

Draft Minutes
Research Vessel Operator's Committee (RVOC)
2011 Annual Meeting
April 26-28, 2011
Host- Scripps Institution of Oceanography-San Diego, CA
Venue- Humphrey's Halfmoon Inn- Shelter Island Drive, San Diego

RVOC Meeting Presentations

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Welcome remarks:

Joe Malbrough (RVOC Chair)- Called the Meeting to Order. Agenda see appendix I.

Introductions from participants attending the meeting were announced. See appendix II.

Captain Zoltan Kelety of Scripps Institution of Oceanography/ Marine Superintendent, presented logistics of meeting.

Guest Speaker: Dr. Jeff Babcock, Scripps Institution of Oceanography. He is the executive director of Ocean Bottom Seismometers (OBS) at Scripps and has been on a number of research vessels since 1990. Jeff really enjoys going to sea! OBSs are autonomous seismic recording instruments which are dropped to the seafloor to record data and return to the sea surface upon acoustic recall. Three OBS providers are SIO, WHOI and LDEO. Funding comes from NSF/MG&G. Adapting to changes and new technologies have aided in new designs and improved data. There are 66 active instruments and 46 passive instruments and they have increased numbers over the years. They have used UNOLS ships for launch and recovery over 35 times. ELCHEAPO are the name of early instruments and have completed over 1100 deployments. Operations over last year included 6 cruises including on the *Revelle*. Used a two ship operation using New Horizon and Ewing and deployed 78 instruments over 206 deployments. Cruises produce large amount of data sets. There have been some possible problems with whales beaching themselves during cruises. NSF funded a Jason cruise to investigate OBS failures. They learned quite a bit about the limitations of the OBS system. Jeff showed an OBS that was covered from a lava flow, but it was still collecting the data. Linda Goad thanked Jeff for all of his help with scheduling the OBS and working with UNOLS. Linda asked Jeff to talk about Cascadia.

Old Business:

Minutes from 2011 meeting were unanimously approved.

New Business

Committee and Liaison Reports

UNOLS Report

UNOLS Report - Annette DeSilva, Assistant Executive Secretary, presented Jon's slides via telecom. Jon's slides are included as **Appendix IV**

RVOC Officer status: Joe Malbrough/LUMCON RVOC Chair- 9/10-9/13

Sam DeBow/ URI-GSO- RVOC Chair Elect- 10/10-4/11 as Interim Chair-Elect.

A call for nominations was open in March 2011. We received one nominee: Sam DeBow- Director of Marine Operations, URI/GSO

Introductions of UNOLS office and recent efforts, see slide.

USCG/UNOLS Memorandum of Agreement - Ongoing effort to provide training opportunities for CG Marine Science Technicians: MOA between United States Coast Guard Pacific Area and University-National Oceanographic Laboratory System (UNOLS) regarding training cruises for Coast Guard Marine Science Technicians assigned to USCG Icebreakers - UNOLS on a space available basis will provide training cruise opportunities for USCG-PACAREA Marine Science Technicians. The MSTs will gain hands-on experience with science operations similar to those conducted on Coast Guard Icebreakers. UNOLS will work with Chief Scientists and UNOLS Operators to identify available cruises. MOA signed on February 10, 2011 between UNOLS Exec. Sec. & USCG

Gender Climate at Sea – Kenneth Coale/Jon Alberts/Annette DeSilva/Bruce Corliss have reviewed the on-line training courses on sexual harassment prevention offered by WorkPlace Solutions the Implementation strategy is:

- Committee selected WorkPlace Solutions training course: “Unlawful Harassment Prevention”
- Modify the introduction to customize it for the UNOLS Fleet, addressing intensity of working at sea, etc.
- Allow Marine Sups. to view course as a pilot program
- Determine how many licenses are needed and who would act as Administrator.
- Collect feedback and summarize the findings and get back to Workplace Answers with more concrete suggestions to customize for UNOLS fleet.
- Work with Workplace Answers to customize a program if needed.

Course Topics

- Federal and State Laws
- Application- apply to all employees in all industries
- Definition of what is Sexual Harassment
- Scenarios and questions presented in online forms
- Practical Harassment Prevention Strategies
- Organizations legal responsibilities

To Do-

- Write the one-page UNOLS lead-in slide
- Set up a Learning Management System- They recommend one account set up under UNOLS name to allow us to track who takes the course, keep the cost down, and eliminate extra client contracts. This would put the financial burden on the UNOLS Office.

One of last year’s UNOLS goals was to strengthen the partnership between UNOLS, NSF-OCE, and NSF-OPP. There have been a few activities that are working towards this goal:

- Ship-based Science Technical Support in the Arctic – STARC. NSF would like to fund a single Cooperative Agreement to:
 - Plan and execute science support for Arctic cruises on icebreakers, augmenting USCG
 - Coordinate with Chief Scientist, USCG, NSF, UNOLS and other providers
 - Some work directly funded through CA, some funded by NSF through UNOLS agreements
 - Manage science equipment onboard icebreakers in cooperation with USCG and NSF
 - Ships: *Healy*, *Polar Star*, and transitions to other ships as needed
- Status - NSF held competition through the STARC solicitation to identify an institution that would provide NSF with a mechanism to offer a dedicated cruise planner to coordinate required resources and to steward the science equipment onboard Healy. NSF will announce an award very soon.

Other major UNOLS activities this year included:

Outreach activities – Resources are available to the public – poster, slide packages, and brochures. These are great for public forums. Contact the office.

UNOLS is on Facebook

UNOLS conducted a survey on ship time demand. The survey is still available. The preliminary

results were presented to the UNOLS Council in March. Now have over 300 responses.

Safety Committee and Research Vessel Safety Standards- RVSS

Dan Oliver/UAK and Chair of the Safety Committee Report-

Last meeting- Yesterday, April 25, 2011.

Dan requested that the UNOLS office take on a task of creating a new UNOLS ship safety video.

Discussed Locator Beacons, use and if needed. Is there a demand? Contact the safety committee with any questions or concerns.

Appendix B – Has anyone read Appendix B? Does anyone understand it? Bill has taken the lead with Appendix B – the cost for the Sharp handling system is much more than expected. Future meeting to further discuss Appendix B and possible workshop.

See of Appendix V.

Ship Scheduling Committee – Rose Dufour/Liz Brenner - Appendix VI

- This presentation is the one that Stewart gave to the Council. 1456 funded days. Little over 1700 for pending converts to about 432 funded days.
- $(1456 \text{ plus } 432) \times 1.33 = \sim 3,000$ days for 2012. This is bad
- Gulf of Mexico Initiative might help.
- There was about 3,700 days in 2011.
- The tech support line is kind of flat.

OOI is ramping up slowly, so it is not going to help much in terms of additional ship days.

Fleet Improvement Committee

Al Suchy could not be at the meeting. Annette DeSilva provided a report.

A major task the FIC took on in 2010 was to evaluate and respond on 13 areas of inquiry regarding the Regional Class Research Vessel. This was at the request of NSF.

They conducted the review via a series of about 5 or 6 phone/web conferences. FIC provided their response to NSF and it is available on the UNOLS website. The topics that were considered included:

- Vans
- Aft deck space
- Power
- Dynamic positioning
- Bulbous bow vs. transducer performance
- Science storage space
- Incubators
- Handling systems

The FIC also took on tasks for the Navy in regard to the Ocean Class RV

- They reviewed the baseline mission equipment for the Navy
- They recruited individuals to serve as science advisors for an OCAC

The FIC continues to keep abreast of new technologies and facility upgrades – including:

- Upgrade plans for the R/V Langseth

- Handling systems on Kilo Moana and Sharp
- The Long Core system

In the upcoming year, FIC will work with the agencies to review the projected service life end dates for the current fleet.

Lastly, an exciting project that FIC is coordinating is a Chief Scientist Training program. The program will cover pre-cruise, at-sea, and post cruise activities. Two separate cruise opportunities are available – one in July and one in September. UNOLS posted a call for the training opportunity earlier this year and there were 55 applicants. It has been difficult selecting the final group. Clare is spearheading this effort with the support of Daryl Swenson. FIC is assisting with the curriculum.

Replacement Human Occupied Vehicle (RHOV) – Annette DeSilva reviewed the slides provided by Al Suchy - **Appendix VII**

A phase approach to the RHOV project is underway. In the first phase a new sphere is being fabricated and will be installed in Alvin . The new sphere will be rated to 6,500m, but the vehicle will still have a 4,500m capability.

- There will be new syntactic foam and penetrators.
- There will be 5 viewports as opposed to 3 – increased field of view.
- The new sphere has improved ergonomics and is larger.
- The project successfully completed FDR in December 2010.
- Sea trials after the first phase are planned for May 2012.

In the next phase the remainder of the Alvin systems will be upgraded with a 6,500 m depth rating.

DESSC – Annette DeSilva presented Jon’s slides. **Appendix VIII**

- In the last year, The DESSC has continued to advising on the design of the replacement Human Occupied Vehicle (HOV). They will be working with NSF to advise and inform the community about the vehicle and science sea trials cruise DESSC continues the User Debriefs of all NDSF Vehicles (*Alvin, Jason, AUVs*) – One DESSC Member, the NDSF Ch Sci, and the cruise Chief Sci. These have been very effective.
- DESSC continues to advising on Imaging Upgrades, Archiving and copyright issues.

At this year’s AGU Fall meeting there was an NDSF booth that featured the mock-up sphere for the ALVIN upgrade vehicle. It was a huge hit. The booth was very well attended. One of the goals was to try to entrain the new (young) investigators to NDSF.

RVOC Business: Election for RVOC Chair-Elect- Motion and Vote to elect Sam DeBow as RVOC Chair-Elect was passed.

RVTEC – Rich Findley/RSMAS - **Appendix IX.**

- Rich is the immediate past chair
- Encouraging more participation from junior techs
- RVTEC now has a chair-elect position
- Multibeam user list was just established

- The 2011 RVTEC meeting is tentatively planned for Nov 14th in New Orleans .

AICC – Doug Russell/UW provided the report. Appendix X.

- Polar Sea decommission in 2011
- Ice imaging is popular
- Outreach has been an emphasis with AICC – particularly with the Native American
- Primer for new users of the Ice Breakers is available on the Icefloe website – good resource.
- Navy interest in arctic is picking up again.

SCOAR – Annette DeSilva provided a report. Dan Schwartz/UW Emeritus is the Chair.

- The SCOAR met during last June’s meeting at the CIRPAS facility in Marina California, resolved to recommend that ONR support a technology and scientific demonstration project that would employ an unmanned aerial system (UAS), to be launched from, and recovered aboard, a UNOLS vessel, and that it be employed to collect useful scientific data while operating away from the ship. The agency is exploring the feasibility of such an operation as part of an upcoming Physical Oceanography cruise of the R/V *Roger Revelle*, in the Indian Ocean . There are a number of technical, logistic and infrastructure challenges to be worked out and we hope to report further progress on this UAS and off-board aerial sensor demonstration at the next meeting. SCOAR continues to play a facilitating role in offering assistance to individuals involved with this demonstration, as planning continues.
- SCOAR currently has an opening for another member. Please share this information with colleagues.
- The next meeting of the SCOAR will take place this summer, again graciously hosted by CIRPAS at the Marina , California facility.
- The UNOLS aircraft facility, CIRPAS, will in the near future have another platform, the Neptune U.A.S. What is unique about this particular UAS is that it is recovered in the water, alongside the ship, rather than by a complicated on-board capture system. Thus, flights terminate in a low inertia recovery to the water, promising greater reliability of operations.

MLSOC – Alice Doyle presented the slides provided by Jon Alberts. Appendix XI

The slides include:

- MLSOC Committee Membership - Graham Kent, UNR (Acting Chair, MLSOC)
- This year the MLSOC established recommendations and provided these to NSF. The recommendations addressed:
 - Data Access and Availability
 - Advanced Planning Cycle - MLSOC endorses an advanced planning cycle in which proposal calls are issued on a regional basis (e.g., North Atlantic , eastern Pacific) several years in advance.
 - Dedicated Langseth panel: - MLSOC offers as a suggestion that NSF consider a separate panel for judging R/V Langseth proposals.
Training the Next Generation
 - Data Processing - MLSOC endorses commercial processing for all 3D cruises. Improving the Educational Footprint
- In other activities:
 - John Diebold honored with the naming of the *Diebold Knoll*
 - Langseth Shipyard Period 5 Jan to 3 Feb 2011. Work/Improvements included:

- Painting
- Decks: Main , OBS, and Paravane decks have all been refurbished.
- Engine/Drive Train
- Habitability
- Regulatory
- Tanks: Aft peak tank repairs
- A new ADCP was successfully installed.
- New set of 3.5kHz transducers for sub-bottom profilers.
- Langseth Current Status
 - NSF Ship Inspection held on March 8-10, 2011.
 - Final contract for W-G streamer purchase was finalized between CU/LDEO and Western Geco . The shipment of 9 -40' containers of streamer to Long Beach on March 16.
 - Departure to Costa Rica on March 27th.
 - 246 operating days are planned in 2011

Long Coring Vessel Feasibility Study - Update- Annette reported.

- Knorr will retire soon.
- NF funded a study for Glosten look at various options – Revelle, Thompson, and Langseth.
- Langseth looks to be the most promising candidate

Post Cruise Assessments and PCA results – Erin Jackson presented the PCAR Slides that Jon prepared – **Appendix XII.**

Erin explained that Jon will work with the operators to define what constitutes a “lost day.” Lost days topic has been discussed a lot in the past year, but it might be a reporting issue.

Linda – the post cruise assessments are mixing up some things.

- Linda - The PCARs should be submitted in a timely manner. Often the PCARs don't provide useful information. It is a real pain to receive 35 reports in the same day – Captains and Techs do this. The reports often just check the boxes and don't provide any useful information. She would rather not have them at all.
- There are other reports – quarterly reports and the cooperative agreement reports.
- Send reports in a timely manner.

Sam – it is a big effort to get the scientists to respond. If you are saying that the Capt reports aren't worthwhile, should they even be done?

Linda – PCAR report submittals by Captains and Tech is something that could be discussed by the operators. Should there be a change?

Dennis – the total number of accidents that UNOLS reports still represents that we have a safety program in place. This is important for insurance renewal.

Linda – Accident Reporting. When Linda receives an accident report from an operator, she forwards the report to Dennis and Bob Houtman. They are well informed. There needs to be a

standard reporting form for incidents/accidents. It is critical that these reports are timely (doesn't want to read about it in the news). As an action item, a standard reporting format should be developed.

USCG – Jonathan Berkson sent a written report this morning. **Appendix XIII**. Alice summarized the report.

Status of the USCG Polar Icebreaker fleet

Healy - Plans for 2011 include: NASA Icescape Casts; Extended Continental Shelf (ECS) Task Force mapping with Canadian icebreaker LOUIS ST LAURENT; ONR/NSF North Slope Mooring Deployments and Recoveries; NSF Winter Biological Oceanography Study (First Arctic Winter Deployment for Healy)

POLAR SEA - Currently in port waiting decommissioning. Crew will be transferred to POLAR STAR.

POLAR STAR:

- Caretaker status since 2006
- 2009-2010 appropriation provided \$62.8M to reactivate and extend service life 7-10 years, which is currently underway
- Expected to return to service in late 2013

Study of all Federal icebreaking needs is in the DHS FY12 budget, subject to approval/enactment by Congress

Lunch Break

Guest Speaker- Dynamic Positioning Systems- Nick Van Overdam/Kongsberg

Appendix XIV

Andrew Phillips- Kongsberg sales Associate

DP increases vessel worth as well as safety.

- 1961, first station keeping vessel.
- Three Classes:
 - Class 1. Loss of position may occur in the event of a single loss. Equipment need not be redundant.
 - Class 2. Loss of position is not to occur in the event of a single fault in any active component or system. Static components for failure. Typically achieved through redundancy.
 - Class 3. Loss of position is not to occur in the event of a single fault including a completely burnt fire sub-division or flooded watertight compartment. Typically achieved through redundancy and compartment segregation.
- More sensors the better the holding capabilities. Wind with direction, Gyro, MRU as a minimum. Heave and Yaw, roll and surge, pitch and sway.
- Must have reliable GPS system true multi referencing. Also have RADIUS/CyScan/RadaScan/Fanbeam.

Agency Reports

NSF – Bob Houtman via telecom

- NSF budget will be about 1% below 2010 level. They review it as somewhat good news, but it is about 11% below the FY11 request. NSF is basically level funded.
- The Foundation has to put together an operation plan on how the budget will be executed. The operating plan was based on FY2011; NSF will have to redo the op plan. This will take some effort. For the time being they will operate at 90% level of FY2010.
- FY2012 request - \$90M increase. The OCE share of that was to be about \$35M? increase. This was to go for OOI initiative.
- There are a couple programs in the budget request:
 - SEES? – Goal to generate discoveries for sustainable future.
 - Green initiative.
 - Expand research and education.
 - CAMARA – hazard related science. All three divisions are involved. Increase predictions. There will be a formal solicitation.
- GEO and NSF are focusing on education...

Regional Class Research Vessel (RCRV) – was to fund out of Ocean Sciences Section originally. After the vessel design efforts, the cost estimates for the RCRV were beyond the capability for OCE. Now the RCRV will be proposed as an MREFC project. The proposal would be for three ships with one MRE account. Unfortunately, OCE proposed the RCRV project into the MRE process at a bad time. The new NSF Director wants to review the MREFC process. The RCRV was just moving through the MRE, but now the MRE is under review. As soon as the MRE review gets completed, the RVCV is first in line.

ONR & IWG-F – Tim Schnoor provided the report. His slides are included as **Appendix XV**.

- ONR does not anticipate any changes in budget. They have had a couple of good years for ship time support, but are entering a cycle of data analysis and lower demand of ship time. There are some projects that don't require ship time this year. By about 2013, he expects ship time to go back to the 500-day level.
- ONR has requested that the Navy ships be included as part of NSF's ship inspection program. The Navy inspections are about every four years. The NSF inspections would be done in the interim years.
- Tim reported on the shipyard periods for Atlantis, Thompson.
- FLIP – has about 2 weeks of work in 2011. Good stable platform.
- ONR is considering mini-midlife refits for the AGOR 23 class. Maybe over the next few funding cycles.
- Ocean Science and Technology – IWG-F – Grew out of the old FOFC. A lot of attention is being paid to unmanned systems and working with the FAA to determine how operations can be accomplished.

- National Academy Study – The goal of the recent study was to determine the major research questions and what facilities would be needed to address these questions.

NOAA/OMAO – CDR Ralph Rogers - Appendix XVI

- This year in FY2011 NOAA has 18 vessels operating. This is less 2 vessels due to budget constraints.
- They have 2 new ships coming on line. They have taken the Hassler out of the yard after extensive delays and will figure out a way to bring it on line.
- Lasker is under construction in Marinette , WI

NOAA Greening efforts.

- NPDES – it is all types of emissions. It is anything coming off the ship that wouldn't be there if the ship wasn't there. Any ship that is over 70 feet can apply for the permit. IF they don't have the permit, they would have to get their own.
- Dennis – Is NOAA complying with low sulfur content fuels? Ralph – does not know, but will look into this and get information regarding low sulfur fuels to UNOLS
- Other greening efforts – Hybrid launch
- Fuel metering
- Upgrades to lighting and HVAC. Mike – what kind of lighting? Ralph – fluorescents
- Considering repower of T-AGOS
- Oil water separators
- Etc.

External Operator Survey - NOAA will be looking into running models.

Marine operations center – Pacific - NOAA will move out of Seattle this summer.

Question:

- Doug – what about the status of NOAA's pending ship time proposals. He has a big proposal for NOAA on the UW ship. Ralph – many of the UNOLS ship time programs are line item decisions, he has no control. OAR is having some problems funding the Thompson cruise because there is a 9% increase in the cost of the cruise. Linda – This is due to the fuel increase.
- Rose asked a question about the Ron Brown. Ralph – The plan was to bring Brown into the UNOLS fold; however, after 9/11 they couldn't publish the Brown schedule. The IWG-F would like to see improved cooperation, so they are trying to solve this problem. Ralph – they can look into this issue further to make these schedules more integrated.

State Department – Liz Tirpak provided a report.

- There were four clearance declines – bureaucratic.
- Clearance lead-time requirements are very critical. Most require 6 months, but some will take 3 months. Less than that is too short time.
- She has good charts (Caribbean) request them from her – paper or electronic. They are being updated.
- The DoS web site includes a list of requirements. They are updated monthly.
- On the positive note – Dept of State deployed the RATS last August. They have months of experience and have feedback and are making improvements. If you are interested in beta

testing the improvements, let her know. She will send a notice to the UNOLS Office.

- Sam - Why are we having so many problems getting clearances with Brazil ? Dennis – they think that research is either military or economic. There is a block of countries that feel this way. It is best to try to leverage partnerships with scientists from these countries.
- Mexico continues to be a challenge.

Special Reports-

UNOLS Wire pool update – Rick Task. **Appendix XV.** He and Ruthanne Mullineaux are present at the meeting.

- Wire Pool Activities:
 - 44 wires and cables purchased during the grant period
 - 40 distributions to the UNOLS Community
- System Upgrades – new tensile machine control system for conducting UNOLS wire break tests.
- Picture of lab.
- Newly Implemented Procedure – conducting break tests with one end free to rotate
- There have been changes to the database. The Marine Supt is still responsible, but they can add authorized users. Changes:
 - Second section of the Ship Report
 - Meters
 - If the wire is on the vessel, it is “in use”
 - The other areas are “in storage”
 - Estimated usable length – this is new.
 - Disposal of wire requires permission.
 - Section 3 only lists those wires that are “in use on vessel” These wires need to be tested. If you take a wire out of storage, you must confirm that it is in compliance.
 - Break tests – If you send a sample, it is best to have an end termination that was done by your vessel
 - If sample is terminated on both ends, need an additional 18 inches.
 - Rick covered what is needed in terms of Appendix A compliance.
 - Reel View
 - Email brings you here.
- Termination Terminology
- Using Handbook and Oceanographic Winch and wires
 - showed examples of termination types.
 - When they get a wire that is not terminated, they will do a poured-socket termination and swage fittings.
- View of Reel History – you can drill down to this.
- They will roll out the database in summer 2011. What other events would be helpful to log in the database?
- One last thing – initiated some discussions with wire manufactures for wires that incorporate synthetics – lighter, maintain same diameter, easily terminated. They are working on some designs now. This is still a ways off, but hope to report in the future.

Schmidt Ocean Institute- Pete Zerr - Appendix XVIII

- Provided background of SOI and introduced staff
- Described the vessels
- Sea trials planned this summer
- They are revamping their website.

Question- what about Foreign Flag? Pete – they still can request U.S. clearances.

Van Pools - East Coast, Capt. Bill Byam / West Coast- Demian Bailey.

East Coast – Bill Byam

- Tim Deering is actually the east coast pool manager. Bill encourages operators to notify Tim as early as possible. Scheduling is a challenge.
- They will be doing some environmental testing of some of the vans.
- Tim is working with USCG to supply vans to the Polars.
- Joe Malborough - The rad van is going to stay in the Gulf. If anyone needs it, let him know.

West Coast – Demian Bailey:

- They have 5 vans
- Last year they provided 430+ days. Many of these were for OPP.
- Next year most days will again be for OPP

Woody – is there any documentation regarding shipping of the isotope van? It would be nice to have this. This needs to be looked into.

Medical Section

UNOLS Annual 2010 Report and MAS/Medaire/HIPAA Laws- Leonard Muhammad and Randi Dibell - Appendix XIX

- MedAire is getting more UNOLS calls. There is an increase in reports, but it might be because people are using the service more.
- Question about expiration on pharmaceuticals. Randi - Once something is expired, it should be disposed of.
- Paul – he has put Tempest Unit in the SSSE proposal. It is \$35,000. Matt has suggested a group purchase. Last year Langseth had to divert twice in the same cruise, a Tempest unit would have been economical.
- Question – do you keep track of diversions? MedAire said no.
- Joe asked RVOC who diverted last year – 4 hands.
- MedAire really tries to avoid diversions because they are expensive.
- HIPAA – Randi reported that Medaire is now part of the HIPAA law. She explained how it impacts UNOLS. Medaire cannot release any info that will identify an individual outside of the organization. They can release for treatment.
- The notification that Medaire sends out goes to the medical officer who is indicated by the UNOLS contract.
- Question – Currently the Marine office gets a report after a treatment. Will this continue?

MedAire: - if the person is designated as the medical officer, yes.

- Contagious diseases – Randi - If there is an upswing of e.coli or other breakouts, they might report this.
- Workers Compensation – might get involved.

There was a discussion on the medical standards and the profiles and pre-cruise screening.

- Dennis – the crew is getting papers from the USCG that they are fit, but the thresholds are lowering.
- Alice – OPP has medical guidelines in place. Crew has to pass this. Dennis – because the nature of the OPP position, they can put these standards in place. The problem is that UNOLS operations are varied – coastal as well as remote. Sam – You can't have different requirements for crew and scientists.
- Kniffin – This is the problem. You have no idea what you have in terms of the science party.
- Dennis – we have had this problem for a long time. The USCG is passing the crew, and yet the operator probably won't pass them. You are also faced with the problem that in these tough times you don't want to turn away a science party. However, the institution should be able to turn away scientists who cannot accomplish minimal safety procedures.
- Tom Althouse – the operator has no control of the scientists from other institutions. It is a serious problem that has been going on for years.
- Dennis – there have been a number of deaths recently. Some were near the end of their career, but they had papers.
- Mike Prince – UNOLS should come up with criteria for establishing appropriate medical guidelines. MedAire – Randi - this is exactly what they feel could be done. MedAire could work with UNOLS to establish the criteria.
- ADM Bailey – NOAA has a process for review. There is a waiver process.
- Paul - The drilling program does a screening process.
- Dennis – the cost for an individual scientist are really quite expensive.
- MedAire – they can look at the database to determine if the pre-screen is effective.
- UK – they use ISM to require the scientists to get medical screening prior to the cruise. They have had one diversion this year that ruined a cruise. They are still looking at a process of medical screening for the future.
- UK – on the pregnancy issue, if they are told that the individual is pregnant, they can do a medical assessment.
- Nixon – should join with the foreign operators to come up with a solution for medical guidelines.
- Action Item – RVOC should work with MedAire to develop medical guidelines.

Representatives from Foreign Countries

NERC – Geraint West – Appendix XX

- 24th International Research Ship Operators Meeting May 25-27, 2011
- Discovery Replacement, Designer Skipsteknisk AS , Norway
- ROV's and Props don't mix.
- Discussed the recent shooting incident onboard British Royal Navy submarine

UK Activities- Robin Plumley - Appendix XXI

- Discussed the ships and issues that they have encountered
- medical
- Shore issues
- ISIS ROV prop damage

NURC – (NATO Undersea Research Centre) - Ian Sage

- three years since he attended RVOC
- There have been a lot of changes
- **Appendix XXII**
- NURC runs Alliance and Leonardo
- Alliance is one of the world's quietest ships
- Fast rescue vehicle is aboard
- Leonardo is coastal ship
- Aurora Borealis – Ian has been involved with.

NIOZ – Dr. Erica Koning,

- She took over from Marieke
- **Appendix XXIII**
- Pelagia mid life refit
- OFEG
- Chart showing the OFEC exchanges 2008-2011
 - They are also synchronizing capital investments
 - This has been cost effective
 - OFEC-Tech – like the US marine technician exchange
 - Key 2009-2010 activities – Seismic Agreement NERC-SIS
 - Piston core trials cruises

NIOZ & OFEG report – DRDC Atlantic – Yves Perron - Appendix XXIV

- Problem definition – Ship (Quest) underwent an inclining experiment in June 08
- When performing stability analysis following the incline, data obtained from experiment did not align with the last manual of Trim and Stability done following the refit of 1999 (Sept 2009)
- Further analysis revealed that:
 - Assumptions made in the past were wrong and did not relate to any acceptable stability standards
 - Stability problems identified in 1986, but not correct in the 1997-1999 refit
 - New stability calculations exposed risk to ship and crew when ship in damage state (Nov 09)
- Further analysis revealed that Stability standard on 2 compartments flooding in a damage state were not met
- Outcome: Dec 09 – Naval authorities order CFAV QUEST alongside pending resolution

The Engineering Solution - Need for no.1 deck sub-division, increased buoyancy, reduction of weights

Part 1: Fitment of sponsons (water wing)

Part 2: Anti-roll tanks disabled

Part 3: Removal of fitted equipment

Part 4: Limitation of the scientific payload (from 70LT to 50LT) – 20LT max on flight deck

Part 5: Insertion of subdivisions

Part 6: Mushroom vent isolation (weld deck / Quarter deck)

They decided to take the opportunity to improve the ship while ship was alongside for the stability work:

- Change switchboard and electrical cable to generators
- Modify ship's mast in support of Q340 trial on signature management

Prepare ship for trials upon return to service

Q340 Signature Management - Ship painting – Portside Grey, Starboard White

- interesting exercise

Timeline:

- Inclining Experiment: 18 – 22 April 2011
- Harbor and Sea trials: 25 – 29 April 2011
- MOSH/SOLAS survey: April 2011
- Trials Q338 start: 9 May 2011
- Procurement delayed due to Canadian election

New RV Concept – QUEST Replacement

Break & Annual Group Photo – All Marine Superintendents and agency representatives.

Research Vessel Updates

R/V SIKULIAQ – Captain Daniel Oliver, UAF - Appendix XXV

Areas covered by Dan included:

- Side Profile – they did a full size mock-up that was very worthwhile.
 - bridge modification
 - forward mast
 - 6' longer working deck
- Project Execution
- Marinette Marine corporation
- Project's Shipyard Office
 - Staff
 - Marc Willis – hired from OSU
- Keel Laying on 11 April 2011
- ARRV Module Status
- Act2 Technologies zero discharge MSD system – Florida based company
www.act2tech.org

Anticipated Schedule

- Delivery in June 2013
- Start Science in Jan 2014

UAF will hold two science planning workshops

Ocean Class AGOR update – Tim Schnoor/ Mike Prince/Chris MacDonald

Mike Prince reported – **Appendix XXVI**

- Mike reviewed the timeline and acquisition schedule for the two new Ocean AGORs. Navy will have to make a construction award by September 30th.
- The first ship could be delivered about 4th quarter FY2014 and the second ship would be early 2015.
- All of the major science equipment including Multibeam will be GFE. This allows the purchases to take place late in the construction process.
- Mike can't answer any questions about designs, but both designs are very viable. The Naval Architect teams did good work.
- The funding is coming in chunks. The shipyard contract was structured with a cap of \$74M for the first ship.

RCRV- Request for Proposals for Construction and Operation of Regional Class Research Vessels – Bob Houtman via telecom – no additional report

Polar Research Vessel Science Mission Requirements Workshop Report – Annette DeSilva - **Appendix XXVII**

With the aging of the Polar Vessels that NSF leases for work in the Antarctic, they felt that it was timely to start planning for new facilities.

Last year NSF came to UNOLS to assist in a review and refresh of the Science Mission Requirements from PRV Study completed in 2006

- Assess if 2006 SMRs meet current and emerging needs for Polar Research
- Consult existing UNOLS/SMRs for Ocean & Regional Class ships
- Polar Research Vessel Committee (PRV) - Established Dec. 2010
- Develop a survey to gather feedback on the 2006 SMRs
163 responses

UNOLS Polar Research Vessel Workshop

February 28, 2011 & March 1, 2011

- about 50 participants
- scientists, ship operators and technicians, agency representatives, naval architects, and foreign polar vessel operators

Focus of the meeting was to identify the *Marine Science Drivers for the Polar Regions*

- *this was lacking from previous studies.*

A lot of useful feedback was gathered at the workshop.

Prepare an Interim Report for NSF by June 2011, with a final report in late 2011.

<http://www.unols.org/committees/fic/smr/PRV/index.html>

Guest Speaker: Ship Performance Management- Todd Hassel/Prisms

This was a discussion with questions and answers.

Prisms System provides shipboard control solutions and propulsion management systems for vessels.

Vessel Management Systems provide integrated, cost-effective shipboard management products that can reduce development times and sea cost.

Today troubleshooting can be done remotely

- Hot swappable IO. Nice way for crew to maintain vessels no matter where they are in the world.
- Uses fully redundant PLC based system that uses distributed I/O to monitor and control equipment throughout the vessel.
- Use commercial-off-the-shelf equipment to provide ease of maintenance and repair.

NSF Ship Inspection- Jamestown Marine Services- Blake Powell -Appendix XXVIII

- The inspection is more encompassing now.
- Subtle changes – pre-inspection. Everything is electronic now.
- Would like to see all PCARs since the time of the last meeting.
- Appendix A worksheet – JMS can assist with filling it out.
- Shipyard reports
- NSF Ship Condition Form – will be less onerous. They have folded all of the ship condition info into the JMS report. Operators will be asked to update the data that was submitted since the last report.
- Common findings – Appendix A and Appendix B. Sticking point has been level wind.
- Appendix B is going to be a whole other issue. In the beginning there was very little consistency across the fleet. Knowing the real breaking strength will be very useful.
- Training for Stability can be improved.
- Medical was discussed yesterday. Just make sure that the crew is well trained. There is a lack of expertise. You really should have more medical expertise aboard.
- The UNOLS Ships are not very ADA compliant. As you go through a mid life, consider what types of ADA features can be incorporated. This about pre-cruise planning that can be done to improve accessibility.

Discussion of Appendix-A Workshops/Rich Findley/RSMAS (Appendix XXIX)

- Training Format of two day workshop
- Need to get more Scientist involved in workshops.
- Workshops at RSMAS, BIOS, WHOI, URI, LUMCON, additional workshops at SIO, UW, and maybe east coast.
- Issues: sheave sizes, load testing, reluctance to use weak links, scientist supplied tension members and equipment will be a problem, logbooks.
- Need for water weights, possible group purchase

Discussion of Appendix B (RVSS): UNOLS Load Handling System Design Standards – Dan Oliver/UAF – Appendix XXX

- Essentially a documentation plan- maximum capability document (MCD)
- Feedback is really needed by all users
- 2 year deadline once implemented in order to comply
- Discussed draft MCD for Sikuliaq A-frame
- Rollers, possibly could be eliminated
- Deck loading for portable equipment discussed

Ship Happens. Admiralty Law & Insurance Update - Dennis Nixon/URI Appendix XXXI

- Global Marine Insurance Report- Global premium- 23 billion
- At risk vessels aren't paying correspondingly high premiums

- Changes to STCW- work hours and abuse prevention- 10 hours rest in 24 hour period.
- Coast Guard Rules for evaluating mariners- physicals and medical forms
- Lessons from Marine Accident Investigations- see presentations
- Conclusions: Insurance market remain stable, Deepwater Horizon may change liability laws, unmanned and ROV technology will be the new frontier?, accidents will continue with new distractions such as cell phones, electronic charts etc.

Tour of Scripps Marine Facility at MARFAC

1700 Adjourn day two

THURSDAY, 28 APRIL 2011

Opening Remarks: Joe Malbrough

- Thanks to Sam for being Chair-Elect and presentation of the Cup/Schilling. This has been passed along to each Vice Chair/Chair-Elect.
- Thanks to Bibiana for all of her support

Sam De Bow – the M/V Endeavour grounding on 1 Jan 2011. Not the URI Endeavor! The press ran with it and confused it with the Endeavor, including a picture of the Endeavor. Sam had to call the Agency Reps and others to alert them that the Endeavor had not grounded; the ship was in the yard in Quonset. You really have to get on these things early and keep on these.

Gulf of Mexico Deep Water Response Center Experiences- Demian Bailey/OSU

Demian reported on the organization and challenges.

- On day 52 was in early June – “this is not an “oil spill”
- Spill of National Significance.
- The challenges of communication were extreme.
- Lack of experience/knowledge of the nuances of an oil spill (myths abound).
 - There were a lot of things that people didn’t understand about oil.
 - There were a lot of reactive responses
 - Very emotional.

How did we get here ?

- never has been the need for such deepwater monitoring resources.
 - Didn’t appreciate the need at first
 - Public wants to know what is down there

Timeline:

- spill occurs
- increased flow estimate
- R/V Pelican Cruise I
- Subsurface dispersant Test
- Whitehouse call to action

- 14 ships steam to Gulf
- A year's worth of cruise planning occurs

Data Gaps

- Press finds ill-informed people
- Subsea dispersant effects?
 - Data?

Subsea Dispersant Injection – chart

Coordination in Real-Time- the key is recognizing and seizing opportunity and having the data.

Group Purchase updates of Shipboard Scientific Support Equipment items:

Summary of Fleet Broadband System Usage – Annette presented Al Suchy's slides. Appendix XXXII.

- Program established 1 January 2010
- Program covers 5 years for 70 users
- Rate reduced from \$11.34/MB to \$1.52/MB
- Total pool size established at just over 40 GB/month
- Unused balance will carry-forward month to month for 1 year period
- Within one year period, use or lose
- If user pool exceeds allowance, use rate increases to \$2.28/MB
- FTP site, <ftp.who.edu>, established to allow users to monitor usage. Member institutions provided with individual user and password login information

Two Charts:

- Chart showing cumulative usage and cumulative availability. Usage on a cumulative level has been below the availability.
- Chart showing monthly usage and availability. On a couple of occasions, the usage was over the allowance.

Comments:

- Joe Malbrough would like the Pelican to be included in the FBB program.

LCI90i's from Measurement Technologies NW-Installation Update — Joe Malbrough/Thomas Rezanka/MTNW - Appendix XXXIII

- Thomas provided the status of work in progress on the various ships
- Calibration Results – all winches except one were calibrated to Appendix A tension specs. All winches are calibrated for payout.
- Sample Data

Winch Pools:

West Coast – Eric Buck listed the winches in the pool. No slides presented.

- Dynacon winch from Kilo Moana – this is currently on long term loan
- 3 CTD winches - These get deployed. One is on Revelle, one is on KM, and one is in shop.
- There are spare parts

- There are day rates for each of the winches. The day rate covers the maintenance, mob, etc
- They get requests from various users. Eric will develop a cost estimate.
- Long-term goal is to be a center of excellence on winches and wire. They hope to hire an engineering specialist. This person could be a resource and help operators come into compliance. This will probably be an expensive exercise
- Lessons learned:
 - The day rates for the mooring winches might be too long. Day rate doesn't even cover mob costs for short cruises.
 - Early last year took delivery of two new winches. They got requests from East coast. The day rate was fine, but the shipping costs were a killer. So they ended up sending one of the winches to the WHOI East Coast pool. They also sent a winch to Hawaii for them to keep out there.
 - Mooring Winch – because of the high cost of shipping these, it makes more sense to have these located regionally.

East Coast Winch Pool – Annette presented Al Suchy's slides: **Appendix XXXIV**

- East Coast Pool Elements:
 - Shared-Use portable winches
 - Wire Spoolers
 - Long Core Over Boarding System
 - Jason Launch and Recovery System
- Winches:
 - 3 Winches reallocated – 1 from Alaska , 1 from Miami and a TSE mooring winch from Scripps
 - 4 New winches to be delivered from MacArtny early July
 - New winches to be capable of 2200-4400# bare drum pull, with active heave compensation
- New spooler to be delivered from Pine Hill Equipment – Spring 2011
- Winch Pool P.O.C.: Jamie Haley <Jhaley@whoi.edu> 508-289-3531

UNOLS Pilot Program on Tech Retention and Recruitment- Alice Doyle
Appendix XXXV. See slides.

Concluding Remarks - Joe Malbrough thanked everyone for attending and participating.

Break

Round Table discussion items (Marine Superintendents only) –

“RVOC Only” website

ISM Policy Implementation

New Group Purchases coming up, Blocks, RVSS Compliance

Difficulty implementing RVSS Appendix A and B

Medical Forms

UNOLS Ship Classes
Registration with EPA on the VGP.

1130 Lunch

1230 Business Meeting- Marine Superintendents

Assignments to Committees

Review of RVOC Action Items Pending

Safety Committee Action Items – Dan Oliver

Suggestions for 2012 Agenda-

Nominations and vote on 2012 meeting location- Possibly- Marinette , WI

Results from Election for RVOC Vice Chair/Chair Elect.

PCAR Report – Lengthy discussion

Issues:

- Captain and Tech reports don't provide useful info
- Operations don't like to submit negative reports because they want the science parties to return
- Concern over distribution
- Loss of Concerns

Geraint or Robin explained their UK process.

Safety – must be cross-referenced to an issue.

Very useful performance

Very useful -

Richard Kniffin – biggest problem is getting the science party to complete the role of each participant for the ship utilization report.

Adjourn