HOW TO USE MJPG-STREAMER IN BBG

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Last update: AUG 3rd, 2018

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1 Introduction

This guide will give you some ideas about how to:

- Use a webcam to do video streaming in BBG

- Capture photos in BBG
2 Install dependencies

2.1 Check the ethernet connect by:

```
# ping 8.8.8.8
```

2.2 Add dependencies by:

```
# sudo apt-get install g++ curl pkg-config libv4l-dev libjpeg-dev build-essential libssl-dev cmake
```

2.3 Troubleshooting:

If you get an error when doing “ping 8.8.8.8”, try re-do Dr. Brian’s networking guide.
3 Install MJPG-Streamer

3.1 Download and Install MJPG-Streamer

```bash
# cd /mnt/remote
# mkdir mjpg-streamer
# cd mjpg-streamer
# git clone https://github.com/jacksonliam/mjpg-streamer
# cd mjpg-streamer/mjpg-streamer-experimental
# make
# make install
```

3.2 Troubleshooting:

If you cannot see “remote” folder under “/mnt”, try re-do Dr. Brian’s NFS guide
4 MJPG-Streamer Start-up

4.1 Connect webcam to the BBG’s USB port

4.2 Check if BBG detect the webcam by:

```
# lsusb
```

You should see something like this:

(ID 038f:6001 is the webcam)

![lsusb_output]

4.3 Check the webcam’s specifications by:

```
# v4l2-ctl --list-formats-ext
```

You should see something like this:

![v4l2_output]

You will get some ideas about your webcam, in my case:

My webcam’s resolution is 640*480

My webcam’s fps is 30

My webcam’s pixel format is YUYV
4.4 Based on the information we get from 4.3, we can run the MJPG-streamer by:

```
# ./mjpg_streamer -i "/input_uvc.so -d /dev/video0 -YOUR_PIXEL_FORMAT -fps YOUR_FPS -r YOUR_RESOLUTION" -o "/output_http.so -w ./www"
```

*You need to change the command in red based on your webcam’s specification.

*For my hardware, my command is:

```
# ./mjpg_streamer -i "/input_uvc.so -d /dev/video0 -y -fps 30 -r 352*288" -o "/output_http.so -w ./www"
```

4.5 To see the video stream by open the browser and type:

http://192.168.7.2:8080

4.6 Troubleshooting:

If you cannot see the video stream on the browser, try use a lower resolution you found in 4.3

For example: Use 352*288 instead of 640*480

If you see an error “network:Failed to bind socket”, try the following:

```
# lsof -i:8080
```
5 How to capture a photo?

5.1 Open another terminal

5.2 Capture a photo and name it “output.jpg” by:

```bash
wget http://192.168.7.2:8080/?action=snapshot -O output.jpg
```
6 References

http://embeddedtweaks.com/beaglebone-usb-webcam-mpeg-streamer-installation-tutorial/


https://www.raspberry.pi.org/forums/viewtopic.php?t=109352