

901205 - ESP SURF Center

Week 29

1. Brent Roman
 - a. Improved the calibration procedure for the 3G ESP's Carousel absolute position sensor
 - b. Hacked some custom firmware to correct ESPhonu's damaged abs pos sensor

Week 27

1. Brent Roman
 - a. Helping Nadia bring up ESP3s retrofitted for Function cartridges
 - b. Updating every ESP2G in the field (ongoing, never ending ;-)

Week 26

1. Scott Jensen
 - a. Support of Bozeman instrument field testing

Week 25

1. Scott Jensen
 - a. The linux computer for FIDO is having disk problems. The cause is not completely clear.
 - b. Reducing log writing is the first line of offense.
 - c. The mechanism seems to be running well
 - d. Latest update was installed and has been proving out well
2. Brent Roman
 - a. Working with Preston and Nadia to restructure configuration files to make it easier for 3G ESPs to move between different types of domes.

Week 23

1. Scott Jensen
 - a. Delivery of instruments has unearthed many little details and most of them have been addressed.
 - b. Fieldwork support is commencing but time pressure is limited

Week 22

1. Scott Jensen

- a. Back from vacation and deep in the issues
 - b. Pump controller version 4 seems to work ok but due to a user setting it was faulting.
 - c. A patch has been implemented to increase some of the pump controller limits to allow more room to operate.
 - d. Fido-010 in Wisconsin is having an issue with its Force Sensing Resistor (fsr). The preload value seems to have dropped.
 - e. The fsr issue uncovered a weakness in the calibrate routine that needs to be fixed.
- 2. Brent Roman
 - a. Helped Chris Preston diagnose weirdness with 3G cartridge heat calibration

Week 20

- 1. Brent Roman
 - a. Moved NFS mounts to thalassa
 - b. Patched old bug in Ruby garbage collector

Week 19

- 1. Scott Jensen
 - a. Preparing instrument for shipment
 - b. Monitoring Bozeman progress and support
 - c. Finally have knocked down all the vacuum issues, from debris in the valve to the failing pump. Hoping now true progress to use cases can begin.

Week 18

- 1. Scott Jensen
 - a. Ran into a number "bugs" with FIDO that needed some attention
 - b. One was a logic bug that left the instrument in a loop that required manual control to break
 - c. Another was a leaking intake valve which turns out it had a foreign object inside.
 - d. A mysterious vacuum leak was traced to a stick slip problem with the puck lid. A solution was devised for that as well.
 - e. Finally a method to program new firmware was implemented and tested
- 2. Brent Roman
 - a. Colleagues in Denmark have deployed ESP on a creek in Iceland
 - i. Doing in-situ PCR every other day for a few months
 - b. Patched the MBARI Ruby interpreter to (hopefully) fix a very rare garbage collection bug.
 - i. Found 20 year old post on the Ruby issue tracker that looked like a good match

- ii. In case this bug bites again, modified Ruby to soldier on rather than bailing.

Week 15

1. Scott Jensen
 - a. Installed FIDO-Marina (002) on Brazilian Research vessel
 - b. Assisted with installation of ESP-Koa on Tupan UASV
 - c. Returned home from Brazil
 - d. Supported delivery and commissioning of first USGS FIDO instrument
2. Brent Roman
 - a. Helped Jim Brich debug his puckreader/scanner app
 - b. Worked with Kevin Gomes to package it into the FIDO SDcard image

Week 12

1. Scott Jensen
 - a. Finishing preparations and logistics for Brazil deployment

Week 10

1. Brent Roman
 - a. Prepared ESPaway router with USB cell modem that should work in Brazil

Week 8

1. Scott Jensen
 - a. Code clean up due to many legacy files still remaining
 - b. Testing of mechanism in hot and cold
 - c. Vacuum pump leak and adding a valve to deal with
 - d. Packing and preparations for Brazil
 - e. Support of preparation for Brazil

Week 7

1. Scott Jensen
 - a. Instrument check outs for Brazil deployment
 - b. Ran instrument cold

Week 5

1. Scott Jensen
 - a. Supporting work for upcoming ASV deployments
2. Brent Roman
 - a. Supporting Preston, Nadia & Scott in prepper ESPkoa for Brazil

Week 4

1. Kevin Gomes
 - a. Incorporating Brent's changes to try and make the SD card images more robust to power cycling
2. Scott Jensen
 - a. Finalized puck potting protocol
 - b. Transferred potting task to The Rosal Group
 - c. Supporting design of the rebuild of the USV platform interface
 - d.

Week 3

1. Scott Jensen
 - a. Preparations for Rio. Dug up previous configuration drawings and began working to implement the configuration for the Tupan
 - b. Year planning around deployments and installations throughout the year
2. Brent Roman
 - a. Working with FIDO team to create a separate /boot filesystem
 - b. So that the rootfs can be recovered on next boot after FIDO loses power
 - c. Lots of testing of improved WiFi and cell modem management in ESP Linux
 - d. Supporting NWFSC NOAA's repairs of their ESP's grippers
 - e. Discovered that RTL8723DU WiFi chips work on the Parkard
 - i. When RTL8723BU WiFi chips do not associate with its Cisco APs at all
 - f. Ported driver for the 8723DU to ESP Linux kernel
 - i. Testing for long term stability

Week 2

1. Brent Roman
 - a. Debugging cell modem connection script for the troublesome SIM7672G
 - b. Writing and testing generalized GPS enable/disable scripts for GPS equipped modems
 - c. Working with Andrea on determining why ESP WiFi cannot connect to the Parkard's network.