

Meeting Minutes  
February 25, 2008  
Attendees: Everyone  
Prepared by: Alex

#### Labor Hours Matrix

- Needs a date
- Keep track of overall project hours and record these each week
- Should fit onto one page
- Tasks are not clear with WBS tasks
- Per GPR001 all documents should be portable ie. Make this a pdf and put on website

All documents should be made into pdf doc's and put on website

Items are not complete unless they are posted to website

GPR's that need to be addressed (put on WBS?), major marked with \*\*

- 001 – portable doc's (pdf form and put on website when complete)
- \*\*002 – Environmental analysis (temperature, humidity) should be looked into
- \*\*003 – EMI needs to be started, note how radiated emissions are hurting us and customers
- 004 – Need to use lead-free solder and lead-free soldering irons when building circuit boards
- 005 – Must start labeling everything (cables, connectors, etc.)
- \*\*006, \*\*007 – Reliability, maintainability needs to be considered
- 008 – Sourcing, need to make BOM, must have second sources for all components
- \*\*009 – Global sustainability needs to be looked into
- 010 – Ethics still under evaluation, will be discussed after CDR
- 011 – Need to decide what will be the demo for end of project
- 012 – Final disposal: all prototype circuits should be put in box marked “Senior Design Project Spring 2008” or something similar, must follow Lafayette Electronic Disposal Policy

Management has ordered Octopus and RS-232 cables

#### Low Level Discussion

- Management to see circuits before sent to Jeff and finalized
- Sensor Circuit
  - Circuit design shown to management by Dan
  - Suggestion: use capacitor near PIC instead of near Reed switch
- Power Circuit
  - Circuit design shown to management by Tom
  - Suggestion: possibly buy 3 power supplies to prevent noise problems?

- Need to check to make sure regulators won't overheat w/ so much current
- 24v to 18v is 6 watts of power can they handle that?
- Should breadboard the circuit and show to management
- Suggestion: instead of common ground for all supplies, distribute them to keep grounds closer therefore avoiding an electromagnetic loop which could cause problems
- Breadboard size might be 8.5"x11" according to Jeff
  - Suggestion: put sensor circuits on separate boards and attach bc some stations require less circuitry than others, might be unnecessary to have such a huge board at each station
- Rail Switching Circuit
  - Circuit design shown to management by John
  - Original design might destroy switches if use 24V, that requires too much current
  - Suggestion: use a capacitor to charge and then discharge switch, will be better for switch

Timing Analysis needs to be completed

- Need to determine minimum time interval between switch "throwings"

Action Items:

- Redo Labor Hours Matrix for Wed. Feb. 27<sup>th</sup> (Austin)