

5/30/2013

**Activities**

Public Demonstration

5/29/2013

**Activities**

Final Testing

Check off!

5/27/2013

**Activities**

played with roamer and pod

**To Do List**

begin working report

5/26/2013

**Activities**

changed motor driver to higher current (I298 would go into thermal shutdown when we pulled a load on the carpet)

tested full system - driving with headset and using gripper to open hatch/pull miners

tested with special

**To Do List**

stress test

range test

5/25/2013

**Activities**

Removed weight from Roamer (able to move!!)

Improved robustness of Roamer

**To Do List**

change motor driver (no TAs on Saturday)

5/24/2013

**Activities**

Fixed Battery charge level interpretation (issue with clock rate)

Added all components( E128, proximity sensors, battery, accelerometer) to POD

Lots of heat shrinking!

**To Do List**

Remove weight from Roamer so it is able to move on carpet

Change motor driver

Improve wheel alignment/attachment

5/22/2013

**Activities**

Finished Laser cutting POD

Assembled POD (glued acrylic)

Changed code to make POD led's display when roamer is connected

**To Do List**

Fix battery charge level interpretation

Stress test + continue testing w/ other teams

5/21/2013

**Activities**

Purchased POD acrylic

Began laser cutting POD

Finished Debounce code for buttons

**To Do List**

Assemble POD

Battery charge level interpretation

Change code to make POD led's display when roamer is connected

5/20/2013

**Activities**

Finalized POD design

Finalized Soldering

**To Do List**

Additional testing with our POD and Roamer and other team's

Build POD

Finish debounce code

Fix battery charge level interpretation

5/19/2013

**Activities**

Fixed Xbee communication with other Xbees (changed channel)

Additional testing with our POD + other team's ROAMER & other team's POD + our ROAMER  
Checked off (2nd checkpoint!...and project preview!)  
Finished soldering E128 circuits (buttons for lamp control, roamer select, LEDs on POD)  
Set up battery power for POD  
Created circuit schematics  
Tested SPECIAL with ROAMER (comm worked)

### **To Do List**

Build POD structure  
Buy/find acrylic for POD  
Debounce code for buttons  
Fix interpretation of Battery charge level  
Still need to find: Headset/helmet for accelerometer, holder for camera pivot button

5/18/2013

### **Activities**

Fixed bugs in communications  
Finished camera pivot and gripper code/testing  
Soldered majority of E128 circuit boards

### **To Do List**

Buy more solder, wires, socket protectors for E128  
Finish soldering E128 circuit boards

5/17/2013

### **Activities**

Fixed SPECIAL solder board  
Got a new C32

### **To Do List**

Test SPECIAL  
POD solder

5/16/2013

### **Activities**

Debugged comms (needed to take out printfs)  
Started design for POD  
Fixed motor drive problem - bad C32

### **To Do List**

Get a new C32 from TA  
Complete design for POD

5/15/2013

**Activities**

Debug motor drive w/ accelerometer  
Test proximity sensors

**To Do List**

Fix motor drive bug (wheels not driving in reverse with inputs from the accelerometer, but with keyboard command)  
Test SPECIAL comm

5/14/2013

**Activities**

Completed solder boards for ROAMER  
Refine ROAMER design/building  
Assemble/test the gripper

**To Do List**

Continue to test code  
Test SPECIAL with solder board

5/13/2013

**Activities**

1st check off!!  
Ordered green solder boards (Amazon)

**To Do List**

5/12/2013

**Activities**

Test/debug SPECIAL (works!)  
Test/debug ROAMER code

**To Do List**

Check off  
Continue debugging code

5/11/2013

**Activities**

Tested communication between XBee + E128 (success!)

### **To Do List**

Test XBee + C32, debug comms, Test SPECIAL comm

5/9/2013

### **Activities**

Completed first iteration of ROAMER code

Waiting on SPECIAL with PIC - debugged some of basic functions (response to simulated messages and 2ms timer)

Found out how to connect XBee + E128 and XBee + C32 (phone cable to ICL3232 to Xbee)

Reorganized elec. components into storage box

### **To Do List**

Wire XBee, debug comms, test SPECIAL comm

5/8/2013

### **Activities**

Progress on PIC (asm for SPECIAL) + C32 (for ROAMER) programming

Bought wheels, storage box, some green solder boards, robotic claw

Soldered XBee boards

### **To Do List**

Find out how to electrically connect XBee

Base for ROAMER

5/7/2013

### **Activities**

Design review

Testing of sensors

Coding - E128 Communication to XBee, Accelerometer -> Motor speeds, Timer for communication, Infrared distance to close gripper, connect roamer using 3 way switch

### **To Do List**

Software - Communications

Hardware - ROAMER base/drive (Wait on POD sensors, gripper until Design Review)

Electrical - Solder new XBEE boards

Communications - SPECIAL -> PIC -> C32? How will the PIC communicate to C32? Needs back and forth communication (LEDs, could be 3 pins that are high/low for the 3 lamps? or SPI/SCI, and battery level)

### **To Buy List**

Buy box for storage

Accelerometer <http://shop.moderndevice.com/products/mma7260qt-3-axis-accelerometer>

Ultrasound sensor Sharp GP2Y0A21YK

Green solder boards

Button

Servos (Recycle?)

5/6/2013

### **Activities**

Meet with coach

### **To Do List**

Software - Communications

Hardware - ROAMER base/drive (Wait on POD sensors, gripper until Design Review)

Electrical - Solder new XBEE boards

Communications - SPECIAL -> PIC -> C32? How will the PIC communicate to C32? Needs back and forth communication (LEDs, could be 3 pins that are high/low for the 3 lamps? or SPI/SCI, and battery level)

5/5/2013

### **Activities**

Brainstorming/finalize concepts

Sketching ideas

### **To Do List**

Schedule meeting with coach

5/1/2013

**Activities**

Brainstorm session

Familiarize with assignment