



# Allied Technology Group, Inc.

## Engineering and Technical Services

### Scientific Data Network (SDN) Program and Project Review



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GROUP INCORPORATED



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## Engineering and Technical Services

### Notional Requirements

- Provide assistance for the management of shoreside and shipboard electronics, information and science systems
- **Science Systems Operational Support:**
  - Assist the Coast Guard in identifying and acquiring technicians experienced in the calibration, set-up and operation of each shipboard science system
  - Provide for pre-deployment system set-up and testing to ensure the systems are fully operational
  - Schedule and tracks sensors maintenance and calibration of sensors
  - Provide underway technical support
- **Science Data Network System Management:**
  - Provide network / systems management, periodic network / equipment grooms, configuration management and on-site technical support
  - Maintain the computer network used for the acquisition, processing and archiving of underway scientific data and for providing email for the scientists
  - Manage the SDN to support navigation, acoustic, meteorological and oceanographic electronics



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### Science Data Network System Management (Continued):

- Configuration and support of underway email using satellite communications
- Provide SDN familiarization/operational training for the crew and deploying scientists
- Provide network / systems management, periodic network / equipment grooms, configuration management and on-site technical support
- **Underway Science Systems Support:**
  - Provide from initial systems checks to final equipment set-up for the deployed science users
  - Provide ship's force / deployed science users support for the day to day operation of the onboard science data systems



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### Shipboard Science Systems Include:

- **Winch wire out and tension data**
  - Science Winch Data Acquisition System (DAS)
- **Acoustics**
  - RDI 150 KHZ Acoustic Doppler Current Profiler (ADCP)
  - RDI 75 KHZ Acoustic Doppler Current Profiler (ADCP)
  - SeaBeam 2112 Bottom Mapping Sonar
  - BATHY 2000 Sub-Bottom Profiler
  - Knudsen Sub-Bottom Profiler
- **Oceanographic**
  - Expendable Bathythermograph – DOS
  - Conductivity/Temperature/Depth (CTD) Rossette System
  - Integrated Bridge Voyage Management System (VMS)
  - Seabird Thermosalinograph
  - Fluorometer
- **Meteorological**
  - Terascan – Sun Ultra SPARC
  - R. M. Young platinum air temperature sensor
  - R. M. Young wind vanes



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### Underway Systems Support (Efforts to Date)

- **Hydrographic Data Acquisition Systems Support for USCGC Healy**
  - Field test and validate the Hydrographic Data Acquisition Systems to include CTD Sensors, Thermosalinographs (TSG), XB(CT)D and Autosals
  - Install and test cast each of the new SBE 43 oxygen sensor and provide training to MST's
- **Issues/Concerns/Status to Date:**
  - All contractual obligations have been met with no unresolved issues
- **Supported By:**

#### **Scripps Institution of Oceanography**

8602 La Jolla Shores Drive  
La Jolla, CA. 92037

**Dates:**

24 June 2003 - 01 July 2003



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### Underway Systems Support (Continued)

- **USCGC Healy, Northwest Passage**
  - Prepare 75 & 150 kHz ADCP Systems for Data Collection
  - Develop a Meta Data scheme for the ADCP Systems to be implemented
  - Operate the 75 & 150 ADCP Systems to ensure continuous quality data
  - Maintain daily logs for the 75 & 150 ADCP Systems
- **Issues/Concerns/Status to Date:**
  - All contractual obligations have been met with no unresolved issues
- **Supported By:**

### University of Delaware, College of Marine Studies

006 Robinson Hall

Newark, DE 19716-3501 USA

**Dates:** 16 August 2003 - 30 August 2003



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### Underway Systems Support (Continued)

- **Metadata Recording System Support**

- Provide development and implementation of an electronic metadata recording system for the USCGC Healy underway data acquisition systems including SeaBeam, Knudsen, Bathy 2k, RDI 150 and 75 kHz ADCP, expendable probe deployment including XCTD and XBT, underway science seawater TSG and Fluorometer data and the full suite of meteorological data

- **Issues/Concerns/Status to Date:**

- All contractual obligations are current with no unresolved issues

- **Supported By**

### Lamont-Doherty Earth Observatory, Columbia University

1210 Amsterdam Avenue

MC 2205

New York, NY 10027

Dates:

14 August 03 – 30 June 04



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Engineering and Technical Services

## Underway Systems Support (Continued)

- **SDN Systems Requirements Documentation**

- Investigate, analyze and document the operational and functional system requirements of the Science Data Network (SDN)

- **Issues/Concerns/Status to Date:**

- All contractual obligations are current with no unresolved issues

- **Supported By**

**Syntek Technologies, Inc.**

4301 North Fairfax Drive

Arlington, VA 22203



**Dates:**

**U.S. COAST GUARD** 01 October 03 – 13 February 04



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## Engineering and Technical Services

### Underway Systems Support (Continued)

- **CTD Assembly and Operational Testing for USCGC Polar Star**
  - Assist in the CTD assembly and operational testing
  - Assist in testing of old CTD and winch via shipboard deepwater CTD tests
  - Train MST's during transit during CTD Casts
- **Issues/Concerns/Status to Date:**
  - All contractual obligations are current with no unresolved issues
- **Supported By**  
**University of Alaska, Fairbanks, Marine Operations**  
201 Railway Avenue  
Seward, AK 99664

**Dates:** 30 October 2003 – 11 November 2003



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### Underway Systems Support (Continued)

- **Bottom mapping Sonar**
  - Hydro test the wells
  - Evaluate the condition of the projectors, hydrophones and wet cables
  - Supervise the installation of the new SeaBeam Orange acoustic window
- **Issues/Concerns/Status to Date:**
  - All contractual obligations are current with no unresolved issues
- **Supported By**  
**L-3 Communications SeaBeam Instruments**  
344 Vanderbilt Avenue  
Norwood, MA 02062

Dates:



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01 December 2003 – 15 December 2003



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### Underway Systems Support (Continued)

- Science and Navigation Sensors
  - Assist with the Quality Assurance (QA) for the SeaBeam transducer array precision survey
  - Assist with identifying the sensors to be surveyed, reference marks and locations of benchmarks
- **Issues/Concerns/Status to Date:**
  - All contractual obligations are current with no unresolved issues

- **Supported By**

**Lamont-Doherty Earth Observatory, Columbia University**

1210 Amsterdam Avenue

MC 2205

New York, NY 10027

**Dates:**



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10 November 2003 – 31 January 2004



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### Systems Support Acquisitions to Date:

- **Carousel Water Sampler, Sea-Bird Electronics**
- **Audio-Visual Equipment, B & H Photo Video**
- **Issues/Concerns/Status to Date:**
  - **Carousel Water Sampler delivered 15 September 2003**
  - **Audio Visual equipment delivered 14 July 2003**



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# Allied Technology Group, Inc.

## Engineering and Technical Services

### Allied Technology Group Point of Contacts:

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