

901009 - CANON

Week 52

1. Thom Maughan
 - a. Minor deeprip maintenance

Week 51

1. Thom Maughan
 - a. Meeting with Nate, elevator chat with Francisco.
 - b. Adding user accounts on DeepRip.
2. Carlos Rueda
 - a. Some MXM work

Week 50

1. Kevin Gomes
 - a. Support for normal ODSS maintenance

Week 49

1. Thom Maughan
 - a. Looking into SquiggleNet for real time control of nanopores in the minion sequencer.
 - b. DeepRip ssh access resolution
2. Carlos Rueda
 - a. Continue reviewing the MXM concept of operations.

Week 48

1. Carlos Rueda
 - a. Reviewing MXM stuff in general: lots of library updates, code cleanup, reenabling local (non-dockerized) execution to facilitate development, setting up Github actions not only for regular CI (testing), but also to generate and publish the docker image.

Week 46

1. Brent Jones
 - a. Recovered Wire Walker. Cleaning system and processing data
 - b. Searched for and recovered CPF. Processing data
2. Thom Maughan
 - a. Met with Nate to discuss software for close loop control of minion eDNA sequencer, Squiggle. Read paper, looked at github repo.
 - b. DeepRip user's notified of rebuild. Purpose of rebuild is move from Ubuntu 21 to 20.04 LTS and tuning the RAID for storage media.

Week 44

1. Kevin Gomes
 - a. Had IS finally remove the old Normandy (CentOS 6)
 - b. Troubleshooting for CPF positions on the ODSS.

2. Thom Maughan
 - a. Ordered Xavier NXs to replace those borrowed from Plantivore, delivery expected Jan 2022.
 - b. Ordered const current dc/dc conv for eDNA box battery pack

Week 43

1. Brent Jones
 - a. Designed new SIPPER pump pcb board for use with ELMO twitter
 - b. Prepping CPF for sampler deployment next week. A few software changes (+ testing) were needed to perform a full 48 hour dive
2. Thom Maughan
 - a. Looking at options for 'safe' rechargeable batteries in portable DNA sequencer box

Week 42

1. Brent Jones
 - a. Prepping CPF for deployment early Nov. Test tank ballasting and diagnosing a Seabird issue
 - b. Monitoring wire walker deployment

Week 41

1. Kevin Gomes
 - a. Migrated all Danelle's ERDDAP subsetting and mapfile update scripts to a Docker container and deployed both on normandy8 and on odss-testu. That should be the last piece so I shutdown the original normandy (CentOS 6) machine and will leave it dark for a bit to see if anything breaks. Next steps are to re-migrate normandy8 to an Ubuntu box and then upgrade zuma and malibu on Carson and Flyer respectively.

Week 40

1. Brent Jones
 - a. Monitoring Wire Walker deployment.
 - b. Sent RBR Cervello back to Canada for leak diagnosis
 - c. Beginning build of 3ea SIPPERS. Need to modify electronics to run the peristaltic pump

Week 39

1. Brian Kieft
 - a. Salinity QC questions from past CTD data

Week 38

1. Kevin Gomes
 - a. Migrating last scripts from normandy to normandy8/odss-test so we can shut down normandy
 - b. Small fix for Dorado tracking data that was not making it's way into the ODSS. Need to come up with RabbitMQ monitor that will notify when queues backup.
2. Brent Jones
 - a. Recovered WW with bricked RBR CTD
 - b. Fixed RBR CTD and re deployed WW near Power Buoy
 - c. Data processing of WW
3. Thom Maughan
 - a. Nate ran Katy's Qiime2 workflow successfully on DeepRip. The bioinformatics code did not utilize the high core count, but did basque in the luxury of 256GB RAM.

Week 37

1. Kevin Gomes
 - a. Small amount of ODSS/tracking DB support
2. Thom Maughan
 - a. Ubuntu 21.04 installed on DeepRip to enable Chavez lab (Katy) to run a bioinformatics dataset that is crashing on the mbon virtual machine. For this run, EXT4 used on updated Samsung 980 2TB drives. Collecting benchmarks to compare with forthcoming ZFS experiments.

Week 36

1. Brent Jones
 - a. Prepping Wire Walker with new line and XEOS trackers
 - b. Diagnosing bad hammerhead mooring line connection.
 - c. Deployed Wire Walker next to Power Buoy
 - d. Flying Spray 34 in a box around power buoy

Week 34

1. Kevin Gomes
 - a. Helped troubleshoot AIS feed
2. Brent Jones
 - a. Installing XEOS rover and apollo-mono on WW.
 - b. Looking into how to plumb the position reports from the rover into various repo's around MBARI
3. Carlos Rueda
 - a. MXM code updates, including migration to Github actions for CI and slack notifications.

Week 33

1. Brent Jones
 - a. Continuing to design brackets for Wire Walker XEOS beacons.
2. Carlos Rueda
 - a. Review of MXM code continues.

Week 31

1. Carlos Rueda
 - a. Trying to resume concrete work on MXM.

Week 28

1. Kevin Gomes
 - a. Proposal input
2. Brent Jones
 - a. Helping with proposals
3. Thom Maughan
 - a. Worked with Nate and Francisco on input for HiPP eDNA input to CANON proposal.

Week 26

1. Brian Kieft
 - a. Supporting MBTS as needed on call

Week 25

1. Brent Jones
 - a. Budgetting 2022 costs for Wire Walker for the proposal
2. Carlos Rueda
 - a. Continued revising MXM code. Looking into determining next steps, especially regarding easier integration of execution systems, possibly even changing the design a bit in terms of a simplified registry component, so it mainly becomes a discovery service.

Week 23

1. Thom Maughan
 - a. Truelove-M eDNA box was highlighted in DOEST.
2. Carlos Rueda
 - a. Some code revision and cleanup, but still looking into a next phase of “real” development.

Week 22

1. Brian Kieft
 - a. Launched LRAUV daphne for MBTS run yesterday. Supporting deployment.

Week 20

1. Mike McCann
 - a. Battled travis-ci failure with pip not able to resolve dependencies
 - b. Exploring using Docker's --scale option to horizontally scale the STOQS web app

Week 19

1. Kevin Gomes
 - a. Starting work on normandy replacement with Ubuntu machine
2. Brent Jones
 - a. Processing Wire Walker data. Requesting quotes for stuff we will eventually need
3. Mike McCann
 - a. Told IS that they may turn off the old kraken machine which they will do next week

Week 18

1. Kevin Gomes
 - a. A light amount of tidy up post experiment
 - b. Cut test machine over to Ubuntu, starting configuration of normandy replacement. Waiting on Atlas share work.
2. Brian Kieft
 - a. Wrapped up CANON/EcoHAB deployments
3. Thom Maughan
 - a. Working with Paul C to wrap up eDNA box packaging.
4. Mike McCann
 - a. With help from IS moved stogs.shore.mbari.org from dedicated hardware to an Ubuntu VM
 - b. Loaded Western Flyer CTD data into [stogs_canon_april2021](#) which is served by the new VM
 - c. Wrote parquet2csv.py to make the STOQS parquet output even more usable
 - d. Working with Chris Preston to make sure we properly have all of the ESP filtering data

Week 17

1. Kevin Gomes
 - a. Experiment support
 - b. Cut over to the Ubuntu based ODSS on the test machine and will start planning for production and boat upgrades.
 - c. Support and troubleshooting for tracking database for glider for Yui
2. Brian Kieft
 - a. Recovered Daphne/Makai following successful EcoHAB deployment and 86 hours of underwater drift
3. Mike McCann
 - a. Loaded delayed mode & ESP filtering LRAUV data into [stoqs_canon_april2021](#)
 - b. Beginning to look for shipboard data to load into STOQS
4. Carlos Rueda
 - a. ODSS planning component issues seem to have been fixed. Thanks Chris W. for the testing. Pending update on the production server.

Week 16

1. Kevin Gomes
 - a. Support for experiment/ODSS
 - b. Helped Monique debug/fix layers on the ODSS
 - c. Revival of the WG acoustic tracking code
 - d. At the request of the LRAUV team, added a feature to the acoustic tracking code that will send an email/SMS if the waveglider loses acoustic tracking for 20 minutes
 - e. Finally got the Ubuntu version of the ODSS test server deployed at <https://odss-testu.shore.mbari.org>
 - f. It seems like the Ubuntu installation is very similar and seems to operate fine as compared to the CentOS8 version.
2. Brent Jones
 - a. Continued support of all assets deployed for CANON/ECOHAB
 - b. Deployed two more Wire Walkers for SIO
 - c. Multiple Paragon trips for deployments/recoverys/maintenance
3. Brian Kieft
 - a. Supported spring CANON field program
4. Mike McCann
 - a. Continuing to see that data flow into [stoqs_canon_april2021](#)
 - b. Need to schedule a time to switch over to kraken's replacement
5. Ben Raanan
 - a. CANON almost done!

Week 15

1. Kevin Gomes
 - a. Troubleshooting some bugs that cropped up on the WF during CANON
 - b. General experiment support
2. Brent Jones
 - a. Deployed Wire Walker system. Topside telemetry system failed after 5 days due to a leak. Also troubleshooting data that was returned to shore. Multiple trips to WW buoy for diagnostics and checks
 - b. Deployed and recovered multiple LRAUV's in lead up CANON testing and for CANON
3. Brian Kieft
 - a. CANON field program is happening! So far so good from the LRAUV/ESP side.
4. Mike McCann
 - a. Processed Dorado mission 2021.102.02 using ctd2
 - b. Setup [stoqs_canon_april2021](#) to receive data from the current campaign

- c. Almost ready to make the switchover to the new kraken2 server
- 5. Ben Raanan
 - a. Vehicle prep, planning, and operations for CANON
 - b. CANON is on!
- 6. Carlos Rueda
 - a. ODSS Planning component: adjustments/fixes while testing against odss-test8. The component can be exercised directly [here](#), where Chris W. could try to reproduce issues he recently noticed. (Thanks Kevin for [CORS](#)-enabling the ODSS, so my local proxy for development purposes is no longer needed.)

Week 14

- 1. Kevin Gomes
 - a. Wrote script to publish WireWalker locations to the ODSS
 - b. Working on Geoserver and a layer for CANON experiment for WaveGlider sampling locations for John R.
 - c. Some LRAUV support for the CANON experiment
 - d. Other CANON related support
- 2. Brent Jones
 - a. Prepping Wire Walker mooring
 - b. Prepping RBR instrumentation on WW mooring
- 3. Mike McCann
 - a. Copied production databases & loadlogs to the new kraken2.shore.mbari.org server
 - b. Testing function & performance of new virtualized kraken2 server – so far it looks good
 - c. Preparing for April 2021 campaign data

Week 13

- 1. Kevin Gomes
 - a. Investigating creation of a GeoServer layer for John's sampling around the WaveGlider
 - b. Looking into script that can put wirewalker positions in the ODSS
- 2. Brent Jones
 - a. Building Wire Walker mooring. Sourced ground tackle and am getting rope shots spliced
 - b. Ballasted Wire Walker in test tank
 - c. Testing RBR instrumentation on Wire Walker
- 3. Brian Kieft
 - a. Prepping for canon!

Week 12

- 1. Brian Kieft
 - a. Met to discuss plans for the two April field campaigns
- 2. Mike McCann
 - a. The kraken2.shore.mbari.org server is up and running with a self-signed certificate
 - b. Link to Jupyter Notebook that visualizes parquet data added to end of [Issue 837](#)

Week 11

- 1. Kevin Gomes
 - a. Starting work on migration of odss-test to Ubuntu again (web server, podman and systemctl config)
- 2. Thom Maughan
 - a. AWS Server setup April 2020 for remote internship, HiPP eval and eDNA processing has been a source of trickling charges. The account is now closed and the trickle should stop after 90 days, I hope. I have respect for the role of DevOps.

3. Mike McCann
 - a. Working with IS through needed changes on Ubuntu for supporting STOQS on kraken2
 - b. Examining why Dorado survey 2004_251_00 does not loading into stoqs_all_dorado
4. Carlos Rueda
 - a. Thanks Tom for your presentation in the Engineering meeting.

Week 10

1. Kevin Gomes
 - a. GraphQL API work
 - b. Trying to get moving again on odss migration to Ubuntu to address CentOS 6 migration issues.

Week 9

1. Kevin Gomes
 - a. Some ODSS troubleshooting and tracking verification for Carson
2. Brent Jones
 - a. Diagnosed bad GSM modem in RBR cervello. Sending back to Canada on RMA
 - b. Extracting realistic current profiles at C1 to input in mooring simulation. Looks like we might be able to get away with a 400# anchor. This means we can use the Paragon for ops!
3. Mike McCann
 - a. Examined metadata that Katie is dealing with for eDNA sample data

Week 8

1. Kevin Gomes
 - a. ODSS restarting and fixes after firewall replacement
2. Brent Jones
 - a. Continued diagnosis of Wire Walker GSM cell modem issues
 - b. Designing WW C1 mooring
3. Brian Kieft
 - a. Preparing missions for April
4. Tom O'Reilly
 - a. Met with Carlos Rueda, Kevin Gomes, and Kongsberg engineers to discuss their development of standards-based mission planning tools that manage underwater, surface and aerial vehicles with a wide variety of protocols; their system has similar goals to our management of the CANON autonomous fleet.
5. Carlos Rueda
 - a. MXM: meeting with kongsberggeospatial.com folks and Tom O. and Kevin G. regarding [SUIT standards-based UxS interoperability test-bed](#). Thanks Tom for organizing.

Week 7

1. Kevin Gomes
 - a. Transitioning the grabUDPShipPositions.py scripts that are running on Western Flyer and Rachel Carson to me (from Rich) and updating documentation.
 - b. Short troubleshooting for ODSS on the Western Flyer after IS patches.
2. Brent Jones
 - a. Working out SIM card issues with new Wire Walker. Planning deployment mooring for C1
3. Mike McCann
 - a. Redeploying STOQS servers as needed with module updates
4. Carlos Rueda

- a. Looking into ODSS Planning tab UI issues (reported by Chris W.). Entered [issue](#) to determine mechanism to facilitate development/testing of the UI against ODSS backend.

Week 6

1. Brent Jones
 - a. Procuring SIM card for WW modem.
2. Tom O'Reilly
 - a. Tom was invited by an Open Geospatial Consortium working group focused on standards for networked robots and sensors, to talk about MBARI's autonomous CANON fleet at their February meeting. [Tom's presentation](#) describes software being developed by him and Carlos Rueda that will enable better situational awareness and robot-to-robot coordination.
3. Carlos Rueda
 - a. MMX: Helped Tom put together slides for presentation to OGC group, based on our [proposal draft](#). Thanks Yanwu for the figure from your recent paper. Some code review.

Week 5

1. Kevin Gomes
 - a. Looking over Vue 3 docs to decide if ODSS should be moved to Vue 2 or 3.
 - b. Restarting work on moving odss-test to ubuntu as a trial for migrating the rest of ODSS server to ubuntu instead of CentOS
2. Brent Jones
 - a. Received Wire Walker. Going through unpacking checklist
3. Brian Kieft
 - a. Debugging issues with Biolum data unserialize
 - b. Met to discuss EcoHAB and CANON for this year
4. Thom Maughan
 - a. The eDNA sequencer shipbox
5. Mike McCann
 - a. Updated packages for STOQS removing, security vulnerability & redeployed in production
6. Ben Raanan
 - a. CANON/EcoHab planning

Week 4

1. Brent Jones
 - a. Preparing SIPPER drawing package for outside machine shop quotes

Week 3

1. Kevin Gomes
 - a. Starting to work on ubuntu build of the ODSS on the test machine to see if we can make the leap to ubuntu now.
 - b. Trying to figure out if I can move away from the map downloading script that is the only thing running on old normandy and just point to the source WMS layers for remote sensing so we don't have to migrate script.
2. Carlos Rueda
 - a. MXM: helping Tom put together a presentation about CANON/MXM for OGC.

Week 2

1. Kevin Gomes

- a. Still working on ODSS migration finalization. Some map management scripts left to migrate
 - b. Using the 2nd round of migration for odss-test to evaluate Ubuntu as possible server platform for MBARI moving forward
2. Mike McCann
- a. IS spun up an Ubuntu kraken2 VM for replacing the existing kraken hardware
 - b. Working on a Jupyter Notebook for making T/S plots for all platforms in a campaign

Week 1

1. Kevin Gomes
- a. Continuing on work to migrate ODSS servers
2. Thom Maughan
- a. We are shutting down our AWS instance for eDNA workflow development / working with external collaborators and interns. Collecting lessons learned and costs.