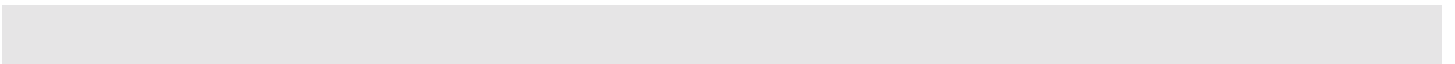


Project Number: 200109

Project START year: 2002 Project END year: 2002

Project Manager: Brian Schlining:

Core Mooring Data - MDUC



1) Abstract (new and continuing projects)

This MDUC project provides for the institutional support of “core” data from MBARI moorings.

The primary elements of this project are:

- Maintenance and minor development of software used for the processing and archiving of mooring data.
- Data processing and validation by Fred Bahr at the Naval Postgraduate School.
- Data archiving and dissemination through the mooring database.
- Data validation through Science data “champion”.

2) Proposal

A) Overview

A subset of mooring data (surface CTD, T-string, meteorological, GPS, ADCP, and pCO₂ data) have been designated as core data streams, which means that support for the collection, processing, and archiving of the data is provided on an institutional basis rather than through individual projects or divisional budgets.

Brian Schlining will manage this project, and the MDUC chair (David Caress) will serve as lead scientist.

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The core mooring data team includes:

- Brian Schlining (IAG)
- Fred Bahr (NPS)
- Francisco Chavez (Data Champion, Science)
- David Caress (MDUC, Science)

The project will include a subcontract for Fred Bahr of NPS to continue his data processing and validation efforts.

B) Approach to Archiving Mooring Data

One ideal central to this project is to store the data in a manner that will allow the data to be useful years from now. The requirements for the data archive format include:

- Operating-system independent
- Platform independent
- Stable, non-evolving format
- Self-describing
- Allow for efficient access

The format of choice is netCDF¹ (network Common Data Format), which is currently supported by the University Corporation for Atmospheric Research (UCAR). Accessing data stored in netCDF can be accomplished through the use of a data-analysis package that supports this format or through a netCDF software API. Software packages used at MBARI that allow a user to access netCDF files directly include IDL, GMT, Matlab, and Ferret. NetCDF API's are also available for a variety of programming languages, such as C, FORTRAN, Perl, and Java.

In order to allow exchange of our data with other institutions and for compatibility with existing data analysis and viewing software, this project stores data following the COARDS conventions for netCDF².

C) Approach to Disseminating Mooring Data

In order to provide simple and convenient access to the core mooring data, a web interface to the data archive is accessible at <http://dods.shore.mbari.org:8080/mbariMoos/jsp/ncarchive.jsp>. The web interface is written using Java servlet and JSP technology. IAG time for maintenance, development, and upgrades to the web interface are included as part of this proposal.

Other methods of accessing the core mooring data archives are also being explored as part of the larger MOOS data management project. For 2002, XML technologies will be explored as a method of data presentation and exchange.

3) Budget

The 2002 budget includes the following:

- 5 days for data validation by Francisco Chavez

¹ More information regarding netCDF is available at <http://www.unidata.ucar.edu/packages/netcdf>

² Cooperative Ocean/Atmosphere Research Data Service. The standard is available at http://ferret.wrc.noaa.gov/noaa_coop/coop_cdf_profile.html

- 20 days for pCO₂ data processing, project management, web interface support and development, and software support by Brian Schlining
- 2 days IS support for maintenance of storage disk space and a java servlet container.
- \$12,000 for a subcontract to NPS for Fred Bahr's time to perform quality control on the surface CTD, t-string, meteorological, GPS, and ADCP data sets.
- \$1,200 for upgrading the Java IDE used for developing the web interface.

4) Milestones

	Milestone 1	Milestone 2	Milestone 3	Milestone 4	Milestone 5	Total Resources ³ for each resource category for all milestones listed here
Milestone date	End of each month	July 2002	July 2002	Sep 2002	Within 1 month of a mooring recovery	
Milestone description	Review of data quality by Data Champion	Review of data quality by MDUC	Recommendati ons and budgeting for 2003	MDUC finalizes budget and recommendati ons for 2002	Quality control of core mooring data streams and submission to data archive	
EE						
SE						
ME						
IAG			3		5	8
ME Technician						
EE Technician						
Machine Shop						

³ This number should be same as the number you entered on the resource requests for this particular resource