

This lab demonstrates how to install the drivers necessary to capture an image from the Logitech camera and practices scripting to build a simple camera application.

Part 1: Installing the Software

Install the required packages for the Logitech camera.

- gstreamer-tools
- gstreamer0.10-plugins-good
- gstreamer0.10-dev # needed?
- gstreamer0.10-tools # needed?

Some of the packages that auto-install include:

- gstreamer-plugins-base

Use `apt-get install <packagename>` to install each package.

Run the following command:

```
gst-launch v4l2src device=/dev/video0 num-buffers=1 ! ffmpegcolorspace !  
pngenc ! filesink location=$newName
```

Write a script to with the following options

- Take picture immediately when run
- Take picture after timer goes off when run
 - LED (on cape, not camera) should blink once a second for first 8 seconds
 - LED should blink 4 times a second for last two seconds

The script should save pictures to consecutively numbered files, e.g. test1.png, test2.png, test3.png.

The script should find the first unused file and use that ... or “remember” what files have been written.

Deliverables

Upload to website:

- Report
 - Include an introduction and conclusion, written by yourself/team (In Spring 2014, this is a team report). Suggestions for improvement of the lab are optional.
 - Include a picture taken with your camera.
 - What is the response-time of the camera?
 - Include a table with the response times measured by the “time” command or similar utility.
 - Discuss the results. What is the “true” response time for the system?
- zip of source code
 - This needs to run on my machine without installing extra libraries.
 - Either use shell scripting or another script included with the default image.