

# UNOLS COUNCIL Meeting

Biosphere II  
Oracle, AZ  
January 16-17, 1997

## Meeting Report

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**INTRODUCTION** - The UNOLS Council met on 16-17 January 1997 at the Biosphere II Conference Facility in Oracle, AZ. The participants of the meeting are listed in [Appendix II](#). The items of the agenda, [Appendix I](#), were addressed in the order as reported below. The meeting was called to order at 8:30 a.m. by Ken Johnson, UNOLS Chair.

**ACCEPTING MINUTES** - The minutes from the September 1996 Council meeting were accepted as written.

### **COMMITTEE REPORTS:**

**Deep Submergence Science Committee (DESSC)** - Mike Perfit provided a review of ALVIN/ROV operations long with a recap of the December DESSC meeting, see [Appendix III](#). ALVIN 1996 operating year ended in July when ATLANTIS II was retired. The remainder of the year was devoted to ALVIN's overhaul. The ROVs were successfully used in three cruises in 1996. During Dan Fornari's LUSTRE cruise to the Mid Atlantic Ridge in July, Jason's manipulative capabilities were demonstrated while conducting sampling operations. In Paul Johnson's September cruise to Juan de Fuca Jason completed 84 hours of continuous operations on the bottom during one lowering.

Mike presented ATLANTIS' proposed schedule for 1997. The ship will transit from the shipyard to Woods Hole in March/April. It will then undergo an outfitting period at WHOI and ALVIN will be loaded aboard. In May, ATLANTIS is expected to leave WHOI and transit to Washington D.C. for public viewing. Next, ATLANTIS will conduct ALVIN certification dives off Bermuda before beginning science operations in mid to late June. The first cruise will be on the Mid Atlantic Ridge. In July/August, ATLANTIS will transit through the Panama Canal for work off California. ATLANTIS is scheduled to

begin a Post Shipyard Availability (PSA) in September through mid October in San Diego. In the fall, ALVIN will resume operations on the Northern East Pacific Rise. At the end of the year, ATLANTIS/ROV operations are planned on the Southern EPR. By conducting ATLANTIS' PSA period in September, the ship's schedule will be open allowing the ship to remain at the Southern EPR to complete all funded programs.

The ROVs have a full schedule in 1997. Two Jason programs are planned in the Western Pacific off of THOMPSON including a 47 day UK funded cruise to survey the wreck of the M/V DERBYSHIRE. The survey will use all three ROV systems. ROV operations are also planned at Juan de Fuca, the Mediterranean Sea and the Southern East Pacific Rise. The systems are scheduled to be used from three different platforms: THOMPSON, C.CHOUEST and ATLANTIS.

Mike Perfit reviewed the geographic areas of interest for ALVIN and ROVs through 1999. This year, letters of interest were submitted to the UNOLS Office via the Web. Considering that it was the first time using this procedure, response was good. Areas of interest included traditional and non-traditional areas: Atlantic, Mediterranean, Gulf of Mexico, Juan de Fuca, Off California, NEPR, Guaymus Basin, Equatorial Pacific, SEPR, Hawaii, Western Pacific and the Indian Ocean.

At the December DESSC meeting WHOI presented their Concept of Operations for the Deep Submergence Facility. The plan outlines the integration of ALVIN and the ROVs. WHOI's concept would centralize cruise preparation and science liaison with a single point of contact, Don Moller, the Marine Operations Coordinator. There are a number of operational issues associated with an integrated facility. A 24 hour switch-over period is required between ALVIN and Jason. ROV and tethered vehicle switch-over time is 18 hours. Special requirements for cruises must be indicated by PIs early during the planning period. ROVs are NOT "night-time" survey vehicles.

The December DESSC meeting also included a discussion on WHOI's archive policy. WHOI reviewed their current policy of preserving data. A draft policy is in the works and will be circulated for review. Mike reported that WHOI has submitted an ALVIN upgrade proposal to NSF which includes DESSC's prioritized list of eleven upgrades. The first three items on the list are datalogger/video upgrades, increased payload capabilities and power improvements. Additionally, WHOI requested upgrades for the VB system, navigation and digital imaging. If funded, the upgrades would be integrated during 1997/98.

ALVIN's overhaul is coming along smoothly. Various components are being upgraded on ALVIN during the overhaul including wiring for a third battery, pan/tilt installation, and a new single chip video camera. Component re-installation has begun. Upgrades are also planned and being installed on the ROV systems. These include modifications necessary for surveying the M/V DERBYSHIRE wreck. [Appendix III](#) provides a full list of the ROV upgrades.

Lastly, Mike reported that the NSF/ONR/NOAA Memorandum of Agreement (MOA) for the Deep Submergence Facility is still on hold. The agencies plan on discussing it later in the year.

In other deep submergence news, the Canadian ROV, ROPOS, was lost in the fall from THOMPSON during a fast moving storm. ROPOS was insured and it will be replaced.

**Fleet Improvement Committee (FIC)** - Chris Mooers, FIC Chair, reported on the Committee's December meeting in San Francisco. The first day and a half was devoted to developing Science Mission Requirements (SMRs) for the central Pacific. In addition to FIC, scientists with seagoing experience in the Pacific were invited to attend the meeting and assist in the SMR development. University of Hawaii representatives came to the meeting with a revised (scaled-down) set of UH SMRs based on comments received from the community.

The Committee began its development of the SMRs by reviewing the values reported in existing UNOLS Science Mission Requirements for Class II and Class III monohull research vessels and Class I and III SWATH research vessels. They then established the minimum acceptable and desirable values for the central Pacific. The desirable requirements were prioritized by the meeting participants. The meeting participants were able to achieve a consensus on the SMRs, however, the degree of enthusiasm over the

SMRs varied. They expressed concern for the associated construction and operating costs for a new vessel. It was recommended that a subcommittee be appointed to work with ONR during the construction of the new vessel.

The remainder of the FIC meeting was devoted to updating the Interim Fleet Improvement Plan (IFIP) and preparing the 1998 Fleet Improvement Plan (FIP98). The FIC decided that this may not be the appropriate time to develop a full FIP98. Instead, they plan to prepare a supplement to the 1995 FIP since many of the original sections do not require updates.

During the FIC meeting, the estimated useful life of the UNOLS vessels was reviewed, see [Appendix IV](#). By the year 2015, many of the intermediate vessel will be retired. The FIC recommends that now is the time to start planning for their replacement and the development of a conceptual design for intermediate vessels should be considered. Regulatory issues regarding crewing and inspection need to be addressed prior to design development.

**Research Vessel Operators' Committee (RVOC)** - Paul Ljunggren, RVOC Chair, reported on the RVOC 1996 Annual Meeting and other activities underway. The Annual Meeting was hosted by Florida Institution of Oceanography and the University of South Florida in St. Petersburg, Florida in October. It was a well attended meeting. Representatives from both NAVO and NOAA were present. RVOC expressed the importance of having new partners involved in UNOLS activities so that strong relationships can be built.

Paul reported that Mike Prince has developed a Post Cruise Assessment form for the Web. It is hoped that the electronic form will make submissions easier and increase responses. Mike is preparing a preamble explaining the importance of the form.

A Request for Proposals (RFP) for ship inspections is being prepared by the UNOLS Office. A number of groups have expressed interest in submitting proposals. Jack Bash hopes to have an inspector selected by spring. Once the contract is awarded, NSF will manage and coordinate the inspection. UNOLS will serve only as the contract administrator.

The RVOC meeting included three workshops: (1) Developing medical standards for maritime employees, (2) Strategies for maintaining a healthy fleet, and (3) Research vessel safety. The medical standards workshop was attended by Dr. Brown of the Medical Health Service (MHS) and Dennis Nixon. MHS will work with RVOC to develop a medical history form. RVOC is also drafting a list of performance standards to be used in job descriptions. This information should be useful when hiring new crew members. Robert Hinton is the new chair of this subcommittee. The workshop to develop strategies for maintaining a healthy fleet discussed the importance in re-establishing the ship inspection program as soon as possible. Also, they are looking at ISO9000 and ORV regulations on tonnage to see how these will impact ship inspections. The group plans to review the criteria for designation as a UNOLS vessel. The focus of the safety workshop was to develop a safety orientation film approximately 10-12 minutes in length. A proposal to produce the film will be submitted by WHOI. RVOC viewed a safety video produced in the Netherlands that meets many of their objectives. The RVOC film will be more tailored to the requirements of the UNOLS vessels. The Council requested that the Dutch video be viewed at the next Council meeting.

Other business of the RVOC includes reviewing the *Research Vessel Safety Standards* and preparing a small R/V compendium. Dave Powell has agreed to lead the compendium effort. The 1997 RVOC meeting will be hosted by WHOI and the 1998 meeting will be hosted by the University of Hawaii.

**Research Vessel Technical Enhancement Committee (RVTEC)** - John Freitag, RVTEC Chair, reported on their 1996 Annual Meeting. The meeting was hosted by Harbor Branch Oceanographic Institution in Ft. Pierce, Florida in November. The meeting included a show-and-tell session in which Rich Findley presented MERLIN and a single-mode fiber optic cable. Dan White of HBOI made a presentation of data transfer/communication technology. He discussed MSAT, not to be confused with INMARSAT-M. MSAT is much cheaper than INMARSAT, however, there is considerable delay-time associated with its use. The FAX feature is not yet available.

The meeting was highlighted by a presentation from Phil Gibson of Tension Member Technology. He provided a very informative report on cables and connections. He "unraveled" a number of issues. The trend today is the ability to transfer greater amounts of data through the wires. The 0.322 cable is nearing the end of its lifespan. There is great need to move to fiber optic cables to meet future demands.

John reported that NAVO provided a review of their programs scheduled on UNOLS vessels. The importance of all parties communicating early and often was stressed. So far, discussions have been open and the differences between UNOLS and NAVO are being surfaced. There has been nothing that cannot be resolved.

The RVTEC meeting also included reports from their various subcommittees. Not much progress has been made on the establishing NetCDF as the standard for data storage over the past year. It needs impetus from the science community. Chris Mooers indicated that he will ask the FIC to provide input. The database committee, chaired by Tom Wilson, has developed an RVTEC homepage, <<http://archive.unols.org/committees/rvtec/index.html>>. The site provides UNOLS resource lists including technical support groups and scientific equipment. Lastly, Sandy Shor provide the RVTEC with NSF budget information.

Suggestions for the next RVTEC meeting include presentations on marine corrosion, RDI and SEABIRD. The next meeting is tentatively scheduled to be hosted by the University of Washington in Seattle. John indicated that he will serve as the RVTEC liaison to the FIC.

**Ship Scheduling Committee (SSC)** - Don Moller, SSC Chair, reported on the 1997 ship schedules. Scheduling was faced with many issues this past year: multi agency programs, equipment constraints, personnel constraints and multi-year programs. The large ship have healthy schedules. The JGOFS work was taken off THOMPSON and moved onto MELVILLE. In turn, THOMPSON will do the Juan de Fuca programs. There are still three cruises which remain to be settled. These are Hey's cruise on the Southern East Pacific Rise, Stephen/Orcutt/Speiss cruise for borehole operations and Karsen's cruise to the Hess Deep. The intermediate vessels are almost all underutilized in 1997. Don presented a viewgraph of the charge days for each UNOLS ship for the years 1995, 1996 and 1997 (see [Appendix V](#)). A total of 5,034 days are scheduled in 1997, which is a substantial increase over last year. As was shown in Don's last viewgraph, the increase can largely be accredited to the addition of the NAVO and NOAA time, and the U.K. funded work to survey DERBYSHIRE. The Council discussed ways of outreaching to the Navy labs. It was suggested that representatives from the Navy labs be invited to our next Council meeting. It was also recommended that Ken bring this topic up at the next FOFCC meeting scheduled for February 27th.

**Arctic Icebreaker Coordinating Committee (AICC)** - Jim Swift reported on the AICC activities. The AICC was formed this year and is charged with providing scientific oversight of Arctic polar science support on USCG vessels. The committee is supported by NSF and the USCG and includes eight members. Jim commented that they would like to form a tie with RVTEC. Jim provide a list of AICC 1997 activities planned:

- Ship scheduling via the UNOLS format
- Providing science of opportunity guidelines
- Producing a "Chief Scientist" pamphlet
- Identify steps for technical support continuity
- Coordinate science missions
- Support for future initiatives
- Science oversight for HEALY construction.

Jim reported that HEALY's construction is well underway. The ship is scheduled to operate in a test mode in 1998 and commence science operations in 1999. With the assistance of the AICC, HEALY's science space and outfitting is being modeled after the AGORs. Cost for science use is expected to be approximately \$20,000 per day. Using deck layout plans, Jim reviewed the committee's recommendations for HEALY modifications and reported that the committee has made remarkable progress. He showed revised deck outlines with the revisions included. The Coast Guard has agreed to remove the dive locker,

make a two-story garage which will fit a van, rearrange the passages and double the bench space in the main lab. A very positive relationship with the Coast Guard has developed. Over the next year, the AICC may suggest to the Coast Guard to subcontract with a UNOLS marine operations group for routine consulting and to increase access to technical expertise via RVTEC. AICC plans to form better ties with the community involved with PALMER and the AGORs. Jim's full report to the Council is provided as [Appendix VI](#).

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*The UNOLS Council approved a motion to provide \$1000 from the UNOLS dues in honor of Marcus Langseth. Jack Bash was asked to establish an appropriate fund.*

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## **AGENCY REPORTS:**

**National Science Foundation (NSF)** - Don Heinrichs gave the report for NSF. His view graphs are included in [Appendix VII](#). A new NSF science program, Life in Extreme Environments (LEXEN) has been established. The purpose of the program is to provide knowledge fundamental to understanding the processes that led to the formation and adaptation of life on Earth, and whether and how life may thrive on other planets. It has a budget of \$6M in FY97.

Don reviewed the OCE budget history since 1982. A graph showing both current dollars and constant dollars indicates that there has been some leveling of the budget in recent years. Next Don reviewed the OCE/OSRS success rates for competitive proposals since 1985. The success rates are shown by discipline and then on average. The average success rate now is roughly 25 % and shows a downward trend.

Don reviewed the NSF Ocean Sciences Division budget for the past four years. The Research budget has risen approximately 10% since FY94. A separate line item was added in FY97 for Major Research Instruments and is budgeted at \$4.5M. The FY97 budgets for Operations is \$38.1M. Don reviewed his 1997 UNOLS ship classification that divides the fleet into large, intermediate, local and regional vessels. The UNOLS operations support trends since 1993 shows that NSF continues to be the major contributor. There was a spike in NSF funding in FY95 due to the support of Indian Ocean operations. In 1997, the biggest increase in ship support came from "other" non-traditional support. This increase was largely due to the introduction of NAVOCEANO's ship time. International support for the DERBYSHIRE cruise was also a major "other" contributor. Don showed how the "other support" was distributed among the ship classes with the largest share of the "other" ship time on the large ships. Regional vessels have the second largest share of the "other support". Although the NAVO support is high in FY97, the traditional "other" support is down.

In summary, NSF predicts that if fleet support returns to the traditional sponsors only, a reduction of the fleet size would probably be necessary. Support from traditional sponsors has declined in recent years. New ships have been added to the fleet, increasing costs by approximately \$4.8M in 1997. Outside support in 1997 from NAVO and the UK may not be available in future years. NSF predicts that all of these factors make the future of the large ships vulnerable.

Don concluded by reviewing some of the quotes from the Ocean Studies Board report, "*Oceanography in the Next Decade*" - *Building New Partnerships*.

**Office of Naval Research (ONR) and Oceanographer of the Navy** - Pat Dennis gave the reports for the Oceanographer and ONR. He began with an update on the Navy's TAG-60 Class construction efforts. PATHFINDER, TAG-60, has been operating since summer and is planned to work in waters away from the U.S. for the next ten years. SUMNER and BOWDITCH (TAG-61 and TAG-62) are both in operation. HENSON, TAG-63, was launched in the fall. Presently, the budget includes funds for TAG-64. If built, there will be a nationwide "name the ship" contest for grades K-12. The Navy hopes that there will be funds appropriated for construction of a TAG-65 ship.

Pat was asked by the Council if the change in ONR's formula to support ship time (Facilities pay 80%/science program pays 20%) has made a difference in the amount of ship time being funded by ONR. Pat indicated that it is still hard to tell. However, he noted that Admiral Gaffney is a strong supporter of

ocean research. His goals are not to allow the ONR research budget to shrink and if possible, help it grow. Presently, there have been no changes in Sujata's facilities support budget.

**National Oceanographic and Atmospheric Administration (NOAA)** - Beth White provided the report for NOAA beginning with an update on ship construction and operations. Delivery of NOAA's AGOR, RON BROWN, is scheduled for late March. The ship will then transit to Norfolk, VA for outfitting before starting science operations in August. The ship will undergo its PSA during February to April 1998. The KA'IMIMOANA's cruises are going well. Preparations for the ship's A-76 are in progress and a work statement is expected to be completed by late February. DELAWARE II has completed its shipyard work. The FASTEX cruise on KNORR in the North Atlantic is progressing smoothly. The next NOAA cruise using a UNOLS ship will be on REVELLE. Beth reported that NOAA funds for 1997 have not yet been distributed within NOAA.

Beth reviewed the OAR requests received for NOAA ship time in 1998 and 1999, see [Appendix VIII](#). The 1998 Class I requests for the North Atlantic include three major programs: OACES, CO2 cruise in June; ACCE transatlantic cruise in January/February; and a Brazil Current cruise in June to August. There are four major, non-KA'IMIMOANA program requests in the Pacific: Global Drifters in the South Pacific, four PACS/TAO cruises, two vents cruises at Juan de Fuca, and two FOCI cruises off Alaska. UNOLS vessels may be considered for the NOAA Atlantic work because NOAA expects to use their vessels in the Pacific in 1998. There are also four coastal and nearshore programs: FOCI, Tsunami off Alaska, Sea Grant of the East Coast, Florida Bay and IASCS. UNOLS vessels may be considered for some of these programs. In 1999 six major, non-KA'IMIMOANA programs have requested ship time in the Pacific. These are GLOBAL DRIFTERS in the South Pacific, OACES in both the North and South Pacific, PACS in the Equatorial Pacific, VENTS at Juan de Fuca, ARM & TRMM in the Western Pacific, and FOCI off Alaska and in the Bering Sea. There are also three programs requested for the Indian Ocean in 1999: INDOEX, GOALS and ARM & TRMM.

**Naval Oceanographic Center (NAVO)** - Gordon Wilkes of NAVO provided an overview of the ten NAVO programs scheduled on UNOLS vessels, see [Appendix IX](#). The work will use eleven different ships. Four programs are in the Atlantic, five are in the Pacific and one program is in the Gulf of Mexico. NAVO welcomes university work onboard the ships as long as it does not hamper their programs. Gordon noted that working with UNOLS has provided a good learning experience. The NAVO visits to the ships and the communications with RVTEC have been beneficial. Woody Sutherland at Scripps is developing a procedure for processing the NAVO collected data.

In 1998, there is potential for additional NAVO work on UNOLS ships. There is interest in repeating the 1997 physical oceanography work, conducting a West Coast ODISTA survey and continuing the gravity surveys. There may also be a need to conduct an AUTECH range survey for the Naval Undersea Warfare Center, Newport, RI. Lastly, there is potential for an expansion of the SOCAL range environmental survey. All of the potential work would be on the same funding scope as this year's work.

The Council noted that there is a great deal of overlap in the geographic areas of interest between both academia and NAVO. The academic community would benefit by an overview of the NAVO work. The Council requested NAVO to prepare a brief written summary of the NAVO programs carried out on the UNOLS ships.

**Department of State** - Tom Cocke provided the report for the Department of State. A summary list of research clearances for 1996 is included in [Appendix X](#). The State Department now has a homepage on the Web. It includes speeches, legislation and treaties. Tom reported that an arrangement has been made with the UK that unless we hear from them after submitting a clearance request, the request is granted. The State Department is trying to make this same arrangement with Barbados. Mexico's new science coordinator has indicated that they will meet with the U.S. to discuss clearances issues. Hopefully they will be able to resolve the problem of late responses to clearance requests. Russia still remains a problem; no clearances have been granted in the last couple of years. Problems have also been experienced with Chile. The embassy received many complaints after three clearances were negatively affected by ship changes.

Tom reported that the State Department is being adversely impacted by many personnel cuts. As a result, there is increasing difficulty in processing clearances efficiently. Tom would welcome any assistance in this matter.

## **UNOLS ISSUES:**

**Science Mission Requirements (SMRs) for Central Pacific** - Pat Dennis provided a brief update on the status of the Navy's plans for construction of a replacement for MOANA WAVE. ONR is requesting UNOLS' input into the research needs for the central Pacific. At the December FIC meeting, Sujata provided a report on the new vessel plans, see [Appendix XI](#). Language was included in the Defense Authorization and Appropriation Bills which directs the Navy to review the SWATH and SLICE design options for replacement of MOANA WAVE. ONR plans to forward ship specifications to NAVSEA based on the input received from UNOLS and U.Hawaii. ONR and the Oceanographer of the Navy have issued a tasking letter to NAVSEA allowing them to conduct a SWATH market survey, study ship acquisition options, and begin preparing a program of actions and milestones. NAVSEA cannot develop a design that substantially exceeds the \$45M appropriation. NAVSEA will evaluate the SWATH, SLICE, and monohull designs in their considerations. The Navy plans call for release of an RFP by June 1997, selection of a ship builder in September 1997, ship delivery in September 1999, and operations by the year 2000. The schedule is very optimistic and slippage should be anticipated.

Ken Johnson reported that the FIC held a meeting on 12-13 December and invited seagoing scientists who had experience in the Pacific. Using the UNOLS SMRs for Class II and III monohulls and Class I and III SWATHs as guidelines, the group developed a set of SMRs for the central Pacific. Requirements were established for minimum allowable and desirable values. The requirements were then prioritized based on their desirable value. The FIC expressed concern regarding the cost of operating a new vessel.

Ken opened the SMR review to the Council and a lengthy discussion followed. Bob Knox began by remarking that the FIC's SMRs dictate a large ship design. Referring to Tables III and IV of the Betzer report, Bob noted that by the year 2000 a 28% shortfall is predicted. Bob made a series of calculations using the estimates from the Betzer report and data from NSF, see [Appendix XII](#). He estimated that UNOLS ship support in 1997 will be \$48,500. Bob extrapolated to estimate the fleet support expected in the year 2002. He pointed out that according to the Betzer Report and the AAAS predictions, the anticipated fleet support will be less than that required to meet the fleet costs. In the worst case, the gap between support received and fleet costs is estimated at \$22,845. Bob's calculations do not consider replacement for MOANA WAVE. NSF's and UNOLS projections show that we are heading for a major deficit in the short time frame.

Bob continued by asking what subset of work could most efficiently be done by a vessel located in Hawaii. Dick Pittenger provided a series of world maps showing the UNOLS fleet coverage by the intermediate and regional vessels, see [Appendix XIII](#). From the charts, it appears that a 3,000 nm range is adequate for the intermediate vessels. The ocean areas without shading can be covered by the five large ships.

## ***DAY TWO:***

**SMRs for Central Pacific (continued)** - The morning of Day Two was again devoted to review of the SMRs for the Central Pacific. During the discussion, the following points were made:

1. There is general support for a Class II/III vessel based in Hawaii to support ship operations in the mid-Western Pacific region.
2. There is general support for consideration of a SWATH design.
3. There is general endorsement of FIC's SMRs with the following qualifications:
  - a. They appear to fit Class I/II SMRs than Class II/III.
  - b. There is more than adequate Class I/II capacity in the current fleet through 2010.
  - c. The real need is for a Class II/III ship based in Hawaii.
  - d. The \$45M appropriation should meet this need.
  - e. Operational costs should be kept to a minimum since projections indicate a gap between the

- cost of the fleet and the support available (which we are dealing with some suggestions).
- f. It is important to get institutional commitment to provide significant continuing operations support.
  - g. Selection of an operating institution should be either immediate pre-selection of Hawaii or a fair and open competition.

Ken Johnson agreed to draft a cover letter for the SMRs and incorporate the Council's points. He will e-mail his draft to the Council prior to sending it to ONR.

Next the Council reviewed each FIC SMR and made specific comments:

**Cruise Range** - Reduce the minimum range value to 8,000 nm to be consistent with Class III specifications.

**Endurance:** The minimum endurance should be reduced to 30 days to be consistent with Class III specifications.

**Size:** Beam and draft should be restricted to sizes that would allow servicing of the vessel in the dry docks typically found throughout its proposed operating region.

The Council recommended that a statement regarding the cost of operation for the new vessel be included in the letter to ONR: "Due consideration should be given to reducing the cost of operation of this vessel. Such features as fuel efficiency, automation (to reduce manning levels), and ease and cost of maintenance should be factored into the design." Also, the Council agreed with FIC's recommendation to form an ad-hoc committee to work with ONR in the construction of the vessel.

**Future NAVO Funding** - Ken Johnson reported that CORE is exploring ways to secure NAVO funding for UNOLS ship time in 1998. The Council expressed interest in obtaining NAVO's long range plans to determine their future ship needs. The Council also discussed the potential of UNOLS ships doing NAVO work in other countries' EEZs. The topic will be discussed further at the next Council meeting.

**NOAA/UNOLS Cooperation** - A Memorandum of Understanding (MOU) between NOAA/OAR and UNOLS has been drafted. The MOU allows NOAA to enter RON BROWN into the UNOLS scheduling process. NOAA responsibilities will include supporting RON BROWN for a full operating year in addition to providing \$2.6 M of support for outsourcing of NOAA research and NOAA sponsored research on UNOLS vessels. The MOU addresses effective, cost efficient ship scheduling; safety standards; insurance practices; and coordination of equipment through RVTEC. It was recommended that cruise assessment reporting should be included in the MOU. The MOU, when accepted, would be in effect for two years unless terminated earlier.

The Council recommended that, if possible, the MOU be expanded to include all of the branches of NOAA which interact with UNOLS, in addition to OAR. This would include NURP. Ken Johnson asked the Council to review the MOU and provide comments to him as soon as possible.

**Reassessing the Status of a UNOLS Research** - Bob Wall reported on the recommendations of his subcommittee's efforts to reassess of the status of a UNOLS vessel. Prior to the meeting, Bob provided the Council with an Interim Subcommittee Report on, *THE UNOLS FLEET: Focused Resources in an Expanded Capacity*, by Steve Rabalais, Tom Royer, and Bob Wall. Bob gave a summary of the background and charge to the committee, see [Appendix XIV](#). The committee's charge was to re-examine the guidelines for becoming and UNOLS vessel and to evaluate the status of the UNOLS operator. Bob reviewed the small vessel issue and explained why it is an issue. In summary:

- the criteria for designating smaller ships as UNOLS vessels is not available.
- Coastal marine research conducted from smaller ships is growing.
- A number of smaller ships already exist and more will be coming on line.
- Small UNOLS vessels have advantages over small non-UNOLS vessels in attracting researchers and in obtaining equipage and technical support.



- UNOLS vessels are likely to be safer vessels.
- Support for UNOLS vessels is becoming more and more limited.
- UNOLS and the agencies have little control over the design, construction, location and who owns and operates these smaller ships.

Bob reviewed the two research vessel pipelines for construction, use and operation. In the first case, the ship is planned, built and operated Federally and by the National community. Use and operations are in accordance with UNOLS/Federal policies. In the second case, the ship is built and operated by the institution or state. Use and operations are variable and the crux of the issue. The subcommittee recommended that UNOLS' goal should be to provide a fleet of sea-going ships that best meets the needs of the academic marine research community with a maximum of safe and effective operations; and a minimum of cost to the Federal agencies. Possible directions to follow to achieve this goal were outlined:

1. Maintain status quo.
2. Select and implement one of the three models provided by the subcommittee in their interim report.
3. Define and implement a different model.
4. Collect additional information on:
  - a. The level of interest in the community of UNOLS-designation for smaller ships- and under what conditions.
  - b. Policies that would foster regional cooperation and sharing.
  - c. Agency views/policies related to this issue:
    - i. Ship support policies for UNOLS vs. non-UNOLS ships
    - ii. Level of responsibility (Federal) for small ships.

It was noted that this is a timely issue. Rick Jahnke of Skidaway recently sent a letter to Ken Johnson requesting UNOLS status for their BLUE FIN replacement vessel, see [Appendix XV](#). Conceptually, the replacement vessel will be a 90-100 foot, fiberglass monohull outfitted for general-purpose oceanography. Don Heinrichs reported that Mike Purdy has begun a review within NSF on the topic of small vessels. Their program managers are being polled to determine the NSF use of small vessels. They expect to have their review completed later in the winter.

The Council recommended that the subcommittee collect additional information on this subject. They were also asked to research the ship needs of the coastal community.

**Scheduling Ad-hoc Review Group** - Jack Bash reported on the Ship Scheduling Procedure Ad-hoc Review Group meeting held on 7 January. The draft minutes of the meeting were provided to the Council. An ad-hoc committee was formed to examine all areas of the scheduling process and to consider how it might be improved. The committee was chaired by Rick Jahnke and included Bob Detrick, Pat Dennis, Dolly Dieter, Dave Epp, Robert Hinton and Rose Dufour. In general, the group agreed that the community needs educating on scheduling and that there is a need to increase communications between the PIs and schedulers. The group recommended that the ship time request form be modified to be a two tier system. The first tier would be used to establish preliminary schedules. The second tier would be used after the science program was funded and would provide detail requirements/constraints of the cruise. Schedulers would establish an electronic folder of all correspondences relating to a ship time request. A world map would be posted on the Web which would include all ship requests by region. Also, the group recommended establishing track charts by year for each ship.

The Council recommended including a disclaimer at the top of each schedule noting that it was tentative and subject to change. The need to re-educate the community on the realities of operations was noted and it was recommended that a ship scheduling primer be developed.

**White Paper on Crewing Requirements** - Ken Johnson lead a discussion on the need to develop a white paper on crewing requirements. The new Coast Guard admeasurement rules essentially eliminate the opportunity for builders to construct large ships that are under 300 gross tons. Ships over 300 gross tons are required to be "Inspected" vessels. This could have a serious impact on the ability to build ships comparable to the Class III and IV research vessels now operating. The inspection requirement normally brings with it a need for a larger crew. Will there be no future ships in the 150 to 200-foot range that carry

a crew of 12 or 13? Ken reported that we need to assess the actual meaning of the new Coast Guard regulations and whether or not there are other avenues to peruse to keep the crew size down (thus reducing the daily operating cost). Ken has discussed this matter with naval architects, The Glosten Associates, who are prepared to conduct a study, see [Appendix XVI](#). The study could be completed in time for the summer FIC meeting if Glosten were to get the go-ahead soon. The UNOLS Office is to submit a supplemental proposal to conduct the above study. The scope of the requirements will need refining.

**Concept Design for an Intermediate/Coastal Research Vessel** - The Council discussed the need to develop a conceptual design for Intermediate and Coastal research vessels. They considered it important to have such designs "on the shelf" so that institutions will have a base from which to work, particularly if new or "found" money becomes available for ship construction. Don Heinrichs cautioned that any proposal would need to be well thought through. He reminded the Council that three such proposals have failed funding in the past. The proposal should make it clear that the effort is for the benefit of the Community at large and that funding could come from a variety of sources. The consensus of the Council was that this effort should proceed after the completion of the white paper on crewing requirements.

**CORE/UNOLS Cooperation** - A draft MOU between CORE and UNOLS was distributed to the Council for their review. Ken lead the discussion on the history of the draft and the reason for the wording. The Council was concerned that UNOLS did not become involved in any lobbying effort and that this MOU can not be construed as such. The MOU was approved and will be forwarded to the CORE Board for their approval, see [Appendix XVII](#).

**Interim Fleet Improvement Plan (IFIP)** - Chris Mooers opened the discussion by presenting the revised IFIP. The revised plan removed references to regional consortium. Discussion followed. The Council was concerned that the Plan needs to conform with the FIC report "*Projections for UNOLS' Future-Substantial Financial Challenges*" and that the numbers are based on the same premise. Chris will make the minor changes suggested and publish the IFIP.

**SEA CLIFF Retirement** - Mike Perfit provided the Council with the background on the Navy's proposed retirement of SEA CLIFF and TURTLE. The Navy plans to retire TURTLE at the end of FY97 and SEA CLIFF at the end of FY98. DESSC has been asked by the Navy for input regarding utilization of the Navy's deep submergence assets and an assessment of deep submergence research objectives for the next few decades. The Navy also approached WHOI requesting the cost implications for the Deep Submergence Group to transition SEA CLIFF into the National Facility. Mike is preparing a questionnaire for the community to solicit their views. An ad hoc committee will meet in March to review the results of the questionnaire and make a recommendation to the Navy. Attached, as [Appendix XVIII](#), are view graphs presented by Mike.

**Undersea Vehicles and National Needs** - Mike reported that a recent National Research Council (NRC) Report titled "Undersea Vehicles and National Needs" has been published. The report had been several years in the making and much of the information is dated. The report is primarily technologically oriented and approaches the matter of undersea vehicles from an engineering standpoint and not from the perspective of science or research. Charlie Bookman of the NRC suggested a meeting with Mike and others to review the report and determine if it can be of value to the research community.

**UNOLS Committee Appointments** - Ken Johnson announced the appointments for the Executive Committee. These are Ken Johnson, Tom Royer, Dick Pittenger and Bob Wall. The new Chair of RVOC is Paul Ljunggren and the Vice Chair is Steve Rabalais. The new Chair of RVTEC is John Freitag. The AICC member appointments are Jim Swift, Chair, Lisa Clough, Larry Lauver, Kelly Falkner, Glenn Cota, Tom Weingartner, Joe Coburn, and Dan Lubin.

**Other UNOLS Business** - Ken Johnson discussed a letter he received from Rick Jahnke concerning the replacement of BLUE FIN, see [Appendix XV](#). Skidaway would like a commitment from UNOLS that this replacement would be a UNOLS vessel. The Council suggested that the reply should explain to Skidaway that UNOLS would entertain an application for the new ship and that there were no changes to UNOLS policy regarding the designation of research vessels in the UNOLS Fleet. Ken will write the letter.

**Calendar for UNOLS Meetings** - Chris Mooers announced that the next FIC meeting would be the week of 21 July at in Rhode Island. The summer UNOLS Council meeting will be in Michigan, probably Grand Haven. Jack Bash would survey the Council to select the best dates.

*The meeting was adjourned at 3:00 p.m.*