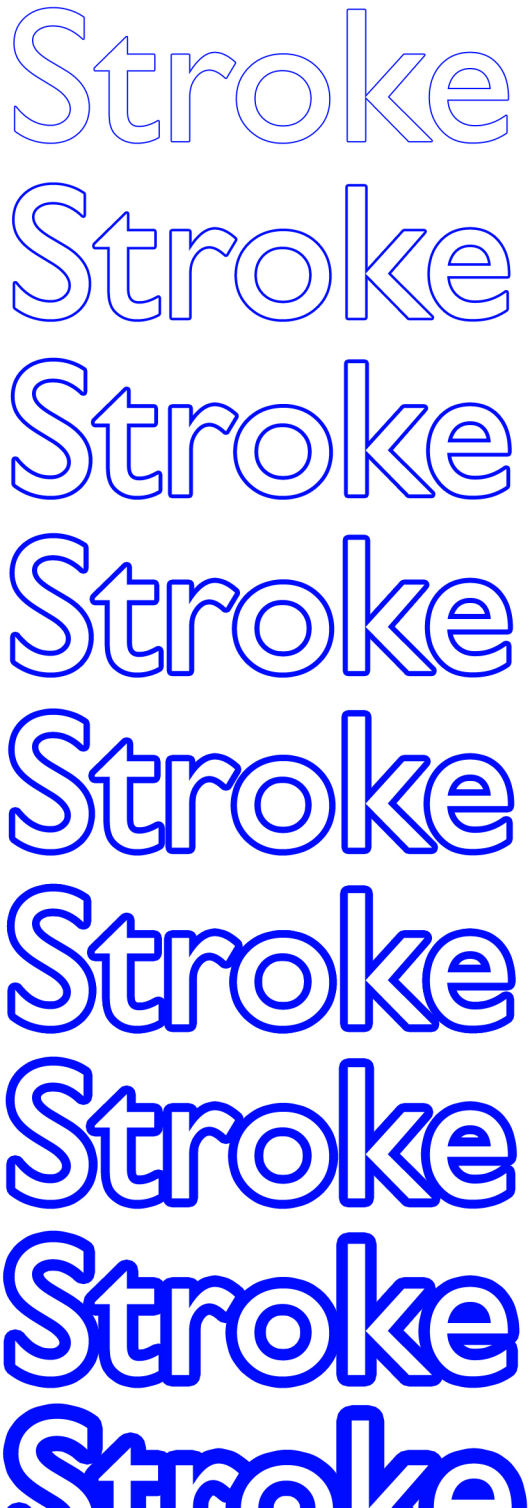

Figure 6: Stroke can be any color and any size. It can start as small as one pixel and range to infinity. However, Its utility diminishes as the stroke size increases. If the blue stroke was not present, these words would be invisible on the page.

Digital Compositing

The original intent of Photoshop was to allow filmmakers to place actors in "strange new worlds" too expensive for practical set effects. Each frame of film can be meticulously managed and altered to enhance believability.

Digital compositing creates the illusion that people, places, and things are existing in the same space and time. See **Figure 7** for an example of how compositing works.

Figure 7: Starting with #1 and working clockwise to #5 a composite is made of pictures #1-4 (composite created by Scott Dills)

Writers already carry a heavy responsibility to remain within ethical boundaries.

Deepfakes and ethical complications

Graphics and visual imaging software do present some unethical situations. A famous example was the onscreen resurrection of character Grand Moff Tarkin, played by Peter Cushing in the 1977 film *Star Wars: A New Hope*.

Lucasfilm visual effects engineers used the visage of actor Peter Cushing in the 2016 film *Rogue One: A Star Wars Story*.

The character's revival was rejoiced by most fans, however some critics recoiled at the use of a deceased actor's image. Cushing died in 1994. (see **Figure 8 & 9**) (Pulver).

Figure 8: Peter Cushing as Grand Moff Tarkin, Star Wars: A New Hope, 20th Century Fox

John Knoll allayed concerns, stating that the deceased actor's estate had been consulted before production began. Peter Cushing's family fully supported using the actor's visage in the film.

Coworkers claimed that Cushing would have been thrilled to be featured in a second Star Wars film. He was proud of his work and disappointed that his character did not survive into another installment (Pulver).

A young version of actress Carrie Fisher was also reanimated in *Rogue One: A Star Wars Story*. Lucasfilm president Kathleen Kennedy provided assurances that the late Carrie Fisher was happy with the production (Whitney).

Figure 9: CGI Grand Moff Tarkin, Disney & Lucasfilm

While the two previous examples were sanctioned, a much more alarming internet trend is the emergence of deepfakes.

Deepfakes are false images and productions depicting people and situations with the intent to persuade and deceive general users. These images and videos are manufactured without permission.

A typical deepfake video production involves a proxy actor who closely resembles a famous person (see **Figure 10**). This malevolent misuse of digital imaging platforms has coincided with the recent phenomena *fake news* (Westerlund).

Though most deepfakes are manufactured in video format, photographic examples are ubiquitous across the internet.

A March 15, 2021 article reported the arrest of a Pennsylvania woman who created deepfake images to defame a local cheerleading club. The deepfake creator was identified via her IP address and quickly taken into custody (Sturla). This misuse of photo-rendering software demonstrates a disturbing trend in general user production and dissemination.

Figure 10: Deepfake of George Lucas with the intent to discredit Disney Star Wars productions (Collider Extras)

Hesitant to adopt Photoshop as your platform?

Some technical writing organizations may be wary of equipping their writers with image-rendering software (due to potential malfeasance). While these concerns are valid, a writer's ability to pair the written word with visual rhetoric far outweighs any negative potential.

Figure 11: Adobe Photoshop logo

Writers already carry a heavy responsibility to remain within ethical boundaries.

The addition of image-rendering software makes a writer an even more valuable contributor. A legitimate concern is the cost of the Adobe products themselves. But when you look at the details, is this really a concern?

The entire Adobe Creative cloud subscribes for $599.88 a year (or $52.99 a month).

While small business owners may be hesitant to subscribe, the package contains twenty distinct Creative Cloud programs including the most recent edition of Photoshop, Illustrator, InDesign, Dreamweaver, Premiere Pro, and Acrobat Pro.

This price is reasonable considering the platform's far-reaching utility (Adobe).

Also, to address the unintended misuse of Photoshop, Adobe is now implementing the Content Authenticity Initiative. This program partners industry leaders to design products that identify potentially fraudulent material. Any composite picture manufactured via Adobe Photoshop will contain metadata about the origin of an image, and if it has been modified. This metadata will be encrypted to prevent deepfake authors from modifying the details (Rosenthol, 6-8).

Figure 12: Adobe Creative Cloud

Conclusion

Over the course of its relatively short existence, Photoshop has demonstrated its powerful collection of tools and features. Its utility and usefulness have transcended the initial needs of its creators, making it one of the most versatile platforms for visual design on the market. Though it provides fertile ground for misuse, its ability to broaden the scope of effective communications makes it an invaluable resource. Every organization that employs technical communicators and creative architects should make budget for this truly exceptional program. This entire document was rendered in Photoshop using layering, smart objects, color-matching, stroke, and compositing.

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