

901009 - CANON

Week 51

1. Kevin Gomes
 - a. More detailed work on Mapserver part of ODSS as this could be a piece that serves maps for the new 4D NavView server which is the replacement for Winfrog.
 - b. Helped Tom O'Reilly with some troubleshooting on WGMS SOAP interactions that had stopped working.
2. Thom Maughan
 - a. The two GPU based rack mount servers for bio-informatics arrived. Named deepedna1 and deepedna2. Met with Joe, Peter and Doug to discuss IS involvement and long term plans. Great meeting.

Week 50

1. Kevin Gomes
 - a. More work on upgrades/changes to the docker compose for repeatable installs for ODSS
2. Thom Maughan
 - a. Working with IS on getting rackspace/ups/power for the two bioinformatics servers. These are Ubuntu 22.04 machines with NVidia GPUs. Planning to meet with Doug/Peter/Joe on HiPP IS labor division. Physical space, power and security patches for sure. Would like NFS mounts if possible.
3. Carlos Rueda
 - a. Some dependency upgrades for the MXM server (now using latest Quarkus 2.15.0.Final).

Week 49

1. Kevin Gomes
 - a. More condensing of the ODSS build and development environment. Upgrading mapserver and inserting some example files for mapserver to serve
 - b. Digging deep on mapserver to go ahead and upgrade the version since I am doing all this anyway.
2. Thom Maughan
 - a. The two bio-informatics HiPP machines are built and in test at the vendor. Shipment should be in a week or so

Week 48

1. Kevin Gomes
 - a. Cleanup up source tree and cleaning out old, unused build related stuff. Condensing things to make dev docker-compose cleaner and upgrading components in preparation for deployment using this new docker compose method on Zuma.

Week 46

1. Kevin Gomes
 - a. More work developing docker-compose for 'production' deployment of the ODSS with the initial target being zuma so I can upgrade the OS.

Week 45

1. Kevin Gomes

- a. Resurrecting script to push locations from WG tracker to the ODSS (LR broke some stuff).
2. Carlos Rueda
 - a. MXM adjustments, mainly in the prototype implementation (both backend and ui).

Week 44

1. Kevin Gomes
 - a. More work on Zuma upgrade
 - b. Taking the opportunity to overhaul a docker compose to help with production deployments.
2. Thom Maughan
 - a. Met with Kobun to review specs for eDNA workflow server. Gathered quotes and am working with the vendor to get the most bang for the buck.
3. Carlos Rueda
 - a. (not reported past week) Met with Kevin and Tom for a general [MXM status update](#). In short, good progress on the prototype implementation; additional components being incorporated in the data model; and, per prior discussion with Erik T., potential inclusion of Dorado as one other *prototype provider* to help test and refine the MXM concept next year while also demonstrating benefit for Dorado and other possible systems.
 - b. Refined the [MXM Service REST API for Providers](#).

Week 43

1. Kevin Gomes
 - a. More work on migration of ODSS on Zuma to Zuma U. It's a heavy lift as I'm doing some upgrades at the same time.
 - b. Met with Carlos about MXM and ODSS integration.

Week 42

1. Kevin Gomes
 - a. Starting to prepare for moving Zuma (ODSS server on Carson) to ubuntu.
 - b. Documenting existing zuma for purposes of migration (new satellite system working well!)
 - c. Creating migration instructions for zuma move, maybe next week during a mob day I can attempt the move.
2. Brent Jones
 - a. Recovered Wire Walker that had failures in the data logger. Diagnosed and sent back to RBR Canada for repairs
3. Brian Kieft
 - a. Recovered Makai Monday following successful CANON deployment
4. Thom Maughan
 - a. Debugging button start on battery power
 - b. Working thru ont-guppy v6.3.8 arm install
5. Mike McCann
 - a. Loaded [stogs canon october2022](#) and confirmed that all 55 field ESP Samples were parsed
6. Carlos Rueda
 - a. MXM: Re-enabled *continuous deployment* (using [Watchtower](#)) for the MXM system as well as for the new MXM provider example service. It is really great to just push a code update and then also see the deployed service getting updated after a few moments automagically. Preparing a status update for the team.

Week 41

1. Kevin Gomes

- a. Small support tasks for CANON experiment
- 2. Brian Kieft
 - a. CANON is underway. Lots of support early on to get Makai settled
- 3. Thom Maughan
 - a. Hardware mod for Xavier NX for RTC support
 - b. Started coming up to speed on software stack rebuild - packages have changed.
- 4. Mike McCann
 - a. Beginning to write loader for stoqs_canon_october2010

Week 40

- 1. Kevin Gomes
 - a. Finished first round of python code to extract data from WGMS' new data service and am using it to publish positions for the WaveGliders since the previous access method broke.

Week 39

- 1. Kevin Gomes
 - a. Starting upgrade of ODSS on Rachel Carson
 - b. Liquid Robotics somehow broke my connection to WGMS so they want me to move to a new data system. It's basically a whole new stack so I am starting over from scratch. Will be a better system, I think, so hopefully will be worth it.
 - c. Getting close to deploying new waveglider data extraction on new VM wg-portal.shore.mbari.org.
- 2. Thom Maughan
 - a. Battery backup circuit design
 - b. Xavier NX rtc parts ordering
- 3. Carlos Rueda
 - a. MXM: went ahead with migration of the UI implementation to Vue3/Quasar2 (from Vue2/Quasar1), Pinia (from Vuex), Typescript (from JS) and newer Apollo mechanisms. Worth this extra effort sooner than later. (So, with the also new backend reimplementation I ended up with a funny overall setup: The "subatomic" [Quarkus](#) on the backend, [Quasar](#) on the frontend!)
 - b. MXM: putting together the MXM Provider API with an OpenAPI specification (greatly facilitated by Quarkus tooling as well): <http://mxm.shore.mbari.org/mxm-provider-api/q/swagger-ui/>

Week 38

- 1. Thom Maughan
 - a. Met with Kobun prior to his departure for Peru to discuss next steps after eDNA tacklebox.

Week 37

- 1. Brent Jones
 - a. Deployed Wire Walker with hydrophone + pH. Was not going up and down. Traced problem to too little buoyancy. Added foam and confirmed it is profiling
- 2. Mike McCann
 - a. Rolled out shortened URL database app for STOQS "Share this view" feature
- 3. Carlos Rueda
 - a. MXM: Decided to go ahead with the migration of the UI component to Vue3/Quasar2 and newer Apollo mechanisms for interaction with the GraphQL endpoint. Taking good shape, and also with the development cycle (hot reload) faster than with the previous setup.

Week 35

1. Mike McCann
 - a. Trying to add a url shortening service to STOQS for better “Share this view” urls
2. Carlos Rueda
 - a. [MXM reimplementation](#) is now getting in pretty good shape to then continue with further model and API revisions and adjustments. Backend simplified and now based on Quarkus (using JDBI and with both GraphQL and OpenAPI endpoints); frontend still on vue2/quasar1 but also simplified. Using the nice [Quarkus Quinoa](#) extension, which helps integrate the frontend for both development and packaging purposes. New dockerized system deployed at <http://mxm.shore.mbari.org/>.

Week 34

1. Brian Kieft
 - a. Did a couple runs for Giancarlo to collect raw AHRS data. Working on reviewing.
2. Thom Maughan
 - a. Working microfluidics quote
 - b. eDNA toolbox charged up, tested, provided to Kobun for filming.

Week 33

1. Kevin Gomes
 - a. Working on new geoserver to replace current one
2. Thom Maughan
 - a. Microfluidics research for quote
 - b. Software setup on xavier for minion
3. Carlos Rueda
 - a. General MXM spec & implementation revision continues.

Week 32

1. Brent Jones
 - a. Rebuilding SIPPER with new ELMO electronics. Requires all new wiring harness and software
2. Thom Maughan
 - a. Working on details for a mock custom microfluidics ‘lab on chip’ quote to inform CANON proposal budget.
 - b. Battery charging circuit research
 - c. Xavier NX and basecamp
3. Carlos Rueda
 - a. Focused on general revision of MXM, both spec and implementation.

Week 31

1. Brent Jones
 - a. Continued processing WW data and diagnosing failures
2. Thom Maughan
 - a. Xavier NX and basestack
 - b. Backup battery design
3. Mike McCann
 - a. Fixed STOQS functional tests and brought all STOQS modules up to date
4. Carlos Rueda
 - a. Updates/adjustments in various MXM related components.
 - b. Started an internal MXM doc site: <https://docs.mbari.org/internal/mxm/>

Week 30

1. Thom Maughan
 - a. Setting up Xavier NX after office move.
 - b. Laptop setup

Week 28

1. Brent Jones
 - a. Recovered Wire Walker and processed data

Week 26

1. Kevin Gomes
 - a. Met with UAV group to resurrect the work on UAV images being served from GeoServer

Week 25

1. Kevin Gomes
 - a. Expanding ODSS satellite layer coverage to help with Yui's current WF cruise
 - b. Changed WaveGlider acoustic tracking to point to the spray glider instead of LRAUV (had to move some data since it was incorrect in the tracking DB).
 - c. More work on the [Windy layers](#) and trying to see if we can integrate them into the ODSS.
2. Thom Maughan
 - a. Debugging startup switch issue when started on battery without wall supply
 - b. Nomachine setup for Xavier NX.
3. Mike McCann
 - a. Made video of LRAUV sampling and posted to sb_ecohab_2022 Slack channel
4. Carlos Rueda
 - a. Various MXM related tasks in the core code itself as well as in the associated provider implementations for TethysDash and the (shore-side) wave glider front tracking software.

Week 24

1. Thom Maughan
 - a. eDNA lunchbox software update
 - b. Battery backup circuit debug.
2. Mike McCann
 - a. With brizo's recovery [stogs_ecohab_may2022](#) is being reloaded

Week 23

1. Mike McCann
 - a. Watching for delayed mode LRAUV data to load into [stogs_ecohab_may2022](#)
2. Carlos Rueda
 - a. Revising MXM implementation

Week 20

1. Kevin Gomes
 - a. Migrated ODSS to newer and open source licensed version of ExtJS to avoid licensing costs from Sencha.
 - b. Something strange happened with podman that caused problems with ODSS and created an outage for a few hours on Tuesday night. Fixed and deployed updated container

- c. After Carlos moved the help file to our new documentation system (thanks Carlos!) and since I was in the ODSS anyway, deployed an updated the pointed the ODSS help page to that doc.
 - d. Added more NOAA charts (and created documentation on how to do so) to support the LRAUV deployments for ECOHAB.
2. Thom Maughan
 - a. Created an account for Katie Pitz on DeepRip for a bioinformatics run.

Week 19

1. Kevin Gomes
 - a. ODSS outage that was related to Atlas share access after OS patch. Found workaround, but still no understanding of why what was working before the patch stopped working after. Was related to AD permissions on the share through NFS/Podman.

Week 18

1. Brent Jones
 - a. Diagnosed leak in Wire Walker telemetry package. Packaged up and sent back to RBR CA
2. Thom Maughan
 - a. eDNA meeting to discuss plans and coordination between wet side team and sequencer/bioinformatics effort. Very helpful.
 - b. Reading about BentoBox

Week 17

1. Brent Jones
 - a. Successfully deployed Wire Walker with pH sensor for the first time ever! Unfortunately, telemetry package has once again failed. It did return some data before dying. Entire week was spent prepping and deploying
2. Thom Maughan
 - a. GPU laptop assist
 - b. Setup base NVidia image (x2) for Xavier NX in eDNA lunchbox.

Week 16

1. Kevin Gomes
 - a. Troubleshooting various data streams after network hiccup from microwave outage
2. Brian Kieft
 - a. Prepped Stella 113 for lagrangian drift sediment sample comparison with CPF
 - b. Deployed CPF with the team yesterday

Week 15

1. Brian Kieft
 - a. Supporting MBTS run for Daphne this week. Will initiate sampling tomorrow.
 - b. Prepped daphne for deployment
2. Thom Maughan
 - a. Got out eDNA sequencing and species id tackle box running, finished testing the battery backup circuit.
 - b. Meetings with Johns Hopkins team. Thanks to Kevin Gomes for help with Slack. Learned about the ESP efforts.

Week 14

1. Brent Jones

- a. Fixing CPF bottom fairing in prep for going out next week
 - b. Fixing SIPPER code to be more robust next trip
2. Carlos Rueda
 - a. Exploring Supabase/pg_graphql as a possible alternative to facilitate MXM implementation.

Week 13

1. Brian Kieft
 - a. Planning has begun for EcoHAB SB deployment.
2. Thom Maughan
 - a. Working with Kobun and Paul C on eDNA tacklebox requirements.
 - b. Talked with Kobun about project priorities as both Paul and I are timeslicing to support other projects - doing what we can without adding stress.
 - c. Battery testing and chem chiller testing.
 - d. Setup of Xavier NX for dev, not sure I'll get to the new basestack install.

Week 12

1. Brent Jones
 - a. Investigating why CPF lost its bottom fairing on last deployment. Modifying new fairing for installation
 - b. Beginning prep of Wire Walker for April deployment
2. Thom Maughan
 - a. Working eDNA tackle box design with Nanuk case. Met with Nate to go over requirements then met with Paul Coenen to give overview and priorities.
 - b. Xavier NX to Kent.
 - c. Reading thru basestack release notes.
 - d. Ordered battery options for new tackle box and spin box as well as a compact freezer for the chemistry.

Week 11

1. Kevin Gomes
 - a. Was contacted by Sencha who makes the ExtJS framework that is used in the ODSS saying we were using their commercial version. Working on sorting this out so that we are sure to be using their open source version.

Week 10

1. Thom Maughan
 - a. Looking at battery and battery management options.

Week 9

1. Thom Maughan
 - a. Meeting with Francisco, Nate, Kent
2. Carlos Rueda
 - a. Mainly some maintenance tasks, but looking, again, into resuming focused work here.

Week 7

1. Brent Jones
 - a. Prepping dual Sediment Trap CPF for deployment next week. Finally got it in the test tank yesterday.

Week 6

1. Thom Maughan
 - a. Started a conversation on Slack with Kent and Nate for embedded software to support eDNA processing workflow
 - b. Battery options.

Week 5

1. Thom Maughan
 - a. Working to draft a notional project plan for the embedded eDNA processing project.

Week 4

1. Brent Jones
 - a. Updating CPF code to service 2 attached Sediment Traps
2. Thom Maughan
 - a. Met with Nate to discuss 'functional notions' of next eDNA lunchbox build.
 - b. Team selected Yellow and agreed on Pelican 1200 / 1300 for form factor.
 - c. Researching battery options.

Week 3

1. Carlos Rueda
 - a. Updated the [odss2dash](#) service implementation.

Week 2

1. Kevin Gomes
 - a. Not sure why, but the trackingdb httpd service does not survive restarts and IS patching kills the tracking DB REST interface that CeNCOOS uses. Had to restart it from inside the tracking-clients container.
2. Thom Maughan
 - a. Meetings with Nate and Johns Hopkins team over next steps on eDNA effort. The portable battery operated eDNA lunchbox is the focus.
 - b. My order for 2 made in Nov 2021 was cancelled in Jan with refund. Purchased a Xavier NX off ebay in order to return the loaner to another project. Told to hold off purchasing a 2nd.
3. Mike McCann
 - a. Wrote [Notebook](#) to compare ESP Sample data in STOQS vs. data from Katy

Week 1

1. Kevin Gomes
 - a. Researching VueJS/Quasar/Vuetify/Slack logins for eventually ODSS upgrade/migration
2. Brian Kieft
 - a. Assisted with MBTS daphne deployment. Configured new GPCTD and adjusted some checklists for operators. Loaded master on daphne for this run.
3. Thom Maughan
 - a. Worked right thru the meeting with Nate / JHU. Follow up meeting scheduled on Monday (with google calendar reminder on my phone).
4. Mike McCann
 - a. Updated STOQS modules and attempting to get DockerHub CI working again
 - b. Reviewing LRAUV ESP Sample ID log info parsing logic with Katy