

APPENDIX X

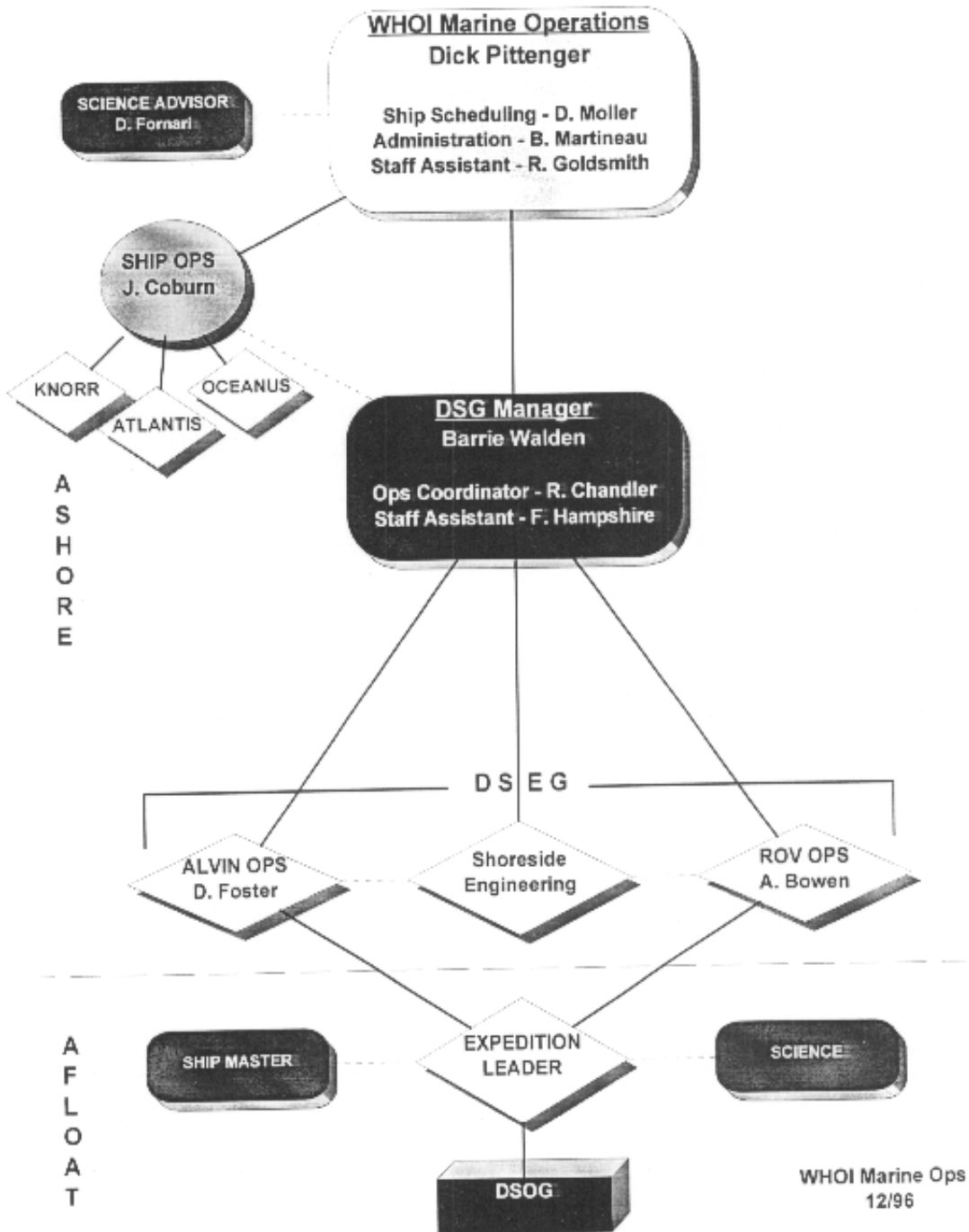
WHOI Integrated Deep Submergence Plan

Integrated Deep Submergence Plan

- *Integration of ALVIN and ROV Programs*
- *Plan for Shore Based and Shipboard Operations Draft*
- *Ops Scenarios for Combined and/or Fly-away Use*
- *DSG Communications*

NATIONAL DEEP SUBMERGENCE FACILITY

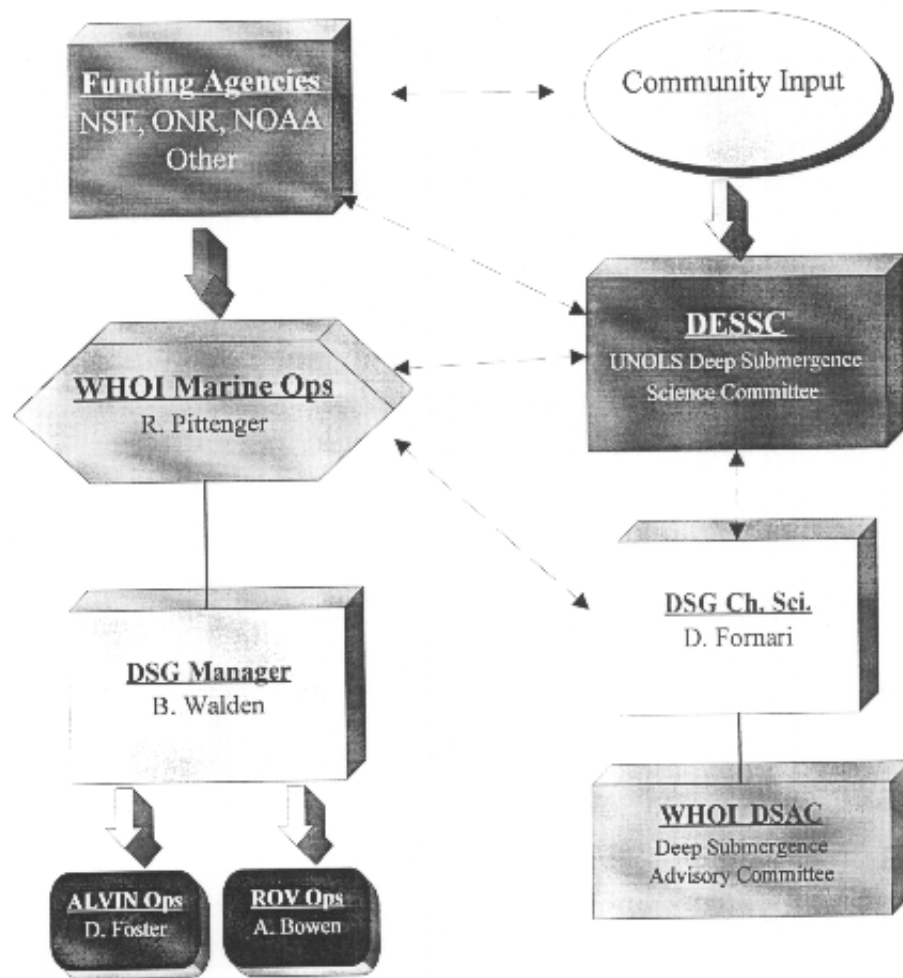
Personnel



DEEP SUBMERGENCE FACILITY

Functional Relationships

DESSC / WHOI / Funding Agencies



Integrated Deep Submergence Facility

Operational Issues

Joint Vehicle Operations & Safety Initial Recommended Guidelines

- The at-sea operations of deep submergence vehicle personnel and facilities will be planned in accordance with the proposed/funded vehicle complement requested by the PI. Under normal circumstances only those vehicles requested/funded will be available during a cruise. WHOI-DSG will do all possible to accommodate to exceptional contingency situations in consultation with the funding agencies.
- ROV Jason, Argo-II and the DSL-120 sonar are not "night-time" survey vehicles.

Integrated Deep Submergence Facility

Operational Issues

Joint Vehicle Operations & Safety Initial Recommended Guidelines

- To ensure safety of Alvin and ROV/tethered vehicle personnel and systems, a 24-hour switch-over period should be factored into joint-vehicle science/operational plans. As personnel gain experience with joint operations, we hope to reduce, somewhat, this initial period.
- Switch-over times for ROV and tethered vehicles will depend on various operational and logistical circumstances during a cruise, but for general science planning the following numbers may be used: Jason to Argo-II and vice versa - 12-18 hrs, DSL-120 sonar to either Jason or Argo-II and vice versa - 6-12 hrs. These times are based on shared use of vehicle sensors and telemetry systems for Jason and Argo, and experience during 1996 operations.
- It is important that PIs inform WHOI-DSG early of special requirements for their cruise so that they can be incorporated into facilities planning.

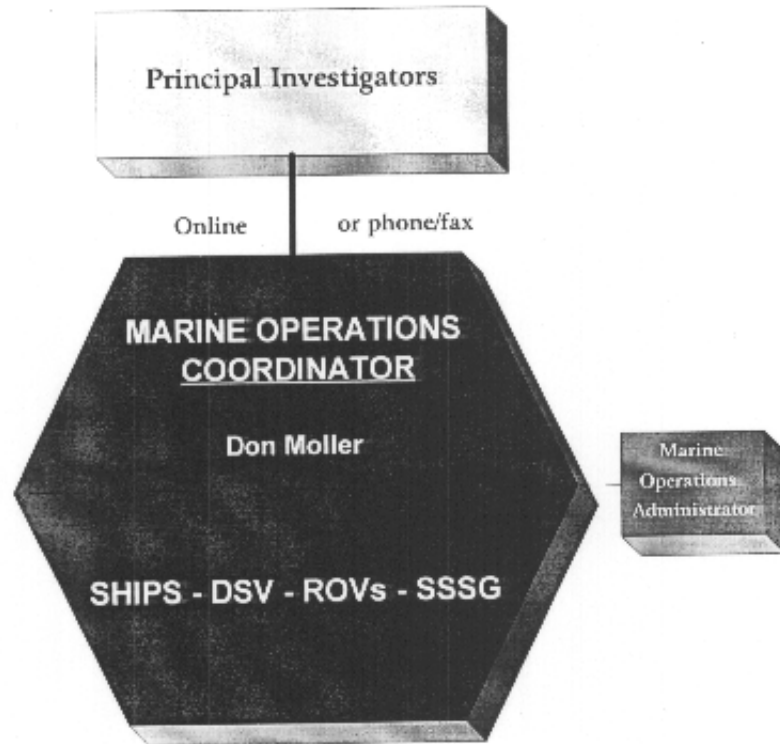
Integrated Deep Submergence Facility

Management Issues

- Advance planning and scheduling of deep submergence science programs are necessary for cost-effective, integrated facility operations and efficient management of personnel.
- Synergistic- and cost-benefits accrue from operating all the National Facility deep submergence vehicles from R/V ATLANTIS, however, maintaining a "fly-away" capability for ROV and tethered vehicles ensures flexibility to accommodate science programs in diverse geographic settings.
- Projected operational models, facility costs and scheduling impacts require well-established protocols between federal funding agencies, UNOLS and WHOI. Updating and revision of the Memorandum of Understanding between the federal supporting agencies should accommodate the new integrated nature of the U.S. Deep Submergence Facility and projected future operations.
 - Adequate personnel and engineering support and long-range planning for vehicle and equipment upgrades should be factored into the continued support structure for the National Deep Submergence Facility.

WHOI MARINE OPERATIONS

Centralized Cruise Preparation and Science Liaison



- SINGLE POINT OF CONTACT
- NO HAND OFFS -- Coordination stays with this office through all stages
 - Planning
 - Scheduling
 - Mobilization
 - De-mobilization
 - Billing

WHOI Marine Op
9/96

WHOI Marine Ops Communication Path



Investigators browse
WHOI Marine Ops web site

www.marine.who.edu

- On-line manuals, schedules and information
- Vessel/vehicle specifications
- Cruise planning questionnaire submission

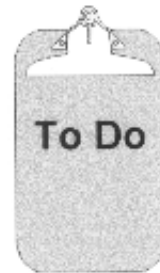


Don Moller

Marine Operations Coordinator



- Collates PI requirements
- Distributes cruise prospectus
- Responds to questions/problems

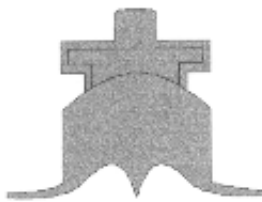


Information Flow

Scientists



Shipboard
Ops Groups



Shoreside
Engineers




Communication Tools

WWW

- Electronic editions of all reference material
- Instant submission/receipt of requirements
- Timely publishing of all cruise-related data

Lotus Notes

- Groupware allows sharing of information among various WHOI technical centers
- Multiple databases contain all cruise details
- All parties see current information -- no impediments to planning process
- Data easily published to WWW for viewing by investigators

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[WHOI Marine Operations Home Page](#)

[WHOI Ships & Vehicles Page](#)

[ALVIN Page](#) [ROVs Page](#)

[UNOLS/National Deep Submergence Facility VEHICLE REQUEST FORM](#)

[Cruise Planning Questionnaire](#)

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Cruise Prep Sequence

