CREATE A CUSTOM VIRTUAL BACKGROUND FOR YOUR ZOOM CAMERA IMAGE

By John Krout

During the 2020 era of social distancing, teleconferencing has become a valuable method to maintain social continuity of all sorts of organizations. Fortunately, the free Zoom teleconferencing app can be used on Windows and Macintosh computers as well as Android and iOS devices.

Recently a local computer club held its first-ever Zoom virtual meeting, and drew almost 50 participants. Many were first-time Zoom users. Some of the members even had webcams available so they could be seen in the Zoom meeting.

One of the veteran users had arranged to display a very attractive landscape scene from Italy behind her. During the meeting, another participant asked how that could be done, and the veteran Zoom user explained. I tried it immediately, since I have many digital photos available, and entertained the meeting participants by switching virtual background photos several times. I do not recommend frequent virtual background switching for everyone.

WHY CREATE A ZOOM VIRTUAL BACKGROUND?

A virtual background image can be very valuable for a couple of reasons. For one thing, a virtual background can hide personal items or clutter that is the normal state in some homes. For another, a virtual background can show something of your career or personal interests.

This is a tutorial on how to accomplish creation of a virtual background for your own camera image as seen during Zoom meetings.

I captured the accompanying images of the Zoom application on a Windows computer. The position of key user interface items may differ on Macintosh computer, but I suspect the gear icon will be visible and the virtual background settings behavior will be similar. I have no idea if the dialog window for choosing a background image will be similar.

I searched for and could not find a similar feature in the Android version of Zoom on my tablet and phone. I suspect the CPU on most portable devices simply is not powerful enough to do the job.

The ability to identify a person as the camera subject and substitute a background image was limited to powerful Chromakey hardware in the 1960s, used by broadcast networks and stations. That is where the term Blue Screen and later Green Screen originated. A specific color in the TV signal was recognized by the electronics, and the electronics replaced every pixel containing that color with substitute video. That technique later became available through the pioneering Video Toaster desktop suite in the late 1980s.

In this century, it became available to the masses through video editor suites such as Pinnacle Studio, Vegas and others. Now it can be done through OBS Studio software, again using a green screen for background, and Zoom. Zoom also allows use of a green screen background but does not require such a background.
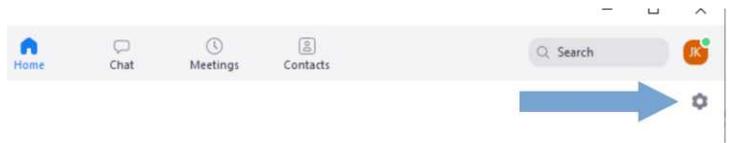
HOW TO SET UP A ZOOM VIRTUAL BACKGROUND

These instructions assume (1) that you have the Zoom application installed on your computer, and (2) that you have a webcam attached to your computer, and (3) that you have at least one digital photo on your computer that you wish to use as a Zoom virtual background.

So here is how you can create a virtual background for yourself using Zoom. The screen capture images below were made on a Windows 10 computer. The Zoom application on Macintosh computers should look and feel roughly the same.

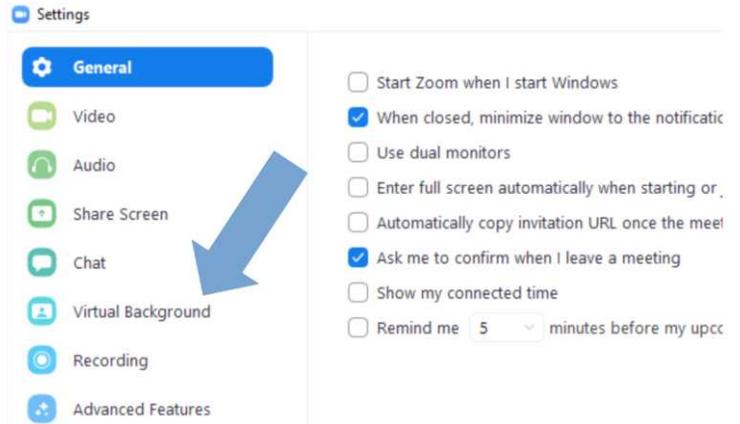**Step 1.** Start the Zoom application.

A portion of the Zoom application Windows computer version startup screen is shown in **Illustration 1.** I added a pointer to the Gear icon. That is the point for accessing the Settings of the Zoom app.

Illustration 1.

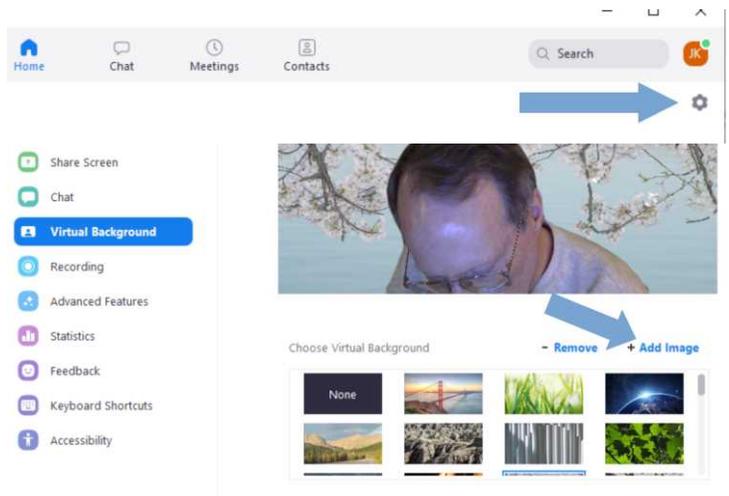**Step 2.** Click on the Gear icon to access the Settings screen of Zoom.

The Setting screen is shown in **Illustration 2.** Note that among the various types of settings is Virtual Background. I placed a pointer in Illustration 2 to draw your attention to the Virtual Background choice in the menu.

Illustration 2.

Step 3. In the menu of Settings appearing at the left, click on the Virtual Background settings choice.

The Setting screen changes to display your camera image as shown in **Illustration 3**. In this particular screen capture it shows me with a virtual background I had set up previously. Below the camera image, there is an **Add Image button**. I placed a pointer in the illustration to draw your attention to that button.
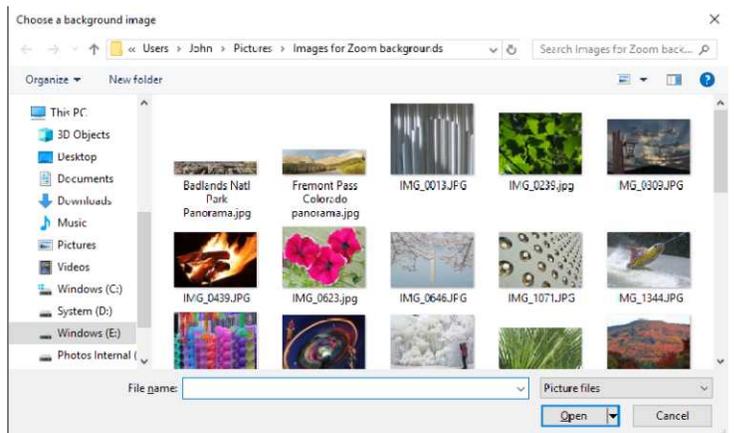
Below the Add Image button, there is a list of Background Photos, including both the photos provide by Zoom and any you might have added.

Illustration 3.

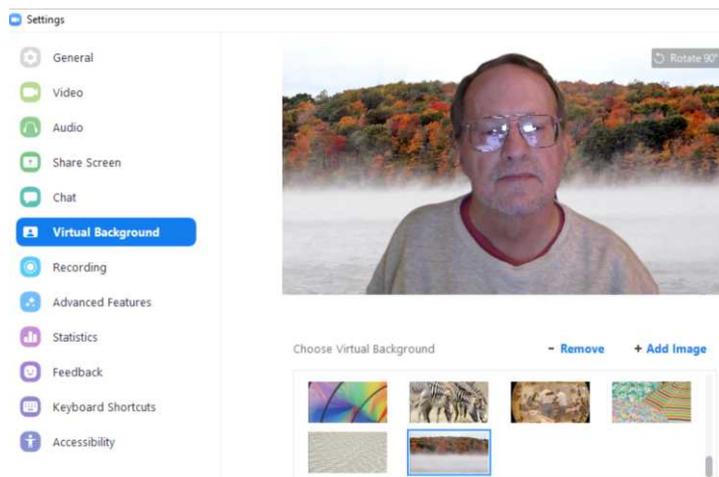**Step 4.** Click on the Add Image button.

The application opens a standard file choice request window, entitled Choose a Background Image, allowing you to browse to your photo directory, then browse to your desired photo, and click on that photo. Then click on the Open button to confirm your choice. In Windows, the Open button is in the lower right corner, as shown in **Illustration 4**.

Illustration 4.

Step 5. When you click on that Open button, the window closes and the Settings depiction of your camera image changes to show you with the new virtual background image behind you. In **Illustration 5** you see my camera image with my new virtual background. The selected photo is now also included in the background photos list.

The Zoom app also provides some sample virtual background images, appearing as icons below the Add Photo button. Your newly selected photo is included to that group of photo icons by the Zoom application. You can switch the virtual background at any time simply by clicking on any one of the images seen below the Add Photo button. If your list of background photos is large (mine is), you can scroll up and down through the list.

Illustration 5.

A TIP ABOUT FLIP

One thing I learned from this experience is that Zoom displays each virtual background photo reversed left/right, like when you see yourself in a mirror. So I decided to copy all my selected virtual background photos into a directory specifically for that purpose. In that directory, I flipped each photo left/right. I avoided doing that to my original photo files.

MS Paint is one widely available Windows application that can accomplish left/right flips for photos. In Paint, find the menu group called Image, in which the Select and Crop options appear. Find the Rotate option in that group, and click on the down-arrow beside that word. A menu appears including the choice Flip Horizontal, as shown in **Illustration 6**. Choose the bottom choice, Flip Horizontal, to create the mirror image of the photo. Then Save it, and you are done!

I hope you have some fun with this Virtual Background capability.

The author thanks Leti Labell for her explanation of the Zoom Virtual Background setup technique.

ABOUT THE AUTHOR: John Krout began taking photos in the mid-1960s and has been using SLRs since 1970. He switched to a digital SLR in 2002 and, after that, won first prizes in the state fair photo contests of Delaware and Virginia, as well as as first prize and a second prize in the Association of Personal Computer User Groups (APCUG) international digital photo contest in 2018. He earned a master degree in computer science from Virginia Tech,and recently retired after a long career in federal contracting, mostly as a software engineer developing or maintaining federal government computer systems. He has been writing about uses of personal computers since 1983.