James Solonika
EET 256 Capstone
Progress Report
Week 5

IC Tester

Current functionality -
Two counters run through all combinations for an 8 input 7400 series logic chip. Microcontroller verifies whether the output is correct for an AND chip or not using logic tables stored in EEPROM

Problems -
Took longer than expected to create and program all 5 256 value logic tables.

Next Weeks Steps -
Have microcontroller compare the chip output to a table of different logic values (OR, NOR, NAND, etc.) to see which chip it is

Percentage complete -
Hardware prototyping - 85%
Software - 50%
Manufacturing - 0%

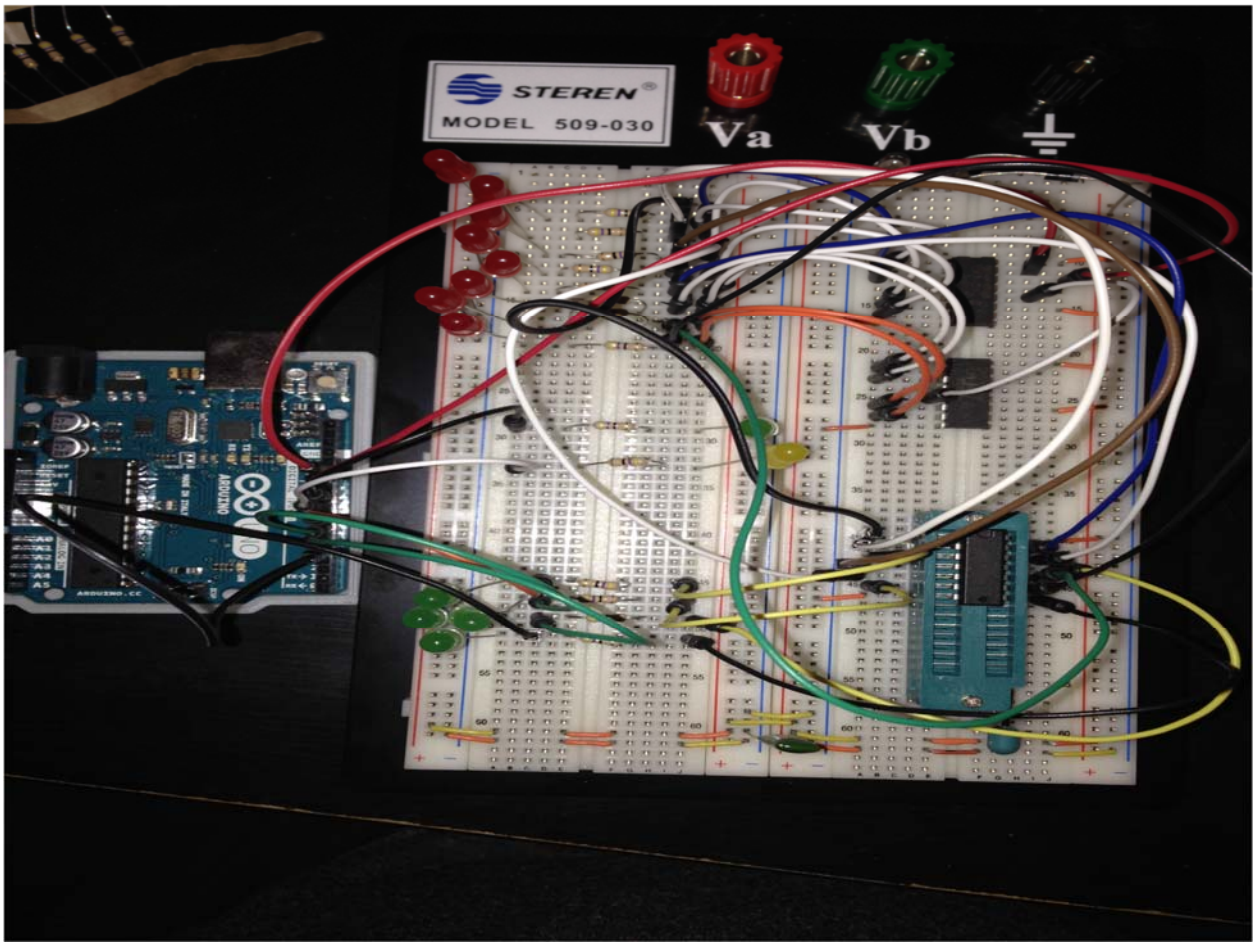
Hardware log since last week –

4/26/15
Micro controller now controlling counters instead of hand.
Added more LEDs to indicate all logic types (AND, OR, NAND, NOR, XOR)

Software log since last week –

3.0: 4/27/15
Created an EEPROM programmer to store 4 full data tables (1024 bytes available, 4 256 byte truth tables). One chip table will have to be stored in local memory each time, but this should speed up setup time on the device. (5 logic chips - AND, OR, NAND, NOR, XOR, only 4 can fit in EEPROM)
Created all 5 truth tables. XOR is programmed into run code.

3.1 4/30/15
Added interrupt code to run program when a button is pressed


STEREN
MODEL 509-030
Va
Vb