

Engineering Weekly Report 3/31/2022 - 4/7/2022

Executive Council Notes

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Individual Activities

- Kevin Barnard
 - 902002 - FathomNet
 - Presented the fathomnet-py Python API in the FathomNet workshop
 - Converted Twitter bot to Apache Airflow DAG
 - 902005 - VARS Annotation Assistance
 - Investigated alternative Qt-compatible video decoder plugins/playback frameworks
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Preparing system for deployment
 - 902106 - Niobicon-Based AUV Docking Development
 - Getting parts for upgraded power transfer device
 - Troubleshooting buoy
 - Out of Office
 - One day off to take care of sick child
- Danelle Cline
- Duane Edgington
 - 901603 - Video TAG
 - Participated in FathomNet workshop
 - 901618 - Pelagic-Benthic Coupling
 - Continued work on laser measure. Harvested 48 framegrabs from transect footage of June 21, 2021 dive for analysis using calibrated laser measure program. The team will be analyzing these images.
 - 902005 - VARS Annotation Assistance
 - Parameter sweeps and model variant runs of deepsortyolov5 against fully annotated benthic transect video analyzed by Linda Kuhn and intern Peyton Lee in 2020.
- Jon Erickson
 - Still working with and advising Quest Institute. Mostly about their MARS experiment.
- Ben Erwin
 - Out of Office
 - Vacation 2/12-2/20
- Kevin Gomes
 - Out of Office
 - Mar 21-25: Vacation
- Andy Hamilton
- Kent Headley
 - 901101 - Seafloor Mapping

- Made some progress on integrating TRN with Ventana. Now producing and publishing records, from LCM input streams and leak tests are looking good, but some work remains to make record content completely valid.
 - Meeting with WHOI about TRN integration on Sentry this Friday
 - Out of Office
 - Out sick this week
 - Mar 1-3 : ocean imaging TRN test cruise
- Rich Henthorn
 - 708167 - WEC Dynamics and Control
 - Met with folks from Open Robotics to discuss grant work
 - 901101 - Seafloor Mapping
 - Building dorado-auv-linux code on an Ubuntu target
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Buoy controller prep for deployment
 - 901618 - Pelagic-Benthic Coupling and the Carbon Cycle
 - Weekly meeting
 - Overhead
 - Farewells
 - Out of Office
 - April 25 - out of the area, WFH
 - July 4 - 18, vacation & WFH, email & phone OK
 - Sep 21 - 30, Sta.M Cruise (final scheduled cruise of the Western Flyer)
- Brett Hobson
- Scott Jensen
- Brent Jones
 - 901009 - CANON
 - Fixing CPF bottom fairing in prep for going out next week
 - Fixing SIPPER code to be more robust next trip
 - 901502 - Soundscape Research and Education
 - Ported click detection code to Julia in VScode
 - 901805 - Coastal Biogeochemical Sensing Program
 - Drawing up mounting brackets for pH sensor integration on Wire Walker
 - Flew and recovered Spray 34 in support of PIE experiment (Takeshita)
 - Diagnosing poor COMMS performance of Spray 34 last deployment
 - 902004 - Planktivore
 - Meetings and discussions centering on mounting contraption to Spray
- Chad Keczy
- Brian Kieft
 - 300082 - DMO Support - Wave Glider
 - Piloting Tiny/Hansen
 - Working with Yui to support PIE deployment which completed Monday. Tracking of Spray lasted for about 16 days!
 - Logs pulled and submitted.
 - 708168 - DHS/LRAUV Under-Ice
 - Added ZDA support for NAL9602 component
 - Enabled PD6 mode for WHOI ADCP testing
 - 708143 - Eco HAB
 - Working on basic logistics for May. Van, boats, etc.
 - 800139 - EyeRIS (Remote Imaging System)
 - Preparing for deployment today. Did soak test and B&T on vehicle. \

- Integrated joystick control
- 901513 - Targeted Sampling by Autonomous Underwater Vehicles
 - Working with Yanwu on polygon bounding of LRAUVs. Reviewed mission results.
 - Will run oil and polygon testing over the weekend in preparation for Santa Barbara and Barrow deployments.
- 902009 - AUV User Experience Design
 - Met with team to discuss progress and onboarding Karen
- 902101 - LRAUV Technology Development and Fleet Operations
 - Performed a successful joystick integration and harbor test on Pontus.
 - Setting up backseat computers for work in Santa Barbara
 - Working with Tanner to get fuel gauge component operational for use with primary batteries.
- 902106 - Niobicon-Based AUV Docking Development
 - Deploying again today for further docking tests and ROV footage on Thursday.
- Overhead
 - Supporting Hotspot work around the LRAUV dock for Ivan
- Out of Office
 - 04/15 (PDT)
 - 05/15 - 06/04 (EcoHAB PDT)
 - 07/02 - 07/09 (HST - vacation)
 - 07/13 - 07/22 (AKDT)
 - 08/01 - 09/03 (EDT)
 - 09/12 - 09/28 (GMT+2 - vacation)
- Denis Klimov
- Diana LaScala-Gruenewald
- Eric Martin
 - 708167 - WEC Dynamics and Control
 - Radar in final stages of roof testing, supporting collaborators at JHU.
 - 901101 - Seafloor Mapping
 - Closing in on multibeam selection, the recent reports from Winghead have proven limiting.
 - 901206 - Coastal Profiling Float Transition to Science Applications
 - Bug fixes in and tested last week.
 - Starting Post oil fill checkout on CPF001.
 - Deployment last week went well until last friday.
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Preparing for deployment next week.
 - Many minor issues have popped up that required lots of disassembly and re-assembly, but today all systems seem good.
 - 902012 - Telepresence on MBARI Research Vessels
 - Microservices to mirror screengrabs from vessels to telepresence.mbari.org
 - DQ2032 - DOE Wave-Energy Control
 - Meeting last week with Open Robotics
 - Out of Office
 - STCW training April 11-15
- Thom Maughan
 - Out of Office
 - TBD trip to Montana.
 - May 27 - 31 Camping
 - Jul 6 - 13 Camping
- Mike McCann
 - 901101 - Seafloor Mapping

- Set up cron job to reload the database each Sunday morning
- Overhead
 - Installed caching server and increased RAM so that the initial load of <https://emdb.shore.mbari.org/> is faster
 - Starting to look at QC operations that can be done for ROV Nav data
 - Created CleanRovnavDataQC EXPD View that removes (0, 0) points
 - Adding start_datetime and end_datetime columns to CleanRovNavLoad table
- Rob McEwen
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Talking with S. Rock about an ROV simulation.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Working through the Pixhawk 4 setup for Believer #3.
 - Re-installed Mission Planner and got it to work on Blackhawk-VM.
 - Put on the linkages, verified that they work.
 - Rehinged the Stbd elevator with improved hinge locations.
 - Out of Office
 - Vacation May 11-13.
- Paul McGill
- Tom O'Reilly
- Craig Okuda
- Doug Pargett
 - 708146 - Saildrone
 - Finding valves that may be added to MV3 to work better during the long deployment. Looking for ways to mount and connect up for control/power.
 - 901205 - SURF Center
 - Repair of ESP MV1 oil diaphragm
 - Getting quotes, ordering parts
 - Checking inventory of parts in lab
 - Overhead
 - Meetings
 - Out of Office
 - Sick leave for family health care, a few days.
- Ben Raanan
 - Out of Office
 - 02/23-24
 - 04/4-7
 - 04/13-23
- Mike Risi
- Paul Roberts
 - Out of Office
 - 4/2 - 4/9 (spring break san diego)
- Brent Roman
- Carlos Rueda
 - 901009 - CANON
 - Exploring Supabase/pg_graphql as a possible alternative to facilitate MXM implementation.
 - 901513 - Targeted Sampling by Autonomous Underwater Vehicles
 - Met with Tom and Yanwu. Making some progress.
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Scheduling an internal TethysL status update and demo.
 - Overhead

- Eng. and IE meetings
- Out of Office
 - Apr 4-5: sick
 - Apr 13-15; May 16-18: vacation
- Karen Salamy
 - Out of Office
 - April 4-8, Vacation
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Porting new deepseaguide from Vue 2 to Vue 3
 - Investigating using web components in our on-line apps.
 - 902002 - FathomNet
 - Presented at FathomNet workshop last Thu and Fri
- Alana Sherman
 - 902208 - MiniROV Operations
 - Spent the last three weeks packing and preparing the MiniROV to go to the Arctic.
 - We had one major technical problem that was a combination of water getting into an oil-filled housing and the GFI system not being correctly hooked up. The result was blown fuses all over the system and opening up most of the housings. Once it was put back together there were a bunch of smaller issues (low voltage ground faults on instruments and cables, software updates)
 - Combined packing lists of several previous cruises
 - Packed and documented all the Zarge boxes for the cruise