

Project Status Letter PSL

Number: [PSL_02]

Covering period: 02/13-02/17

Prepared by: Mahati Hari and Rachel Szteinberg

Task summary from previous week/Proposed Changes:

While individuals have made significant progress within their respective teams, this table

accounts for only items that can be fully crossed (completed/approved) off the WBS.

TEAM	TASKS COMPLETED	PROPOSED CHANGES
VSCADA	None	-None to WBS, Beggs will be taking care of designing Layouts for different views
Cell App	CELL2.1.[Created Charts and Graphs from proposal] CELL.3.1.[GJSON parsing implemented]	?- “some changes”
DYNO	None	None to WBS
TSV	?- determined all wiring -ESF forms -TSV.4.1 [All packs fully assembled] -TSV.4.2 [All packs fully tested] -TSV.4.3.[Debugged assembled packs] ?-TSV.5.2.[ATP delivered] -TSV.6.3.[Integrate packs in series without AMS or PACMan]	-addition of ESF forms -PAC assembly without AMS boards -addition of mechanical assembly
TSI	None	-addition ESF forms to WBS - addition of IMD relays (previously included as just “interfaced with IMD relays”)
Cooling	?-COOL1.3 [Electrical schematic approved]	-refactor WBS to CANBus Interface / Safety loop Interface/ Manufacturing -May change after testing ordered parts
Systems Engineering	?-TSV.4.2. [Accumulator verification test] ?-VSC.3.5.Demonstrated CANBus Link	-M3 User Manual template addition -M4 maintenance manual template addition

GLV	GLV.3.1. [Basic Safety Loop Panel Manufactured] GLV.2.1.[Built Basic Safety Loop Circuit] GLV.2.2.[Tested Basic Safety Loop Circuit] GLV.2.3. [Integrated Basic Safety Loop] ?- status of tech memo sent for approval ?-status of approval of design for exterior	- addition of testing fixture (finished version of Exterior panel +GLV/power/VSCADA) -addition no redesigning GLV power/VSCADA/Safety BoB
Interconnect	IC.2.1.[Built GLV safety loop cables]	-add specific tests as per ATP
Communications	M.7.1 [weekly updates]	-add meetings with Prof. Hummel/communications representatives
Car Physics Investigation	None	None
MGMT	M.7.1.[Organized / Updated financial section of the website] M.11.[purchasing report]	Add aforementioned changes to WBS

Plan for next week:

TEAM	TASKS TO BE COMPLETED
VSCADA	VSC.4.2.[Software maintainability plan]
Cell App	CELL.2.2[Created odometer, speedometer, and SoC page] CELL.2.3[Displayed raw data as numbers] CELL.2.4.[Demonstrated functional UI for approval]
DYNO	DYNO.3.1-DYNO.3.3[02/20 test]
TSV	TSV.6.3.[Tested safety loop with packs in series] TSV.2.[PACMan Delivered and integrated into each PAC] TSV.4. [4 Fully functional packs delivered in series in DYNO room] TSV.6.[02/20 test]
TSI	TSI.1.1. [Schematic Design approved] TSI.4.1. [Inventor file for TSI Box approved by machine shop]
Cooling	COOL2.1[control algorithm built] COOL2.2[control algorithm tested with fan]
Systems Engineering	-ESF forms -M.5.1.[ATP created and approved] -TSV.5.1[Powered dynamometer with accumulator] -M.1.3. [Maintainability plan] -M3: User Manual template -M4: Maintenance manual template
GLV	GLV.4.3.[VCI BoB Delivered] GLV.3.3[Exterior Panel Delivered] GLV.2.4.[Built full safety loop] GLV.4.2.[VCI Breakout Board delivered] GLV.3.5[Integrated exterior panel]
Interconnect	Action Item: follow up with Champlain cabling [IC.2.2.[Proper double shielded cables researched and acquired]] IC.1.1- Manufacture cables for Comm. Link. demo
Communications	Continue to meet with campus Communications Representatives
Car Physics Investigation	PHYS.3.1[Mathematical derivation for dynamic modeling] PHYS.3.2[Mathematical derivation for static modeling] PHYS.3.1[Mathematical derivation for cascade relation] PHYS.3.1[Mathematical derivation for Motor/motor controller IO]
MGMT	Weekly task of purchasing/ receiving orders Purchase report Inventory PSL3 update WBS

Cost Summary:

Subsystem	Spent this period	Spent to date	Budget Allocated	Budget Remaining
TSI	\$114.88	\$114.88	\$1,000	\$885.12
GLV	\$0	\$0	\$1,000	\$1,000
VSCADA	\$0	\$0	\$50	\$50
Cell App	\$0	\$0	\$125	\$125
Controller Cooling System	\$410.47	\$410.47	\$600	\$189.53
Interconnect / Cabling / ICD	\$0	\$0	\$1,000	\$1,000
Dyno	\$0	\$0	\$50	\$50
TSV	\$384.31	\$384.31	\$500	\$115.69
Physics & Cruise Control	\$0	0	\$0	\$0
Shipping / Tax	\$13.32	\$13.32	\$1,175	\$1,161.68
Total	\$922.98	\$922.98	\$5,500	\$4,577.02

Receiving Report:

- 1) TSV – Digikey – PacMAN board parts (Appendix I)

Purchase Requests:

- 1) TSV – Digikey – PacMAN board parts (Appendix I)
- 2) Cooling – SpakrFun – Arduino Uno R3 and CAN BUS Shield (Appendix II)
- 3) Cooling – Koolance – Cooling system parts (Appendix III)
- 4) Cooling – SparkFun – LCD Display (Appendix IV)
- 5) Cooling – Amazon – PWM Fans (Appendix V)
- 6) TSI – EVWest – Precharge Relay (Appendix VI)

APPENDIX I

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 1

Requested By: TSV (Emilie)
Requested Date: 13-Feb-07
Ship By: Ground

Vendor: Digikey
Web Site: <http://www.digikey.com/>
Phone: 218-681-6674

#	Cust Ref	Vendor PN	Manufacturer PN	Description	Quantity	Unit Price	Total Price	Rcvd
1	U1	AT90CAN128-16AU-ND	AT90CAN128-16AU	IC MCU 8BIT 128KB FLASH 64TQFP	5	\$7.5200	\$37.60	17-Feb-17
2	U2	ADM6320CY29ARJZ-R7CT-N	ADM6320CY29ARJZ-R	IC SUPERVISOR WATCHDOG SOT23-5	5	\$1.5400	\$7.70	17-Feb-17
3	U3	568-1074-1-ND	PCF8574AT/3,518	IC I/O EXPANDER I2C 8B 16SOIC	5	\$1.2200	\$6.10	17-Feb-17
4	U4	296-29034-1-ND	INA226AIDGSR	IC Monitor PWR/CURR BIDIR 10MSOP	5	\$3.4400	\$17.20	17-Feb-17
5	U5	296-38849-1-ND	ADS1115IDGSR	IC ADC 16BIT 860SPS LP 10MSOP	5	\$5.6500	\$28.25	17-Feb-17
6	U6	LTC3638EMSE#PBF-ND	LTC3638EMSE#PBF	IC REG BUCK ADJ 0.25A 16MSOP	5	\$7.7900	\$38.95	17-Feb-17
7	U7	811-2109-5-ND	NCS6S1205C	CONVERT DC/DC 6W 12VIN-5VOUT T/H	2	\$22.0000	\$44.00	17-Feb-17
8	U8	336-2048-5-ND	SI8600AC-B-IS	DGTL ISO 3.75KV 2CH I2C 8SOIC	5	\$3.3700	\$16.85	17-Feb-17
9	U9	NCP1117ST33T3GOSCT-ND	NCP1117ST33T3G	IC REG LDO 3.3V 1A SOT223	5	\$0.4600	\$2.30	17-Feb-17
10	U12	768-1007-1-ND	FT232RL-REEL	IC USB FS SERIAL UART 28-SSOP	5	\$4.5000	\$22.50	17-Feb-17
11	U13	TLP2361(V4-TPLECT-ND	TLP2361(V4-TPL,E	OPTOISO 3.75KV PSH PULL SO6-5	5	\$1.1400	\$5.70	17-Feb-17
12	P1	A113982-ND	556881-4	CONN RCPT 4POS 11.18MM PCB SLDR	5	\$8.3000	\$41.50	17-Feb-17
13	P2, P6	WM1340-ND	15912025	CONN HEADER 2POS .100 R/A SMD	5	\$2.6100	\$13.05	17-Feb-17
14	P3	WM1344-ND	15912065	CONN HEADER 6POS .100 R/A SMD	5	\$4.2000	\$21.00	17-Feb-17
15	J1	ED2983-ND	USB-B1HSB6	CONN USB TYPE B R/A BLACK	10	\$0.5460	\$5.46	17-Feb-17
16	J2	182-37FE-ND	182-037-213R531	CONN D-SUB RCPT 37POS R/A SOLDER	3	\$3.2800	\$9.84	17-Feb-17
17	J3	WM3789CT-ND	855135002	CONN MOD JACK 6P6C VERT UNSHLD	3	\$1.1600	\$3.48	17-Feb-17
18	Q1, Q2, Q3, Q4	RRR015P03TLCT-ND	RRR015P03TL	MOSFET P-CH 30V 1.5A TSMT3	10	\$0.3960	\$3.96	17-Feb-17
19	R15, R16, R17, R18, R22, R26	P510BZCT-ND	ERJ-PA3J511V	RES SMD 510 OHM 5% 1/4W 0603	100	\$0.0340	\$3.40	17-Feb-17
20	R3	CSNL1206FT1L00CT-ND	CSNL1206FT1L00	RES SMD 0.001 OHM 1% 1W 1206	10	\$0.5390	\$5.39	17-Feb-17
21	C30, C31, C32, C33, C35, C36	1276-1052-1-ND	CL21A106KPFNNE	CAP CER 10UF 10V X5R 0805	50	\$0.0736	\$3.68	17-Feb-17
22	C27, C9, C15, C12	1276-1854-1-ND	CL32A106KAULNNE	CAP CER 10UF 25V X5R 1210	100	\$0.0930	\$9.30	17-Feb-17
23	F1	BK-6010-ND	BK-6010	FUSE BLOCK BLADE PCB	10	\$0.4940	\$4.94	17-Feb-17
24	D15, D5, D6, D9, D18, D21, D19	SK310A-LTPMSCT-ND	SK310A-LTP	DIODE SCHOTTKY 100V 3A DO214AC	25	\$0.3284	\$8.21	17-Feb-17
25	Rly 2	PB1014-ND	T9AS1D12-5	RELAY GEN PURPOSE SPST 30A 5V	5	\$3.7800	\$18.90	17-Feb-17
26	U14	296-40579-1-ND	TCA9617BDGKR	IC V-LEVEL XLATR FM+ I2C 8VSSOP	5	\$1.0100	\$5.05	17-Feb-17

Subtotal	\$384.31
Shipping Fees	\$13.32
Grand Total:	\$397.63

APPENDIX II

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 2

Requested By: Cooling (Yi Han)
Requested Date: 15-Feb-17
Ship By: Ground

Vendor: SparkFun
Web Site: <https://www.sparkfun.com/>
Phone: 303-284-0979

#	Quantity	SparkFun SKU	Description	Unit Price	Total Price	Rcvd
1	1	DEV-13262	CAN-BUS Shield	\$24.95	\$24.95	
2	1	DEV-11021	Arduino Uno - R3	\$24.95	\$24.95	
3						

Shipping Fees	
Grand Total:	\$49.90

Instructor Approval: _____

URLs: <https://www.sparkfun.com/products/13262>
<https://www.sparkfun.com/products/11021>

APPENDIX III

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 3

Requested By: Cooling (Yi Han)
Requested Date: 16-Feb-17
Ship By: Ground

Vendor: Koolance
Web Site www.koolance.com
Phone 253-249-7669

#	Koolance SKU	Description	Quantity	Unit Price	Total Price	Rcvd
1	NZL-LXG1	Fitting Elbow 1/4 BSPP	2	\$9.99	\$19.98	
2	QD4-FS13X19	QD4 Female Compression 13 x 19	2	\$15.99	\$31.98	
3	QD4-MSN38	QD4 Male to 3/8 NPT Male	2	\$12.49	\$24.98	
4	ADT-XMM-BK	Male-Male G 1/4 BSPP	3	\$2.49	\$7.47	
5	FIT-V13X19-BK	Compression 13X19 to 1/4 BSPP	4	\$6.74	\$26.96	
6	INS-FM17N	Flow Meter	1	\$19.99	\$19.99	
7	SEN-TPL010K	Temperature Sensor	2	\$19.99	\$39.98	
8	TAP-CP002P	Temperature Sensor Tape	1	\$0.35	\$0.35	
9	SEN-AP007P	Temperature Sensor, Flat, 10K Ohm	1	\$4.49	\$4.49	
10	PMP-450S	PMP-450S Pump, ID 13mm	1	\$76.99	\$76.99	
11	HX-720	Radiator, 2x120mm 30-FPI Copper	1	\$47.99	\$47.99	
12	GRL-AP002P	Fan Grill, 120mm	2	\$2.49	\$4.98	
13	CBL-CTR103P	3-4pin Molex Power Adapter	1	\$3.49	\$3.49	

Shipping Fees:	
Grand Total:	\$309.63

Instructor Approval: _____

APPENDIX IV

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 4

Requested By: Cooling (Yi Han)
Requested Date: 16-Feb-17
Ship By: Ground

Vendor: SparkFun
Web Site: www.sparkfun.com
Phone: 303-284-0979

#	SparkFun SKU	Description	Quantity	Unit Price	Total Price	Rcvd
1	LCD-09568	Serial Enabled 20x4 LCD - Black on Green 5V	1	\$29.95	\$29.95	

Shipping Fees:	
Grand Total:	\$29.95

Instructor Approval: _____

URL: <https://www.sparkfun.com/products/9568>

APPENDIX V

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 5

Requested By: Cooling (Yi Han)
Requested Date: 16-Feb-17
Ship By: Ground

Vendor: Amazon
Web Site: www.amazon.com
Phone: 1-888-280-4331

#	Description	Quantity	Unit Price	Total Price	Rcvd
1	Asiahorse PWM Solar Eclipse-Ultra Quiet Bearing 120mm DC Led Fan for Computer Cases, Long Life CPU Coolers 2pack(red)	1	\$20.99	\$20.99	

Shipping Fees:	
Grand Total:	\$20.99

Instructor Approval: _____

URL: https://www.amazon.com/Asiahorse-Eclipse-Ultra-Bearing-Computer-Coolers/dp/B01MY2MAL4/ref=sr_1_2?ie=UTF8&qid=1487275853&sr=8-2&keywords=computer%2Bfan%2B120%2Bmm%2Bpwm&th=1

APPENDIX VI

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 6

Requested By: TSI (Jack)
Requested Date: 17-Feb-17
Ship By: Ground

Vendor: EV West
Web Site: www.evwest.com
Phone: 1-888-591-5830

#	Vendor PN	Description	Quantity	Unit Price	Total Price	Rcvd
1	GV200-QA	Gigavac GV200-QA EV Contactor - 4000 Amps Max - 48 Volt External Economizer PWM (Relay for motor controller)	1	\$114.88	\$114.88	

Shipping Fees:	
Grand Total:	\$114.88

Instructor Approval: _____

URL: http://www.evwest.com/catalog/product_info.php?products_id=406