

Brent Roman

Week 52

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office

Week 51

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office

Week 50

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Provided a bit of help to Steph's lab debugging ESP 2G gripper issue
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Completed configuration of T2-chip equipped MacBook Pro
 - Built bootable USB SSD to facilitate recovery and cloning
 - Found and fixed problem where FIDO WiFi AP was being assigned random MAC
 - Scripted custom APN rewriting logic needed for connecting SIM7672G cell modem

- Took weeks to work this out!
 - Sent script to SIMCom with plea to fix module firmware bug necessitating this
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Dropped framerate to 30hz as an experiment for remainder of this deployment
- Overhead
 - Helped Brett Hopson choose a replacement for LRAUV's CradlePoint router
- Out of Office

Week 49

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Helped Nadia diagnosed Forearm problems at NWFSC (with ESPeddie at Steph's lab)
 - Rewrote and debugged udev rules to configure cell modems on FIDO and ESP
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Configured G3 camera for another deployment
- Overhead
- Out of Office

Week 48

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office

Week 47

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW

- Steph discovered that the ESPfriday's gripper was failing to stop at it closed position
 - Which explains the trouble we were having late in the last deployment
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Continuing testing of Cellular modem and GPS for FIDO sampler
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Finally ran a YOLO object ID model on the CV25 camera.
 - Draws only 3W IDing full HD video at 16hz.
 - Lots of work left to do
 - Set up purloined camera focusing rig in old pilot's area being remodeled
- Overhead
- Out of Office

Week 46

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Cell modem test rig I help develop a few weeks ago was deployed to compare two different modems performance while ship loitered around the ESP mooring site
 - I spent a couple hours yesterday monitoring it and playing with modem configuration.
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Finished repairing ESPECOSCOPE and discovered an Arm drive belt needs replacement.
 - Presented results of LTE cell modem evaluation to the ESP team
 - Installed the chosen modem dongle on the FIDO sample being deployed on dock next week.
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Monitoring ongoing deployment.
 - Wrote a script to sequence through alternative shutter speeds and auto exposure gains.
 - Contacted USB camera vendor recommended by Paul Roberts
- Overhead
- Out of Office

Week 45

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Better error reporting for tripped overload breakers
 - Helping to diagnosis I2C bus failure on ESPkoa
 - Evaluating various USB modem LTE Cat1.bis modules from uBlox, SimCOM, and Quectel
 - Discovering lots of poor quality firmware especially in uBlox modems
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Readied for another deployment
 - Evaluating effectiveness of video encoding parameters
 - Working with Olclea to determine how to use the CV25 chip for off-line transcoding
- Overhead
- Out of Office

Week 44

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office

Week 43

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Added signal quality logging to cell modem tester shipped to APL last week.
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Installing Debian T2 chip equipped MacBook pros is “interesting”

- Got most everything working except suspend/hibernate
- Worked with Adrianna to alter policy on DP-Guest
 - To allow ESPs to create WiFi APs with DP-Guest as uplink
- Helped Scott debug I2C Bus electrical issues on 3G's Cartridge bus
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Evaluating gen3 camera video from last week's deployment
 - Looks really good this time, much improved exposure range than gen2
- Overhead
- Out of Office

Week 42

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Shipped kit of parts for cell modem tester to APL Engineer who mounted them into a deckbox
 - For testing alternative cell modems off La Push, WA
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Worked with Scott Jensen to help debug electrical issues that arose when loading 3G ESP
 - With the full complement of 60 smart cartridges
 - I2C bus and electrical overloads resulted
 - Modified ESP software and firmware to better report when overloads occur
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Modified max gain halfway through deployment to see its effect on low light video quality
- Overhead
- Out of Office

Week 41

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - ESPfriday finally seems to have dropped a sampling puck due to a gripper failure. Not recoverable, but only after processing 170ish of 192 pucks. Not bad.
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center

- Enhanced ESP Elf motor controller firmware to support continuous reseeking of carousel position when it slips. Was needed due to added friction in newest builds. Seems to work great.
 - Helped FIDO group get RockPI-S WiFi working reliably again.
 - Working with APL to prepare a deckbox for comparing different cell modems for use off La Push.
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Added a bunch of new command line switches to facilitate adjusting video parameters during deployments.
 - Switched to h.264 encoding because h.265 encoded video was jerky
- Overhead
- Out of Office

Week 40

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office

Week 39

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Working with Tina's lab to determine cause of occasional camera overexposures
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Determined that, when using WiFi chip's simultaneous AP/STA mode, the STA must be started before the AP.
 - Got cell modems working with FIDO sampler
 - Reconfigured FIDO to use a separate USB WiFi dongle for STA(client) mode
 - Ordered low power USB cell modem with GPS for testing
 - Added "reseek" option to ESP 3G stepper motor controllers
 - To restore position of bumped carousel.
- 901913 - Wet Wifi
- 902304 - Piscivore Cam

- Worked out an acceptable video file naming convention with Brian Schlining
- Negotiated a punch list for next camera deployment.
- Finally received converted ML model for testing on G3 camera
- Overhead
- Out of Office

Week 38

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office

Week 37

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Review of debug log info indicates that 2G ESP camera is not very linear
 - Tweaked autoexposure algorithm on deployed ESPfriday to better cope with this
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Configured ESP on David Parkard to allow both local and remote access
 - Only to discover that IS blocked all remote connections and VPN offshore
 - Worked with Andrianna to restore necessary connectivity.
 - Again.
 - Trouble with WiFi concurrent mode on RockPI-S
 - Seems OK in typical scenarios, but reconnects repeatedly on campus networks
 - Suspect some problem with roaming – more work needed
 - Installed RockPI-S with Raspberry PI on Dock to gain more data on connection stability
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - 2nd deployment of 3rd Gen Piscivore
 - Increased record data rate from 4Mb/s to 13.24Mb/s
 - Discovered that record rate is limited by SDcard write rate of 20Mb/s

- Reworked file naming convention per Lonnie's request
- Overhead
- Out of Office

Week 36

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office
 - Visiting family in Anacortes, WA for funeral Sept 3 - 9th

Week 35

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Added debugging output to try to understand occasional camera autoexposure errors
 - No failures since debugging output added (figures 😊)
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Unorganized gripper object hierarchy to ease implementation of asymmetric ExternalValve error recovery
 - To better cope with overly stiff valves discharging supercaps
 - Found and fixed firmware bug in gripper/valve actuator driver
- 901913 - Wet Wifi
 - Lunch with GreenSeas engineers who have had good luck with OceanComms modems
- 902304 - Piscivore Cam
 - Delaying start of backseat heartbeat seems to be required so that LRAUV shuts it down properly.
- Overhead
- Out of Office
 - Visiting family in Anacortes, WA for funeral Sept 3 - 9th

Week 34

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office
 - Visiting family in Anacortes, WA for funeral Sept 3 - 9th

Week 33

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - ESPfriday continues sampling using Certus for comms
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Working with Preston to diagnose PCR instrument failures in Iceland
 - The PCR temperature sensor seems to be reading 35C high
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Integration of packaged camera is going well.
 - Initial tests in tank working well
 - Need to confirm that LRAUV restart sys will warn camera of shutdown
 - Need to create some LRAUV mission to switch camera off at night
- Overhead
- Out of Office
 - Visiting family in Anacortes, WA for funeral Sept 3 - 9th

Week 32

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam

- Overhead
- Out of Office

Week 31

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Carried cannibalized ESP 2G elevator to Steph Moore's lab and helped them repair ESPfriday with it.
 - ESPfriday deployed with Iridium Certus 100 satellite communications.
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
 - Nothing to report. Ticking over nicely.
- 901205 - ESP SURF Center
 - Helped Nadia bring up and debug portable 3G ESPs
 - Helped Preston configure and debug ESPkoa
 - Reconfigured ESPkoa during deployment to work around cartridge bus I2C failure
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Brought up 2nd article
 - Fixed issue causing failure after every few minutes of recording
 - Testing waterproof housing and cabling.
- Overhead
- Out of Office
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Week 30

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office
 - May 30 – June 23

Week 29

- 701147 - MARS O&M IV

- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office
 - May 30 – June 23

Week 28

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Testing and tuning Certus satellite comms with ESP on NOAA's roof.
 - Helped APL debug their current limiting power supply
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Augmented the ESP's existing "daily" mission framework to support missions with multiple assays
 - Which assay to run is determined by the number of remained pucks
 - Rather than by the phase's programmed start time.
- 901913 - Wet Wifi
 - Decided to fold WetWifi into LRAUV Tech devopment in 2026
- 902304 - Piscivore Cam
 - Bringing up 2nd test article.
 - Worked out how to update device-tree without reflashing entire image
- Overhead
- Out of Office
 - May 30 – June 23

Week 27

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead

- Out of Office
 - May 30 – June 23

Week 26

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Testing updated telebuoy power supply
 - But, still seeing undervoltage failures
 - ESPeddie over half through its samples
 - But, its Forearm is suffering from a bad case of cage creep
 - Often needs manual intervention to get bearings aligned
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
 - ESPgordon and ESPwaldo appear to be running well!
- 901205 - ESP SURF Center
 - Helped Preston and Nadia rediscover old LRAUV bug preventing vehicle from starting its pppd
- 901913 - Wet Wifi
 - Still debating what to do for next year
- 902304 - Piscivore Cam
 - Seem to have fixed the timing deadline failures by turning off sync mode in the queue for monitoring video.
 - Working with Brian on a “backseat” software interface for Piscivore
- Overhead
- Out of Office
 - May 30 – June 23

Week 25

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office
 - May 30 – June 23

Week 24

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office
 - May 30 – June 23

Week 23

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office
 - May 30 – June 23

Week 22

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Patched deployed ESPeddie to better recover from Forearm cage creep
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
 - Developed a simple procedure to recover deployed ESPgordon from I2C gateway serial I/O errors
- 901205 - ESP SURF Center
 - Diagnosed hardware problems on a few of the failed ESP 3G heater boards
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Finally (sort of) wrapped my head around BitBake and Yocto.
 - The prototype is recording HD video @60hz while serving a real-time RTSP stream.

- Also corrects for camera lens warping and provides a WiFi link.
 - Worked with George Stern and Oclea to find a hardware fix for Battery Backed RTC.
- Overhead
- Out of Office
 - May 30 – June 23

Week 21

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office
 - May 30 – June 23

Week 20

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - ESP deployed off La Push continues sampling once every other day
 - Working with APL electrical engineer to debug power supply issues
 - Certus modem inrush current requires buffering with a large cap and slow-start circuit
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Helped Nadia understand why 3G PV actuators' calibrations are drifting
 - After she discovered printed parts are flexing and cracking
 - Revamped sampler vacuum calibration to more easily handle flow resistance varying between machines.
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Finally got the CV25 Ambarella based camera board image configured to my liking
 - With support for High-Speed WiFi, Wireguard VPN and SDcard storage
- Overhead
 - Filling new shelves in my office
- Out of Office

- May 30 – June 23

Week 19

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - ESPeddie deployed w/o satcomms
 - Testing satcomms on roof of NOAA Office
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
 - Supporting the away team!
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
 - Decided to focus on LRAUV <-> Waveglider tracking for next few months
- 902304 - Piscivore Cam
 - Oclea's CV25-based camera module is up and running
 - Built Yocto-based distro (after much trial and error)
 - Reconfiguring Linux kernel for USB host instead of device
 - Working with George Stern on packaging, physical ports, etc.
- Overhead
- Out of Office
 - May 30 – June 23

Week 18

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - NWFSC Deployed one ESP off La Push. Not using Certus yet.
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
 - Helped Scott patch problem with Vectron's Linux kernel WiFi support.
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
 - Convinced Brett we should demonstrate better LRAUV/Waveglider coordination before purchasing another year subscription for OceanComm modems
- 902304 - Piscivore Cam
 - Configured Yocto to build images for Olcea hardware on my Desktop machine
 - Demonstrated RTSP video server with the module we hope to deploy.
- Overhead
 - Finally got shelving installed in my office. Thank you, Tyler!
- Out of Office
 - May 30 – June 23

Week 17

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office

Week 16

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
 - Updated Linux OS on both of the ESPs to be deployed
 - Tested ESP Linux integration with Starlink
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Calibrated first set of new 3G Heaters boards with Chloe's help
 - Enoch is iterating on holder to make it less finicky
 - Added capability the ESP to remotely plot time series with gnuplot
 - To help improve performance of puck/cartridge heating PID controllers
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Worked with George Stern to write EOI requesting early access to their EVK/SDK for board development
 - Received and reviewed material.
 - Recommending we purchase ASAP
- Overhead
 - Moved my main workstation to Debian Trixie with BTRFS replacing EXT4
 - BTRFS allows rollback to checkpoints – which has already proven useful
- Out of Office

Week 15

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud

- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office

Week 14

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Some stress at NOAA early in the week due to a software bug in the rewritten ESP camera driver in the Linux kernel.
 - Needed to run on newer kernels, but “best practices” broke driver on older ones!
 - Took 2 days to find and fix with conditional #defines depending on kernel version
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Got almost everything ready for calibrating 100 ESP 3G heater boards starting next week.
 - Working with Enoch on creating two water baths with the board switching between them
 - To form a 2-point linear calibration
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Sent EOI and got 2-week early access to their development portal for pre-purchase evaluation
- Overhead
 - Finally moving my main Linux desktop to 64-bit user space with Encrypted BTRFS
 - Everytime I update Linux, it breaks Bluetooth 😞
- Out of Office

Week 13

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Discovered timing bug in low-light camera Linux kernel driver
 - Due to using new “approved” user mem copy functions for newer kernels
 - Believe “Fixed” by *only* using those functions in newer kernels!
 - Certus modem quit working after shipment to PNW
 - But started again after a issuing a firmware “factory_reset”
 - Decided to deploy without Satcoms in April, with in August

- Not enough time to test.
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Investigating use of refrigerated bath for “cold” temp. Calibration point
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Wrote LOI to Oclea to get a preview of their SDK before committing to purchase
- Overhead
- Out of Office

Week 12

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Shipped back Certus modem after completing testing with it on Bld B roof
 - Altered log level of a few recurring kernel and daemon warnings
 - Reduce the size of the logs uploaded via the expensive Certus link
 - Remotely updated both of their ESPs
 - Determined how to run JXL decompression on their Windows laptops 😞
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
 - PID control parameters for older ESPs needed revisiting.
 - Likely due to “wear-in” of carousel mechanism
- 901205 - ESP SURF Center
 - Enoch and I seem to have cobbled together a viable, quick calibration fixture
 - utilizing a plastic bag in a suvee bath!
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Working with Oclea to convince them to allow us access to their “portal” ahead of \$6k purchase
 - So MBARI can determine if their development kit suites our needs
- Overhead
- Out of Office

Week 11

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Testing, debugging and enhancing Certus/Cell comms mooring
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud

- 901205 - ESP SURF Center
 - Working with Enoch on water bath based 3G heater board calibration fixture
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Design meetings
- Overhead
- Out of Office

Week 10

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office

Week 9

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Test and Debug of Cell/Sat/WiFi comms fallback logic in SatComms ESP mooring
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Prototyping water bath based temperature control for 3G cartridge sensor calibration
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
 - Researched GStreamer viz a viz Ocelea.
- Overhead
- Out of Office

Week 8

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials

- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office

Week 7

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Wrote scripts to reroute between cell and sat comms depending on service availability
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Supporting the Tasmanian Away Team
 - EE Techs providing good support bringing up SPR boards
 - Identified and the software issue that was causing serial comms to fail
 - Still have a number of boards with unidentified hardware problems.
- 901913 - Wet Wifi
 - Spoke with OceanComm about can flooding. Agreed to delay further work until April.
 - Board bullets
- 902304 - Piscivore Cam
 - Researched more open alternative hardware architectures.
 - Advocated for higher power alternative architectures which also provide a much more open and well developed software ecosystem that would make it easier to establish optical requirements and iterate on optical parts
- Overhead
 - The office move in continues. Spec'd and ordered light filtering cellular shades.
- Out of Office

Week 6

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Testing wireguard timing adjustments to save satellite link bandwidth
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Located used thermal forcing system for \$8k (who will pay for it?)
 - Working with Enoch to build a quicking acceptance test fixture.

- Configured ESPaway3 to act as router for the team in Tasmania
- 901913 - Wet Wifi
 - OceanComm will supply a pair of modems in April.
 - No more deployments on fast moving ships as that seems to cause housing leaks
- 902304 - Piscivore Cam
 - Researching possibility of using commodity processor board and open source software
- Overhead
 - Moving into my new office. Gotta get blinds!
- Out of Office

Week 5

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office

Week 4

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
 - Wrote Ruby code to provide optional cjxl compression for puck images
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Helping Team ready for their trip to Tasmania
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
 - Moving into new G206 office
- Out of Office

Week 3

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW

- Got PPP connection scripts working reliably with retries in chat scripts
 - Added a big capacitor to the telebuoy to deal with modem inrush
 - Discussed with UW how to incorporate this into the actual telebuoy
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
 - Helping bring up the new TTL
 - Working with Nadia to tame the increased friction of the 3-bearing Carousel
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office

Week 2

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office

Week 1

- 701147 - MARS O&M IV
- 708184 - ESP Monitoring PNW
- 771131 - Great Lakes PCM/HAB
- 800165 - eDNA Sampler Trials
- 808015 - Monitoring McCloud
- 901205 - ESP SURF Center
- 901913 - Wet Wifi
- 902304 - Piscivore Cam
- Overhead
- Out of Office