

The Kid Stays in the (Moving) Picture

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HD clips open up creative possibilities when working in SD.

We recommend to folks in the market for stock footage that if they can get the high definition (HD) version now, they should – even if their jobs are currently all in standard definition (SD). For one, HD is certainly the future, so buying HD clips now helps prevent your investment from becoming obsolete. Secondly, the extra pixels available in an HD clip open up many additional possibilities when working in SD: You can re-frame the shot, perform pan and zoom moves on it, and also perform creative tricks such as simulating the popular “Kid Stays in the Picture” look. We’ll discuss some ideas along those lines here.

Preparing the Image

The idea behind this trick is turning a two-dimensional image into a three-dimensional diorama that a virtual camera can then be moved around. If you’ve seen a video or film shot of a photograph where the subjects suddenly start to drift in relation to each other, you’ve seen this trick.

Images that work well for this trick have a few important characteristics:

- There are two or more subjects in it that are clearly different distances from the camera (such as a person standing in front of a piano), but which are not physically connected (i.e., the person’s hand is not resting on the piano).
- The foreground subjects have cleanly defined edges. Hair is the biggest issue here; it is far easier to isolate a person with a bald head or tightly plastered hairdo than one that has frizzy, see-through hair.
- Your source image should be bigger than the final video or film frame, so that you can push in on and move around the subjects. Otherwise, they will become soft and fuzzy from being scaled up too much. Photographs or scans are often used as the source, but of course you can use an HD video frame in place of a photo if the final output is SD or web video.

Once you have chosen an image, you need to do some work preparing it. This breaks down into three steps:

- Making a copy of the main image for each subject you wish to isolate.
- Cutting the subject out so that each layer contains just that subject, and nothing else. You can use masks in After Effects, paths in Photoshop, or whatever tool you are most comfortable with.
- Creating a “background” version of the original image where you’ve painted out the new foreground subjects that you’ve isolated on other layers. This is usually done by cloning other parts of the original image to cover, either in Photoshop or by using the Paint and Clone tools in After Effects. You don’t have to completely remove the original subjects; quite often, it’s enough to just chew away their edges. The main goal here is to be able to move the foreground subjects a little bit, and not reveal behind them a second copy of the same subject.

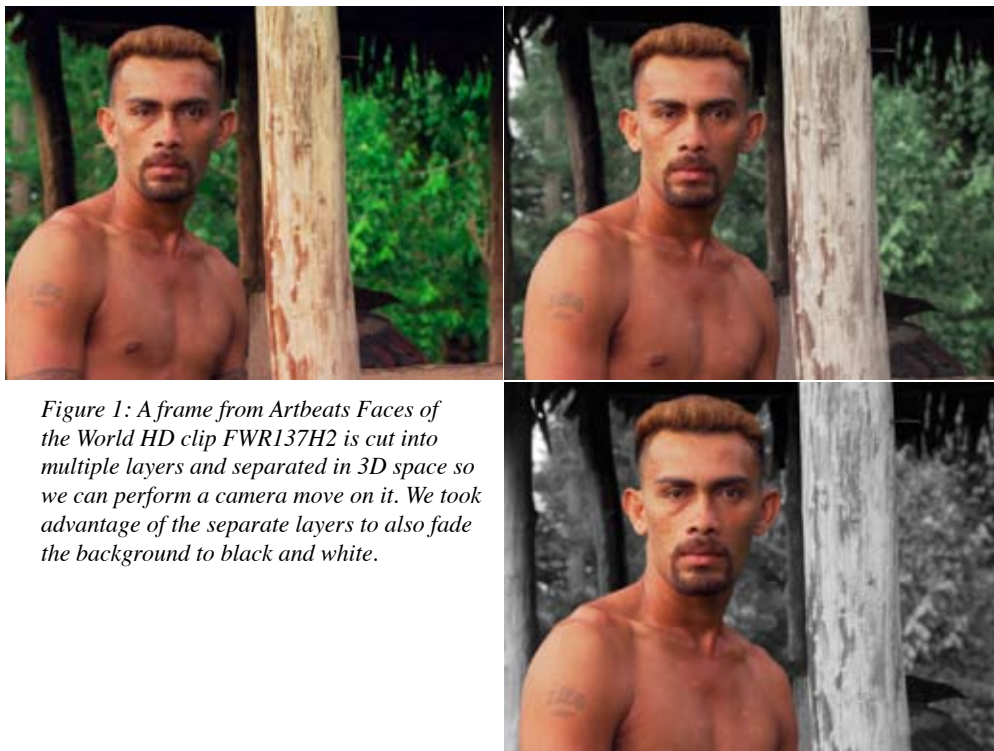


Figure 1: A frame from Artbeats Faces of the World HD clip FWR137H2 is cut into multiple layers and separated in 3D space so we can perform a camera move on it. We took advantage of the separate layers to also fade the background to black and white.



Figure 2a



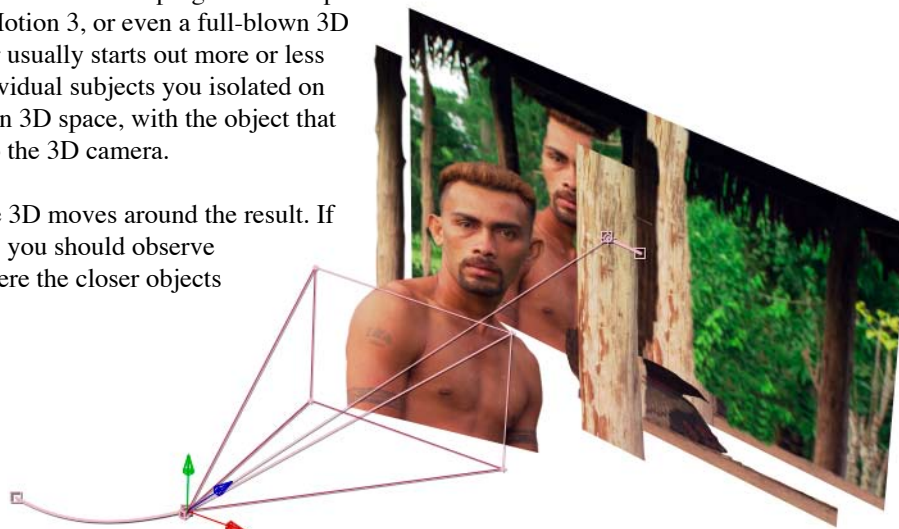
Figure 2b

Figure 2: We duplicated the frame, and masked out objects we wanted to isolate – one per layer (a). We then cloned out portions of the original frame to create a new background (b). We cloned just enough so that we could move the camera left or right slightly without revealing the original objects in the background.

Once you've finished doctoring up the original image or frame, you need to bring the resulting layer stack into a program that supports 3D space, such as Affects, Motion 3, or even a full-blown 3D application. The background layer usually starts out more or less centered to the camera, while individual subjects you isolated on their own layers are then arrayed in 3D space, with the object that should be nearest to you closest to the 3D camera.

You can then perform some gentle 3D moves around the result. If you just pan left/right or up/down, you should observe a classic “multiplaning” effect where the closer objects

Figure 3: The layers are then separated in Z space, and a 3D camera pans and zooms around them.



appear to move faster than those further away; more common is to pivot the camera around the stack of layers to reveal more complex changes in perspective. How far you can move the camera depends on how good of a job you did cloning the foreground subjects out of the background layer. Enabling “Auto Orient Layer Towards Camera” can also help maintain the illusion.

Note that you can also apply effects to the individual layers after you have cut them apart, perhaps to draw attention to the “hero” layer.

The Video Variation

By using video rather than a still image as a source, you have the option of using full-motion video to come into or go out of this effect. The trick comes in bridging the transition between the flat video and your dimensional move. Here is one approach to pulling this off:

- Play back the video up until the frame you cut apart.
- When performing the 3D camera move around your layers, start with all layers at the same distance and scale, in essence recreating the original flat image. Then animate the layers apart as the camera starts to move.
- Crossfade from a freeze frame on the video to your camera move. To further smooth the transition, either start the camera move dead-centered on the layers, or put your motion video in 3D space as well, located at the same position as the background in your layer stack.

The resulting effect has the general feel of the “bullet time” scenes from the movie *The Matrix*, where time seems to stand still as the camera moves around it – very surreal, and a lot less expensive than setting up a Flo-Mo camera right to capture an actual Bullet Time shot!



Figure 4: This sequence shows how we flow from moving video (a,b) into a 3D move on a still frame (c,d). Footage: Artbeats Surfing SUR123.

Zooming Out

You may be tempted to try this on moving video, rather than going to a freeze frame. This is tricky. If the outlines of your subjects change from frame to frame, you have to change their cutout masks as well. Plus you need to clone every frame of your background that has motion in it. This is hard to do without getting edge “chatter” and other artifacts that quickly give the effect away. That said, many of the subjects in the Artbeats Faces of the World, People, and Portraits collections do hold their poses very well, so feel free to give it a shot!

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*Chris and Trish Meyer are the founders and owners of CyberMotion (www.cybmotion.com), an award-winning motion graphics studio in Los Angeles that has created a wide variety of work for film, broadcast, corporate events, and special venues. They were one of the original development sites for After Effects, wrote the highly-acclaimed books *Creating Motion Graphics* and *After Effects Apprentice* (2007), and are long-time Artbeats users.*