

## **Research Vessel Technical Enhancement Committee (RVTEC)**

Inn on Lake Superior  
350 Canal Park Drive Duluth, MN  
October 24-26, 2017

### **2017 Meeting Minutes**

***Minutes provided by Lee Ellett, RVTEC Chair-Elect***

#### **Tuesday October 24, 2017**

Inn on Lake Superior, Northern Lights Ballroom

Scott called the meeting to order  
Annette gave an orientation of the facility  
The participant list is included as (Appendix I)

Dr. Robert Sterner, Director of the Large Lakes Observatory

Dr. Sterner provided welcome remarks and insight into resources of the great lakes.

Dr. Jay Austin - Science Talk - Unintentional (but useful) measurements of ice keel thickness in Lake Superior (Appendix II)

Introductions for all participants was then conducted

#### **Icebreaker Session Order of Presentations: (Appendix III)**

University of Miami – Walton Smith - Don Cucchiara

Discussed operations in and around Cuba, their year of operations and a SBE 9 troubleshooting example.

University of Washington

Clifford A. Barnes – Patrick A’Hearn

Not many operational problems.

Thomas G. Thompson – Patrick A’Hearn

Discussion of shipyard status.

Rachel Carson - Patrick A’Hearn

Replacement for the Clifford A. Barnes.

Bermuda Institute of Ocean Sciences– Atlantic Explorer - Mason Schettig

Engine overall in shipyard. Example of broken OFP mooring and recovery challenges.

Woods Hole Oceanographic Institution - Cris Seaton & Joseph McCabe -

Atlantis - Dave Fisichella

A fairly active year, more general-purpose cruises due to a light Alvin schedule.

Problems with operations out of Mexico. Acquisition of liquid nitrogen generator.

Neil Armstrong - Amy Simoneau

Example of challenges using a Sonardyne USBL system with an ROV.

University of Minnesota – R/V Kingfisher - Aaron Lingwall

Discussion of multibeam operations on Jenny Lake in the Grand Tetons.  
University of Rhode Island – Endeavor – Lynne Butler  
.322 wire with extremely rusty layers in the middle of the cable.  
University of Delaware – Hugh R. Sharp - KG Fairbairn  
Problem with ROV recovery where the lifting bail broke, luckily over water.  
Recovery was challenging.  
Scripps Institution of Oceanography  
R/V Sally Ride - Keith Shadle  
Operational challenges of bringing a new vessel into service.  
R/V Roger Revelle - Keith Shadle  
Busy schedule unique overboarding scenarios  
R/P FLIP - Keith Shadle  
Busy schedule, MRU on vessel that flips  
R/V R.G Sproul - Keith Shadle  
Busy schedule, short notice cruises  
LUMCON - R/V Pelican - Alex Ren  
Example of Oceaneering ROV use, deployment of elevator basket and ROV  
using two wires in the water.

#### Break

Oregon State University - R/V Oceanus - Andrew Woogen  
Busy shipyard, replacement of acquisition systems, use of a UAV, deep water  
camera housing.  
Lamont-Doherty Earth Observatory - R/V Marcus G. Langseth - Jeff Rupert  
Motivational challenges with a light schedule. Acquisition system challenges and  
conducting general purpose operations. Lively discussion around the future of  
Langseth. Discussion of New Zealand protocols and UH protocols surrounding  
regulations of cleaning of vessel hulls.  
University of Alaska Fairbanks - R/V Sikuliaq - Steven Hartz  
Discussion of R/V Sikuliaq underway data acquisition modular design.  
UNOLS Tech Pool - Elizabeth Ricci  
Outlined challenges of working on several UNOLS vessels.  
NOAA Vessels - Patrick Murphy  
Discussion of challenges of moving the North Atlantic Bottom Trawl Survey from  
the *Bigelow* to the *Pisces*.  
USGS - Rachel Marcuson  
The challenge of wiring a sparker ground for 220V single phase power on a ship  
with a floating ground.  
STARC - USCGC Healy - Brett Hembrough  
Discussion of using an EM122 to locate a wreck in shallow water.  
USCG C4IT - USCGC Healy - Adam Stenseth  
USAP Vessels - Ross Hein  
R/V Nathaniel B Palmer

Challenge of sea ice formation cruise.  
R/V Laurence M Gould  
Addition of Fleet Express system and challenging shipyard.  
Schmidt Ocean Institute - R/V Falkor - Stian Alessandrini  
Shipyard challenges, lost cruises. Transducer replacement. ROV operations.

Stony Brook University - R/V Seawolf - Tom Wilson  
Description of challenges associated with an atmospheric radar installation on shore.

University of New Hampshire - R/V Gulf Surveyor - Daniel Tauriello  
Summary of most recent hydrographic field season. Taking students to sea for hydrographic surveys. Problems with UPS systems on a small vessel.

University of Hawaii – Kilo Moana – Scott Ferguson  
Description of EM122 noise. Analyzed power quality during troubleshooting and found a conflict with 38kHz ADCP.

### Agency Reports

NSF - Jim Holik  
See Presentation (Appendix IV)

ONR - Tim Schnoor  
See Presentation (Appendix V)

NOAA - CDR Patrick Murphy  
See Presentation (Appendix VI)

USCG - David Forcucci  
See Presentation (Appendix VII)

### INMARTECH brainstorming session - UNOLS

See Presentation (Appendix VIII)

Annette discussed the 2018 INMARTECH meeting. She announced the location at WHOI, combined with a 1 day RVTEC meeting. A strawman schedule was suggested. She asked for suggestions and volunteers to develop the meeting agenda. This topic will be revisited on Thursday.

### Introduction of Friday Basic Network Training - Laura Stolp & Britton Anderson

Laura gave an introduction to the Friday training. Following the training a hands-on session will follow.

Britton introduced himself to the group and discussed his experience bringing Sikuliaq online. He has taught networking courses at UAF and is looking forward to training with this group.

### Introduction of afternoon sessions

Scott introduced the afternoon sessions

- R2R Session
- Cybersecurity with SATNAG
- Sonar Synchronization Panel
- Internet Use Policy Panel

Karen Stocks gave an overview of the R2R panel. (Appendix IX)

Annette provided an update to the logistics for the afternoon of the meeting.

### **Wednesday October 24, 2017**

Inn on Lake Superior, Northern Lights Ballroom

8:38AM - Scott called the meeting to order. There were several meeting logistics updates prior to starting the morning presentations

### Marine Technology Summit

An update an invitation on MTS Summit on Nov 6, 2017 was provided by Mike Einhorn.

### Summary of Tuesday Breakout Sessions

Karen Stocks updated on the R2R activities session.

- Q/C of CTD data
- Q/C of echosounder data
- Best practice recommendations
- Trial fluorometer Q/C

Jules Hummon updated on the sonar syncing session. There was discussion of K-Sync given by Ethan Roth and a discussion of ADCP interference given by Jules Hummon.

Dave Fisichella updated on bringing shore equipment to sea. At the session, there was a discussion of how to determine requirements for equipment prior to going to sea during pre-cruise planning

John Haverlack updated on the SatNAG cybersecurity session. How does cybersecurity apply to the marine environment? It is a complex issue. Do we want a fleet effort to be consistent and proactive with this issue?

Ken Feldman updated on the SatNAG internet use policy session. The session discussed this broad subject and how a policy is being assembled. A draft policy will be implemented on SatNAG member institution vessels.

MATE Update - Nandita Sarkar, MATE and Amanda Dostie, MATE  
See Presentation. (Appendix X)

An overview of the MATE program and an update on current activities. She was followed by Amanda Dostie who provided an update on her activities as a long-term MATE intern. (Appendix XI)

#### Ship/Shore Communications

HiSeasNet - Kevin Walsh, SIO

See Presentation (Appendix XII)

An overview of HiSeasNet activities and an update of operations

Fleet Express - Al Suchy, WHOI

See Presentation (Appendix XIII)

An overview and update on the FBB and Fx program.

SATNAG Report - Jon Meyer, SIO

See Presentation (Appendix XIV)

An introduction of the Satellite Network Advisory Group. An update was provided on the year activities.

Technician Pool/Technician Exchanges - Alice Doyle, UNOLS and Debz DeFreitas, TAMU

See Presentations (Appendix XV)

An update was provided on the current status and activities of the UNOLS Tech Pool and Tech Exchanges.

JMS Inspection Report - Ted Colburn, JMS

See Presentation (Appendix XVI)

This presentation is an update on the NSF Ship inspection program.

#### Break

MISO Pre-Trip Prevention Collar - Dan Fornari, WHOI

Dan called in to present on the pre-trip collar system that has been developed. Miso camera system on multicores have been providing real-time images on UNOLS cable for several years via a datalink. In March-April of 2017 a pre-trip prevention collar was developed to work with the MISO multicore camera video. A video was shown to demonstrate the system. (Appendix XVII)

R2R Report - Suzanne O'Hara, LDEO

See Presentation (Appendix XVIII)

Status report from R2R group.

HiSeasNet Pacific Bandwidth Expansion Project - Kevin Walsh, SIO

See Presentation (Appendix XIX)

Kevin presented on the 2017 IS-18 Pacific bandwidth expansion.

UNOLS Wire Pool and Synthetic Rope - Rick Trask, WHOI

See Presentation (Appendix XX)

Information on the UNOLS Wire Pool and status of synthetic rope testing and use.

OCRV Coring System - Jim Broda, WHOI

See Presentation (Appendix XXI)

Update on the OCRV Coring system.

### **Wednesday October 24, 2017**

Inn on Lake Superior, Northern Lights Ballroom

0832 - Scott called the meeting to order. There were several announcements before stating the morning presentations.

Don Cucchiara from University of Miami announced they have decommissioned a vessel and have surplus equipment free of charge, your institution pays for shipping. The list will be sent to the RVTEC Managers list.

UNOLS East Coast Winch Pool - Josh Eaton

See Presentation (Appendix XXII)

An update on the current activities of the UNOLS East Coast Winch Pool.

UNOLS West Coast Winch Pool - Aaron Davis

See Presentation (Appendix XXIII)

An update of current West Coast Winch Pool.

### UNOLS Reports

UNOLS - Debbie Steinberg

See Presentation (Appendix XXIV)

Update on UNOLS Office re-compete, committee for Maintaining a Respectful Environment on Ships (MERAS), and the 2017-2018 goals.

FIC - Annette DeSilva

See Presentation (Appendix XXV)

An update on FIC activities including the appointment of Ethan Roth from UAF as the RVTEC liaison.

RVOC and Safety Committee - Scott Ferguson

Bill Fanning was unable to attend this meeting. Aaron Davis

AICC - Steve Hartz

See Presentation (Appendix XXVI)

The update of current activities included

SCOAR - Steve Hartz

See Presentation (Appendix XXVII)

Update SCOAR activities and an update on UAS policies.

RCRV - Jim Holik

See Presentation (Appendix XXVIII)

Update on the status of regional class research vessels

Appendix B Update - Aaron Davis

Aaron provided an update on RVSS Appendix B. UNOLS council cancelled Appendix B. Jon Alberts is working on a document to capture Subchapter U requirements.

ADCP - Jules Hummon

See Presentation (Appendix XXIX)

An update was provided on the status the UHDAS systems supporting ADCP data collection.

Logistics White Paper, Foreign Port and Foreign Clearances - Alice Doyle

See Presentation (Appendix XXX)

Introduction to recent discussions and creation of a white paper describing best practices on foreign logistics and cruise planning.

Break

MOCNESS Rebuild update – Lee Ellett

See Presentation (Appendix XXXI)

Datapresence from RCRVs - Chris Romsos

See Presentation (Appendix XXXII)

Chris provided an update on data services design that is ongoing for the RCRV project.

Questions

Toby - How is design being developed by users and how much by design team.

Chris - By going to sea and getting input from users.

Marc - This is not being developed in a bubble.

Chris - The program has science oversight.

Jim - This is forward thinking but will need to look at development of a complex system versus operational funding realities.

Fantastic Techs and where to find them - Discussion - Moderator, Tom Wilson

See Presentation (Appendix XXXIII)

Tom introduced the topic of what make a good tech, how to find them, and how to keep them.

Comments on what makes a great tech

Marc Willis - Engineers that could use tools. Seagoing experience not required. Raw skills and interest is a requirement.

Jules - Sailboat owners and SEA students are good options

Scott - Some of the most robust techs he had observed were out of the fisheries observer program.

Marc - Always ask what are you going to hire and what are you going to train.

Tom - Related a sea story of

Ross - Deck work can be a scary and difficult.

Nandita - A big part of her job is choosing through these skills set to determine the best candidates.

Ken - A mindset of solving problems is key.

Comments on How to Find Them

Tom - Hiring a good tech when you find them.

Dave - Ask the tech pool who is looking for a position

Nandita - Community college students are a good resource.

Tom - Public outreach is a mechanism to attract young people.

Comments How to keep and grow them

Marc - Travel, Toys, and Training, Treatment

Jules- Drive a forklift

Brett - Training can be difficult with busy schedules

Jim - Training funds are the first to be cut

Brett - Should be on top of work

Ross - Onsite training

Tom - Conferences and he recommends buying an Arduino kits to give to techs

Lynn - Having engaging conversations with techs

Steve - Let techs take ownership of projects

Marc - recommends the workboat show

Jules - Have an Arduino competition

NOAA - There is a hard ceiling for some positions, Survey techs

Dave - We could do a better job with fleetwide institution training

Many agree that standardized training would be a good thing



Tech exchanges are also a good resource

Advertisements in veteran publications

Underwater intervention is another good conference

Annette - UNOLS meets at many institutions. Have technicians attend UNOLS meetings

Scott - What is valuable about this community is learning where to good techs may be

Annette - Appreciates all the INMARTECH suggestions.

Meeting Adjourned