Project Objectives

This project aims to improve the user experiences of documentation using physical computing technology to facilitate subsequent demonstration of work. Time-lapse photography is a technique whereby the frequency at which film frames are captured is much lower than that used to view the sequence. This project is to design and implement a time lapse camera system which can be used to capture photos and/or videos in a classroom, conference room or studio.

System Design

The project is divided into three phases: Research, design, prototyping/implementation. The first phase is to conduct research on time lapse camera and arduino based physical computing overall. The second phase is to design the feasible system according to adequate preliminary research. The third phase is to build the working system based on the design solution.

Final Deliverables

The final deliverables are:

1. An arduino based camera system with following functions:
   i) Capture Time Lapse Photos (Switching between 30s/photo or 1min/photo)
   ii) Automatically upload photos captured to a web server
   iii) Provide a RGB light feedback system suggesting current camera status.
2. Tutorials and Design Specification document

Conclusions

The deliverables of the project can facilitate documentation and demonstration of a project, the meeting minutes, the recording of class activities or studio work sessions. The project also serves as a case study to provide inspirations for people interested in physical computing projects.

Future plan: 1. Implement the camera prototype with more advanced microcontroller. 2. Conduct usability testing of the prototype.