

902306 - SINKER

Week 51

1. Enoch Nicholson
 - a. 2024 project planning
 - b. Hardware clean up
 - c. Destage SINKER
 - d. Weight Check

Week 50

1. Rich Henthorn
 - a. Testing at the test tank
 - b. Wednesday test deployment on Ventana canceled due to crew sickness
2. Enoch Nicholson
 - a. Deployment preparations
3. Paul Roberts
 - a. Integration and testing of SINKER on Ventana

Week 49

1. Paul McGill
 - a. Helped a bit with tank testing of instrument in preparation for next week's dive
2. Enoch Nicholson
 - a. Instrument assembly & deployment preparation
3. Paul Roberts
 - a. Sediment camera assembly and tank testing
 - b. Interface can software

Week 48

1. Rich Henthorn
 - a. Camera controller
2. Enoch Nicholson
 - a. Housing & Wiper pressure testing
 - b. Chassis assembly
 - c. Wiper tank testing
3. Paul Roberts
 - a. Assembly and sediment camera bring up
 - b. Image acquisition software

Week 47

1. Enoch Nicholson
 - a. Chassis Assembly
 - b. Housing Pressure Testing
2. Paul Roberts
 - a. System controller bringup
 - b. Optics testing

Week 46

1. Rich Henthorn
 - a. Dang camera controller testing
2. Enoch Nicholson
 - a. Wiper Testing
 - b. Pressure vessel assembly
 - c. Chassis assembly
3. Paul Roberts
 - a. Project management
 - b. Prep for field work

Week 45

1. Rich Henthorn
 - a. Camera controller board testing
 - b. Move into lab
2. Enoch Nicholson
 - a. Completed Interface & sediment chassis layout / fabrication drawings
3. Paul Roberts
 - a. Preparing for system assembly and testing

Week 44

1. Rich Henthorn
 - a. Camera controller dev
2. Enoch Nicholson
 - a. Completed Sinker deployment frame assembly
 - b. Began finalizing Chassis design for I-Face & Sed-Cam housings
 - c. Finished deep wiper assembly
 - d. Ordered acrylic test ports

Week 43

1. Rich Henthorn
 - a. Camera controller development
2. Enoch Nicholson
 - a. Completed deployment frame for December cruise & submitted work orders.
 - b.

Week 42

1. Francois Cazenave
 - a. Reviewed the frame design with Enoch
2. Rich Henthorn
 - a. Camera controller software dev
3. Enoch Nicholson
 - a. December deployment frame design
4. Paul Roberts
 - a. Testing sediment camera optics

Week 41

1. Rich Henthorn

- a. Flipping switches on camera controller
 - b. Writing camera controller app beginning with test and BIT program
2. Enoch Nicholson
 - a. December deployment frame design

Week 40

1. Rich Henthorn
 - a. Wrestling with camera board, bootloader
 - b. Both bootloader and application needed to be built with CRYSTALLESS option
2. Enoch Nicholson
 - a.
3. Paul Roberts
 - a. planning for tank testing and instrument assembly

Week 39

1. Rich Henthorn
 - a. Programming camera board with integrated Moteino M0
 - b. Issues programming after burning bootloader
2. Paul Roberts
 - a. Sediment camera chassis and optics

Week 38

1. Rich Henthorn
 - a. Issues with bootloader on camera control boards
2. Enoch Nicholson
 - a. Completed check of housing drawings with FC. Released and submitted final drawings to Scripps.
3. Paul Roberts
 - a. Internal chassis design
 - b. firmware troubleshooting

Week 37

1. Enoch Nicholson
 - a. Finished Housing B drawing set.
 - b. Quoted fabrication with Scripps.
2. Paul Roberts
 - a. finalization production for Ti housings
 - b. sediment camera optics and mounting

Week 36

1. Enoch Nicholson
 - a. Housing A drawing package complete & submitted.
2. Paul Roberts
 - a. chassis modeling and optics mounts

Week 35

1. Rich Henthorn
 - a. Camera controller testing
2. Enoch Nicholson

- a. Drafted and submitted Housing A drawing package for peer review.
 - b. Built compensated wiper.
 - c. Added optics mount to test aquarium.
3. Paul Roberts
 - a. Internal chassis for sediment camera
 - b. Internal chassis for sinking camera

Week 34

1. Rich Henthorn
 - a. Dev meeting
 - b. Camera control board testing
2. Enoch Nicholson
 - a. Housing detail design

Week 33

1. Rich Henthorn
 - a. Checking on new controller
2. Paul Roberts
 - a. Battery pack modeling
 - b. Housing drawings

Week 32

1. Enoch Nicholson
 - a. Met with wiper vendor
 - b. Hydro wiper prototyping

Week 31

1. Paul Roberts
 - a. Mechanical design

Week 30

1. Francois Cazenave
 - a. Meeting
2. Enoch Nicholson
 - a. Revised system controller board layout.
 - b. Contacted glass manufacturer
 - c. Concept design of wiper compensator.
 - d. Met with Zebra Tech about deep hydro wiper.
3. Paul Roberts
 - a. Design review planning
 - b. Budget review

Week 29

1. Enoch Nicholson
 - a. Completed aquarium cart.
2. Paul Roberts
 - a. Preparations for design review
 - b. Testing cameras and lenses

Week 28

1. Paul Roberts
 - a. Proposal submission

Week 27

1. Enoch Nicholson
 - a. Contacted glass manufacturer for material information.

Week 26

1. Enoch Nicholson
 - a. Presented and discussed mechanical progress at our biweekly meeting.

Week 25

1. Enoch Nicholson
 - a. Housing weight trade offs Ti vs Al
 - b. Acrylic viewport feasibility & basic design

Week 24

1. Enoch Nicholson
 - a. Completed conceptual layout of System controller.
 - b. Began assembling the wiper test aquarium.
 - c. Rachel Carson ride along to observe ROV / MARS operations.

Week 23

1. Enoch Nicholson
 - a. Ordered aquarium hardware.
 - b. Submitted frame drawings.
 - c. Continued frame design.

Week 22

1. Rich Henthorn
 - a. Weekly meeting
 - b. Dev kit
2. Enoch Nicholson
 - a. First pass at SINKER mass properties.
 - b. Began discussing deployment with ROV pilots.
 - c. PCB mechanical layout.
3. Paul Roberts
 - a. Pressure housing weight reduction
 - b. Electrical design review
 - c. Ordering sediment camera lens
4. Alana Sherman
 - a. Attended design review for main controller board

Week 21

1. Enoch Nicholson
 - a. Refined module board layout.

- b. Began concept chassis design.
 - c. Continued conceptual frame model.
- 2. Paul Roberts
 - a. Finalizing sediment camera optics

Week 20

- 1. Enoch Nicholson
 - a. Transferred CAD data to PDM Vault
 - b. Ordered aquarium and completed design of printed aquarium components.
 - c. Worked on PBC layouts: Module board and its daughter board, System Controller.
 - d. Began conceptual layout of SINKER frame.
- 2. Paul Roberts
 - a. Sediment camera optics modeling
 - b. finalizing CAD models

Week 19

- 1. Francois Cazenave
 - a. Aquarium design review with Enoch
 - b. Attended meeting
- 2. Paul Roberts
 - a. Updating solid models with latest camera/lens/illumination design

Week 18

- 1. Enoch Nicholson
 - a. Completed design of test aquarium and discussed with the group. Produced drawing for quote.
 - b. Started sketching frame ideas.
 - c. Obtained pinout for wiper control cable.
 - d. Started basic housing design using hand calcs and DSP&L Under Pressure.

Week 17

- 1. Rich Henthorn
 - a. Assembling dev environment - duplicating env from AyeRIS
 - b. Tested with AyeRIS code
- 2. Paul McGill
 - a. Trying to make sense of the power budget spreadsheet.
- 3. Enoch Nicholson
 - a. Started conceptual design of wiper test aquarium.

Week 16

- 1. Enoch Nicholson
 - a. Disassembly of ZebraTech Hydro Wiper
 - b. Developing Mechanical Engineering task list
- 2. Paul Roberts
 - a. ME planning and organization

Week 15

- 1. Francois Cazenave
 - a. Met with Paul and Enoch to discuss mechanical design

2. Paul Roberts
 - a. camera testing and lab setup
 - b. dev meeting

Week 14

1. Paul Roberts
 - a. LED lighting design
 - b. Dev board bring-up

Week 13

1. Rich Henthorn
 - a. Weekly Meeting
2. Paul Roberts
 - a. Interface can mechanics
 - b. Dev board for firmware development

Week 12

1. Paul Roberts
 - a. System PCB review and mechanical modeling of interface housing

Week 10

1. Paul Roberts
 - a. Purchasing zebra-tech wiper
 - b. review of system PCB design

Week 9

1. Francois Cazenave
 - a. Attended meeting and helped with housing design
2. Paul Roberts
 - a. Wiper concept and camera / lens testing

Week 8

1. Paul Roberts
 - a. Wiper design
 - b. Electrical hardware selection
 - c. Testing cameras and lenses

Week 7

1. Paul Roberts
 - a. Completing requirements documentation
 - b. Power path and power isolation design

Week 6

1. Paul Roberts
 - a. Wiper concept model
 - b. Electrical system design

Week 5

1. Rich Henthorn
 - a. Dev meeting to discuss requirements and concepts
2. Paul Roberts
 - a. Wiper mechanics concept design
 - b. System diagrams and interfaces
3. Alana Sherman
 - a. Team meeting to review requirements

Week 4

1. Francois Cazenave
 - a. Attended meeting
2. Paul Roberts
 - a. System diagrams and planning
 - b. Hardware procurement

Week 3

1. Francois Cazenave
 - a. Attended meeting
2. Paul McGill
 - a. Attended project kickoff meeting.
3. Paul Roberts
 - a. Kickoff meeting, scheduling and hardware procurement

Week 2

1. Paul Roberts
 - a. Kickoff meeting and planning for 2023