*Draft - pending Member approval*

**2004 RVOC Meeting**
**MINUTES**
**October 19-21, 2004**
**Bermuda Biological Station for Research**
**Ferry Reach**
**St. George's, Bermuda**

## APPENDICES

***All appendices are in PDF format, unless othwise noted***

I. Meeting Agenda 124 KB
II. Attendees
III. FIC Report
IV. DESSC Report
V. RVTEC Report (Bill Martin, UW)
VI. AICC Report ( Daniel Schwartz, UW)
VII. ONR Report (John Freitag) 2.15 MB
VIII. Saclant Report ( Ian Sage) 1.03 MB
IX. NIOZ Report (Marieke Rietveld) 1.01 MB
X. ALPHA HELIX Replacement (Tom Smith, UAK) 685 KB
XI. R/V TIOGA Presentation (Al Suchy, WHOI) 489 KB
XII. Fisheries Research Vessels (Jim Meehan,NMFS)
XIIa. FRV JPEG Images 428 KB
XXIIb.NOAA FRV Launching (AVI file 22.2MB- for QuickTime or RealPlayer)
XIII. CAPE HENLOPEN Replacement Vessel Status (Matt Hawkins, UDel) 570 KB
XIV. Van Status (Purchases and Standards) (Matt Hawkins, UDel) 626 KB
XV. Load Handling Systems Workshop (Matt Hawkins, UDel) 589 KB
XVI. Long Corer Animated Movie Clip (WMV file 16.3MB- for QuickTime or RealPlayer )
XVII. WESTERN LEGEND Presentation (Paul Ljunggren, LDEO) 6.80 MB
XVIII. Insurance and Liability (Dennis Nixon, URI) 725 KB
XIX. Medaire Report (Bill Mahaffy, Medaire) 7.15 MB
XX. Glosten Report (Dirk Kristensen, Glosten and Assoc.) 148 KB
XXI. Impact of NVIC 11-93, Change 3 on R/V NEW HORIZON (Dirk Kristensen, Glosten and Assoc.)
XXII. RVOC Report on Uniformity of Fees 94.8 KB
XXIII. Post Cruise Assessments and PCA Results (Mike Prince, UNOLS Office) 143 KB
XXIV. 10/29/04 Letter re RVOC input on X-Craft65.5 KB

**Welcoming Remarks**
Lee Black, Marine Superintendent, BBSR, Dr. Tony Knap, President & Director BBSR, Tim Askew, Chairman, RVOC – Lee Black gave welcoming introduction of various personnel at BBSR attending. Tony Knap gives welcoming remarks - highlighted BBSR's maintenance of time series, new programs, new facilities (student and faculty housing), Tim Askew welcomes all attendees with special thanks to BBSR. Self-Introduction for all attendees at meeting.

**Presentation by Dr. Maureen Conte**: Dr. Conte presents findings from BATS station during passage of Hurricane "Fabian" over Bermuda in Sept 2003.

**Questions asked from attendees:** What capabilities do you foresee for new vessels? Answer: Broader range of instruments and sampling systems on board. Enhanced communications systems between mooring and ship, and ability to design cruise around unique events.

**Old Business**
Minutes 2003 Meeting – Minutes from 2003 accepted by members with no changes. Mike Prince noted that revision of RVOC by-laws approved by UNOLS Council and now part of the UNOLS Charter. Available on the UNOLS web site.

**Group Purchase Update**
EEBD (Tim Askew), 8-Alaska, 18-LUMCON, 16-Moss Landing, 9-URI, 16-Duluth, Viking brand EEBD's purchased. Last 3 times as long as Evac-U-8 brand. Very worthwhile. Tom Althouse mentioned that a couple units failed, but were replaced by manufacturer at no cost.

Immersion Suits (Fred Jones) - 94 Imperial brand immersion suits purchased.

Automatic Identification System (Tom Althouse) - Furuno model FA-100 purchased in 2003. 1 unit for every UNOLS vessel. IMO compliant GPS's Furuno GP90D – 10m accuracy, 5m in differential also provided for system. Oregon Furuno dealer used was "B&F" – exceptional pricing. Installation schedule up to individual operator. USCG notification not required when getting underway if AIS is operational.

Tom Althouse noted that high traffic volume tends to overloads system, but can be alleviated by putting on different setting. Crews seem to like the system which is easy to identify other vessels and special operating conditions (i.e. RAM). Tim Askew noted that a lot of other ships still don't have which limits effectiveness of system at times.

Dan Schwartz – web site for chart of Puget Sound – displays all vessel locations with AIS. SeaWave has similar screen for anywhere in the world. Tim Askew reports position can be as muck as 24 hrs behind ship's actual position.

Radars (Fred Jones) - Furuno S-Band & X-band radar units were provided to: Scripps, Oregon State, Harbor Branch.

SSAS (Al Suchy). (Ships Security Alert System) Felcom 16 & Iridium "Sailors" purchased depending on vessel needs. 14 units total. 3-WHOI (Oceanus, Knorr, Atlantis), 1-BBSR (Weatherbird), 1-Duke (Cape Hatteras), 2-HBOI (Seward Johnson I & II), 1-Lamont (Western Legend), 1-OSU (Wecoma), 3-Scripps (New Horizon, Melville, Revelle), 1-URI (Endeavor), 1-UW (Thompson). Test unit installed on Oceanus before proceeding with larger group purchase. Order now placed with delivery in very near future. Operators should notify Al if any other SSAS systems needed.

**New Business -** None

**Committee and Liaison Reports**
UNOLS - Mike Prince, Exec. Secretary: FIC, Council, Annual meeting (with elections) last week. See UNOLS web site for election results: http://archive.unols.org/meetings/2004/200410anu/200410anuap22.PDF. Revisions to UNOLS charter included making UNOLS vessel designation go through UNOLS Council (corrected discrepancy in Charter), showing how facility fits into national plan, and what to do if not accepted by Council (appeal process). Put Committee by-laws into charter – mostly "lawyerly changes".

UNOLS actively working on Fleet Renewal issues.

RVTEC in early November, SCOAR Committee – New. Fourth meeting soon. Focus to be on getting word out on how aircraft can support oceanography. Primary aircraft is Twin Otter. No clear path yet on science access to aircraft – structuring like UNOLS.

AICC– meeting in November. DESSC – Dec 12th.

**Safety Committee**
Tom Althouse: Last meeting was one day meeting in Duluth. Discussed reorganization /review of Safety Standards – total re-write and new format. UNOLS Office comparing other operator formats. Ensure current and parallel with what is happening at USCG, ABS, and latest regulatory/legislative actions with Intermediate Class Vessels.

**Safety Standard issues/question before RVOC:**
1. Should safety standard clearly define what should and should not be required?
2. LHS Design Standards – review and approve.
Safety committee meeting scheduled for coming year. Mike Prince recommends web conference for organizational meeting – followed by face-to-face meeting.

Tim Askew emphasized need for at least one face-to-face meeting to accomplish goals and hammer out issues. Also emphasized need to make progress on getting safety standards up to speed.

**Ship Scheduling Committee**
Mike Prince: 2005 scheduling process took advantage of web conferencing. All parties involved thought it was successful. Web conferencing works particularly well with a specific task and if people do their homework beforehand. Gives deadline for getting things done. Helps to narrow subjects.

Had to re-adjust schedules because of funding realities, conflicts with JASON/ROV projects vs. availability. Numerous cruises deferred from 2004 to 2005.

2004 ship schedules were “above average”. 2005 more normal on ship usage.

OBS availability and ALVIN major factors. Budget is major constraint.

SJ II lay up. Most global vessels under 300 days – by choice/direction (budget and improved maintenance). Alpha Helix lay up depending on OPP funding - may have partial year.

Linda Goad noted that all schedules were properly set by late September. Process moved quickly to “real” schedules. Pressure on hard deadline for Ship Ops proposals (November 1) had positive effect on scheduling.

Steve Rabalais thanked Linda Goad and UNOLS Office for cleaning up STR system in Excel spread sheet. Notes and removal of old requests particularly helpful. Mike Prince noted that Excel spread sheet is precursor to new Ship Scheduling System when transitioned to data base format. Current process still labor intensive with lots of work done manually by Linda Goad. Mike also noted that spread sheet is not error free – check with PI and UNOLS office if there is concern about cruise being missed.

Mike Prince thanked Ralph Rogers/NOAA for efforts so far. NOAA cruises waiting on funding status from Congress. Some feedback on NOAA funding priorities.

John Freitag knew early on ONR funding status for ship scheduling.

**MMPA (Marine Mammal Protection Act)** affected Ewing and all seismic cruises. Endangered species

are most problematic. Only one potential cruise in 2005 once permits are in hand. Clearances and permits have long lead time. NSF requires August deadline for cruise two years out (i.e. – August '04 for 2006 cruise). Should be flagged in STR early.
Tom Althouse noted that environmental groups are getting "militant". Several cruises were shutdown in fleet, with loss of a 40 day cruise at Scripps in 2004.

International efforts going on to better define terminology and requirements – over several years. Work in progress.

**Ship Security**
Dan Schwartz discussed UNOLS fleet compliance with Maritime Safety act of 2002. Deadline – last Dec for Vessel Security Plan (VSP). Large (SOLAS) ships submitted for review and approval to USCG. Next milestone was July 2004 for audit. "Document of Security" issued to operator if passed. All large vessels now operating under approved plans.

Required changes at UW include: Crew training with periodic updates. Briefing of new crew members. Gangway watches 24-7. ID badges – digital camera and laminating machine. In home port, badges worn on ship only - Gangway watch takes badge when crew member goes ashore. "Generic" visitor badges used – signed in and out by gangway watch. System helpful for knowing who is on board. UW uses campus police after hours in home port. UW Tech department gets digital photos from Chief Scientist ahead of mobilization.

Dan noted that changes have not been "the end of the world" as predicted, but system not yet tested in higher MARSEC levels.

Tom Althouse noted that "Intermediates" (which are over 500 ITC) are now required based on new NVIC. New Zealand now requires prior list in advance of all people leaving and joining the ship. Need good advanced planning with science party.

Facility Security Plans (FSP) - applies to any "facility which services SOLAS vessels. Tim Askew warned that smaller vessels may eventually need vessel and facility plans. Need security plans to return to US if vessel goes foreign.

**Committee and Liaison Reports (Cont'd)**
**FIC (Al Suchy)**: See Presentation from FIC meeting:
http://archive.unols.org/meetings/2004/200410fic/200410ficap03.PDF
FIC involved with ARRV process – design nearing completion – hoping for funding in FY 06. Ewing Replacement (*Western Legend)* – accepted by Lamont and delivered to US (Quonset Point, RI). Busy with re-flagging. Oversight committee to review re-fit specs. Yard period in spring '05. $20M budget for acquisition, conversion, and re-flagging/ABS. Some additional funds coming from NSF Ship Ops and Tech Support. Ewing to be sold.

Ocean Sciences budget – ALVIN, Regional Class Vessels, Western Legend – "Mid-sized infrastructure". $25M set aside per year.

ARRV Funding ($85M) Budget line item at Congressional/National Science Board level.

Regional Class – MOU of understanding between NSF and NAVSEA done. Operational requirements document under review – prioritized SMR's. High Level document. Performance spec developed for RFP process.

Draft Regional replacement schedule developed - Integrated Product Team (IPT) approach envisioned.

Ongoing thru FY 05 Two identical contracts issued for competing designs with shipyards – one year period. Only one final design selected.

Lead ship award – January 2007. Operator solicitation – possibly "summer" of 2005. Operators will somehow be involved with detailed design – details to be worked out. Two possible places - operational requirement stage or final design phase.

Mechanism for community involvement still being worked out – review of confidentiality/contractual issues.

Ocean Class – See John Freitag's comments. Phase 2 study complete - Comparison on SWATH, mono-hull, and X-craft complete. Mono-hull slightly below sea keeping requirements. 75% of current AGOR ($70-75M). SWATH similar to KILO MOANA ($80-85M). X-craft would give significant reduction in SMR's at 1800 tons. 2400 tons required to 100% meet SMR's.

Service Life Extension Programs (SLEP's) developed over the summer '04. Needed due to extension of Regional and Ocean Class replacement process. Excellent operator response – timely and factual. Operators worked closely for consistency of requirements and costs. Costs represent NO capability increase – maintain current capability only ($1-5M for 5 year extension). Strongly urged against by science community.

Steve Rabalais - believes figures in SLEP are conservative. $3.0 M spent on PELICAN. However, their mid-life involved extensive capability increases - not purpose of SLEP figures.

FIC fleet renewal plan proceeding.

FOFC plan update completed end of FY-05 (Bob Winokur). FOFC plan and UNOLS plan should be in "lockstep" with each other – integrated and aligned.

Global Class ships nearing mid-life. Update of SMR's for Global Class ships to begin. No commitment for funds for mid-life, but should have updated SMR's in place. Including new requirements such as Ocean Observatory support, etc.

Discussion of debrief process for Kilo Moana. Decided to continue debrief process, but focus more narrowly.

CAPE HENLOPEN Replacement Vessel – See Matt Hawkins presentation.

**DESSC – Mike Prince:** See Report from previous FIC meeting: http://unols.org/meetings/2004/200410fic/200410ficmi.html Alvin's 4000th dive completed in 2004. Funds now in place to design and build a "New Alvin". Design and test sphere first – rated to 6500 m. Final assembly in 2007 – Operational in 2008. Alvin to go through final 5-year inspection/overhaul.

HROV – hybrid between AUV and ROV. Developing a light weight tether specifically for this purpose.

Debbie Kelley at UW to be next chair of DESSC.

**RVTEC – Bill Martin**: See written report from Bill Martin.

**AICC - Dan Schwartz:** See PowerPoint presentation.

**OPP – Alice Doyle:** ADCP "Ocean Surveyor" installed in drydock. Stability issues with MV Palmer.

Gould has science cruises in FY 05.

PRV (Polar Research Vessel) questions remain on how to replace. Contract up in 2012. Started process with forming of science review committees.

**SOCP – Tim Askew:** Most information from SOCP meetings available on web site. Link from RVOC home page. www.SOCP.org Lots of good info available to operators – "No Room for Error" DVD – viewed at Round Table (excellent). Info on accidents, pollution, etc. Meeting coming up next week in Toledo, OH – nobody attending. Members to advise if any topics of direct interest to other operators – UNOLS office can generate a direct link. SOCP funded by MARAD.

Maureen Reap (Texas A&M) comments that SOCP has contracted with commercial companies to have lots of products made and continually updated for member use.

**NSF – Linda Goad:** NSF went into scheduling meeting knowing budget shortfall was there. No increase came – funds taken from science operations to fund ship operations (Net $8M from science side).

Ship Ops proposals reviewed this year. Linda emphasized to get in by November 1 deadline. (Panel meets Dec 8-10) and to get any budget revisions in early – nothing will be funded after 6 months beyond deadline.

**ONR - John Freitag:** See PowerPoint presentation for details. Also stressed getting proposals in on a timely basis "When money is gone - it's gone!" 75% of ONR ship ops budget must be spent by Jan 1.

ONR Use of fleet is down in 2005 – driven by programs – NOT budget.

Z-drive problems resolved with new Klingelnburg gears. No failures of new gears in our community. Monitoring system in place on Thompson for Z-drives.

Admiral Cohen announced commitment to going forward with Ocean Class construction. Beginning in FY '06 taken from ONR core funding. Committed to first vessel only. Operator selection planned in early CY 2005 through an RFP. Conditions for eligibility for selection shown in presentation (vessel to retire, institutional commitment for support, etc.). NAVSEA used at agent for construction through an IPT (Integrated Product Team) as with KILO MOANA.

Hull form has not been determined. Admiral Cohen interested in making an X-craft R/V, but will defer to UNOLS decision. Additional Federal funds may be available if X-craft is selected. UNOLS team needed to make decision quickly as timeline greatly accelerated.

Global Mid-life – NO funds identified. However, may be able to do some work out of operational funds since ship support is down (single-person staterooms on AGORS, KILO MOANA handling systems, etc.)

Dan Rolland segment – Results of Phase 2 study presented (See PowerPoint). Comparison of mono-hull, X-craft, and SWATH with SMR's for Ocean class.

X-craft currently under construction: water jet, 1300 LT displacement. 73m x 20m. Multiple mission modules (20-foot vans) fully enclosed. UNOLS version would probably be propeller drive and lower top speed. Increased range. Admiral Cohen is proponent of higher transit speed vessel for UNOLS fleet.

Mike Prince – Community should consider all points (both "positive" as presented by Admiral Cohen and concerns from UNOLS community) and respond appropriately to the X-craft design using the same information used by Admiral Cohen. 1400 ton vessel under construction the "benchmark" – could upsize

to 1800 tons w/o significant re-design. 1400 ton cannot meet SMR's.

Advantages over SWATH – Less sensitive to loading, lower draft, higher speed.

Concerns were also about non-uniform motion – higher sea sickness rate.

Concerns about higher operating costs – misalignment with NSF view (principle funding agency). Higher transit speed is offset by the higher cost.

**Agency Reports**

**NOAA/FOFC - Beth White:** Table on contents flushed out for revised FOFC report. Emphasized need for FOFC plan and UNOLS plan to work "in unison" and be coordinated. First FOFC report seems to have had some impact – though fleet renewal slower than hoped.

In total, 9 TAGOS vessels, one TAGS 51, and one torpedo test vessel transferred from Navy to NOAA. FSV OSCAR DYSON now in builders trials. FSV HENRY B. BIGELOW now underway at Halter. Funds for FSV #3 and #4 in NOAA budget through 2007 – funds identified but not in hand. FSV #5, #6 & #7 envisioned.

Older ships actively being replaced with converted TAGOS vessels. Disposing of FERREL, McARTHUR, and WHITING. SWATH vessel to replace RUDE and home ported at UNH. Contract awarded with option to construct. As a result, average age of NOAA fleet is going down.

Bob Ballard got Congress to transfer last TAGOS vessel plus $18M for conversion. No operating funds identified – home port not yet known.

**USCG – Jonathan Berkson:** See PowerPoint presentation, AISC report above, and report from UNOLS meeting. One of Ocean Commission recommendation was replacement of two polar ice breakers (POLAR STAR and POLAR SEA).

**State Dept. – Roberta Barnes:** No report given.

**Special Reports:**

**Foreign Operators:**

**SACT - Ian Sage:** (See PowerPoint presentation on ALLIANCE and LEAONARDO) discussed transformation from NATO to "Supreme Allied Commander" Severe budget cuts in 2004 necessitated looking for creative ways to develop charter income. ALLIANCE chartered to Walt Disney for making of the film "Life Aquatic" with Bill Murray.

**NIOZ - Marieke Rietveld:** (See PowerPoint presentation) Discussed Ocean Facilities Exchange Group (OFEG) and European new ship construction including NERC – "JAMES COOK" (CHARLES DARWIN replacement). ISOM Organization trying to become more formal like RVOC. Europeans developing a marine research consortium similar to UNOLS.

**Other Reports:**

**Alpha Helix Replacement - Tom Smith:** (See PowerPoint presentation). Finishing contract design in mid-November. Detailed daily rate and discussion given. Discussion of deck plans and arrangement.

**Review of ADA design features:** US Access Board to give more detailed recommendations for

"passenger vessels" – broader list than strict USCG definition of "passenger vessels". May include guidelines for R/V's. Terry Whitledge to publish white paper. US Access Board to put guidelines out for public comment.

Dennis Nixon does not feel this affects view of R/V's by USCG's. These recommendations are not required – ARRV is doing the "right thing" by making "reasonable accommodations". Concern expressed among operators concerning meeting ADA requirements.

**Insurance and Liability Dennis Nixon:** See PowerPoint presentation for full details – major points as follows:

- Technicians fall under "unseaworthiness" doctrine (member of crew) since spend more than 30% of time at sea.
- Vessel Operators should insist on requiring proof of health insurance for all members of the science party (PI, graduate students, undergraduate students) – as well as release form (liability waiver). Threshold should be if vessel underway "overnight" – refers to lapse of time an illness may show itself.
- Members decided that further discussions on this subject warranted by RVOC. Amendment to Safety Standards may be necessary. May not be an RVOC "safety issue", but perhaps a Cooperative Agreement issue?
- Diversion expenses for illness are claimable on P&I insurance.
- Classification societies are now being held to standards of "workmanlike standards".
- Criminal Liability for Marine Sups.
- Liability during training accidents.
- Evolving standard of "seaworthiness".
- Is a student intern a crew member?
- AUV Legal regime: Is an AUV a "vessel"? They have many vessel-like attributes. Becoming more frequently used and thus issue needs to be discussed. Who is responsible if an AUV surfaces and causes damage to another vessel? Marking and lighting requirements? Is this and RVTEC or RVOC issue? Is a "Hold Harmless" necessary for AUV's? As point of reference, NATO believes AUV would be considered like a ship's boat – part of ship's equipment and display same lights as submarine when on the surface.
- Beaked whales and giant squid stranded as a result of acoustics. Severe damage to ears. "Outstanding Issues" slide from Geraint/NERC on acoustics and marine mammals.

**Evening events at the Biological Station**
**WEATHERBIRD II (Open House)**
**Tour of New BBSR lab by Dr. Tony Knap**
**Sponsored Dinner (Meyers Agency) @ BBSR**

**WEDNESDAY, 20 OCTOBER 2004 – BBSR**

**Continuation of Research Vessel Updates**

**R/V Tioga Update – Albert Suchy:** Al expressed thanks to ODU and UNH for help with TIOGA. Small but capable vessel (60 feet). Good speed to get to station – 18 knot transit speed used for planning. 100+ miles offshore 2-3 days max. Accommodations for 6 with small galley. Photos of various ops shown in presentation. T-boat certificate but "toggle" capability to operate as uninspected designated R/V. Name came from big donor and we "will know someday what it actually means." (Donor's husband's connection with "Ticonderoga"?) Construction cost was $1.85M not including science outfit. Rates = $1500/half-day, $2000/day full-day, and $3000/day for extended trip.

See article in Issue #4 in Professional Mariner – American Ship Review.

**NMFS Fisheries Vessels - Jim Meehan:** (See PowerPoint presentation for photos) FSV OSCAR DYSON launched last fall. "Pear-shaped" bow which pulls down 1m at cruise speed. Preliminary acoustic trials complete – some problems background noise high – did not get good low frequency data. From 10 Hz up looks OK compared to ICES.

High fan noise (HVAC) for some compartments. Problem with anchors dragging in bow wave during trials. Vessel has viewing windows and strobes in stern for actually looking at propeller.

2500 tons, Total construction cost of $43M plus $6-7M additional in science outfit. Cruising speed of 13 knots.

Yard to do additional formal acoustic trials. NOAA to do own acoustic trials in Alaska. Vessel will be in Seattle from mid-December to May '05, and begin field ops in February '06.

Now cutting steel on FSV HENRY BIGELOW. Going together much faster due to learning curve. Launch in March 05. Delivery in January 06.

**Cape Henlopen Replacement - Matt Hawkins:** See PowerPoint presentation. Construction proceeding on schedule with launch in "summer" and delivery in October 2005.

**Ewing Replacement – Paul Ljunggren:** See PowerPoint presentation. Decision made to replace EWING with "new" vessel since refit will not meet SMR's.

Acceptance pending drydock and reinstatement in class (DNV). Will be re-classed with ABS. M/V WESTERN LEGEND purchased and now sitting at pier in Quonset Point, RI. Length similar, but 10' more beam, 50% increase in displacement. Large increase in bollard pull and HP for towing larger streamers.

Oversight committee established to make sure conversion meets science needs and stays within scope/cost.

Needed items include: Re-flagging, open up main deck, increase general laboratory area, new over-the-side handling systems, minor improvements to accommodations, improved sonar systems, add DP, marine mammal observation and mitigation (active monitoring system), and general-purpose capabilities,

**CMMS Update – Dan Schwartz/Bill Hahn:** Xantech-Amos system chosen based on capabilities and pricing (both purchase and annual maintenance). Also long-term company - hopefully providing stable support in future. Pilot program done aboard URI, Scripps, UW vessels. KILO MOANA chose to purchase and implement independently. Implementation is the most costly and time consuming part – not original purchase of software (i.e. $900/day for engineering support).

However, having CMMS is vital for ISM certification.

NSF unwilling to fund anything further on CMMS systems. Final implementation costs covered by institutions.

All operators using Xantech pleased with performance of system. Critical capability is link between what ship does at sea and shore-based system – automatically updates data base. Everything synchronized – personnel, maintenance, etc. Significant time/effort by Captain and Mates to fill data base.

"Science/Tech Department" also created in data base. Includes winches, etc.

**Winch and Wire Update – Mike Prince:**
Started in 1999 with symposium. Narrowed down to focus on small diameter cable – replacement for 0.322 wires. DRAFT "Functional Requirements" posted on UNOLS web site under "Reports". Still need to take the next step and bring in people with expertise in wire design and develop concept designs with cable manufacturers.

Two categories of uses – large CTD packages to full ocean depth. Currently <2:1 Factor of Safety and on edge of wire capability: (1) More load capacity needed at full ocean depth – cannot necessarily get with slightly larger cable due to increase in cable weight; (2) higher band width. Adding fiber optic (F/O) cable generally means giving up strength. Increase in power transmission good, but less than current 0.322.

0.419 with F/O currently used for towed bodies on portable winches – thus shorter lengths (not full ocean).

Problem with whole project: No clear and immediate demand for new cable. Community is "getting by" with pushing limits of current 0.322. Towed body needs being met – special purpose/shallower depth.

Report given to agencies and UNOLS council. Releasing RFP recommended by Council.

No clear decisions on prescribed SWL – operational restrictions still being used as primary safety net.

Need individual in UNOLS community to take "ownership" of this issue including wire inventory, new cable development, working with cable manufacturers, etc. Individual should have engineering background.

**Van Pool, Group Purchases, and Standards Matt Hawkins:** See PowerPoint Presentation.

**Long Core System – Al Suchy:** Contracted with Glosten to get ideas from Jim Broda and develop conceptual design. Contract awarded to Allied for modifying A-frame, swing davit (on qrtr), and stern sheave. Synthetic rope with breaking strength of 355,000 lbs (2.24" DIA) – very low stretch, light weight (Spectra). RFP about to be released for winch.

KNORR to yard for modification in March '05. 50m clear needed along stbd side.

Going through US Coast Guard to get waiver on Sub-Chapter U requirements. Weight is not on A-frame during recovery of core - load is on main stern sheave which is imbedded in deck structure at transom. Pull out (working load) estimated to be 100,000 lbs. (See video animation provided)

**Load Handling System Workshop Matt Hawkins:** See PowerPoint Presentation

**Med Aire (formerly MAS) Bill Mahaffey:** MAS came to Med Aire in 2004 after bought by other company – other company straying from core business. Med Aire is UK-based company with global coverage. Also have clinics in China through "Global Doctor". Deals with all international clients - Maritime, aviation, and foreign business/corporate travel to remote locations. US main office is in Arizona. (See PowerPoint presentation) Medical Training available world-wide. STCW compliant. Calls still route through MAS in Maryland but call eventually goes to Arizona facility. Contact numbers remain the same as with MAS in the past.

New services available (not included in current contract with UNOLS):

- ISM services – MGRC Program and Contacting services for Dedicated Person Ashore (DPA).
- Default is nearest Coast Guard. Documentation of drills.
- Security Programs – advisory, SSAS (Pending)
- Travel Assistance – concierge, travel monitoring (for employees)

Observations and Recommendations made:

1. For smaller vessels, Maritime-specific medical "kits" may be an option (as opposed to locker).

2. Very few vessels carry enough oxygen: There is an "Oxygen conserver" (OM-400) which can extend oxygen life by 8 times.

3. Portable vital signs machine: Can send outputs via electronic means. Doctor can take control of unit remotely.

4. DAN (Diver Assistant Network) has excellent travel insurance coverage.

Two consistent problems noted by Tom Althouse:

1. Lack of/Poor recommended list of drugs: Should be tailored to size of vessel and operating area. During last medical emergency, Captain was asked to send MAS a list of medications they have on board! MAS had no record.

Bill Mahaffey suggests "MCA Class A Commercial Kit"

2. Getting pharmaceuticals with only 2-months left before expiration.

**Weight and Stability Management for Research Vessels Tonnage Impact (Regulatory vs. Convention) on Intermediate vessels Dirk Kristensen, Glosten Associates:** (See PowerPoint presentation)

OCEANUS Example: Recently inclined and weight found substantially different than expected. Emergency solid ballast added to meet stability requirements.

Average percentage weight growth (light ship weight) over time = 1% per year (structural modifications, additional stores, old cables and electronic equipment, layers of paint, etc.).

Average percentage allowed for growth over vessel life is only 5%.

USCG requirement for inclining is 10% net CHANGE from light ship including additions, removals, and relocations – NOT JUST ADDITIONS.

"Growth is incremental and insidious!"

Recommendation made that a UNOLS standard be developed for how stability data is presented (booklet format, etc.)

Recommendations for individual operators:

• Assign individual to track all weight additions, removals, and re-locations.
• Invoke a system of weight and moment reporting (quarterly, monthly?)
• Establish REALISTIC weight and moment allowances (service life changes, ship's stores, etc.) CLEAR definition of what is in "light ship" vs. ship's stores, science equipment, etc.

• Recommended minimum interval for inclining = every 5 years. (Particularly for R/V's). Incline also in "operational light ship" conditions – systems and equipment that are always on the vessel.
• Clean ship out periodically.
Real-world problems with getting accurate inclining and stability book.
• Inaccuracy in draft marks.
• Unrealistic numbers for misc. stores.
• Shipyard responsible for inclining.
• Inaccuracies in original data used in later computations.
Glosten software allows movement of solid and liquids around easily. Grid showing load locations.

**Impacts of NVIC 11-93** (For details, see Presentation).

• Current Intermediate Vessels now required to be ISM and ISPS compliant.
• USCG intent was for ISM and ISPS issues only – not physical issues like structural fire protection.

**NTSB – Morgan Turrell, Marine Accident Section (What to expect if ship has accident):** Speaker not present.

**Doug White - Discussion of Oceanic Data Base and R/V Scheduling:** See PowerPoint presentation.

**Workshops Topics**

**Security plans -Tim Askew {with Chris Gretch, Tom Smith, Alice Doyle, Linda Goad, and Steve Lanoux}:** All Intermediates to have Vessel Security Plans based on latest NVIC. ABS can provide assistance, but can also be done by you. Captain and Marine Sup should go to training course. Video training options for crew members.

**Uniformity of Fees** - Dan Schwartz {with Marieke Rietveld, Steve Rabalais, Doug White, John Freitag, and Fred Jones}: See presentation. Consensus to be pursued and Dan Schwartz to summarize. Results posted on UNOLS site.

**Safety -** Tom Althouse {with Braxton Tesh, Bill Martin, Pierre Fuentes, Dan Aspenleiter, Ralph Rogers, Ian Sage, Dennis Nixon, Mike Prince, Maureen Reap, Robert McDougall}: Recommends the restructuring of RVOC Safety Standards to eliminate ambiguity – clarify and identify the "shall" items compared to "should" items. Break out separate chapter for "Science Operations" from "Ship Operations". Plan in place among Safety Committee members to start review. Eliminate "recommendations" as advised by Denis Dennis Nixon – instead to: "These are MINIMUMS you SHALL do".

46 CFR 189 – Sub-Chapter U – Risk of snagging is paramount.

Insurance for all persons on board – see discussions with Dennis Nixon. Round Table discussion tomorrow.

**Load Handling System Design Standards** Matt Hawkins {with Paul Pelletier, Turner Cabanis, Randy Maxson, Rich Muller, Dan Rolland, Pete Kilroy, Dirk Kristensen, Jim Meehan, Bruce Cornwall, Beth White, Phil Sacks, Stan Winslow, Mike King, Dave Powell}: Discussion of Sub-Chapter U which assumes cable is "weak link" –i.e. cable parts before anything else fails. Discussion of Classification Society Standards (ABS, DNV, etc.) – which are not specifically for R/V's.

Group agreed that cable parting is not acceptable in any case – this philosophy is more similar to Classification Society standards. Group recommended the following as acceptable means of cable strain

relief during hang down:

1. Winch payout under tension (if it can be proven to work and routinely tested) - this includes brake slip, hydraulically, or electrically
2. Cable cutter (as last resort)
3. Weak Link (only on end of wire)

Unacceptable means include:

1. Shock absorbers – due to limited range
2. Boom "Dip"- questionable, more info needed
3. Weaker wire design

Group also recommended the adoption of a "sensible" safety standard that ensures:

1. No structural damage to equipment
2. No wires to part
3. No blocks to fail

Though existing standards may not be precisely applicable to R/V's, Group recommended RVOC not attempt to develop their own standard, but choose between one of the existing standards if possible.

**Presentation of Workshop reports** (See above)

**Adjourn.** Dinner at Grotto Bay Hotel

**THURSDAY, 21 OCTOBER 2004 – BBSR**

**Round Table Discussion - Marine Superintendents and Program Managers**
Marine Superintendents or their equivalents from member and guest organizations met to discuss issues of mutual interest. A summary of topics discussed included: (Full text available to Marine Superintendents and Program Managers upon request)

**Ship Inspection Program:** Currently in 1st year for renewal contract.

**X-Craft Discussion:** Consensus is that RVOC should draft own response for contribution to FIC discussion assuming that R/V version would have standard propulsion plant with diesel engines (Lower speed and higher endurance).

**ISM:** [No discussion]

**Winch Training Program (Vendor Visits):**
Mike Prince: Reports supposed to route from the winch manufacturer, to NSF, to the Operator. Will try to get key recommendations out as soon as possible. Funds have to be spent by May 2006. Operators should make preliminary contact with winch vendor.

**Post Cruise Assessments and PCA results & Safety Statistics:**
Mike Prince: Council has small committee looking at how system is working, whether there are any fleet-wide issues, and if there are any areas of improvement.

**Group Purchase:** Scheduling of training among operators discussed. MITAGS/PMC offer still pending –

no organized action taken.

**ADA:** Matt Hawkins advised membership that Chapman submitted NSF proposal to Geosciences to improve accessibility on research vessels. Will probably involve survey of vessel and follow-on recommendations.

**Medical Standards: for new hires – Tim Askew:** No uniform UNOLS standards and insufficient ability to get information on current medical status. Dan Schwartz (UW) – NVIC's state that ship operator is responsible for providing healthy maritime employees – offset by HIPPA and ADA issues.

**Manning Agencies:**

**AIS Training Requirements:**

**Uniformity of Tech Services:**

**Shipping Rules:** have changed, experiencing numerous problems/ delays with shipping equipment to the ship on time. Operators need to advise chief scientist and do more pre-cruise planning to help combat this problem.

**Work hours for Crews:**

**Business Meeting**
Assignment to Committees: Assignment to the Safety Committee: Mike King nominated as additional member of the Safety Committee. Ian Sage (SATC) invited as "International Observer". No changes to Security Sub-Committee

**Review of Action Items Pending:**

- Letter to FIC on X-craft from RVOC Chair.
- 3-year summary of insurance information (Mike Prince) for use by Operators in negotiating insurance rates.

Suggestion for 2005 agenda. Good this year on level of items discussed – don't overload the agenda.

- Workshop format good – need a little more time, however. Go into separate rooms for Workshops.
- One or two additional speakers (max) in addition to Dennis.
- Crew retention and UNOLS "Intern Program"?
- Security update – Operator facility and foreign (list of "approved" ports).
- ISM update for Intermediate Vessels.
- Marine Mammal mitigation policies – NERC expert (guest speaker?)

**Nominations and vote on 2005 meeting location:** Discussion on changing month for RVOC meeting due to busy fall schedule with other meetings and proposal deadlines. Membership took verbal vote and decided to move meeting to end of April, 2006. Chair to send e-mail to broader membership to ensure no major conflicts.

Last year's nominations for the next meeting include UW, Duke, and UT. Duke Representative new since nominations last year, and not present at meeting. UT submitted good description of facility and desire to host, but unaware of date change. UW still glad to host despite "short fuse". By raise of hands vote, majority voted for UW to host tentatively the week of April 18th.

**Nominations for 2006:** LDEO, Florida Institute of Oceanography, University of Miami.