## How to Use Camera Mouse on a Mac with Parallels

Dianne Theriault, PhD student, Boston University

Although Camera Mouse cannot be used with Mac OS directly, it can be used on a Mac with virtualization software, such as Parallels 4.0, with a Windows installation. These instructions are setup instructions for how to use Camera Mouse with a Windows installation running inside of Parallels 4.0 for the Mac. It is possible to use other virtualization software (such as VMWare) as long as it supports USB 2.0, but we do not cover VMWare here. We assume that you are using Apple branded hardware that includes an integrated camera, such as an iSight, along with Parallels 4.0.

First, obtain and install the Parallels software, and installation media for some version of Windows supported by Camera Mouse. Refer to the Parallels documentation (<a href="http://www.parallels.com/products/desktop/pd40\_docs/">http://www.parallels.com/products/desktop/pd40\_docs/</a>) for how to create and set up a virtual machine with Windows. "Getting Started with Parallels Desktop" will contain step by step instructions to set up a virtual machine, and the User Manual will cover some other topics that we will address later. At some point during the installation, you will be must install the Parallels Tools to enable the USB support and other features. Page 92 of the User Manual discusses how to install the Parallels Tools in a Windows guest operating system. You may also install Camera Mouse at this point.

Once you have created the virtual machine, and installed Parallels Tools, the next thing to do is to set up the USB support. This is covered on pages 123, 191, and 213 of the Parallels User Manual. To start, power off the virtual machine. In the Parallels starting, there will be a listing for the Windows virtual machine. Click on the button for the Windows guest operating system where you want to use Camera Mouse. This will bring up a large window with some buttons at the top. Do not start the virtual machine.

The first step is to add a USB controller (p 213). Click on the "Configure" button, which appears with a little wrench icon. In the Virtual Machine Configuration window, underneath the pane on the left, there are two buttons: a plus '+' and a minus '-'. Click on the plus '+' button. (It may appear grayed out, but click on it anyway.) This will bring up a window titled "Add Hardware Assistant". Press the continue button on the welcome screen and you will see the next screen that will have a box titled "Select a Device" and a list of possible items. Choose "USB Controller" in the bottom row and click "Continue". Then click the "Add Device" button. You will be taken to the screen for the USB Controller. Make sure that the check box next to the word "Enabled" is checked.

If you have already added a USB controller, ensure that it is enabled (p 191), go into the left panel of the configuration window, select the "USB Controller" item and make sure that the check box next to the word "Enabled" is checked.

The next step is to disable one of the Windows integration features of Parallels. While the Configuration window is open, underneath the "Features" group, Select the "Services" option. Un-check the box that says "Automatically capture and release the mouse pointer". This is extremely important to allow Camera Mouse to control the cursor while you are using Windows. This feature is very nice if you are using Windows normally, but it interferes with the ability of Camera Mouse to control the cursor. While you are using Windows, with the feature disabled, you will need to press "Ctrl + Alt" at the same time in order to release the mouse pointer so that you can use it in Mac OS.

Next, start the virtual machine. Under the Devices Menu, go to the "USB" submenu. You will see a list of devices. Select the "Apple Built-in iSight". If you go to the USB sub-menu again under Devices, there should be a check mark next to the Apple Built-in iSight. Under the "View" menu, make sure you have selected either "Window" or "Full Screen". "Full Screen" is preferable for using Camera Mouse, since it will give you more space to use applications.

Finally, inside Windows, start Camera Mouse. The light for the camera should come on and you should see the live video of your face. You are now ready to use Camera Mouse! Select a feature on the face to track, and move the mouse

If you want to stop using Windows and switch to using Mac OS, you will need to press 'Alt' and 'Ctrl' at the same time to release the mouse pointer. Then, you will see a white cursor for the Windows cursor and a black cursor for the Mac OS cursor. If you leave camera mouse running while you release the cursor to Mac OS, you will actually see Camera Mouse continuing to control the cursor in Windows. To switch back to using Windows, click the Mac cursor anywhere inside of the window where the Windows virtual machine is running.