Free Android Course and THETA V Loaner

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

Note: If you already own a THETA V, please join the Star Trails Challenge to receive the free Android course just for confirming camera ownership.

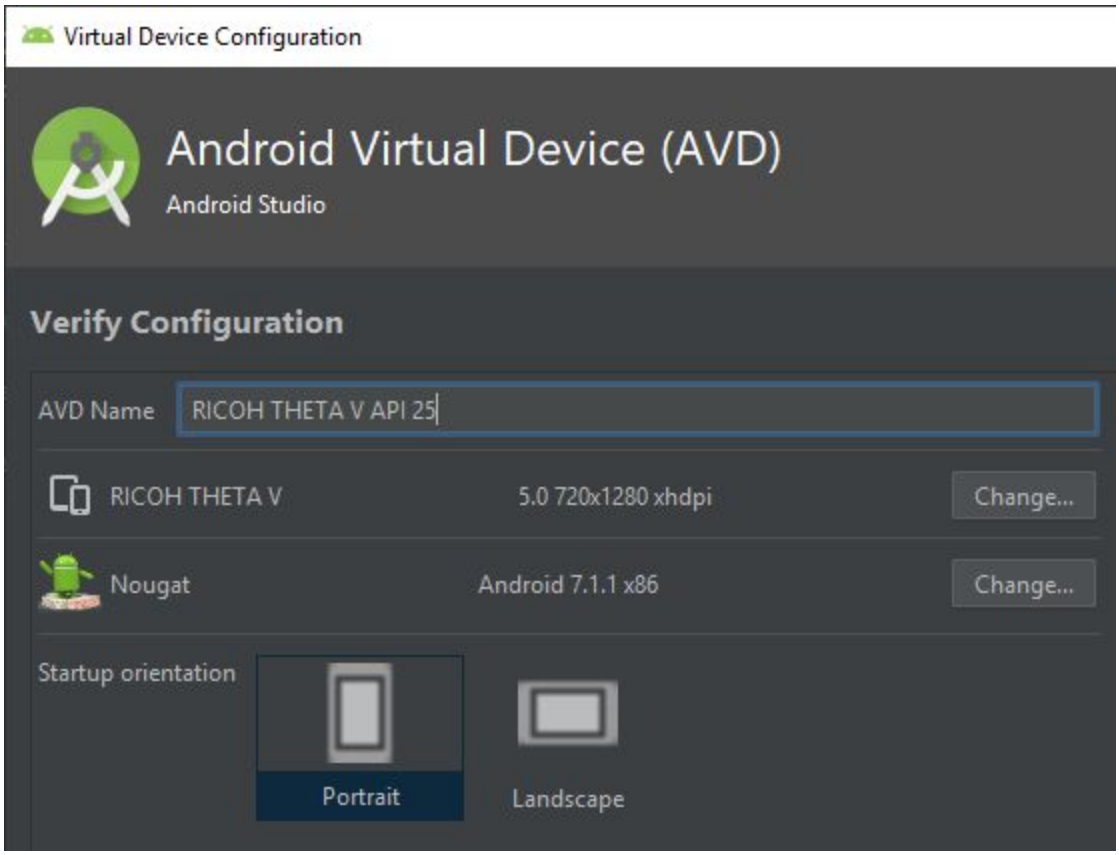
The Star Trails Metadata Challenge

The THETA V runs Android OS 7.1 internally. The camera connects to Android Studio with adb and will appear like a normal Android phone. If you do not have a THETA V, you can develop image processing programs using an Android Virtual Device. Write an Android program to Insert camera orientation metadata into a dual-fisheye image that we provide. 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

About the Free Android Course

- 98 lectures
- 17.5 hours of video
- 1 GB of reusable developer assets with sound, image, icons, templates. 11,000 files in asset pack
- Lifetime access. You can continue to use after the challenge is over.

After completing the challenge, you will receive a coupon code for the free course.