2004 Proposal Form – External/Shared Projects (fully or partially funded by an external grant, and MBARI resources are being requested).
Submission Deadlines: PhaseI: 8:00 a.m. on August 4th. Phase II: TBD

INTERNAL Project Number: 900418
EXTERNAL Project Number: 701107

Project START: Jan 1, 2004 **Project Duration (in years):**

Project Manager/PI: David Caress

Project Title: MB-System

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1) Abstract (new and continuing projects)

This project provides for the development and support of MB-System, an open source software package for the processing and display of swath mapping sonar data. This is a collaborative, NSF funded project involving David Caress of MBARI and Dale Chayes of the Lamont-Doherty Earth Observatory. The MB-System software is distributed as source code by anonymous ftp, and is widely used by the international marine geology and geophysics community. The MBARI component of the MB-System project includes a five-year NSF-OCE grant (OCE-0083082) providing 1.5 months salary per year for David Caress from 6/15/2001 through 5/31/2006. This three year project (2004-2006) requests 1.5 months/year of effort from David Caress to match the salary provided in NSF grant OCE-0083082. Thus, David Caress will put 3-months/year effort total towards development and support of MB-System for the external community.

2) Proposal(Replace this text with proposal text from your external proposal submission)

This project provides for the development and support of MB-System, an open source software package for the processing and display of swath mapping sonar data. This is a collaborative, NSF funded project involving David Caress of MBARI and Dale Chayes of the Lamont-Doherty Earth Observatory. The MB-System software is distributed as source code by anonymous ftp, and is widely used by the international marine geology and geophysics community. Individuals from more than 120 research institutions, universities, and companies worldwide have downloaded the most recent distribution of MB-System.

We have completed a major new version of MB-System (5.0) that will be released soon in conjunction with a draft "cookbook" for using the software, a considerably improved web site, and a permanently archived discussion list. Version 5.0 of MB-System is structured to enable the management of large datasets. The new software integrates editing and analysis tools with a single program, mbprocess, which outputs processed data files. This parallel approach now allows processing to proceed in a more flexible, efficient fashion. An additional important benefit is that the data management structure allows the active processing environment to be embedded within the overall data archive. Within this structure, bathymetry grids, sidescan mosaics, maps, images, GIS layers, and other data products are generated using the most up-to-date processed data. If one layers data dissemination tools and environments on top of the data archive, the served data products will also automatically reflect the latest processing efforts. The MBARI component of the MB-System project includes a five-year NSF-OCE grant (OCE-0083082) providing 1.5 months salary per year for David Caress from 6/15/2001 through 5/31/2006. During 2001-2003, MBARI has provided matching support of 1.5 months of Caress' effort within the Seafloor Mapping Project. Following a discussion with Keith Raybould, it seems logical to structure the efforts to develop and support MB-System for the external community as a separate project for 2004-2006. There will be additional MB-System development effort by Caress targeted at supporting data collected using the MBARI Mapping AUV, but this internal support will be budgeted in the new 2004 Seafloor Mapping Project.

The MB-System project is expected to continue beyond 2006. A renewal NSF proposal will be submitted during 2005 to obtain continued external support.

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3) Expense Budget Justification (new and continuing projects)

This three year project (2004-2006) requests 1.5 months/year of effort from David Caress to match the salary provided in NSF grant OCE-0083082. Thus, David Caress will put 3-months/year effort total towards development and support of MB-System for the external community.

This budget also includes 1.5 months of Caress' time as MBARI matching for support in another external NSF-funded project (Collaborative Research: Test for a Chemical Component to the uplift of Midplate Swells; MBARI external project 701335).

The total request for Caress' time is 90 days, or 4.5 months.