

200105 - Core Navigation - MDUC

Week 50

1. Kevin Gomes
 - a. Working on VM instance of Navproc simulator running currently deployed system.
2. Mike Risi
 - a. Misc. navproc maintenance on Rachel Carson
 - b. Developed on device viewer for pan and tilt debug debugging
 - c. Developed some generic navproc input processes for navproc 2.0

Week 49

1. Kevin Gomes
 - a. Moved simulator for current Carson to VM and it's working. Will move others too.
 - b. New Terminal Server for Packard sim installed
 - c. Progressing on VM navproc running currently deployed Navproc/Logging software

Week 46

1. Mike Risi
 - a. Finalized all processes necessary for navproc 2.0 deployment on Rachel Carson, reviewing with Kevin G.
 - b. Bringing up navproc machines for deployment of navproc 2.0 on the Rachel Carson this Spring 2025.
 - c. Modified 4D Nav process for use on Rachel Carson and David Packard.

Week 44

1. Kevin Gomes
 - a. Worked on simulator layout and planning

Week 43

1. Kevin Gomes
 - a. Shifting to planning for roll out of new system on Carson since Packard delayed
 - b. Built repo for Carson code and planning refactor of simulators/new machines
2. Mike Risi
 - a. Planning navproc upgrade for Rachel Carson with Kevin
 - b. Working on Rachel Carson processes for navproc upgrade

- c. Meeting with Kevin and Drew to work out installation details of new Digi terminal servers for David Packard

Week 41

- 1. Mike Risi
 - a. Working on a few remaining processes for the David Packard
 - b. Working on fix for Rachel Carson navproc GPS process failures to be installed during next maintenance period

Week 39

- 1. Mike Risi
 - a. Developed TCP stream input/output processes for new David Packard terminal servers
 - b. Working with Kevin on serial terminal testing

Week 37

- 1. Kevin Gomes
 - a. 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 36

- 1. Kevin Gomes
 - a. More work on InfluxDB
 - b. Working with DMO to spec terminal servers
 - c. Bi-weekly network meeting

Week 35

- 1. Kevin Gomes
 - a. More work on specifying terminal servers and comms architecture for Packard.

Week 34

- 1. Kevin Gomes
 - a. Met to discuss winch data with Mike
 - b. Working with Adriana, Doug, Marko, Mike, and Drew to spec terminal server.
- 2. Mike Risi
 - a. Fixed some pt-control bugs after testing with Helios pan and tilt simulator

Week 33

- 1. Mike Risi
 - a. Worked Helios simulator for ROS pan and tilts

- b. Completed HD lapbox process and tested with pan and tilts

Week 31

1. Kevin Gomes
 - a. Lots of updates to ship API
 - b. Dataprobe working against new API
 - c. Built new LCM bridge that sends message to Telegraf socket to be converted and stored in InfluxDB

Week 30

1. Mike Risi
 - a. David Packard navproc updates after switch to new SMD control system NUCs

Week 28

1. Mike Risi
 - a. Finalized wind wind sensor process
 - b. Installed 4K lapbox simulator for pan and tilt testing
 - c. Working on finalizing the UHS process, final spec. still pending

Week 25

1. Kevin Gomes
 - a. Deployed more loggers in simulator

Week 24

1. Kevin Gomes
 - a. Working with Peter, fixed issue with Redis patching that is breaking the server on Ubuntu
 - b. Implemented more loggers on the simulator
 - c. Configured simulator to be very close to the newly deployed `dnavproc1.shore.mbari.org` that Mike is bringing up
 - d. Starting on proposal scoping
2. Mike Risi
 - a. Deployed code up and running in building D
 - b. Serial ports installed and functional
 - c. Working with Drew B. to start plumbing in ROV serial instruments
 - d. Logging and nightly downloads to be enabled as soon as data is available

Week 22

1. Kevin Gomes
 - a. Created repo for tracking data system configuration on the Packard

- b. Looking into InfluxDB as a possible data storage mechanism on the Packard since ROV pilots are considering its usage as well.
- c. 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 20

- 1. Mike Risi
 - a. Install of navproc in building D, currently interfaced to SMD control system
 - b. Working on getting Digi terminal servers going in building D to start interfacing with ROV sensors and actuators (e.g. CTD, digiquartz, pan/tilt units, etc.)

Week 19

- 1. Kevin Gomes
 - a. Added publisher to logrs to push logged messages over LCM so that we can monitor loggers and replicate bcserver/UDP functionality of previous system.
 - b. Developed Python multithreaded server to serve all UDP ports to replicate previous bcserver functionality.
- 2. Mike Risi
 - a. Working on a few remaining navproc processes
 - b. Configuring navproc machines for R/V David Packard
 - c. Working with Kevin on finalizing navproc process configuration

Week 18

- 1. Kevin Gomes
 - a. Updating docs and creating top level config projects
 - b. Working on a new LCM bridge to TimescaleDB
 - c. Working on replication of bcserver using new API to support current clients

Week 17

- 1. Mike Risi
 - a. Completed Ricketts overlay process
 - b. Working with Kevin G. on some Ubuntu 22 migration issues

Week 16

- 1. Kevin Gomes
 - a. 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 14

1. Mike Risi
 - a. Procmán Sheriff now working on Ubuntu 22
 - b. Working on configuration of Doc Ricketts NUCs for July install

Week 11

1. Mike Risi
 - a. Working on getting Procmán Sheriff running on Ubuntu 22
 - b. Working with Kevin on navproc-dpkd deployment configuration

Week 9

1. Mike Risi
 - a. Finishing up overlay process
 - b. Working with Drew on trying to move some processes to UDP
 - c. Compiling process configuration list for Doc Ricketts integration

Week 7

1. Kevin Gomes
 - a. Met with Mike to go over new repo structure and will deploy on simulator for Packard
2. Mike Risi
 - a. Started overlay process
 - b. Review of new configuration setup for navproc
 - c. Modifying some of the processes after doc-ricketts process changes

Week 5

1. Mike Risi
 - a. Implementing remaining Doc Ricketts processes for integration later this year
 - b. Working on final configuration of system for navproc

Week 4

1. Kevin Gomes
 - a. Meetings
2. Mike Risi
 - a. Working on generic UDP input/output processes
 - b. Finalizing process list for Doc Ricketts integration this Spring

Week 2

1. Kevin Barnard
 - a. Began scoping rewrite of procman-sheriff GUI
2. Kevin Gomes
 - a. Created a docker compose and dev environment that makes it really easy to develop on the LCM bridge code now.
 - b. 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 1

1. Kevin Gomes
 - a. More work on Redis implementation and aliasing flattened JSON to datamanager 'items'