

## **HASP Monthly Status Report - April 2016**

Arizona State University - HIDRA

April 28, 2016

Student Leader: John McCulloch

Faculty Advisor: Chris Groppi

### **1. Milestones**

- Completed frame fabrication
- Completed individual component testing
- Completed preliminary programming
- Began full systems testing

### **2. Summary of Activities**

The team spent the month of April acceptance testing and thermal-vacuum testing individual components. The frame and chassis designs were sent to the machine shop for fabrication and were subsequently completed. After the individual components passed testing, they were integrated into their subsystems for subsystem testing and then further into a full systems test.

### **3. Issues Encountered**

- The original 30 VDC - 5 VDC converters failed thermal-vacuum testing. They produced far too much heat and did not produce the 5 VDC necessary to power the Raspberry Pi and FLIR camera. Ordered new adjustable ones that have passed the testing phases and have been incorporated into the model.
- Machine shop was unable to attach the press-in nuts to the frame. This was rectified by our mechanical engineer in an afternoon.

- Encountered issues triggering and controlling the FLIR camera. Rectified this issue by using the labjack to generate a PWM signal to change the PWM states thus controlling the camera.

#### 4. Team Structure and Demographics:

Name	Role	Status	Education	Gender	Ethnicity	Email
John McCulloch	Project Manager/Systems Engineer	Active	Undergraduate Student	Male	Caucasian	jpmccull@asu.edu
Bradley Karas	Mechanical Engineer	Active	Undergraduate Student	Male	Caucasian	amastrea@asu.edu
Alex Mastrean	Testing/Quality Engineer	Active	Undergraduate Student	Male	Caucasian	bkaras1@asu.edu
Cheyenne Howard	Science Team	Active	Undergraduate Student	Female	Caucasian	cwhowar2@asu.edu
Jacob Trahan	Software Engineer	Active	Undergraduate Student	Male	Caucasian	jrtrahan@asu.edu
Jia Zhuang	Communications Engineer	Active	Undergraduate Student	Female	Asian	jzhuang3@asu.edu
John Stone	Support Engineer	Active	Undergraduate Student	Male	Caucasian	jdstone7@asu.edu
Kelly Johnson	Thermal Engineer	Active	Undergraduate Student	Female	Caucasian	kejohn20@asu.edu
Nathan Wilson	Support Engineer	Active	Undergraduate Student	Male	Caucasian	ndwilso4@asu.edu
Srinidhi Ravi	Science Team	Active	Undergraduate Student	Female	Asian Indian	sravi13@asu.edu
Stone Hanlon	Power Engineer	Active	Undergraduate Student	Male	Caucasian	sahanlon@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
James Cornelison	Graduate TA	Active	Graduate Student	Male	Caucasian	jcornel@asu.edu
Candace Ashley	Science Team	Inactive	Undergraduate Student	Female	Caucasian	--
Jekan Thangavelautham	Faculty Advisor	Inactive	Professor	Male	Asian Indian	--
Erik Asphaug	Faculty Advisor	Inactive	Professor	Male	Caucasian	--