

# SMART REFRIGERATOR DESIGN PROJECT

## PROGRESS REPORT IV

---

Steven Strapp, Ben Reeves, Dustin Stroup  
April 9, 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	March 30, 2012	Partially complete. Tested using Arduino. Beagleboard GPIO interface configured, needs testing.
Database and web server hosted by Beagleboard	March 16, 2012	DS	NA	Running, web server functionality needs to be incorporated. Mobile app will access SQL databases directly, purpose of web server becoming unclear.
Beagleboard touchscreen display procured	March 16, 2012	DS	NA	Still awaiting delivery.

<b>Milestone</b>	<b>Scheduled Date</b>	<b>Assigned</b>	<b>Modified Date</b>	<b>Comments</b>
Mobile application integrated with web server	March 30, 2012	BR	April 6, 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	DS / SS		Complete - SS. 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		
Improved robustness of mobile interface	April 13, 2012	DS		
Integration testing and system verification	April 13, 2012	BR		
System testing and demo preparation	April 20, 2012	SS		

## 2 Current Milestones

Milestone	Scheduled Date	Assigned	Modified Date	Comments
User profiling and statistical analysis	March 30, 2012	SS	April 6, 2012	Complete.
Updated base station UI	April 6, 2012	SS		Complete, awaiting review by team or outside testers.
Mobile application integrated with web server	March 30, 2012	BR	April 6, 2012	Database integration still required.
Peripherals properly interfacing with board	March 02, 2012	DS	March 30, 2012	Complete aside from temperature sensor.

## 3 Next Milestones

Milestone	Scheduled Date	Assigned	Modified Date	Comments
Updated mobile application	April 6, 2012	BR		
Improved robustness of mobile interface	April 13, 2012	DS		
Web interface development	April 20, 2012	SS		

## 4 Status

- Base station user interface and processing completed; awaiting possible aesthetic revisions following inclusion of the touch screen.
- New task allocated for web interface, allocated to SS since other tasks are slipping.
- The mobile interface needs to be completed and integrated with the MySQL databases.
- Shopping list prediction algorithms require SciPy packages which requires Fortan; so status of Python application on Beagleboard has regressed.
- Temperature sensor needs to be debugged and included. Touchscreen drivers need to be updated; screen is currently mirrored.

## 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	26 d							
2	Base Station UI	3/2/2012	4/6/2012	26 d							
3	Database I/O	3/2/2012	3/23/2012	16 d							
4	Web Server	3/9/2012	3/30/2012	16 d							
5	Mobile UI w/ Network Interface	3/9/2012	3/30/2012	16 d							
6	Prediction Systems	3/16/2012	3/30/2012	11 d							
7	Integration Testing	4/6/2012	4/16/2012	7 d							
8	System Testing	4/13/2012	4/20/2012	6 d							