

How to Create and Submit Videos to Eyetube.net

BY CHRISTOPHER E. STARR, MD, AND SZILÁRD KISS, MD

For the year-end, “Best of 2010” edition of *Cataract & Refractive Surgery Today*, I (Christopher E. Starr, MD) was asked to provide my favorite surgical pearl of the year. Although there were numerous great pearls I learned in 2010, many from the pages of this magazine and the videos on Eyetube.net, my favorite has to be phacoemulsification of the tear film for eradicating bothersome and potentially dangerous oily meibomian and tear film debris before cataract surgery. The pearl, which is credited to Robert Cionni, MD, is simple and effective yet sort of odd and a bit shocking at first (which is why I, and everyone I have taught it to thus far, find it so intriguing). Upon learning of it, most people, myself included, are initially incredulous that it actually works. To prove its efficacy, I created “Tear Film Phaco,” a short video of the technique, which can be viewed on Eyetube.net (<http://eyetube.net/?v=smibi>).

The objective of this month’s column is not to promote my video but to inspire you, the reader, to create and submit your own videos. By walking you through the steps I used to create the “Tear Film Phaco” movie, you will see just how easy it is to make a high-quality surgical video using technology you likely already own or have access to.

GETTING STARTED

The first step in making a surgical video is, of course, filming the live surgery. At Weill Cornell Medical Center in New York, our ophthalmic ORs are equipped with Ikegami MKC-507 (Ikegami Electronics USA Inc., Maywood, NJ) cameras for capturing video directly from the microscope. The video, while simultaneously projected on an external monitor, can be recorded directly to a computer’s hard drive via an IEEE 1394 connection like FireWire (Apple, Inc., Cupertino, CA). Once the FireWire connection is made with the computer (in my case, a MacBook Pro [Apple, Inc.]), iMovie [Apple,



Figure 1. Dr. Starr captures surgical video in his OR with a MacBook Pro connected to an Ikegami MKC-507 via a FireWire cable.

Inc.], which is movie-editing software that comes free with every Apple computer, immediately recognizes the camera and enables live video capture (Figures 1 and 2). With one click of the capture button, the raw surgical footage is recorded in real time as a new “event” in iMovie. Since video footage takes up a lot of hard drive space, I recommend having ample free space on your internal drive or connecting a larger external hard drive while you record.

EDITING YOUR VIDEO

Working With Raw Footage

The real fun begins when you transform your raw footage from the event library into a polished movie or “project,” as it is called in iMovie (Figure 2). When starting a new project, you will be greeted with an initial screen, which allows you to choose a theme (in “Tear Film Phaco” I used the comic book theme) and aspect ratio (I used standard 4:3 since that is the native aspect ratio of our recording equipment). The first step toward

completing your movie masterpiece is editing down the typically voluminous raw footage. This is easily accomplished by selecting short sections of video from the event library (lower window) and dragging and dropping them into your project in the upper left window in iMovie. Each section becomes a clip in the project, and each clip can then be endlessly edited, trimmed, arranged, and rearranged very easily and intuitively from within the project editor pane.

Special Effects

Once you have the video clips arranged to your liking, you can spice up the movie by adding transitions, effects, and text to clips (also called *titles*) and, as I did in "Tear Film Phaco," adding a voiceover track and background music. To add voiceover narration (a requirement for Eyetube.net submissions), you simply click the microphone icon, which is just below the project editor pane, and start recording. Since most computers have a built-in microphone, you do not need an external one. However, for the highest-quality audio, a USB-powered microphone is recommended. I used the USB2200a cardioid microphone (sE Electronics, Hitchin, Hertfordshire, United Kingdom). After a 3-second count-in, begin recording your voice over the video in real time as the clip plays. Once finished, listen to your audio track. If you do not like it, erase it and start again. It is that simple. Although unnecessary, adding background music to your video is a nice touch and is as simple as clicking on the iTunes (Apple, Inc.) tab from within iMovie, selecting the song, and dragging it into the appropriate clip in your project. From there, you can easily set and normalize the volume and edit its timing and duration. In "Tear Film Phaco," I used two songs (both recorded by my strictly-for-fun band *Vitreous*), one that plays under my voiceover at low volume and the other that plays during the end credits at higher volume. Please note that it is important not to inappropriately use any copyright-protected material in your movies; otherwise, they will likely be rejected by the editorial staff. If you want to add a photograph or still image to your video, it can be done just as easily by clicking on the iPhoto (Apple, Inc.) tab in iMovie and dragging your picture to the appropriate location in the movie timeline.

The Finishing Touches

No Hollywood film is complete without end credits, so in that spirit, I added an extra 24 seconds of credits to "Tear Film Phaco." To do this, I selected the ripple transition, which segued the video into a text title called *scrolling credits*. You can choose from a variety of



Figure 2. Screenshot from iMovie during the making of "Tear Film Phaco."

titles and transitions from within their respective iMovie browsers. By double clicking on the project clip, its "inspector" pops up, and from there, you can select a background color or theme. You can then add text and select fonts, colors, and sizes from within the video pane in the upper right corner of iMovie. If you want to overlay text to any of your video clips, simply drag the title of your choice from the title browser, drop it onto the project clip, and then type the text from within the video pane. Simple.

SHARING YOUR VIDEO

Once you are satisfied with your completed movie, you will want to share it with the world, and that is where Eyetube.net comes in. First, save your movie in a file format useable by Eyetube.net. Under the "share" menu in iMovie, click the "Export using QuickTime tab" and save your movie to your computer in any of the acceptable formats, including but not limited to .mov, .avi, or .mp4. Then, at the bottom of any page in Eyetube.net, under the heading *Other Pages*, you will see a link called *Submit a Video*. Follow the simple directions and upload your video. (There is a 4-GB size cap, so be efficient with your editing!) After being cleared by the editorial staff, the video will be live on Eyetube.net within a few days, and then the whole world will be able to learn from you. ■

Section editors Szilárd Kiss, MD, and Christopher E. Starr, MD, are assistant professors of ophthalmology at Weill Cornell Medical College in New York. They acknowledged no financial interest in the products or companies mentioned herein.

Dr. Kiss may be reached at szk7001@med.cornell.edu, and Dr. Starr may be reached at cestarr@med.cornell.edu.

