

Individual Lab Report #3

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TeamA

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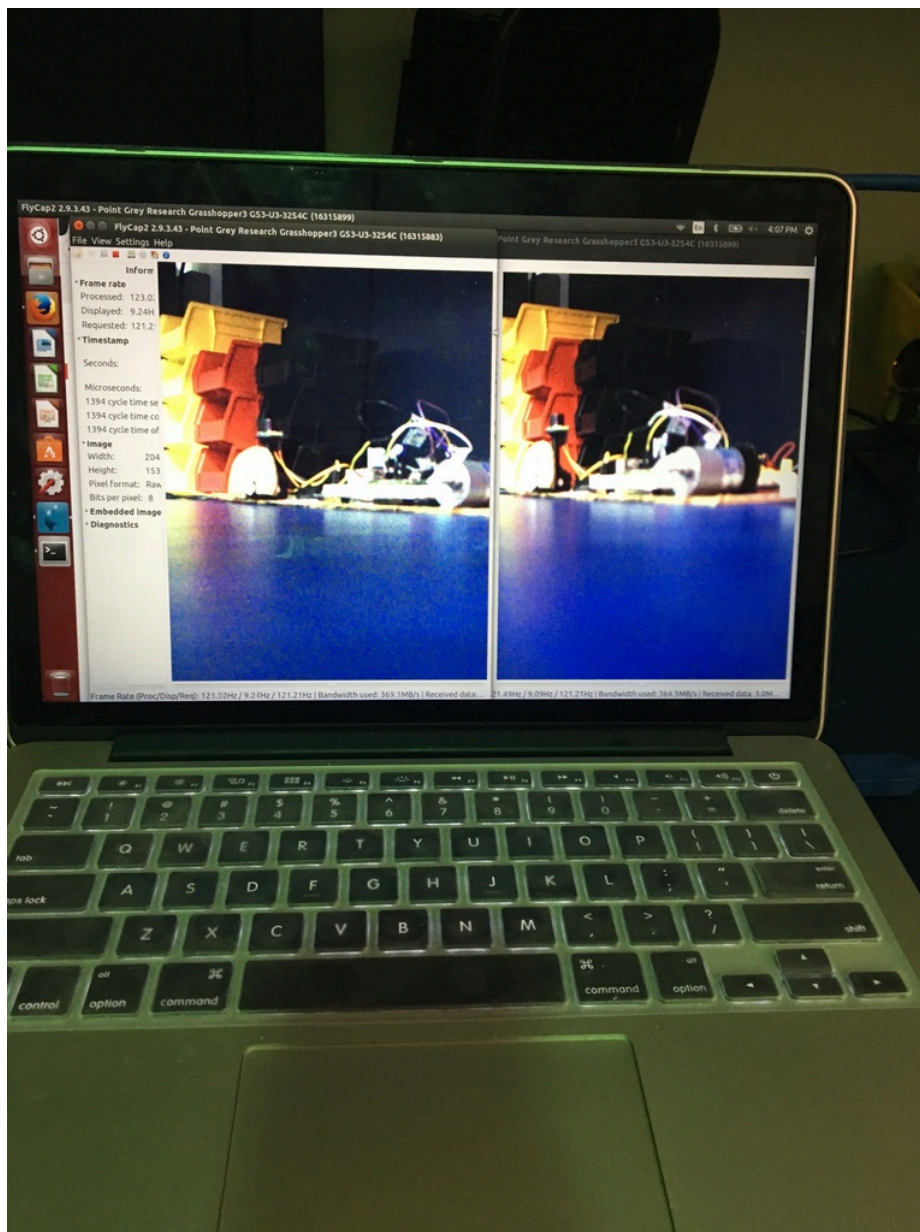
Yihao Qian

Zihao Zhang

Individual Progress

This week I finished the configuration of SDK of camera on Linux platform and finally can save the image from the camera.

First of all , download the software and then configure the environment of the Ubuntu, but need to update and upgrade for the Ubuntu first. Then follow the readme file in the SDK. Besides that, there is a really important step--Configuring USBFS, because by default, Linux limits image capture to 2 MB. To capture images over 2 MB, extend the USBFS limit on how many buffers can be locked into the driver. This is done by updating the boot params in grub. Then restart the computer, the SDK installation is completed. Another important thing is you need to sudo flycap to open the SDK, or the SDK won't detect the camera.



Next step is try to save the image captured by cameras, so I read the tutorial document provided by Point Grey first and then tried demos provided in the library try to find out how to save the image. First of all, The Flycap2Test and CustomImageEX demo can grab grey image, so I read the code of that and made the change of the PixelFormat `k_fmt7PixFmt = PIXEL_FORMAT_RGB8` so that I can get the color image, also to change the number of the image I want, just need to change the `k_numImages` .

Challenges

The challenge is also can be divided to 2 parts, First of all is installation and configuration of the SDK. At first, I install this in the virtue machine, but the image processing frame rate is just around 60hz, I thought it's the problem of virtue machine so it takes me some time to install Ubuntu on Macbook. Then just as I said before there is an important part is to change the USBFS to 1000, so it takes me long time to find out why the SDK can not be opened.

About grabbing the image, at first I can only grab the mono image, then after I read the document and read the code carefully to understand it, finally find the method to change the format of the image and frame rate and number and so on.

Teamwork

This week I basically work with Zihao to set up the camera in the Linux, then work with Yihao to grab the image from the camera

Plans

For next week , I plan to test the camera outdoors with Zihao and Yihao.

Continue writing program to grab the photos.

Test the resolution and frame rate and other parameter of the camera.

Test the stereo vision of the camera.