Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
30 SEP 2001		**00-00-2001 to 00-00-2001**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Distributed Marine Environmental Forecast System	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Naval Research Laboratory,,Stennis Space Center,,MS, 39529**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT
Develop a research testbed for demonstrating the integration of various technologies and components prior to DoD operational use as well as a framework in which to operate validated models.

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a REPORT **unclassified**	b ABSTRACT **unclassified**	c THIS PAGE **unclassified**	**Same as Report (SAR)**	**3**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

Distributed Marine Environmental Forecast System

Richard A. Allard
Naval Research Laboratory
Stennis Space Center, MS 39529
Phone: (228) 688-4894 fax: (228) 688-4759 email: allard@nrlssc.navy.mil

Award Number: N0001401WX21103
http://www.erc.msstate.edu/~haupt/DMEFS

LONG-TERM GOALS

Develop a research testbed for demonstrating the integration of various technologies and components prior to DoD operational use as well as a framework in which to operate validated models.

OBJECTIVES

Provide technical expertise and guidance in both operational and R&D computer modeling frameworks in order to aid Mississippi State University (MSU) in demonstrating value-added capability in their proposed, object-oriented, Distributed Marine Environmental Forecast System (DMEFS).

APPROACH

Given NRL's specific experience with NAVOCEANO's existing, script-oriented, ocean modeling framework (ROAMER), NRL will collaborate with MSU and NAVO in specific targeted functional areas in order to allow MSU to demonstrate the value-added by the object-oriented DMEFS concept. Areas of collaboration include wave modeling and the object-oriented framework developed through Argonne National Laboratory which includes a suite of wave, tide and surf models.

Key Personnel: Mr. Richard Allard is PI on the Rapid Ocean Analysis Modeling Evaluation Relocation (ROAMER) System and Integrated Ocean Prediction System (DIOPS). His expertise in these programs will provide leverage to assist DMEFS personnel.

WORK COMPLETED

- Attended DMEFS workshop held at the Stennis Space Center, MS May 23-25, 2001. Participated in panel discussion regarding METOC modeling, R&D, validation and transitions, and implementation and operations.
- Collaborated with DMEFS staff on the methods that NAVO's ROAMER system addresses wave and surf modeling.
- Attended DMEFS workshop held at Stennis Space Center, MS 5-6 Sept 2001. Dialogue was established between DMEFS staff and Argonne National Laboratory to investigate collaborative work regarding an object-oriented framework.

RESULTS

This effort is at the preliminary stages at this time. NRL has a proven track-record with the ROAMER system currently in place at NAVO. Some perceive DMEFS as “ROAMER Next Generation”. There is functionality in DMEFS (visualization software) which currently does not exist in ROAMER. It is not clear if NAVO will adopt “DMEFS” in their future plans.

IMPACT/APPLICATIONS

DMEFS is envisioned to provide a framework extensible and designed for rapid prototyping, validation, and deployment of new models and tools. It is expected to be operational over evolving heterogeneous platforms distributed over wide areas with web-based access of forecast-derived information.

TRANSITIONS

RELATED PROJECTS

Rapid Ocean Analysis Modeling Evaluation System (ROAMER) funded by SPAWAR. ROAMER allows the NAVO Warfighting Support Center (WSC) to rapidly set up wave, tide, surf and circulation models typically within 72 hours of a request.