Kevin Gomes Sorted By Project

200105 - Core Navigation - MDUC

- More work on Redis implementation and aliasing flattened JSON to datamanager ‘items’ (Week 1)
- Created a docker compose and dev environment that makes it really easy to develop on the LCM bridge code now. (Week 2)
- Added functionality to allow the LCM bridge to publish data to Redis under an alias. This is used to map to other names like the old data manager names (for example SHIP.GPS.LAT). (Week 2)
- Meetings (Week 4)
- Met with Mike to go over new repo structure and will deploy on simulator for Packard (Week 7)
- Worked with Mike R to come up with a new procedure for installing the entire stack on a NUC using Ubuntu 22.04. There was quite a bit of thrash due to the fact that during a point release, Ubuntu moved from version 5 of the kernel to version 6 and some of the libraries would no longer compile. Found a way to roll back to kernel 5 in 22.04 and everything is working fine. I built up a new simulation environment using this new build process and we are running everything in basic simulation now. (Week 16)
- Updating docs and creating top level config projects (Week 18)
- Working on a new LCM bridge to TimescaleDB (Week 18)
- Working on replication of bcserver using new API to support current clients (Week 18)
- Added publisher to logrs to push logged messages over LCM so that we can monitor loggers and replicate bcserver/UDP functionality of previous system. (Week 19)
- Developed Python multithreaded server to serve all UDP ports to replicate previous bcserver functionality. (Week 19)
- Created repo for tracking data system configuration on the Packard (Week 22)
- Looking into InfluxDB as a possible data storage mechanism on the Packard since ROV pilots are considering its usage as well. (Week 22)
- Discussions with InfluxDB about best architectures given the pending release of InfluxDB 3 which is based on Parquet and Apache arrow, but not yet available. (Week 22)
- Working with Peter, fixed issue with Redis patching that is breaking the server on Ubuntu (Week 24)
- Implemented more loggers on the simulator (Week 24)
- Configured simulator to be very close to the newly deployed dpnavproc1.shore.mbari.org that Mike is bringing up (Week 24)
- Starting on proposal scoping (Week 24)
- Deployed more loggers in simulator (Week 25)
- Lots of updates to ship API (Week 31)
- Dataprobe working against new API (Week 31)

- Built new LCM bridge that sends message to Telegraf socket to be converted and stored in InfluxDB (Week 31)
- Met to discuss winch data with Mike (Week 34)
- Working with Adriana, Doug, Marko, Mike, and Drew to spec terminal server. (Week 34)
- More work on specifying terminal servers and comms architecture for Packard. (Week 35)
- More work on InfluxDB (Week 36)
- Working with DMO to spec terminal servers (Week 36)
- Bi-weekly network meeting (Week 36)
- Met with Doug C, Mike R and Drew B. to spec terminal server for purchase. Going to purchase 2 and ship one to Vigo and keep one here for development. (Week 37)
- Shifting to planning for roll out of new system on Carson since Packard delayed (Week 43)
- Built repo for Carson code and planning refactor of simulators/new machines (Week 43)
- Worked on simulator layout and planning (Week 44)
- Moved simulator for current Carson to VM and it's working. Will move others too. (Week 49)
- New Terminal Server for Packard sim installed (Week 49)
- Progressing on VM navproc running currently deployed Navproc/Logging software (Week 49)

300057 - Mooring Maintenance

- Starting on SSDS configuration for M1 Mooring turn coming at the end of the month. (Week 24)

300059 - DMO Support - RV David Packard

- Weekly meeting to discuss issues and status updates. (Week 2)
- More work on the Redis store for LCM messages. Split messages into different logical 'databases' so it's easier to work with them. (Week 16)
- Bi-weekly meeting (Week 22)
- Decision made on Marine Traffic plan, will get that ordered this week (Week 22)
- Working on possibly using the Starlink dish's GPS as a source for tracking the Packard on the ODSS during its trip to its new home (Week 22)
- Set up Marine Traffic account for DMO ops (more work needed here) (Week 23)
- Working through ArcGIS Pro SDK to figure out how to upgrade ArcMapNav to ArcGIS Pro since old ArcGIS will no longer be supported after July. (Week 24)
- Doug Conlin set up a Moxa on the GPS feed to the CTD machine so that it could be split out to multiple listeners. I wrote a python script and deployed it in a docker container on a VM on the ship and it's reading from the GPS and sending data to the AMQP messaging bus for the ODSS with an email backup if the VPN drops during the cruise (which is likely). (Week 32)
- Bi-weekly meeting with folks on site to discuss networking and issues (Week 32)

300062 - DMO Support - Doc Ricketts

- ESRI is deprecating our ArcGIS product and we have to move to ArcGIS Pro which means the ArcMapNav add-in no longer works. I am trying to spin up on the SDK for ArcGIS Pro and have a basic project working that connects to ArcGIS Pro. I am basically going to just have to migrate the code from the old code base to the new … sigh. (Week 16)

300070 - DMO Support - Ventana

- Working with 4D nav rep to help with 4D Nav demo setup on Carson and trying to figure out how to integrate with existing systems. (Week 2)
- Working with Risi, we have a navproc process running that reads in the 4D nav feed and have logger set up to log the raw strings for testing. (Week 2)
- Working with 4D Nav to see if they can put our WMS layers from ERDDAP into 4D nav. Not working yet, will continue to work with them. (Week 2)
- Changed ODSS script running on board Carson to not only feed the asset locations to Winfrog, but to now send them to 4D Nav. (Week 2)
- Checked in on data paths during first cruise post 4D Nav install configuration (Week 3)
- Restarting my efforts on upgrading the DiveLog application. There are serious problems with ODBC on Mac and thinking we should migrate this to an API to get rid of the ODBC dependency. (Week 5)
- Working on web application to replace MiniROV DiveLog (shore based) which will be the first step in building a web application to replace DiveLog on Carson and eventually Packard (Week 7)
- Mike R and I worked to add the camera temperature from the 4K camera through navproc and into dataprobe/logging. Andy had to make some changes in the firmware to send the temperature out of the lapbox, but it's working now. (Week 16)
- Picking up DiveLog web app work again. (Week 17)
- Dive log web application development (Week 18)
- Working on web application replacement for DiveLog app (Week 19)
- Help troubleshooting CTD issue. Added new logger to log raw CSP messages to see what is being sent during the 'outages'. (Week 24)
- Picking up DiveLog app again. (Week 25)
- Small stuff to bring things back up after power outage on Carson. (Week 49)

300079 - DMO Support - RV Rachel Carson

- Updates for ODSS on Carson to support 4D Nav (assets position pushes) (Week 2)
- Mike R and I made all the changes to move navproc and logging to 4DNav so Winfrog can now be retired. (Week 16)
- Working with Doug Conlin to see if I can use grpc tools to pull data from the Starlink dish. This would allow me to get the GPS location from the antenna/router that I could use to track the Packard on the voyage home, but there might be other Satellite data

that we want to use (like knowing when the IP address changes when the satellites switch to another ground station). (Week 25)
- ArcMapNav development - has to be completely rewritten as too much has changed since the ArcObject days. (Week 43)
- Still chugging away at the ArcMapNav Add in for ArcGIS Pro (Week 44)
- More and more work on the ArcMapNav re-write for ArcGIS Pro. (Week 49)

701147 - MARS O&M IV

901009 - CANON

- Exploring the WCOFS models per the request of they Synchro program. They are hoping to add the layers to the ODSS. Registered them in THREDDS and working on integration into ODSS. (Week 4)
- Wrote script to update mapserver files to make the WCOFS temp and salinity available on the ODSS. Current vector map is turning out to be much harder. (Week 16)
- Added the WCOFS layer generation to the odss-utils code (Week 17)
- Added a CTD stations layer for ECOHAB to the ODSS (Week 37)

901911 - ROVVR

902403 - Expedition DB Modern

- Kickoff Meeting (Week 2)
- User story meeting (Week 4)
- Worked up document of current high level view of workflow and how we might create staging system (Week 18)
- Meeting (Week 18)
- Meeting (Week 24)
- Meeting (Week 34)
- Meeting (Week 36)
- Digging into source code locations to compile list of all client software (Week 36)
- Progress meeting and discussions about APIs/ORMs/current processing steps (Week 37)

Out of Office

- March 12-21: Vacation
- March 25-29: Data Council Conference: Austin, TX
- March 18-21: Vacation
- June 7: Out of office
- Jun 21
- Aug 16: Vacation
- Sep 16: Vacation

- Oct 7-11: Vacation
- Nov 18-22: Vacation/Remote Work
- Dec: 12: Vacation
- Dec: 23-26: Vacation

Overhead

- Caught up from vacation (Week 1)
- Slack migration planning with IS (Week 1)
- Early steps in performance reviews (Week 1)
- Performance review stuff (Week 2)
- Working with Joe and Andrew in IS to move us closer to migrating the MBARI Slack workspace to the Enterprise Grid organization. Trying to be thorough for testing purposes. (Week 2)
- Performance review work (Week 3)
- Working on extension of the script that pulls ships' schedules into an internal calendar to integrate MBARI holidays. This is a request from Krystle. (Week 3)
- Using existing code, made another extraction script to pull events from ZImbra holidays calendar into our internal MBARI calendar per request from ITD. (Week 4)
- Performance reviews (Week 4)
- Wrapping up reviews (Week 5)
- Using MiniROV DiveLog app development, prototyping a OAuth application stack using multiple OAuth providers (including MBARI's AD) and leveraging SuperTokens to manage authorization centrally. (Week 7)
- Met with John Zicker to discuss our machine learning efforts and getting outside assistance/guidance (Week 7)
- Working on web application for MiniROV DiveLog entry (Week 9)
- Board meeting activities (Week 9)
- Sat in on meeting with Tympana to see how they are progressing on models to automatically QC Dorado data. (Week 16)
- Working on project with our Board (Week 16)
- Expenses and reports for travel. (Week 16)
- Board related stuff (Week 17)
- Supervisor related meetings (Week 17)
- Board related stuff (Week 18)
- Supervisor related stuff (Week 18)
- Zoom call with Oracle to get a sense of where their cloud offerings are at. (Week 18)
- More work with Slack to try to move the migration along (Week 18)
- Proposal kickoff meeting (Week 19)
- Preparation for DOEST talk (Week 22)
    - Lots of meetings with ML related efforts to gather information for talk (Week 22)
- DOEST Prep and practice (Week 23)
- DOEST meeting (Week 23)

- Working through configuration of Marine Traffic corporate accounts. Trying to get AIS station linked to my account so I can get a free Pro account to assign to Andrew for the Packard. (Week 24)
- Changed getAISpositions python script running on pismo so that it only uses one connection and one channel when pushing messages to the AMQP server. It was create a new connection/channel for each new AIS message which eventually was causing the server to run out of file handles. (Week 24)
- Fixed bug in Telepresence app that was causing datamanager consumption to break (I had turned on publishing from the simulator which did not have any data yet and it broke things. Good that I caught this now). (Week 24)
- Working on next steps for AI/ML collaboration. (Week 25)
- Proposal review (Week 31)
- Proposal review (Week 32)
- Proposal Review (Week 33)
- Proposal Group Lead Meetings (Week 33)
- More proposal and budget work (Week 34)
- Met with Slack to discuss audit, new contract and workspace migration (Week 34)
- Met with a new AWS representative who took over for previous contact to get discussions started. (Week 34)
- Organizing an invited trip to NVidia and preparing slides for introductory talk. (Week 34)
- Follow up activity post NVIDIA meeting (Week 35)
- Meeting and follow up with Oracle (Week 35)
- Proposal revisiting and review (Week 35)
- Proposal review process and feedback (Week 36)
- Back and forth with NVIDIA (Week 36)
- Back and forth with AWS (Week 36)
- Back and forth with Oracle (Week 36)
- Proposal related meetings (Week 37)
- Meeting with John Zicker (Week 37)
- Group meeting to discuss REST APIs and web frameworks. (Week 37)
- Management stuff (Week 43)
- Budget stuff (Week 43)
- i2MAP meeting (was great!) (Week 44)
- DeepMind meeting (Week 44)
- After network maintenance a couple weeks ago, AIS data feed to Marine Traffic has been dropping and needs a restart every day or so. Trying to troubleshoot with IS (Week 49)
- End of year budget stuff (Week 49)

706008 - READI-Net

- Going to run through full build test of the sampler through cloud to see if we can get one working end-to-end. (Week 2)
- Met with group to discuss cellular and satellite communication options (Week 3)
- Worked with Scott to make changes to the online/cloud portion of READI-net. (Week 16)

- Getting ready for a meeting to handoff code back to MBARI. (Week 16)
- Created new documentation site and starting to plow through the code to try and understand it all. (Week 17)
- A couple meetings to help transfer knowledge/docs from what was Big Bad Wolf Software to us. (Week 17)
- Getting familiar with code base (Week 18)
- Met with Nick from BBWS (Week 18)
- Scoping work to add feature to exercise entire chain to get comfortable with how it all works while we still have Nick's time (Week 18)
- Working through source code and creating detailed documentation so we can dry run the development cycle before we lose our contractors time. (Week 34)
- Working through Terraform documentation to familiarize myself with it so I can document the software stack created by Big Bad Wolf. (Week 36)
- Still working through Terraform and Ansible code from contractor to replicate deployment so I can do some development and deploy new changes. (Week 37)
- Able to get SD card images building again and set up new RockPi with updated commands for ESP Sampler. (Week 43)
- Documentation site built and updated with detailed instructions on all this. (Week 43)