

Project Number: 200105

Project Start: Jan 1, 2005 Project Duration (in years): ongoing

Please indicate what type of project is being proposed (mark all that apply).

☐	☐	☐	☒	☐
Feasibility/Scoping	Development	Research	Infrastructure	Education

Project Manager/PI: David Caress

**Project Title: Core Navigation -
MDUC**

1) ABSTRACT (new and continuing projects)

This MDUC project provides for the institutional support of “core” navigation data from MBARI ships and ROVs. This is a continuing project since 2001.

2) PROPOSAL

a) The problem addressed (new projects only)

Statement of the problem

[Enter text here]

Why it is important

[Enter text here]

Present state of art/understanding

[Enter text here]

How it relates/contributes to MBARI's mission and strategic plan

[Enter text here]

b) Approach to the problem (new and continuing projects)

ROV and ship navigation 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.

During 2004 the USBL systems used for both ROV Ventana and ROV Tiburon have been replaced with Sonardyne Fusion systems. As of this writing, the raw USBL tracking performance is good on both systems, but additional effort will be required to achieve fully satisfactory performance from the Kalman filtering software. We expect the USBL operations to be stable by the end of 2004. The archiving of the ship and ROV navigation data has remained stable this year, but will likely have some structural changes next year as SSDS encompasses additional data streams.

The primary elements of this project are:

- Maintenance of software used for the processing and archiving of ROV and ship navigation, primarily by support engineering.
- Data archiving and dissemination through the expedition database.
- Data validation through a Science data “champion”.
- Development of new software needed for the archiving of ROV and ship navigation.

The core navigation data team for 2005 will include:

David Caress (Data Champion, MDUC, Science)
Dale Graves (DMO)

2005 Proposal Form – Internal-Only Projects

Submission Deadlines: Phase I – August 30th, Phase II – October 4th.

Rich Schramm (Support Engineering)
ROV Pilots (DMO)

The MDUC Chair (David Caress) will serve as both project manager and lead scientist for this project, and is responsible as the navigation data “champion” for validation of the archived navigation and for coordination of efforts to respond to navigation problems and issues as they arise. Dale Graves of DMO will serve as the lead engineer, and will be responsible, in conjunction with the ROV pilots, for troubleshooting and maintenance of the shipboard navigation hardware and software (e.g. the USBL systems, GPS units, attitude sensor, and associated computers and software). Rich Schramm of Support Engineering will be responsible for maintenance of the shore side navigation data processing and archiving of the ship and ROV navigation data.

c) Project team (new and continuing projects)

The core navigation data team for 2005 will include:

David Caress (Data Champion, MDUC, Science)
Dale Graves (DMO)
Rich Schramm (Support Engineering)
ROV Pilots (DMO)

d) Project lab space (new and continuing projects)

N/A

3) BUDGET JUSTIFICATION (new and continuing projects)

We request 15 days of Caress and 6 days of Graves. Schramm is part of support engineering, and thus his effort must be requested through the year as needed.

4) MILESTONES (new and continuing projects)

	Milestone 1	Milestone 2	Milestone 3	Milestone 4	Milestone 5	Total Resources ¹ for each resource category for all milestones listed here
Milestone Date						
Milestone Description						
EE						
SE						
ME						
IAG						
Machine Shop						

¹ This number should be the same number you entered on the resource requests for this particular resource.