APPENDIX IV

DSOG Unmanned Vehicle Status

Jason/Medea

- Control Van Rewire
- Medea Replacement
- Debug Telemetry Lockups
- Documentation
- Manipulator Testing

Argo II

- Improved Obstacle Avoidance Forward Looking Sonar
- Determine Source of Video Camera Focus Problems
- Thrusters for Heading Control
- Resolve Noise on LBL Transducer
- Single Van Operations
- Documentation

DSL 120

- Replace Depressor
- Refine Low Speed Tow Dynamics
- Design and Install Weight Dropper
- Determine suitable Upgrade Path for Surface Processing
- Documentation

New 3-Chip DSOG Video Camera and Pan and Tilt

3-Chip

- Studied Present Market and Technology
- Studied Present 3-chip Performance and Specifications
- Studied MBARI 3-chip Development Effort
- Developed Specs and RFQ for Camera Compatible with Both Alvin and

Jason

- New Camera will be Installed During 1996 Overhaul Period

Pan and Tilt

- Surveyed Commercial Vendors
- Identified Remote Ocean Systems as Preferred Vendor
- Discussed Performance History of ROS units with Users
- Acquired Quote
- To Be Installed During 1996 Overhaul

Jason Manipulator Test Program

Completed as of 6/95:

- Demonstration of Fiber Optic Connector Mating/Unmating
- Operational Pressure Tests to 1 0,000 psi
- Redesign of Gripper for More Gripping Force
- Identification of Hydrothermal Fluid Sampler Trigger Mechanism
- Development of Mechanical and Electrical Documentation
- Identification of Dock Test Program
    1. Gas Tight Sampler
    2. Major Sampler Bottle
    3. High and Low Temperature Probes
    4. Rock/Glass Sampler
    5. Rock Sampling
    6. Transfer of Samplers/Samples to/from Elevators
    7. Biology Samples

To Be Accomplished Before 1/96:

- Installation and Testing of New Gripper
- Implementation of Polar Coordinate Control
- Dock Trials
- Vehicle/Manipulator Pressure Tests to 6,000 Meters
- Installation on Alvin for a Portion of November Science Program

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Electronic Still Camera Characteristics

Vital:

- Analog Display of Acquired Digital Data
- Time Stamp at Acquisition
- Simple Real-Time Control
- Real Time Enhancement
- Adaptable to Both Alvin and ROV Power and Telemetry
- "High" Dynamic Range and Resolution
- Minimize Custom Software and Hardware
- Standard Data Format

Desirable:

- Real-Time Control of Focus
- Real-Time Zoom
- Real-Time Viewfinding

Image Processing and Mosaicking

This appendix includes a three dimensional graph of "DSOG Ummanned Vehicle Proposals" number of proposals by year and funding agency and a "DGOS Unmanned vehicles 1995/96" schedule. If a copy of these items is desired, contact the UNOLS office at:

e-mail unols@gsosun1.gso.uri.edu

phone (401) 792-6825

Return to Minutes