

Engineering Weekly Report 3/11/2021 - 3/18/2021

Executive Council Notes

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Individual Activities

- Francois Cazenave
 - 902106 - Niobicon-Based AUV Docking Development
 - I have been testing the niobium dock prototype
 - I assembled the new load dump
- Mark Chaffey
- Danelle Cline
 - 901502 - Passive Acoustic Sensing
 - Uploaded 2018-2020 2kHz data set and working on 16kHz data sets
 - Started on python notebooks for upcoming [ESMO time-series workshop](#).
 - Intern selections
 - 902005 - VARS Annotation Assistance
 - Fixed issues with deesea-tfrecord versioning and correct DVC registry build/delete in [vaaregistry](#). Learned more than I wanted to know about python packages, docker tests and DVC.
 - Started on Sprint 2 to train in AWS using the TensorFlow implementation of Google's [Efficient Detection model](#).
 - Overhead
 - OASIS onboarding meeting cancelled this week; will resume next week.
 - Out of Office
 - March 29-April 2nd. I will be off-the-grid for a good part of this.
- Duane Edgington
 - 901603 - Video TAG: Visualizing Ocean Change
 - Reviewed intern 2021 candidates, and sent selection to George M.
 - Will review intern applicants from CSUMB when their applications are available
 - Reviewing papers with code of recent research publications
 - 902005 - VARS Annotation Assistance
 - Sprint 2 kickoff with Danelle. Looked at tags in S3, ML; discussed sagemaker studio vs command line for end-user engagement.
 - Experimenting with recent updates to Sagemaker Studio
 - Overhead
 - Engr group meeting March 16
 - Group meeting March 15
 - Out of Office
 - Medical Appt Friday March 26
 - March 17-19 Conference: [International Conference on Pattern Recognition Systems ICPRS-21](#)
- Jon Erickson
 - 800139 - EyeRIS
 - We'll start assembly on the LRAUV camera case
 - 902010 - Mesopelagic LRAUV

- Assembly design for pressure test (heavy endcaps!)
- Overhead
 - Spent yesterday with Quest for a Mars connection test, Next Monday is a Test Tank wet test.
- Kevin Gomes
 - 901009 - CANON
 - Starting work on migration of odss-test to Ubuntu again (web server, podman and systemctl config)
 - 902100 - Telepresence on MBARI Research Vessels
 - Since I was working remotely on the Carson, I jumped on the telepresence stuff to test it out and to help get a sense for when kind of web app would be useful.
 - Overhead
 - Working with Rich and Mike Risi to do a full test of the new navproc, datamanager, logging, dataprobe stack of software and deployed on the Carson on Wed (3/17). Successful test, old system back online and we will work to make more changes and run down some strange bugs with serial ports. Goal is to deploy for real, possibly next week on a MARS ROV cruise.
 - Assisted Diana's start with our group
 - Aqua Data Studio purchase
 - ClickUp purchase
 - PyCharm purchase
 - One-on-one meeting
 - Working on LinkedIn Learning membership
 - Working on Matlab license
 - Group meeting mostly to discuss strategic roadmap
 - Gave my input on strategic roadmap
 - Small amount of AWS help on a couple of different fronts
 - Follow up from hosting joint meeting with WHOI/IS/SE-IE
 - Joe Gomez added links to our MkDocs driven documentation to the Canyon Head.
 - Out of Office
 - May 12-24: Vacation
 - June 21-25: Vacation
- Andy Hamilton
- Kent Headley
 - 901101 - Seafloor Mapping
 - Developing multicast TRN client (testing)
 - Updating TRN client component
 - Out of Office
 - Wed 3/17 - medical (a.m.)
 - Wed 3/24 - medical (p.m.)
 - Tue 5/25 - medical (late a. m.)
- Rich Henthorn
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Using logged message data to test TRN modifications
 - 800139 - EyeRIS
 - Installed ELI on target TX2 CPU board
 - Building up ELI functionality adding commands and logging
 - 901101 - Seafloor Mapping
 - Dorado Operations meeting - how best to support 2021 operations
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Installed MBC software on spare TS-7970 stack
 - 901618 - Pelagic-Benthic Coupling

- Weekly meeting
- 902101 - LRAUV Technology Development and Fleet Operations
 - Prepping vehicle for SubC zoom camera tests
- Overhead
 - Engineering meeting
- Out of Office
 - Upcoming vacation days Mar 22 - Apr 2 (starts next week!)
 - Email and phone connectivity
 - Mountain Daylight Time
- Brett Hobson
- Scott Jensen
- Brent Jones
- Chad Keczy
- Brian Kieft
 - Out of Office
 - Mar 3 (doctor)
 - Mar 8-11 (AZ)
 - Apr 2-9 (vacation)
 - Jul 1-9 (vacation)
 - Aug 5-6 (vacation)
- Denis Klimov
- Eric Martin
 - 901206 - Coastal Profiling Float
 - Developing factory mode.
 - 901911 - ROVVR
 - Prepping camera for Barry expedition, changed power supply and replaces cfast cards.
 - 902100 - Telepresence on MBARI Research Vessels
 - Prep for Barry and Katija expeditions, trying a new audio scheme for the MiniROV work.
 - 368000 - DMO AUV
 - Many transitionary knowledge downloads from Hans as he prepares for departure.
 - Overhead
 - Dorado Engineer hiring committee is conducting interviews this week.
 - Out of Office
 - Tuesdays until school is back in session.
- Thom Maughan
 - 901009 - CANON
 - 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.
 - 901805 - Coastal Biogeochemical Sensing
 - Started on feature / bug list with MpHOx as dev hardware. Target connection issues related to supporting multiple chips in the same codebase and/or moving to CCS v10. Resolved by installing CCS v7 on another pc which reconfigured the mikroprog jtag emulator.
 - 902004 - Planktivore
 - Thanks to Jose and James for getting the 220v power supply installed in DeepRip as this solves the power supply to motherboard software problem. Grateful for Paul M providing advice. Moving from 120v to 220v comes with a set of challenges working on options for the UPS next.
 - Updating Planktivore project plan to prep for update to stakeholders.
 - Out of Office

- Arrived home early morning Mar 14 from my trip to Colorado. 14 day quarantine ends on Mar 29.
- Mike McCann
 - 901009 - CANON
 - Working with IS through needed changes on Ubuntu for supporting STOQS on kraken2
 - Examining why Dorado survey 2004_251_00 does not loading into stoqs_all_dorado
 - 901910 - Plankton Taxonomic Groups from AUVs
 - About done with work on parquet file generation from STOQS – there are references to how this may be used at the end of the [GitHub Issue](#)
 - Planning to reload the stoqs_all_dorado database following updates to Monique's proxy data
- Rob McEwen
 - 708167 - WEC Dynamics and Control
 - Wrapped up wave-crest-location estimates using simple method. Sent results to the team.
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Looking at TRN run
 - Out of Office
 - Taking vacation day on Friday
- Paul McGill
 - 901618 - Pelagic-Benthic Coupling
 - Processing video from last dive series.
 - Worked with Mariah to make a new calibration grid for Laser Measure and ordered a new metal print from Bay Photo.
 - 901700 - Acoustical Ocean Ecology
 - Did initial assembly of WBT Mini Faraday shield and adjusted design dimensions where needed. Met with James M. to work on PCB layout for power filter on shield.
 - 901803 - Carbon Wave Glider Development
 - Ordered more parts for work stands.
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Met with Aaron to figure out housing sizes needed for Deep Sea Connect hardware.
- Ed Mellinger
- Tom O'Reilly
- Craig Okuda
 - 901007 - Benthic Biology and Ecology
 - Prototype chamber valves
 - 901803 - Carbon Wave Glider Development
 - Test stand wiring
 - Out of Office
 - Vacation day
 - Overhead
 - Research Microwave replacement
- Doug Pargett
- Ben Raanan
- Mike Risi
 - Out of Office
 - April 26-30: Ocean Imaging Cruise
 - September 3-14: Ocean Imaging Cruise
 - Vacation on alternate Fridays
- Brent Roman
 - Out of Office
 - March 29-April 2 + 2wk away from the office due to quarantine

- Traveling up to Oregon & Washington to visit colleges.
- Carlos Rueda
 - 901009 - CANON
 - Thanks Tom for your presentation in the Engineering meeting.
 - 901502 - Passive Acoustic Sensing
 - HMM+GMM code starting to work, now looking into scalability for actual training with multiple whale song unit instances.
 - 902005 - VARS Annotation Assistance
 - Looking into Cthulhu issues, in particular this one, [#2](#).
 - 902101 - LRAUV Technology Development and Fleet Operations
 - TethysDash: general documentation updates.
 - TethysL: some of the key underlying libraries upgraded after a long while (i.e., typical technical debt reduction that is demanded from time to time, otherwise risking quick obsolescence).
 - Hotspot acoustic relay discussion
 - Overhead
 - WHOI / IS meeting.
 - IE meeting
 - Engineering meeting.
 - Input to strategic roadmap documents.
 - More improvements to the docs.mbari.org system (see [meta-documentation](#)).
 - No much luck with the macbook M1 loaner, especially because of limited support for docker and for the thunderbolt monitors that I currently use (they become practically unusable). So, moving ahead with an intel-based macbook for computer upgrade (already ordered, thanks Doug).
 - Out of Office
 - Mar 25-26: one day vacation
- Karen Salamy
 - Overhead
 - Continued work on Rich S responsibilities succession plan.
 - Working on some scripting for miniROV work
 - Looking into a text editor app for Precruise form.
 - Out of Office
 - Out sick most of this week with a doozy of a cold.
 - Heading to the snow for a few days again. I plan to work from where we are staying as much as possible. March 17-19.
- Brian Schlining
- Rich Schramm
- Alana Sherman
 - 300080 - DMO Support Mini ROV
 - Helped mob the Carson on Tuesday
 - Worked with Dale to debug LabView issue on back up computer
 - 901618 - Pelagic-Benthic Coupling
 - Pulling the parts together for the Smith Macro Camera
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Getting the pieces in order for the macro
 - Worked with Steve from shore to get the talking to the Coral Observatory and download images. First report was it took images for 11 months, waiting to hear how the images turned out.
 - Overhead
 - Meeting with Flaad for new building G
 - Meeting to discuss mentoring brown bag follow up

