



Atlantis - Alvin Background



- **There are always equipment problems.**

- **Ship, sub are complex.**
- **Ship: engines, Z-drives, electrical, A-frame.**
- **Alvin: computers, software, windows, etc.**

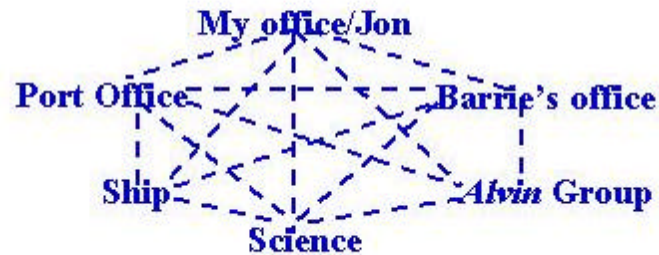
We have customarily worked our way through problems.

- **This time we were not successful.**



Generalized Problems

- Poor Communications



- Under-estimation of scope
- Under-reaction/resources
 - Time
 - People
 - Help
- Design



R/V Atlantis/Alvin **Programmatic and Operational Issues**

- **Ship construction and continuing maintenance problems.**
- **Engineering staffing: Shipboard and shore-based.**
- **Decision to evaluate 'unmanned' engine room approach.**
- **A-Frame maintenance.**
- **Budget driven decision to not do maintenance during Spring 2001 during *Alvin* overhaul.**
- **Funding availability.**
- **Inter-group communications.**
- **Scheduling process.**
- ***Alvin* data logging/computer hardware/software.**

Richard Pfitzinger
May 2002



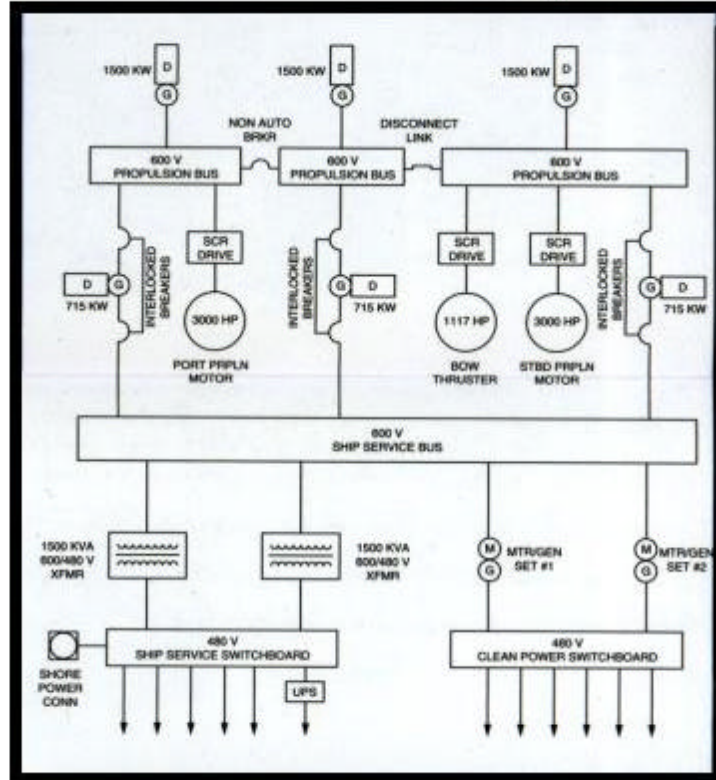
WOODS HOLE OCEANOGRAPHIC INSTITUTION

Removal of Port Motor





Atlantis Electrical System





Atlantis Sea Trials

- **Agenda**

- **Clear ABX & USCG restrictions.**
- **Operate all six engines at full power.**
- **Exercise main plant (propulsion and electrical).**
- **Operate propulsion at full power.**

- **Results**

- **Motors now very good.**
- **Control system better.**
- **Monitoring system improved.**
- **Not quite full power – 14.1 kts @ ~85% load (due to control system limitations).**
- **All restrictions/ABS & USCG issues cleared.**



Alvin Engineering Dives

Agenda

- **Test improved computer hardware configuration.**
- **Demonstrate data acquisition, logging, and reduction.**
- **Test upgraded navigation software.**
- **Test operability of science equipment.**
- **Test integration of Imagenex profiler**

Results

- **All computer hardware (except UPS) tested SAT.**
- **Data acquisition, logging, and reduction tested SAT.**
- **Navigation software tested SAT.**
- **Science equipment operability tested SAT.**
- **Imagenex profiler tested SAT. Data being processed for mapping.**





Corrective Actions Underway

- **Reviewing scheduling principles to ensure sufficient maintenance and training time.**
- **Better, more formalized communication at all levels.**
 - **Marine Operations Management Meetings (bi-monthly) include Marine Ops Committee Chair and Chief Scientist for Deep Submergence.**
 - **Directive to Masters to get involved with science and all aspects of ship evolutions.**
 - **Frequent follow-ups and checks.**
- **Directed maintenance action and reports.**
- **Second science liaison person hired (John Dyke), and Jon Alberts will focus on *Atlantis/Alvin/ROVs*.**
- **Adding back an electrician and (?) two oilers.**



Alvin Internal Review Committee

- **Fred Sayles, Chair**
- **Bob Weller**
- **Susan Humphris**
- **Meg Tivey**
- **Dana Yoerger**

**National Deep Submergence Facility – Income from Licensing Fees of Imagery
DESSC May, 2002 Meeting**

**National Deep Submergence Facility
Income from Licensing Fees of NDSF Imagery
Jan-Dec, 2001**

Source: Ms. Shelley Dawicki, Director of WHOI Media Relations

The Media Relations Department had another record year, handling approximately 3,500 requests for visuals or information related to deep submergence. We distributed about 1,000 press kits or information packages as part of our on-going media relations activities, and participated in a number of media events related to deep submergence, including the September-October NOAA sponsored Dee East cruise and port call of R/V ATLANTIS in Charleston, SC.

**National Deep Submergence Facility – Income from Licensing Fees of Imagery
DESSC May, 2002 Meeting**

We also logged 342 visual requests in 2001, compared to 234 in 2000 and 214 in 1999. A number of visiting journalists heard presentations on or viewed NDSF assets during the year, among them the Knight Science Journalism Fellows from MIT and the Institution's own Ocean Science Journalism Fellows. Dozens of articles appeared in print in the U.S. and abroad, and dozens of television programs featured the National Deep Submergence Facility, including ABC News, National Geographic Channel, Discovery Channel, Science Channel (formerly Discovery Science Channel), PBS, The Learning Channel, The History Channel, and numerous other cable television program.

**National Deep Submergence Facility – Income from Licensing Fees of Imagery
DESSC May, 2002 Meeting**

Licensing Revenue: Total \$30,450.75

Income from video from the National Deep Submergence Facility Archive amounted to \$17,749.50. This breaks down to \$7,065 from the 1985/86 TITANIC expeditions, \$8,397 from hydrothermal vent cruises, and \$2,287.50 of vehicles, some of it topside and not actually part of the facility archives. For the sake of simplicity we have included it here.

Income from still images for 2001 from the NDSF amounted to \$12,701.25. Of this total, hydrothermal vents amounted to \$8,116.25 and 1985/1986 TITANIC images for \$4,585.00.
