

CS 4900

Project: Blacktop

TPS Report

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Task	Who will complete	Time	Risk 1-10	% complete	Actual time	review
T1	SS	1 hour	1	100%	1 hour	AK TH EJ
T2	SS	1 hour	1	100%	1 hour	AK TH EJ
T3	SS AK TH EJ	5 hours	3	40%	TBD	TBD
T4	SS AK TH EJ	10 hours	3	60%	TBD	TBD
T5	SS AK TH EJ	10 hours	6	30%	TBD	TBD
T6	SS AK TH EJ	10 hours	5	40%	TBD	TBD
T7	SS	3 hours	1	100%	3 hours	AK
T8	TH	1 hour	1	100%	1 hour	SS AK EJ

T1: Write the requested deliverables for the week

Write the TPS Report and Stories for the week

T2: Test a program on the TSOP MSP-430 chip

The chips soldered to breakout boards must be tested and flashable using the methods used by students in CS2230. Test code was provided to make sure the program operates and performs to the specified standards. Three prototype MSP-430 chips were connected to the programmer via breadboard and tested using a text to ascii code conversion program used in CS2230. The program ran successfully with no errors. The boards were also flashed with a .elf file that causes the on-board rgb to pulse slowly. The program flashed and ran with no errors.

T3: Test the board to see if it can handle all of the peripherals being turned on at once

The maximum current load of the board must be determined, and if turning on all peripherals exceeds that load a failsafe must be developed to prevent the board from breaking.

T4: Finish breadboarding a prototype board.

The components will have to be socketed into a breadboard and tested for full functionality. This is currently the largest portion of the project to overcome and time specifications will have to be further analyzed.

T5: Develop drivers using SPI to interface with the on-board EEPROM

Drivers must be developed using a serial peripheral interface to transfer data from the main board to the on-board EEPROM

T6: Develop the CAD files for the production circuit board

The circuit board must be designed via KiCAD before a prototype board can be ordered

T7: Solder together more TSOP MSP-430 programmable chips

Two more TSOP packages were soldered together in case any hardware errors occurred from hand soldering the chips to their respective breakout boards. Allin Kahrl experienced difficulties in getting the package to flash properly so additional boards were made and tested for him to use while the board he used was repaired,

T8: Create a gantt chart to simplify scheduling.

A gantt chart was created to promote steady workflow and establish a well defined timeline for the project.