

HASP Monthly Status Report - July 2016

Arizona State University - HIDRA

July 29, 2016

Student Leader: John McCulloch

Faculty Advisor: Chris Groppi

1. Milestones

- Successfully full systems bench tested HIDRA
- Integrated and assembled HIDRA
- Continued camera calibration
- Successfully passed multiple vacuum tests with completed payload

2. Summary of Activities

The team spent most of the month of July testing and troubleshooting issues that arose while fully integrating the HIDRA payload. HIDRA successfully passed a full systems bench test, however once assembled some issues arose regarding conductivity of the aluminum frame. Additionally, the team discovered that the current sensors created so much noise in the power supplied to the system that the PWM signal could not be properly generated; they have since been removed. Additionally HIDRA appears to draw 480 mA at 30VDC for a split second on startup, but then drop to approximately 200mA during normal operation.

3. Issues Encountered

- Current sensors created noise in power lines - removed current sensors
- Aluminum frame was shorting out the Labjack - used nylon washers to isolate the Labjack
- HIDRA draws ~480 mA on startup - ordered a time delay switch to install if issues are encountered at integration

4. Team Structure and Demographics:

Name	Role	Status	Education	Gender	Ethnicity	Email
John McCulloch	Project Manager/Systems Engineer	Active	Graduate Student	Male	Caucasian	jpmccull@asu.edu
Bradley Karas	Mechanical Engineer/Systems Engineer	Active	Graduate Student	Male	Caucasian	bkaras1@asu.edu
Alex Mastrea	Testing/Quality Engineer	Active	Undergraduate	Male	Caucasian	amastrea@asu.edu
Jacob Trahan	Software Engineer	Active	Undergraduate	Male	Caucasian	jrtrahan@asu.edu
Srinidhi Ravi	Science Lead	Active	Undergraduate	Female	Asian Indian	sravi13@asu.edu
Nijiel Rocha	Support Engineer	Active	Undergraduate	Male	Hispanic	nerocha@asu.edu
Akshay Vijay	Support Engineer	Active	Undergraduate	Male	Asian Indian	avijay4@asu.edu
Christopher Groppi	Faculty Advisor	Active	Professor	Male	Caucasian	cgroppi@asu.edu
Andrew Thoeson	Graduate TA	Active	Graduate Student	Male	Caucasian	athoesen@asu.edu
<i>Cheyenne Howard</i>	<i>Science Team</i>	<i>Inactive</i>	<i>Undergraduate</i>	<i>Female</i>	<i>Caucasian</i>	--
<i>Jia Zhuang</i>	<i>Communications Engineer</i>	<i>Inactive</i>	<i>Undergraduate</i>	<i>Female</i>	<i>Asian</i>	--
<i>John Stone</i>	<i>Support Engineer</i>	<i>Inactive</i>	<i>Undergraduate</i>	<i>Male</i>	<i>Caucasian</i>	--
<i>Kelly Johnson</i>	<i>Thermal Engineer</i>	<i>Inactive</i>	<i>Undergraduate</i>	<i>Female</i>	<i>Caucasian</i>	--
<i>Nathan Wilson</i>	<i>Support Engineer</i>	<i>Inactive</i>	<i>Undergraduate</i>	<i>Male</i>	<i>Caucasian</i>	--
<i>Stone Hanlon</i>	<i>Power Engineer</i>	<i>Inactive</i>	<i>Undergraduate</i>	<i>Male</i>	<i>Caucasian</i>	--
<i>James Cornelison</i>	<i>Graduate TA</i>	<i>Inactive</i>	<i>Graduate Student</i>	<i>Male</i>	<i>Caucasian</i>	--
<i>Candace Ashley</i>	<i>Science Team</i>	<i>Inactive</i>	<i>Undergraduate Student</i>	<i>Female</i>	<i>Caucasian</i>	--
<i>Jekan Thangavelautham</i>	<i>Faculty Advisor</i>	<i>Inactive</i>	<i>Professor</i>	<i>Male</i>	<i>Asian Indian</i>	--
<i>Erik Asphaug</i>	<i>Faculty Advisor</i>	<i>Inactive</i>	<i>Professor</i>	<i>Male</i>	<i>Caucasian</i>	--