

## Progress Report #3

### Work Done:

#### 1. Collaboration with other groups

- a. Combined group meeting on 2013-08-14
  - i. Agreement to write list of tasks/requirements from other teams by this week
- b. Begun list of tasks for project using ProjectLibre
  - i. Focusing on tasks to be completed by or in collaboration with software team
- c. Confirmation of Server Hardware
  - i. Electronics team suggested Beagleboard; we like this idea.
  - ii. Then they changed their mind. But I think they changed it back.

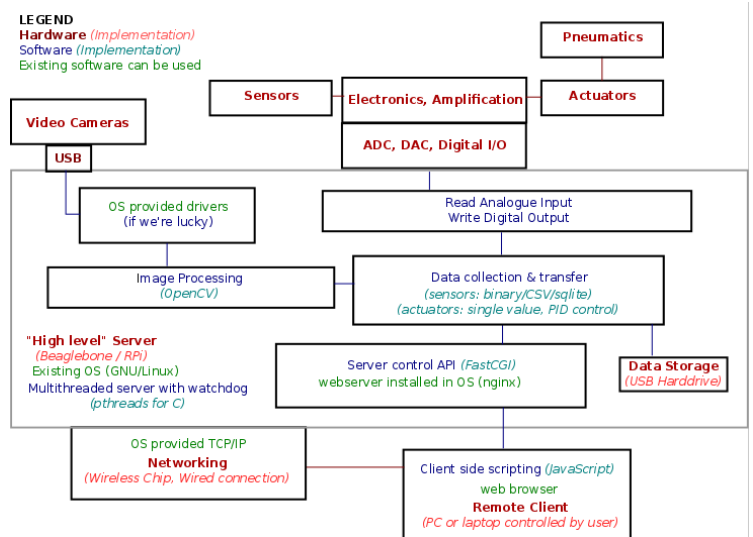
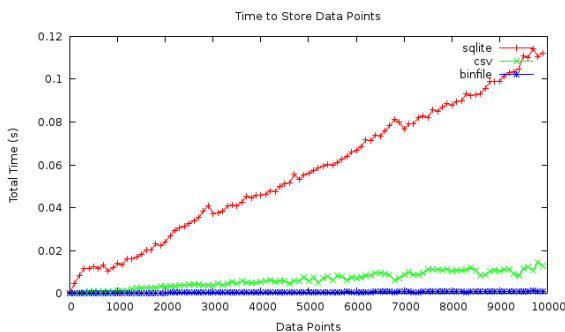
#### 2. Collaboration within team

- a. Dropped custom HTTP solution in favour of FastCGI solution suggested by Jeremy
  - i. FastCGI runs continuously and can be multithreaded; avoids CGI disadvantages

#### 3. Start to develop framework for multithreaded server side software

- a. Wrote multithreaded program to simulate transferring data from sensors to API
  - i. Dummy functions to represent a request via HTTP and sensor polling
  - ii. Currently using a binary file with shared access between threads
    - Also possible to use an sqlite database
    - Realised client will want to download a plain text CSV file
  - iii. Comparison of different data storage/transfer methods between sensor/HTTP threads
    - Binary file - Fast, not human readable, data transfer is easy/flexible
    - CSV - Slow, human readable, data transfer is problematic
    - Database (sqlite) - Extremely slow, data transfer easier than CSV

#### 4. Revised the block diagram to reflect current understanding of the overall design



### TODO:

#### 1. Finish timeline for list of tasks

- a. Agreement within team on timeline and assignment of tasks before Wednesday

#### 2. Continue with framework for multithreaded server side software

- a. Merge dummy HTTP query function with FastCGI sensor handler specified by Jeremy
- b. Add framework for control of hardware actuators
- c. Arrange team meeting in which we actually write code as a group
- d. Collaborate with Callum/Jeremy on transferring images through HTTP API

#### 3. Communication with other teams

- a. List of requirements from each team
- b. Agreement on list of tasks for overall project
- c. Specify server hardware requirements
  - i. Look into server side storage requirements

