Smart Refrigerator Design Project
Progress Report V

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April 16, 2012

1 Updated Milestone Chart

Milestone	Scheduled Date	Assigned	Modified Date	Comments
BeagleBoard procured	February 10, 2012	SS	NA	Complete
Angstrom operating system running on board	February 24, 2012	DS	NA	Complete
Peripherals properly interfacing with board	March 02, 2012	DS	March 30, 2012	Complete aside from temperature sensor. Was not considered in original timeline.
Basic mobile UI, suitable for debugging	March 09, 2012	BR	NA	Complete
Basic base station UI, suitable for debugging	March 09, 2012	SS	NA	Completed basic GUI functionality. Incorporating duplicate item support and databases.
Database I/O configured	March 16, 2012	DS	March 23, 2012	MySQL databases configured, can be accessed with Python application.
Testing and integration of temperature and humidity sensor	March 16, 2012	SS/DS	April 20, 2012	Partially complete. Tested using Arduino. Beagleboard GPIO interface configured, needs testing.
Database and web server hosted by Beagleboard	March 16, 2012	DS	NA	Complete
Beagleboard touchscreen display procured	March 16, 2012	DS	NA	Complete

Milestone	Scheduled Date	Assigned	Modified Date	Comments
Mobile application integrated with web server	March 30, 2012	BR	April 20, 2012	Database integration still required.
User profiling and statistical analysis	March 30, 2012	SS	April 6, 2012	Complete
Shopping lists, item modification, basic settings	March 30, 2012	SS		Complete. Added context menus and hidden "administrator" panel.
Updated base station UI	April 6, 2012	SS		Complete, awaiting review by team or outside testers.
Updated mobile application	April 6, 2012	BR	April 20, 2012	
Improved robustness of mobile interface	April 13, 2012	DS		Purpose of this task has become unclear. May remove.
Integration testing and system verification	April 13, 2012	BR	April 27, 2012	
Web interface development	April 20, 2012	SS		Complete. Does not look flashy but is effective and functional.
System testing and demo preparation	April 20, 2012	SS	April 27, 2012	

2 Current Milestones

Milestone	Scheduled Date	Assigned	Modified Date	Comments
Mobile application integrated with web server	March 30, 2012	BR	April 20, 2012	Database integration still required.
Updated mobile application	April 6, 2012	BR	April 20, 2012	
Testing and integration of temperature and humidity sensor	March 16, 2012	DS	April 20, 2012	Partially complete. Tested using Arduino. Beagleboard GPIO interface configured, needs testing.
Web interface development	April 20, 2012	SS		Complete. Does not look flashy but is effective and functional.

3 Next Milestones

Mobile application integrated with web server	March 30, 2012	BR	April 20, 2012	Database integration still required.
Updated mobile application	April 6, 2012	BR	April 20, 2012	
Testing and integration of temperature and humidity sensor	March 16, 2012	DS	April 20, 2012	Partially complete. Tested using Arduino. Beagleboard GPIO interface configured, needs testing.
System testing and demo preparation	April 20, 2012	SS	April 27, 2012	

4 Status

- Base station user interface and processing completed; awaiting possible aesthetic revisions following inclusion of the touch screen.

- The web interface is complete. It was implemented using a simple HTML front end and PHP queries to MySQL database.

- The mobile interface needs to be integrated with the MySQL databases. ORMLite can not interact with MySQL databases and research indicates Android can not interact with remote databases directly. This interface may require additional PHP back end on the server side.

- SciPy packages have been installed and Python interface is functioning correctly again.

- Temperature sensor needs to be debugged and included. Touchscreen drivers need to be updated; screen orientation has been corrected but touch functionality is not working.

5 Gantt Chart

ID	Task Name	Start	Finish	Duration	Mar 2012				Apr 2012		
					3/4	3/11	3/18	3/25	4/1	4/8	4/15
1	Mobile UI	3/2/2012	4/6/2012	26d	████	████	████	████			
2	Base Station UI	3/2/2012	4/6/2012	26d	████	████	████	████			
3	Database I/O	3/2/2012	3/23/2012	16d	████	████					
4	Web Server	3/9/2012	3/30/2012	16d		████	████				
5	Mobile UI w/ Network Interface	3/9/2012	3/30/2012	16d		████	████				
6	Prediction Systems	3/16/2012	3/30/2012	11d			████				
7	Integration Testing	4/6/2012	4/16/2012	7d					████		
8	System Testing	4/13/2012	4/20/2012	6d							██