

PIC provided by the department will be used. Different sensors could be connected to the pic microcontroller. Types and numbers of required sensors could be discussed after writing the SRS document.

According to the project description “Master controller will collect data, show data in a user friendly interface, let user send control commands to appliances, push data to web, and also provide web based control of devices.” the data collected by the master controller (beagleboard in our case) should be stored in a web based database. The stored data will be shown instantaneously by the user interface and will be used to generate statistics as required.

There are many suitable options for storing data:

1) Web Servers (Apache, IIS or helma¹)

For example, an Apache HTTP Server (which is an open source software and supports Linux) could be run on the beagleboard with a MySQL/Oracle DBMS. For this purpose there are software bundles that can be installed on the beagleboard and one of these is LAMP² which refers to the first letters of [Linux](#), [Apache HTTP Server](#), [MySQL](#) and [Perl](#). There are step by step explanations for how to install Lamp^{3 4}.

Although the beagleboard has only 4 GB of memory (and may be depends on the type of the beagleboard) it is possible to have additional storage by connecting a hard disk to the board. For further information please read (Page 23)

http://beagleboard.org/static/BBxMSRM_latest.pdf

¹ <http://dev.helma.org/>

² [http://en.wikipedia.org/wiki/LAMP_\(software_bundle\)](http://en.wikipedia.org/wiki/LAMP_(software_bundle))

³ <http://www.lamphowto.com/>

⁴ <http://www.ubuntugeek.com/step-by-step-ubuntu-12-04-precise-lamp-server-setup.html>

2) Web Hosting Services

Buying a domain name and web hosting service to install a DBMS.

CEng department servers could also be used for this purpose (if possible).

3) Web Cloud Servers

Oracle cloud⁵ or windows azure⁶ (both are expensive).

So which one is the most suitable one?

In my opinion, installing LAMP on the beagle board is a good choice (if we success to increase the storage of the board).

Web hosting service is also a good alternative.

NOTES:

1) This document is for information purpose only.

2) My part in the weekly report will be posted to Teambox before Monday.

3) Please feel free to ask for anything related with the project via Teambox's conversation feature.

Have a nice day

Abdullah

⁵ <http://www.oracle.com/us/solutions/cloud/overview/index.html>

⁶ <http://www.windowsazure.com/en-us/>