

## ELEC 4000 Senior Design Status Report – Page 1 of 3

Project Name:	PICASSAU
Team #, Members:	Team 2: Ben Straub, David Toledo, Drew Kerr, Kayla Frost, Peter Gartland
Report Date:	9/25/2013
Project Description:	A robot that paints a picture.
Cycle (1, or 2):	Cycle 1
Cycle Intent:	Construct a robot that can reliably paint a single color image from a supplied vector graphic file.

### TASKS

Task #	Task Description (Add rows as needed)	Cycle planned for completion	Planned		Status (% complete)	Actual	
			Total planned hours	Planned hours this cycle		Actual hours this cycle	Total hours
1	Team management	2	55	20	36%	6.5	6.5
2	Mechanical hardware - construction	1	43	43	95%	37.5	37.5
3	Stabilize paintbrush carriage	2	31	0	0%	0	0
4	Electrical hardware	1	25	25	75%	22.5	22.5
5	Embedded software - plotting	1	25	25	70%	18	18
6	Embedded software - brush control and stability	2	41	0	0%	0	0
7	Computer software - main Python functionality	1	34	34	85%	6	6
8	Computer software - setting up the Raspberry Pi	2	35	3	50%	3	3
9	Computer software - user interface	2	35	0	0%	0	0
10	Computer software - optimization	2	12	0	0%	0	0
11	Image processing - filtering	1	60	60	80%	24	24
12	Image processing - vectorization	2	49	0	0%	0	0
13	Testing and integration	2	35	10	10%	0	0
14	Meetings	2	30	15	36%	30	30
15	Administrative documentation	2	30	15	36%	12	12
		<b>Planned Total</b>	<b>550</b>	<b>250</b>	<b>Actual Total</b>	<b>159.5</b>	<b>159.5</b>

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### TEAM MEMBER HOURS

Record # of hours each person spent on each task this week, then total by week, cycle, and project.

								task									Total Hours		
Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Week	Cycle	Project	
<b>Ben Straub</b>	0.5	5.5	0	4.5	0.5	0	0	0	0	0	0	0	0	0	2	0.5	13.5	51	51
<b>David Toledo</b>	0	2.5	0	1	0	0	0	0	0	0	0	0	0	0	2	0.5	6	26.5	26.5
<b>Drew Kerr</b>	1	3.5	0	4	0	0	0	0	0	0	0	0	0	0	2	0.5	11	24.5	24.5
<b>Kayla Frost</b>	0	0.5	0	1.5	0	0	3	0	0	0	0	0	0	0	2	2	9	30.5	30.5
<b>Peter Gartland</b>	0	3.5	0	4	0	0	0	0	0	0	0	0	0	0	2	0.5	10	27	27
<b>TOTALS</b>	1.5	15.5	0	15	0.5	0	3	0	0	0	0	0	0	0	10	4	49.5	159.5	159.5

#### Accomplishments since last status report:

- Ordered, received, mounted, and tested new power supply
- Built new spindles
- Added multiple color support to the Python script
- Built paint platforms
- Redesigned and installed new motor mounts

#### Obstacles encountered since last status report and actions to deal with same:

- Motor driver causes inconsistent behavior
  - Review data sheet and verify setup
- Motor issues prevented testing of other aspects of the design
  - Prioritize motor issue for the coming week

#### Risks facing the project and actions to deal with same:

- Illness of team members
  - Ensure that there is always someone capable of picking up another member's tasks
- Breaking hardware could put the project behind schedule / overbudget
  - Be careful with the hardware and be ready to order replacements if need be
- Incorrect hardware could put the project behind schedule / overbudget
  - Have multiple members double check the item before it is ordered
- Processor speed on Raspberry Pi may not allow real-time previewing of filtered camera feed

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### Objectives for the next week:

- Fix motor issues
- Update embedded software to work with the new Python code
- Fulfill Cycle 1 goal of painting a single-color picture
- Write Cycle 1 report
- Prepare Cycle 1 presentation

### Notes:

- Last week's status report contained incorrect Team Member Hours. There was an error in the spreadsheet formula used to calculate total hours, which left out some of the actual hours worked.