**VR STORYTELLING “BEST PRACTICES”**

VR production techniques are totally unique to the medium. Shooting and editing approaches run counter to many of the ingrained methods for 2-D photo and video. Fortunately, the storytelling principles are generally the same: effective VR will have great visuals, great characters, and a narrative thread tying them together. While VR storytelling is too new for many true best practices to have emerged, following are notes about what we think works, and what doesn’t, for VR production and storytelling.

SHOOTING

- As a rule of thumb, hold a scene twice as long as you would for a 2-D video shoot. A viewer needs time to orient to a scene and look around, so scenes need to be filmed and edited to give a viewer that time. When possible, add additional “orientation time” at the beginning of a clip before any key elements begin.

-Overall shot composition: think of the camera as a person’s head, because when they view the video on a headset, that is the sensation they will have. Place the camera in a natural space with a natural eye line that a person would have if he/she were there physically. Placing the camera too low or too high is one of the most common pitfalls in shooting VR.

-Distance: In VR distance is amplified so there is a very specific sweet spot for camera placement. Generally, your main action points need to be no closer than 5 feet and no farther than 10 feet from the camera. The whole point of VR is to give a viewer a natural sense of presence in a situation. On a headset, the scene is literally projected onto your eyes. So any action too close is overwhelming – the overall effect for the viewer will be akin to sitting in the front row of an IMAX theater.  Anything occurring far away simply gets lost.

-Motion: Another big challenge. Any shaking or errant motion that the viewer cannot control is disorienting in VR and can give viewers motion sickness. In almost every case, 360 rigs need to be stationary or locked off on a fixed moving object such as a car, plane, bike, etc. Use handheld shots sparingly and use accessories that help stabilize the rig and try to limit movement. This surfing video, one of our favorite 360 videos of the year, is a great example of how to pull it off (and note how they masked out the rig in post-production): <https://www.youtube.com/watch?v=7gjR60TSn8Q>

It is very hard to make head-mounted shots work unless the person wearing the rig can keep their head as stationary as possible. Remember, in 360 the viewer does the looking around. It’s akin to them controlling the camera. So if the camera is “looking around” at the same time, it can be very disorienting.

-Distortion: Especially with rigs which use fisheye lenses, distortion will be apparent especially when viewed as 2-D 360 on desktop. It is mitigated a lot on headsets, but still needs to be taken into account when framing your shots.

-Centering: while a relative term for 360, remember that a viewer only sees a portion of a scene at any given time. You still need to center your shot so that when the video launches, the viewer is oriented. Some players have custom-center functionality, but doing this during filming helps avoid having to center the shot in post-production, which is time consuming.

-Give the viewer visual reference points to prompt them to look around. Try to stage the scene with action occurring fairly close up in the center, with additional action on the left and right, within the viewer’s field-of-view, and potentially behind. Utilize an environment’s natural perspective lines to further enhance the video’s focal point which subconsciously encourages the user to look in a direction. In other words, try to put the viewer in the middle of something.

-Time lapses work really well in 360.

**STORYTELLING TIPS**

How to choose stories to which VR can add value, and pulling off the right technical and editorial approach, is a bit hard to put in a box. Trial and error is very important.

-Keep it simple. You are looking for scenes that stand alone and speak for themselves when you put someone in the middle of them. Most of the 360 videos we have produced are single-scene videos. These should rarely be under :60 seconds, and should run as long as the story dictates.

-Multiple-scene videos are great. Generally, each scene should be no shorter than :15 seconds, but it just depends on the piece. Audio is key to holding scenes together – see next point.

-Audio is crucial. Natural sound is just as key to giving a sense of presence as video. Give the viewer plenty of time to look around – and listen. Audio and narration also are key to holding scenes together. We often use sound bites underneath scenes to create segments. Let it all breathe.

-Record ambient sound whenever possible.  This is critical to setting the scene and creating a sense of presence.  Good ambient sound is as powerful as the visual you are shooting.  Ears don’t blink.

-Interviews: Up close and personal interviews can work well, and group discussions work well, provided that they are in a setting central to the story, or in a place that the viewer could never be. VR gives you great power to put a viewer in a room with a compelling character. VR adds value when you are immersed with compelling subjects in a unique setting. From there, it is all about how you frame the discussion. So far, we have found the best results by getting our subjects to open up and talk about things they are passionate about. Once they get going, it’s like they’re talking to a room full of their friends.

-Mixing 2-D photos and videos into 360 content is a nice flourish if you have the time. Use the Mettle’s Skybox After Effects / Premiere plugin to scale your assets and “insert” them in appropriate ways.

- VR and 360 are different experiences.  We are in the business of creating VR experiences. 360 is a by-product we offer on desktops, tablets and for people who do not yet have a cardboard viewer.

**RANDOM TIPS (AND THINGS WE’VE LEARNED THE HARD WAY)**

No matter what else you do: Test your content in VR! It looks much different than desktop 360. We are producing for a headset and mobile-first audience. Grab a few Cardboard viewers for your newsroom.

-Line of sight: As mentioned above, the camera is a person’s head. It’s very important to keep uniform camera height between scenes. If you change it too drastically from one scene to the next, it’s very disorienting.

-GoPros are notoriously finicky in hot and cold weather. In many rigs, GoPros are out of their cases and particularly susceptible to the elements. We keep spare batteries and chargers in the kits and encourage you to obtain accessories for your rig(s) as shoots require.

-Mounts: you may need a variety of options. You will often find the need to get creative to frame a scene correctly, keep yourself out of the shot, etc.

-Tripods: use the thinnest possible tripod with the smallest footprint. It will be in the downward view. We recommend something like a selfie stick with small tripod feet.

-Keep it simple! See the way your camera does. Pick the right tool for the job by considering the scene, visual obstacles, and the story you want to tell.