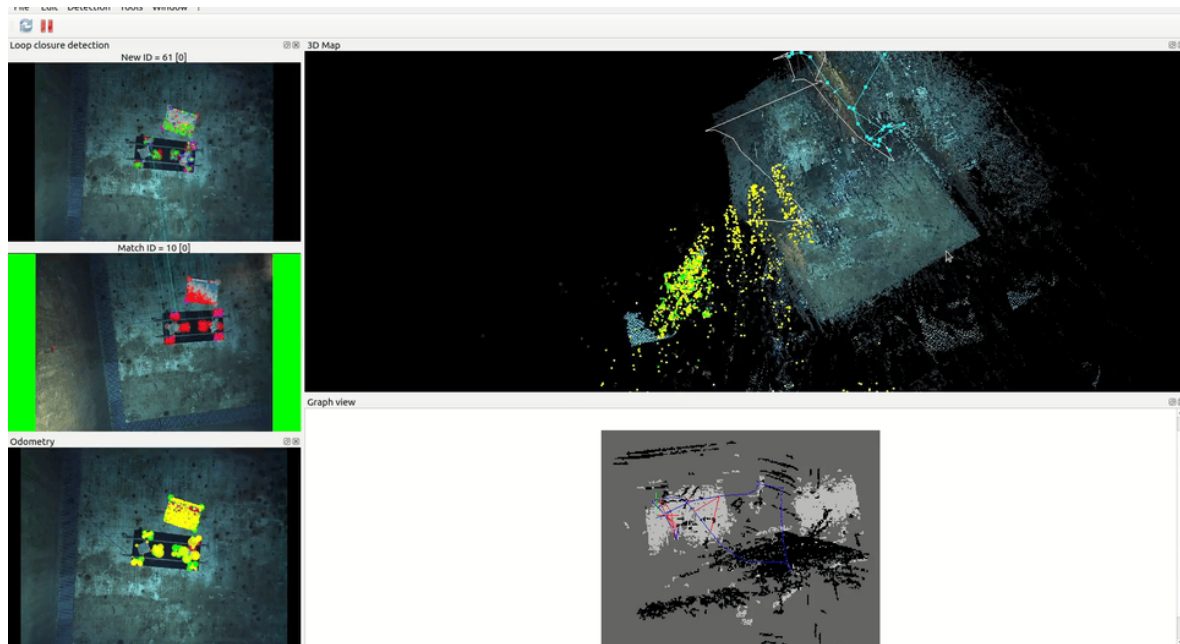


Engineering Weekly Report 12/15/2022 - 12/22/2022

Executive Council Notes

- 902204 - Scalable Robotics - CoMPAS Lab
 - Success this week in the test tank collecting datasets from both the new 6DOF vehicle, and the Low Altitude survey sled, which led to a successful initial demonstration of a new realtime vSLAM developed in coordination with GIM Robotics. Further tuning and testing are required, but developing the pipelines is a milestone for the project.



Individual Activities

- Michael Anderson
- Kevin Barnard
 - 200103 - Core CTD Data - MDUC
 - Resolved D1449 bad O2 values; loaded O2 = NULL and secondary O2 as-is
 - 701139 - ML Tracking
 - Submitted paper to Nature Communications
 - 902204 - Scalable Marine Robotics Foundations
 - Prep for cruise (canceled)
 - Ran online SLAM with OI sled in test tank
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Test PTO in high bay
 - 902106 - Niobicon-Based AUV Docking Development
 - Assembled battery tower
 - Project management
 - Out of Office
 - 2 sick days
- Danelle Cline

- Duane Edgington
 - 902005 - VARS Annotation Assistance
 - Continued work on ReID model runs and stress testing
 - Exploring AWS Secrets Manager
 - Overhead
 - Continuing AWS Training
- Jon Erickson
- Kevin Gomes
 - 200105 - Core Navigation Data - MDUC
 - Weekly meeting about planning for kickoff.
 - 300070 - DMO Support - Ventana
 - A bit of a flail with the Moxa's on the Carson ended happily as it was just a mistake on my part and everything was working fine and there was no core issue.
 - 901009 - CANON
 - 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.
 - Helped Tom O'Reilly with some troubleshooting on WGMS SOAP interactions that had stopped working.
 - 901915 - Improving the Impact of MBARI's Data
 - More web page troubleshooting and some content migration.
 - Overhead
 - Had my last meeting with Todd!! He will be sorely missed!
 - Out of Office
 - 12/19-12/23: Vacation
- Andy Hamilton
- Kent Headley
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Though the OI toolshed cruise was canceled, a lot of progress was made on Terrain Relative Navigation (TRN) for Ventana. The code developed earlier this year was refactored to be more flexible and scalable, and to address a number of bugs exposed during analysis of data from May and October cruises. In addition, new code was developed to use bathymetry from the OI toolshed, which are mounted on a rotating platform. This potentially enables using TRN on vertical surfaces with sufficient maps, e.g. canyon walls, icebergs, etc.
 - Possibly reported earlier: mbtrnpp (TRN with multibeam filtering) is being integrated with the Dorado fast simulator. This was demonstrated recently. mbtrnpp is a TRN extension for MB-System, used with Dorado and WHOI's Sentry vehicle. There is still some integration cleanup pending.
 - Overhead
 - Interview and committee meeting for AOSE roles
 - Scheduling phone screenings for SEE-SD role
 - Preparing for annual reviews
 - Annual CalChamber harassment management training
 - Out of Office
 - Dec 26-30 (vacation)
- Rich Henthorn
 - Out of Office
 - Nov 29 - Dec 7, COVID and quarantine
 - Dec 19 - Dec 29, vacation
- Brett Hobson

- Scott Jensen
 - 300078 - DMO Support - AUV
 - Purchased and fabricated a quadrature encoder mount
 - Shifting from sensorless to sensed code
 - 901205 - SURF Center
 - Support with build of two new portable units
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Discussion with a contractor for a Battery pack with BMS
 - BMS feature requirements and prototyping
 - 902106 - Niobicon-Based AUV Docking Development
 - Monitoring of the build
 - DQ2113 - Tidal Turbine
 - Reviewing Design of new end cap for mounting MBARI power electronics
- Brent Jones
- Chad Keczy
- Brian Kieft
 - Out of Office
 - 12/19 - 12/28 (PST)
 - 12/29-01/03 (MST)
- Denis Klimov
 - 902004 - Planktivore
 - We have parts started coming together for the Fluume assembly integration. Couple of important pieces are still being made: Aquarium assembly (by Gary Plastics Place) and Mounting Plate (need functional water jet for this one). We can, however, start on the assembly with what we have, assemble lifters, access integrity, replace casters, add crossbarace and modify assembly as needed while waiting for parts.
- Eric Martin
 - 901101 - Seafloor Mapping
 - Cruise canceled Monday/Tuesday
 - Successful integration of the LASS on Ventana
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Found issues with CANbus, a broken lead in the em-cable
 - 902012 - Telepresence on MBARI Research Vessels
 - Writing the CSCW paper
 - Tests on starlink postponed due to canceled carson cruise this week
 - 902204 - Scalable Marine Robotics Foundations
 - Cabling for VN100 on Mola
 - Test tank data collection using LASS for SLAM work.
- Thom Maughan
 - 901009 - CANON
 - The two GPU based rack mount servers for bio-infomatics arrived. Named deepedna1 and deepedna2. Met with Joe, Peter and Doug to discuss IS involvement and long term plans. Great meeting.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Support for glider integration and testing
 - 902004 - Planktivore
 - Year end budget.
 - Review of setup parts in machine shop with Denis and Paul
 - Work on camera controller hardware design
 - Out of Office

- Dec 22 - 28 Vacation Colorado
 - Jan 4 - 8 CES
- Mike McCann
- Rob McEwen
- Paul McGill
 - 901618 - Pelagic-Benthic Coupling and the Carbon Cycle
 - Repaired carousel motor for SES
 - Finished writing Web page for Laser Measure
 - 901700 - Acoustical Ocean Ecology
 - Spent most of a day updating NVIDIA drivers on DeepDark because latest version of Mathematica wouldn't run with old drivers
 - Worked on using Differential Evolution to tune hyperparameters on CNN for sonar return classifier
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Read draft of latest octopus paper based on our Barry Macro Camera images
- Tom O'Reilly
- Mike Risi
 - Out of Office
 - May 5 - vacation
 - May 9-10 - vacation
 - June 2-8 - OI cruise
 - June 10-14 - vacation
 - June 20-22 - vacation
 - July 19-20 - vacation
 - August 8-9 - out of office
 - Out of office most Fridays
- Paul Roberts
 - Out of Office
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- Brent Roman
 - 708179 - Saildrone AK
 - Surveyor returned from Mendocino Monday.
 - Could not replicate problems we had with bubbles in intake last time.
 - 708165 - NOAA-MERHAB
 - Contributing my little bits to their new proposal document
 - 901205 - SURF Center
 - Helping Nadia bring up a couple new ESP 3G portable units
 - Added convenient methods to derive wiring tables from software network configuration
 - Participated in call with Bad Wolf software consulting on REDI-net implementation
 - 901913 - WetWiFi
 - OceanComm has the modems again
 - They say logging failure was caused by a bad SDcard in one of the modems
 - They are replacing and shipping them back
 - Out of Office
 - March 8-15 visiting my dad in Sarasota, FL
- Carlos Rueda
 - Out of Office
 - Worked from home for a few days due to covid case at home.
 - Nov 11-14, 23-30, Dec 8-9, 21-29: vacation; Early January (tentative): vacation.

- Karen Salamy
- Brian Schlining
 - 902005 - VARS Annotation Assistance
 - This week has been all about testing and integrating the new Sharktopoda video player.
 - Out of Office
 - Jan 3 - 11 - Vacation
- Alana Sherman
 - Out of Office
 - Out of the office for sick kid Monday and Wednesday and for a school field trip Tuesday morning.