

Kent Headley

Week 51

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - working w/ Tritech re possible logger bug
- 902302 - DEI
- Overhead
 - hiring
 - misc admin
- Out of Office
 - Dec 22-Jan 2

Week 50

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - coding/testing timestamp updates
- 902302 - DEI
- Overhead
 - SE-EAD : 2 applicant screenings
 - misc admin
 - review prep
- Out of Office
 - Nov 23-24

Week 49

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics

- 902302 - DEI
- Overhead
 - Hiring: application review, screening calls.
 - Misc admin
 - Helping with some Matlab debugging
- Out of Office
 - Nov 23-24

Week 48

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Completed code review (with some modifications) for TRN in simulation loop for Dorado.
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
 - Hiring: application review, scheduling zoom screenings
- Out of Office
 - Nov 23-24

Week 47

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Committed a branch of work related to TRN (terrain relative navigation) in the ROV context in the libtrnav and MB-System. Worked closely with Steve Rock and Dave Caress to use the LASS data set collected in October at Sponge Ridge to develop and demonstrate a complete TRN pipeline on Ventana. We were able to use a combination of sensors from the LASS sled and the vehicle to produce TRN output in post-processing. A long term objective is to use sensors of opportunity to efficiently locate places of interest in repeat surveys, increasing time available for science activities. Kudos to the Rachel Carson crew and Ventana pilots for their support and accommodation to collect this data set.
 - Working to wrap up TRN dorado simulation code review submitted by Rob McEwen
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Committed some changes to address issues with the Gemini Sonar GUI. Specifically, range and gain values were not propagating correctly, and the window would resize unexpectedly. These tests are pending testing (requires tank test).
 - Added features : GUI overlays to display a border around the sonar image and image timestamp; add grid and range text display in cartesian mode.
- 902302 - DEI
- Overhead
 - Hiring: application review
- Out of Office

- Nov 23-24

Week 46

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
- Out of Office

Week 45

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
- Out of Office

Week 44

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Processing Sponge ridge ROV TRN dataset
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - debugging new range and gain controls on the libgemini driver/app
 - debugging new logger feature
 - won't be deployed on sponge ridge cruise 11/B, since test and debug requires tank test
- 902302 - DEI
- Overhead
- Out of Office

Week 43

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG

- 600034 - Precision Control Technologies for ROVs and AUVs
 - See seafloor mapping
- 901101 - Seafloor Mapping
 - Working with Steve and Dave on analyzing and validating terrain relative nav (TRN) results from the Sponge Ridge cruise last week
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Preparing for tank test this week; will be collecting a data set for Bastian to compare the Trittech Genesis data logs with the libgemini lstream application (built on the Trittech SDK).
 - Set up a windows laptop with Genesis software
 - Set up libgemini on atuncita
- 902302 - DEI
- Overhead
 - Reviewing SE-EAD applications, preparing screening questions
- Out of Office

Week 42

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
 - Carson LASS cruise at Sponge Ridge 10/10-12:
 - Collected data set for testing TRN using a combination of Ventana and LASS LCM inputs and 5cm scale map
 - The data flow through the pipeline worked, but the geometry corrections were not all in place.
 - Have been working post-cruise to refine and test LCM TRN preprocessing. Geometry corrections seem to work, though TRN performance still not great.
 - Continuing to investigate with Steve and Dave
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Carson LASS cruise at Sponge Ridge 10/10-12:
 - Collected Gemini sonar data
 - Though available time was too brief to collect a good data set, prepared a computer with libgemini and did get to see it run. Planning a tank test to compare libgemini
- 902302 - DEI
- Overhead
- Out of Office

Week 41

- 300057 - Mooring Maintenance
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- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics

- 902302 - DEI
- Overhead
- Out of Office

Week 40

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
 - dorado linux port
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
 - reviewing pull request for mbtrnpp sim integration
 - added plugin handler support
 - working on geometry updates and hopefully new handler
- 901101 - Seafloor Mapping
 - testing multibeam pipeline for cruise next week
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - testing multibeam pipeline for cruise next week
- 902302 - DEI
- Overhead
 - SE-EAD job reposted, reviewing applications
 - misc admin
- Out of Office

Week 39

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
- Out of Office

Week 38

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
 - Refactoring stream handlers for ROV TRN utility; tried out an implementation using dynamic shared libraries, but decided to use a simpler approach instead. It made the code more modular without making configuration more complicated, and required less code.
 - Figuring out instrument configuration for october dive and working on test plan
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance

- 902204 - Scalable Robotics
 - Installed mb1stream on atuncita, built docker image
 - Tested X windows forwarding and fixed a couple of issues for linux build, and a GMT error that affected both linux and macOS
- 902302 - DEI
- Overhead
 - Hiring
 - Sent job description and screening questions to HR
 - Met w/ Andy re requirements
 - met w/ Norm re questions
 - Questions re Irauv software licensing
 - Trying out tmux (terminal mux util)
- Out of Office

Week 37

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
 - Tested (w/ Brian S) and merged changes for libbmagic Linux build and SDK update
- 600034 - Precision Control Technologies for ROVs and AUVs
 - support Rob on simulator cleanup
- 901101 - Seafloor Mapping
 - planning for October cruise (ROV TRN using LASS)
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - planning for October cruise (sonar data for SLAM, imaging sonar)
- 902302 - DEI
 - completed Raben survey
- Overhead
 - hosted Cawthron visitors (Paul Barter, Chris Cornelisen, Shaun Graham)
 - updating SE-EAD job description and writing screening questions
 - AOSE interview
 - Resource balancing (last week)
 - Castroville cleanout (check for CIMT parts)
 - Engineering meeting
- Out of Office

Week 36

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
 - working on Dorado Linux port
 - QNX serial and USB drivers related to Iridium comms for Jan 2024 dorado tow-out missions
- 500055 - VARS, M3/RS, DSG
 - meet w/ Brian Schliniing to test updates to BlackMagic video capture drivers
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Working with Rob to wrap up MB-System TRN in simulation loop
- 901101 - Seafloor Mapping
 - Troubleshooting run-time errors in MB-System Docker images
- 901618 - Pelagic-Benthic Coupling

- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
 - AOSE, EE-MiniROV interviews
 - SE-EAD application review
 - Phase 2 resource balancing meetings
 - Cawthron visit 9/11 week
- Out of Office

Week 35

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
- Out of Office

Week 34

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Supported Rob in running a Dorado sim of the upcoming Axial mission with MB-System TRN processing in the loop (a goal of the project for 2023)
- 901101 - Seafloor Mapping
 - Standby support for ongoing Pacific NW cruise. They've had rough weather and some HW issues to work through, but they've managed to deploy a couple of times on the Cascadia leg. They've been running another quick survey Wed/Thu, and will pick up Erik Thu for the Axial leg, conditions permitting.
 - Submitted an MB-System docker image based on Alpine linux. Danelle Cline recommended Alpine for reducing image size, and it did make a pretty compact version (~30% reduction). Found a build issue that affects a couple of linux variants: CFLAGS -m<bits> is not set correctly on some platforms (Alpine linux, Jetson Nano), breaking the build. It is set using "gmt-config --bits", which returns an empty value in some contexts. The empty value results in an invalid flag (-m) to be passed to the compiler/linker. Also, it is being added to LDFLAGS, when it is a compiler flag (CFLAGS). Resolution TBD.
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Generated a compact docker image for the multibeam processing (see notes, seafloor mapping)
- 902302 - DEI
- Overhead
 - Hiring: reviewing applications, met w/ Norm re ad updates, AOSE, EE
 - Cawthron visit 9/11 week
 - Proposal feedback review
- Out of Office

Week 33

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Helping Rob run simulations
- 901101 - Seafloor Mapping
 - Prepped sonars with TRN software for Pacific NW cruise
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Docker images for multibeam SLAM pipeline
- 902302 - DEI
- Overhead
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- Out of Office

Week 32

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
 - Libbmagic linux build ready to test, pending access
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
 - Prepping TRN on mapping vehicle sonars
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
 - AOSE hire: screening (Peter Marsh), interview (Ethan Park)
 - SE-EAD hire: planning
 - Misc admin
- Out of Office

Week 31

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
 - Attempting linux build
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Looking at GRD/binary octree map conversion utility
 - Replacing debug output library with new mframe module. Used in libtrnav/MB-System
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Fixed bug in mb12x: file list arguments counted twice
 - Investigating apparent network buffer errors
- 902302 - DEI

- Overhead
 - Proposal review
 - Hiring (SE-EAD, AOSE)
 - OASIS support for Cawthron
- Out of Office

Week 30

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
 - Fixed issue with QNX simulator Makefile
- 500055 - VARS, M3/RS, DSG
 - VARS users reported long processing times (12-15s) for 4k frame grabs (FG). Brian Schlining did some testing and found the issue to be somewhere in the frame grab server, which I maintain. I made some diagnostic updates and we isolated the issue to the ImageMagick library. It turns out that the PNG image format can have particularly long write times. After experimenting with some operations that affect compression and storage size, we found a good balance between size and speed, ~11MB and 750 ms.
 - Libbmagic updates: Added support for new BlackMagic SDK, added support for GraphicsMagick builds (alternative to ImageMagick), added configuration option to set quality at run-time
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Helping Rob with TRN integration into Dorado simulation
- 901101 - Seafloor Mapping
 - Helping Rob with dorado sim MB-System setup
 - Call w/ Dave C and Christian Ferriera at MARUM
 - Prep for Axial
 - Wrote up some notes on building MB-System under Cygwin
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Put together a complete pipeline example for converting sonar data to LCM logs and/or live stream for SLAM. Also wrote some documentation for the example, and put together a makefile for generating an example distribution, and delivered it to Sebastian.
- 902302 - DEI
- Overhead
 - Hiring : preparing offer for SE-EAD, scheduling AOSE interview
 - Proposal review
- Out of Office
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Week 29

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Working w/ Rob to complete integration of mb-system TRN into the Dorado AUV simulation
- 901101 - Seafloor Mapping
 - Updates to debug output library (development for post-axial cruise); simpler, more intuitive API, thread-safe
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance

- 902204 - Scalable Robotics
 - Added socket input to mb12x, enabling real-time streaming of sonar data via mb-system to LCM for SLAM. Refactored mb12x, decomposing some functions for better modularity.
- 902302 - DEI
- Overhead
 - Proposals, labor spreadsheet prep, meetings
 - Hiring: meeting with committee on next steps
 - Meeting w CEO search committee, AOSE search input
- Out of Office
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Week 28

- 300057 - Mooring Maintenance
 - Checked data and noted metsys wind errors; turns out sonic is not currently installed.
 - Met w/ Jared re options for changing time on metsys cr10x data logger
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Working out some QNX build issues in the context of integrating multibeam filtering w/ TRN into the dorado simulator
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Updated metadata features and fixed timestamp bug in app for converting multibeam data into LCM stream/log for SLAM. Generated some data sets for Sebastian to share with GIM (Finnish SLAM contractor/collaborator). Help Sebastian set up his processing pipeline as needed.
- 902302 - DEI
- Overhead
 - Proposal process: prep, pre-review, labor spreadsheet
 - Hiring - candidate negotiation
- Out of Office
 - 6/29 Rachel Carson

Week 27

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
- Out of Office
 - 6/29 Rachel Carson

Week 26

- 300057 - Mooring Maintenance

- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Helping Rob to get mbtrnpp simulation running again
- 901101 - Seafloor Mapping
 - Located and fixed issue that generated segfaults at sea last week. A frame limit was using a value that was too small, leading to partial frame reads. Subsequent reads from the frame buffer were incorrectly interpreted, resulting in invalid memory access.
 - Prepped for alternate test day this Thu to complete last week's objectives
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Working with Sebastian to develop a tool for using multibeam sonar for SLAM. Adopted an MB1 translation tool to generate LCM output; later, we'll recast MB1 data to another format (TBD)
 - Helped a little to look at Gemini sonar settings
- 902302 - DEI
- Overhead
 - Proposals
 - Hiring
 - Budget
- Out of Office
 - 6/29 Rachel Carson

Week 25

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
 - Test cruise on Carson: quite a few software issues: first with environment and scripting on cygwin, then segfaults in mbtrnpp. High winds brought us back early.
 - Currently working to trace source of segfaults, made more difficult by the facilities provided by Cygwin, and also that we likely won't be able to reproduce conditions in the test tank (since it's a sonar thing).
 - Did reproduce a segfault by replaying yesterday's mission data, but not certain yet it's the root cause
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
 - attended Lori Mackenzie Inclusive workplace seminar
- Overhead
 - hiring
 - proposals
 - misc admin
- Out of Office
 - 6/20 Rachel Carson

Week 24

- 300057 - Mooring Maintenance
 - working with Jared to understand download failures for 2023M1 (now in test on the dock)

- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
 - preparing for Dorado TRN test day 6/20; this is a test run for Axial in Aug/Sep
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
 - 2024 budget, resources, proposals
 - hiring: AOSE reference check call, SE-EAD
 - misc admin
- Out of Office
 - 6/20 Rachel Carson

Week 23

- 300057 - Mooring Maintenance
 - Investigated system init issue; believe that compact flash card may have some bad media.
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
 - Preparing for mapping AUV test cruise 6/20
 - Syncing codebases
 - Troubleshooting Win7 test setup issues
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Met w/ Bastian, whose last day at MBARI was Wed
 - Investigating gemini sonar image issues w/ Bastian: images change dimension in different range regimes. Trittech indicates it's range compression. This may interfere w/ the ability to use the images in the way Bastian intended.
- 902302 - DEI
- Overhead
 - Hiring: recommendation pending
- Out of Office
 - 6/20 Rachel Carson

Week 22

- 300057 - Mooring Maintenance
 - Wrapped up changes to metsys and gps clock
 - Checked in updates to CVS and git
 - Added sonic wind sensor firmware source to repo
 - Migrated O3 build environment to windows 10
- 300078 - DMO Divisional Support - AUV
 - Working on Dorado linux port
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Working with Rob to sync mbtrn sim work with dorado repo updates

- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Working on some libgemini data issues with Bastian
- 902302 - DEI
- Overhead
 - Hiring: Held meeting to discuss candidates;
 - did not have quorum due to travel and other absences, working off line
 - Working w/ Erik, Alana on AOSE hire
- Out of Office

Week 21

- 300057 - Mooring Maintenance
 - Monitoring 2023M1 output from gps, gpsclock and metsys driver updates. All looking good.
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Helping Rob with code merge
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Working with Bastian to review some cruise data and a potential issue (image resolution differences between logged and captured images)
- 902302 - DEI
- Overhead
 - Hiring: completed first set of interviews, now working on deliberation
 - Attended abstract presentations
 - Misc admin
- Out of Office

Week 20

- 300057 - Mooring Maintenance
 - Figured out why gpsclock driver stopped working: a reset reverted back to a retry configuration value that doesn't work; updated the default config
 - Worked with Karen to restore downloads on 2023M1 test system
 - Now metsys, gps and gps clock are all working on 2023M1
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Helped Rob w/ some git operations
- 901101 - Seafloor Mapping
 - Participated in last Fri Carson cruise to test TRN on ROV. Encountered several technical issues upstream, so couldn't fully exercise TRN code, but did find some bugs and got a lot of useful context for running TRN w/ LASS and other use cases.
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics

- Participated in last Wed Carson cruise to test gemini sonar driver image capture and LCM publishing. That was successful, and determined that hard disk speed is a potential bottleneck at the data rates we were using
- 902302 - DEI
- Overhead
 - SE-EAD interviews this week and next
 - AOSE phone screening and application review
 - Misc admin
- Out of Office

Week 19

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
- Out of Office

Week 18

- 300057 - Mooring Maintenance
 - found root cause of metsys issues. There were two factors causing it not to sample: first, the new wind sensor takes longer to produce a sample, breaking some brittle logic in the sampler firmware. Second, the new wind sensor has a longer power up delay, causing sampling errors. I modified the sampler firmware, and am working with Jared
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
 - helped with various build issues for Rob's mapper oscillation analysis/sim
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Worked with Bastian to debug an issue with the Oculus sonar driver, which was skipping/repeating frames. It turned out to be an issue with indexing a ring buffer. Now testing a fix.
- 902302 - DEI
- Overhead
 - Interview SE candidate
- Out of Office

Week 17

- 300057 - Mooring Maintenance
 - Finally found the root cause(s) of sampling issues with the new sonic wind sensor. We weren't able to get samples at 1Hz, and the instrument seems to have a longer start delay. The sampling firmware also had some brittle logic; in combination with the slow data return, it was failing to travel a critical branch. The long startup time was also causing sampling errors.

- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
 - Prep for TRN May 10-12 Carson days?
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Sprint 7 planning meeting
 - Prep for Sonar driver testing May 10-12 Carson days
 - Get sonar data kindly collected by DJ / the Ventana crew
- 902302 - DEI
- Overhead
 - Hiring
 - General support
 - Misc admin
- Out of Office
 - vacation (4/28 - 5/1)

Week 16

- 300057 - Mooring Maintenance
 - Working w/ James and Jared on OASIS metsys wind sensor issues.
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Updated Blueprint Subsea SDK (imaging sonar) demo to build under Linux and wrote quick emulator for sonar network connections needed to exercise GUI features.
 - Reviewed a couple existing drivers for oculus sonar; one written in GT's lab, another from APL, written by Aaron Marburg, Laura Lindzey and Tanner Poling - small world.
- 902302 - DEI
- Overhead
 - SE-EAD interviews - kudos to Cindy for handling logistics, and to a great interview panel for participating.
 - Misc admin
- Out of Office
 - vacation (4/28 - 5/1)

Week 15

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics

- 902302 - DEI
- Overhead
- Out of Office
 - vacation (4/28 - 5/1)

Week 14

- 300057 - Mooring Maintenance
 - Testing fix for GPS, GPSClock drivers; looking good
 - Working w/ Dave and Jared on troubleshooting metsys
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - DMO made a super effort last week during heavy weather to run the Gemini sonar and and collect some data for Compas Lab. kudos to DJ and Knute.
- 902302 - DEI
- Overhead
 - hiring
 - misc admin
- Out of Office
 - vacation (4/28 - 5/1)

Week 13

- 300057 - Mooring Maintenance
 - after bench testing GPS driver mods, tagged a release and installed on Jared's test setup.
 - Working w/ Dave French to troubleshoot metsys wind sensor issues
- 300078 - DMO Divisional Support - AUV
 - helped Rob to get simulation running to investigated pitch oscillation encountered on MidAtlantic cruise
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - a few minor fixes/features for Gemini driver as Bastian continues testing
 - Worked with DJ to get new Gemini sonar software installed on the Carson; there may be a window of opportunity to collect some Gemini data during Ventana dives this week.
- 902302 - DEI
- Overhead
 - Screening calls (4), working on interview panel
 - Misc admin
- Out of Office
 - vacation (4/28 - 5/1)

Week 12

- 300057 - Mooring Maintenance

- testing software fix for interference between gps and gpsClock drivers, that also addresses possible warm-up time violation for garmin 19xHVS
- Working with Dave French to troubleshoot issue with new Vaisala wind sensor for OASIS metsys. The metsys uses an old Campbell data logger, which has an arcane programming language that is poorly documented.
- Created git repo for oasis3, and plan to reach out to stakeholders about migrating to git. For now, continuing to work in CVS
- 300078 - DMO Divisional Support - AUV
 - working on auv linux port
- 500055 - VARS, M3/RS, DSG
 - Worked with Brian Schlning to resolve segfault encountered while integrating black magic image capture featue on VARS with MiniROV, Root cause appears to be an issue in the latest version of ImageMagick library on macOS Ventura; Wrote an independent/minimal test to confirm this (pending), but meanwhile, the previous version of the library is working.
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Working with Bastian to test Gemini driver features
 - Wrote wrapper script to address issues with broken batch processing in Gemini Svs5 API
- 902302 - DEI
- Overhead
 - hiring - working on getting a committee together, scheduling a few more screenings,
- Out of Office
 - vacation (4/28 - 5/1)

Week 11

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
- Out of Office
 - medical (3/10 a.m.)

Week 10

- 300057 - Mooring Maintenance
 - Jared and I are closing in on the root cause of a couple of OASIS GPS issues: a possible warm-up time violation for newer GPS models and a conflict between the gpsclock and gps drivers. Good news is that we've been able to get a new GPS working w/o software changes (but w/o gpsclock driver)
 - Resurrected the OASIS3 tool chain and was able to build and program O3 persistors
- 300078 - DMO Divisional Support - AUV
 - Working on several proposed updates related to TRN for the dorado linux port
- 500055 - VARS, M3/RS, DSG

- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Fixed a bug in gemini lstream configuration app
 - Worked with Bastian to resolve a dependency conflict between the Gemini SDK and FFMPEG package. The issue was that a mutual dependency, libavcodecs, was not API compatible. Wrote a script to install the Gemini SDK to an alternative path, and use ldconfig to adjust the runtime linker search path. Thanks to Brent Roman for the consultation.
- 902302 - DEI
- Overhead
 - Hiring: feedback for RRE role, scheduling meeting for SE-DA to discuss status and reviewing applications
 - Misc admin
- Out of Office
 - medical (3/10 a.m.)

Week 9

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
 - Updated several modules, including latest TRN simulator code
 - Met w/ Rich and Rob to discuss workflow and potential activities
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Working on LCM message type definitions w/ team
 - Testing Gemini sonar driver
- 902302 - DEI
- Overhead
 - RRE interview
 - SE-DA screening session, application review
 - Travel requests
 - Misc admin
- Out of Office
 - medical (3/10 a.m.)

Week 8

- 300057 - Mooring Maintenance
 - Working w/ Jared and Dave F on metsys, gps debugging
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics

- Implementation, testing of LCM image publisher for Gemini sonar
 - Met with team re message design
- 902302 - DEI
- Overhead
 - Hiring: interview w/ Rowan Border
 - Supervisor's meeting
- Out of Office
 - medical (3/10 a.m.)

Week 7

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
- Out of Office
 - medical (3/10 a.m.)

Week 6

- 300057 - Mooring Maintenance
 - Working with Dave French on OASIS metsys using new model Vaisala wind sensor. The metsys uses a Campbell Scientific data logger to interrogate the wind sensor using SDI-12 serial protocol. Recent wind sensors haven't been working with OASIS, and Dave is checking configuration options to see if that may be the root cause.
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
 - Met with Steve Rock, who had put together a great compilation of Terrain Relative Nav data from Portuguese ledge. It showed consistently good TRN performance and repeatability over 75 missions. There was some interesting structure, which (if I understand correctly) may be related to noise/biases associated with location (terrain?) or direction.
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - Implemented gemini sonar GLF log reader/image capture
 - Met with GT and Bastian re sonar LCM messages
 - Working on
- 902302 - DEI
- Overhead
 - Hiring: Application review, screenings, interviews
 - Resource adjustments
 - Meetings
 - Annual Reviews
 - Covid communications

- Out of Office
 - medical (3/10 a.m.)

Week 5

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
- Out of Office
 - medical (1/25 afternoon)

Week 4

- 300057 - Mooring Maintenance
 - helping DMO (French) with metsys/vaisala issue: latest vaisala wind sensor not working with metsys. The metsys uses a campbell scientific CR10X data logger (c. 1993) to collect data from the sensors. The CR10X has a very arcane programming language: numbers that encode instructions and parameters, much like raw machine code. I took a quick look last year, and didn't have time to figure out CR10X programming. I recently found the original manual, and a trial version of a modern software tool that "disassembles" the program to describe the instructions. After looking at the code, I think that the CR10X communicates via SDI-12 bus, but the Vaisala may be configured to use RS232. Dave has ordered a cable needed to reconfigure the Vaisala; we'll test that hypothesis, and hopefully resolve the issue.
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
 - chatted with Dave a bit about the year ahead. I need to get the MB-System codebase synched up before the vehicles ship to the Mid Atlantic in late Feb
 - Nice article on using TRN with Sentry appeared in the WHOI newsletter:
https://www.whoi.edu/?p=559452&post_type=oceanus_article&preview=1&ppp=ec7bd175aa
 Dave and Raul told the story very well.
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - meeting, planning
- 902302 - DEI
- Overhead
 - annual reviews (3), feedback
 - hiring: app review, reformat app review input, scheduling screening
 - SRSC meeting (2nd half)
- Out of Office
 - medical (1/25 afternoon)

Week 3

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - kickoff meeting
- 902302 - DEI
- Overhead
 - review prep, meetings
 - hiring committee
- Out of Office
 - medical (1/25 afternoon)

Week 2

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
 - attended kickoff meeting
- 902302 - DEI
- Overhead
 - Hiring meetings
 - Annual Review Prep
 - Open Robotics catchup : acquired by Intrinsic (Alphabet/Google)
- Out of Office
 - Weather related issues 1/8 ~ 1/16 (late/WFH/out)
 - medical (1/25 afternoon)

Week 1

- 300057 - Mooring Maintenance
- 300078 - DMO Divisional Support - AUV
- 500055 - VARS, M3/RS, DSG
- 600034 - Precision Control Technologies for ROVs and AUVs
- 901101 - Seafloor Mapping
- 901618 - Pelagic-Benthic Coupling
- 901704.99 - Benthic Observing System Maintenance
- 902204 - Scalable Robotics
- 902302 - DEI
- Overhead
 - Review prep
 - Hiring activities (SEE, AOSE)
 - Misc admin

- Out of Office