Blue Screen Tips and Insights

Starlite Studios held a workshop on techniques, tools and tips for blue screen on Saturday, August 17, 1996 at their San Jose studios. The following are some of the more significant insights they shared with attendees.

Blue screen isn't just being used for film and video special effects. Increasingly it is also being used to provide the added realism demanded by today's CD-ROMs and video game companies. The tips that we are providing here today will help you minimize your costs, and focus more on creating an effect, to give that "wow" to your film, as opposed to spending your entire budget on correcting mistakes that distract from your vision.

Blue screen technique can be done with blue, green or red backgrounds. Blue is most common background, followed by green, and rarely by red. Typically the actual screen is wall and floor painted with one of a few special paints. However, with today's technology, it is possible to do exterior shots when the sky is used as a blue light backdrop. Blue screen is mostly commonly done in film, whereas green screen is usually only used with video, when you have a subject with a lot of lighter colors.

Starlite recommended working with mixed light for blue screen work, using Kino Flo florescent fixtures to provide even fill lighting of the blue screen background, and incandescent key lights to light the subject. To use mixed light, it is necessary to match the color temperatures of the different sources within 300 to 400 K, so they typically work at 3800 K, the temperature of the tungsten lights.

Lighting ratios refer to the foot-candles of the background versus that of the subject. When you are working outside, you might have a 2:1 lighting ratio, say 400 foot-candles for the background and 200 foot-candles for the subject. But for interiors, 1:1 ratios are safe for blue screen, allowing you to drop the background illumination down a stop.

The most significant way that a filmmaker can reduce their blue screen costs is to be carefully to record all aspects of the shot to be incorporated with blue screen. Sources of light, shadows, color temperature, distance, height and movement of the camera from the subject, recording all this information on a shoot sheet will save considerable time when doing blue screen work in the studio. Shooting a checkered two foot cube at a known location for each shot in the field, like you would do a clapboard, is one useful technique to capturing much of this information. Other ways to minimize costs are to avoid shooting feet, where the actor has to be locked down to the ground; and to do medium shots where you lock your camera down.

In summary, blue screen work is not brain surgery. To do successful blue screen work simply requires understanding how it is done, and doing careful and methodical work, such as getting your matching ratios and light temperatures correct.