Memorandum

To: R.M. Schafer

From: Smart Windows

Date: February 18, 2010

Subject: Meeting Five Agenda

1.) Status Updates
    a. Light Sensors: Kelley
        i. No update, Kelley not present
        ii. Need the A/D converter working ASAP
        iii. We eventually want to mount this on a little PC board
    b. Wireless and Microcontrollers: David
        i. Serial EEPROM: Drop onto the board design
            1. For CYA reasons, we should have one in our design
        ii. Need to make real time clock work
        iii. Switch microcontroller down to 4620
            1. Less pins, easier to solder
            2. But only one SPI, USART
    c. Remote Controls: David
        i. New Haven makes SPI LCD screens
            1. These have better dimensions for our remote
            2. Power, ground, and 2 data pins
            3. It is a write-only device
    d. Motors: Tommy
        i. We will put this in the “valence” above the window
        ii. Motor is now working
        iii. Maybe want to use the current sense pin to look for motor stall
        iv. Tommy added a wire connection to determine when it closes.
            1. He is created his own switch
            2. Maybe using the current sense is a better solution
        v. Why do we have such a big h-bridge loss
            1. Should be 2*Rds, but it seems more
            2. Maybe check the voltage at input with motor connected
            3. Send part number the Dr. Schafer
    e. PC software: Andy
        i. Demo looks great
    f. Batteries: Tommy
        i. Motor runs from 4.2 to 6V
            1. Want to use 4 batteries if possible
        ii. Need to demo this operation
        iii. Can we run this voltage into the A/D converter
            1. Unity gain buffer amp (maybe)
            2. High resistance voltage divider
2.) Devices to order

   a. SPI LCD
   b. Serial EEPROM (Schafer will have one)
   c. Possibly another microcontroller
3.) Demo
   a. Anything that affects board design
   b. Software we can change later
4.) Ribbon Cable
   a. Clamp onto it with a vice
   b. Get ribbon cable from Clint
   c. 14-pin
5.) Low Level Design
   a. Due Thursday
   b. Template is online