

MOOS Program Review

1. General

1.1 The MOOS program at MBARI comprises of two major observatory concepts (a) cabled observatories and (b) mooring based observatories. The MBARI cabled observatory effort is focussed on deployment of a test bed for NEPTUNE called MARS that will be installed in Monterey Bay in 2004. The second concept, the mooring based observatories, is the subject of this program. Some of the subsystems are common to both types of ocean observatories.

2. MOOS System Design Overview

2.1 The mooring based observatory system consists of many subsystems that are in varying stages of design development. The subsystems are:

- (a) MOOS Mooring (surface expression, power generation, shore communication, riser, remote instrument nodes (RINs), benthic interconnect nodes (BIN)s, interconnect cables anchors)
- (b) AUV
- (c) AUV docking
- (d) Vertical profiler
- (e) Instrumentation interface
- (f) Shore side data system

2.2 The first part of the program meeting on Thursday will be to an overview of the status of these efforts, critical system level design trade off studies (mainly associated with the mooring development), and high level requirements and capabilities (Instrumentation Interface, Shore Side Data System, AUV docking). The aim of this part of the review will be mainly information transfer, to provide you with an understanding of the capabilities of the system and the status of the development programs.

3. Concept Design Review for the MOOS Mooring

3.1 The MOOS mooring concept review is a sub system review of the MOOS mooring system (surface expression, power generation, shore communication, riser, remote instrument nodes (RINs), benthic interconnect nodes (BIN)s, interconnect cables anchors) and the deployment procedures.

3.2 The aims of this review are to:

- identifying whether we have adequately captured all of the high level functional (science) requirements. Are we tackling the right problems, what have we forgotten
- review whether the technology approaches we have selected are the most appropriate for meeting all of the high level functional requirements?.
- review the deployment procedures

- check interfaces and dependencies to sub systems
- request comments to improve the design
- identify whether we have missed any high risk items
- ensure that the design is compatible with future technology upgrades (high power capabilities, AUV docking)