

SMART REFRIGERATOR DESIGN PROJECT

PROGRESS REPORT I

Steven Strapp, Ben Reeves, Dustin Stroup
March 19, 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	Complete	Completed basic GUI functionality. Backend storage / algorithms not implemented.
Database I/O configured	March 16, 2012	DS	March 23, 2012	
Testing and integration of temperature and humidity sensor	March 16, 2012	SS	March 30, 2012	Partially complete. Tested using Arduino. Not integrated with Beagleboard.
Database and web server hosted by Beagleboard	March 16, 2012	DS	Complete	Running, access to SQL server needs to be configured.
⋮	⋮	⋮	⋮	⋮

Milestone	Scheduled Date	Assigned	Modified Date	Comments
Beagleboard touchscreen display procured	March 16, 2012	DS	NA	Supplier found via Dr. Mondragon, submitting purchase order.
Mobile application integrated with web server	March 30, 2012	BR		
User profiling and statistical analysis	March 30, 2012	SS		
Shopping lists, item modification, basic settings	March 30, 2012	DS		
Updated base station UI	April 6, 2012	SS		
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
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	Complete	Completed basic GUI functionality. Backend storage / algorithms not implemented.
Database I/O configured	March 16, 2012	DS	March 23, 2012	
Testing and integration of temperature and humidity sensor	March 16, 2012	SS	March 30, 2012	Partially complete. Tested using Arduino. Not integrated with Beagleboard.
Database and web server hosted by Beagleboard	March 16, 2012	DS	Complete	Running, access to SQL server needs to be configured.
Beagleboard touchscreen display procured	March 16, 2012	DS	NA	Supplier found via Dr. Mondragon, submitting purchase order.

3 Next Milestones

Milestone	Scheduled Date	Assigned	Modified Date	Comments
Mobile application integrated with web server	March 30, 2012	BR		
User profiling and statistical analysis	March 30, 2012	SS		
Database I/O configured	March 16, 2012	DS	March 23, 2012	
Peripherals properly interfacing with board	March 02, 2012	DS	March 30, 2012	Complete aside from temperature sensor. Was not considered in original timeline.

4 Status

- Preliminary version of mobile application and base station interface were developed.
- Next steps are to incorporate network interface into mobile application, and to add back-end processing and database interaction to base station application.
- Dr. Mondragon has located a supplier for the desired LCD display, a purchase order will be submitted shortly.
- The Beagleboard is running the webserver and python.

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	7d							
8	System Testing	4/13/2012	4/20/2012	6d							