Participate in the Star Trails Timelapse Challenge Without a Camera

Complete a challenge using an Android Virtual Device and receive a free Android development course and be eligible for a THETA V loaner camera.

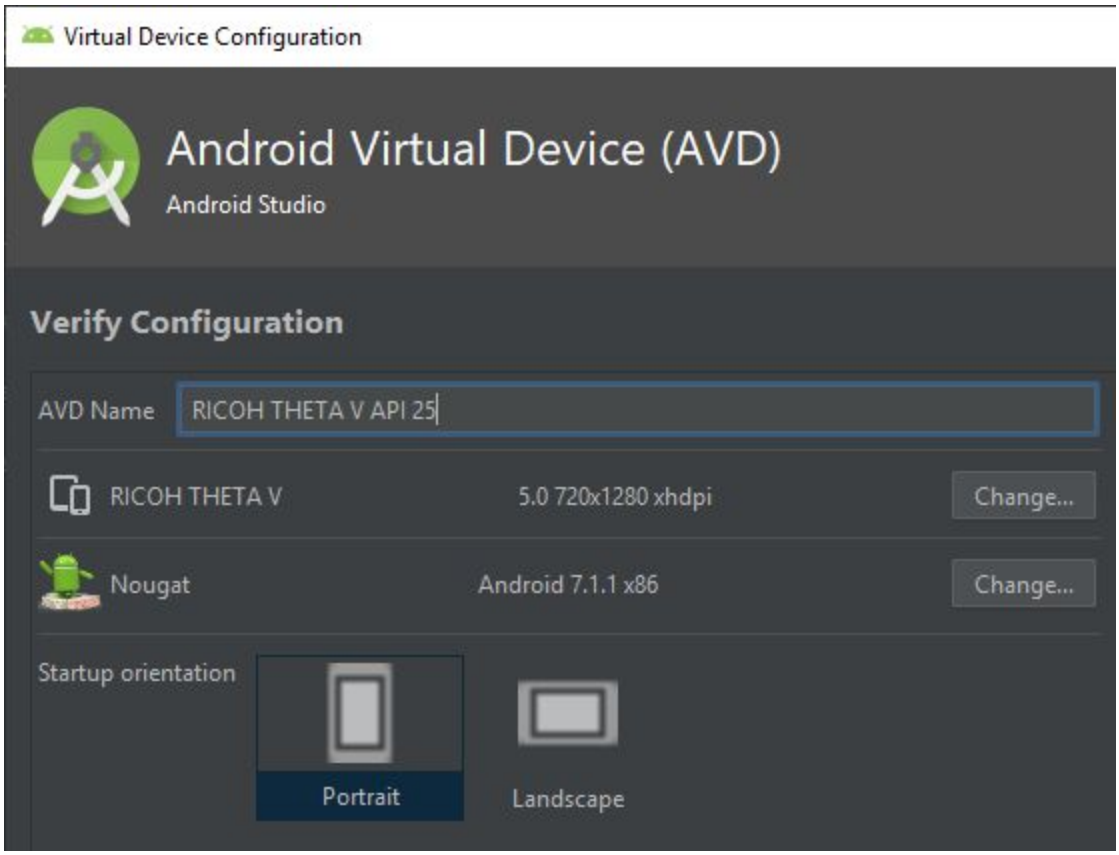
The Challenge

Insert orientation metadata into a dual-fisheye image that we provide using an Android program you develop with Android Studio and test on an Android Virtual Device. Build the apk and send it to us for confirmation.

Steps

1. Register for the Star Trails Timelapse Challenge
2. You will immediately receive links to a stitching app and the sample image above
3. Create an Android Virtual Device (AVD) within Android Studio
4. Use adb push to upload the dual-fisheye image to /sdcard/DCIM on your AVD
5. Write your own program with simulated gyroscope sensor data
6. Submit apk

Android Virtual Device



- 3GB RAM
- Screen Size: 5”
- Screen Resolution: 720x1028
- System Image: Nougat 7.1 x86

Option #1: Orientation Data as XMP Data

Attach the following data to the image as metadata using Photo Sphere XMP Metadata as a reference.

- PosePitchDegrees (up to one decimal place such as 5.7)
- PoseRollDegrees (up to one decimal place such as 5.7)
- RicohPitch (same value as PosePitchDegrees, but with two decimal places such as 5.67)
- RicohRoll (same value as PosePitchDegrees, but with two decimal places such as 5.67)

Option #2: Orientation Data as Exif Data

Set orientation data with ExifInterface. This is one of many articles online using ExifInterface.

Submitting Your apk

If you finish either option #1 or option #2, please submit your apk. Place the apk on a cloud drive such as Google Drive or Box and then send the link to jcasman@oppkey.com

Discussion

There is an active discussion around the dual-fisheye plug-in development here.

Next Steps with THETA V

Once you get a THETA V, you can port your existing Android applications to the camera using this series of tutorials as a reference:

1. How to build Tensorflow apps for RICOH THETA
2. Modify code to work with RICOH THETA Camera API
3. Import RICOH THETA pluginlibrary
4. Port tasks to pluginlibrary
5. Modify pluginlibrary