

Memorandum of Agreement
between
United States Air Force,
National Oceanic and Atmospheric Administration,
and
United States Navy

**Charter for the
National Unified Operational Prediction Capability
(NUOPC)
Executive Steering Group (ESG)**

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1 Introduction

On January 11, 2007, the Tri-Agency Principals (U.S. Air Force Director of Weather (HQ USAF/A3O-W), the Administrator of the National Oceanic and Atmospheric Administration (DOC/NOAA), and the Oceanographer of the Navy (OPNAV (N84)) accepted the recommendation from a Tiger Team (TT) to pursue a NUOPC implementation plan for coordinated development, transition, and operations, and to establish an Executive Steering Group (ESG) to provide guidance, management, and support. The NUOPC focus is on next-generation systems for Global Numerical Weather Prediction (GNWP), allowing for possible later expansion into other areas of numerical prediction with full implementation by 2015 (POM10). The primary deliverable of NUOPC is a multi-model ensemble forecast system, with “managed diversity,” that has the potential to establish the United States as the premier computer modeling group in the world. Equally important is to accumulate the efforts of the various NWP research organizations to achieve end-to-end alignment of the interagency weather modeling processes. On October 9, 2007 the Tri-Agency Principals accepted the recommendations from the NUOPC Tiger Team and approved implementation of NUOPC Phase I:

- a. Establish management team and interim committees
- b. Initiate Coordination meetings
 - i. Common model architecture and standards
 - ii. Aligned transition process
 - iii. Unified ensemble operation CONOPS

2 Background

The primary mission of NUOPC is to *enable* a Tri-Agency *global atmospheric ensemble system*, including the design standards, required research and development, operational implementation, dissemination and evaluation. Phase I (FY08-FY09) carries minimal risk and minimal cost to the agencies. Benefits expected from implementing Phase I include:

- a. Increased Tri-Agency coordination
- b. Preparation for full Tri-Agency collaboration
- c. Quantified cost and impact of moving to Phase II (FY10-FY13)
- d. Delivery of a prototype joint ensemble capability based on NAEFS expansion

Primary Considerations:

Critical factors for inter-agency cooperation:

- Motivation to better utilize resources and accelerate performance gains
- Resolve to preserve agency-unique mission capabilities
- Need to clearly articulate NWP requirements and entrain the research community
- Consideration of the complexity and diversity of agency laboratory and development capabilities

- Need to standardize research, development and transition processes
- Need to coordinate agency budget processes
- Consideration of the DoD requirement for classified operations
- Emerging stringent requirements for information security and information assurance; and very significantly
- The need to address differing operational software infrastructures, standards, and practices

NOTE: The ESG members are directly accountable to the Tri-Agency Principals.

3 Primary ESG Phase I Roles

The ESG will be comprised of two executive-level representatives from each of the Tri-Agencies, tasked to do the following:

- a) Approve interim recommendations made by NUOPC management
- b) Provide advocacy and support up the Chain of Command
- c) Respond to NUOPC management requests for guidance and information
- d) Liaise, as necessary, with other staffs and agencies, i.e., OFCM, NASA, NSF, ONR, Academia, and other stakeholders

4 Primary ESG Phase I Responsibilities

The ESG will appoint an interim Program Manager for Phase I based upon the Tri-Agency representatives recommendations. The ESG will oversee the actions of the NUOPC management. The ESG will be a permanent committee, established for the lifetime of the NUOPC program and made up of executive-level representatives of the three agencies. Membership in the ESG will be a collateral duty to the members' primary position. The primary responsibilities of the ESG are:

- a) Appoint interim Program Manager (PM)
- b) Select permanent Program Manager
- c) Provide management review and approval
- d) Outreach to external providers and users
- e) Assess performance of PM
- f) Steer PM to achieve NUOPC goals/objectives
- g) Review and approve budget submissions and requests for resources
- h) Approve each agency's contribution of actual and in-kind resources to the NUOPC effort in accordance with the agreed upon cost shares
- i) ESG will approve committee membership and reports
- j) ESG will recommend transition between NUOPC Phases to the Principals

5 ESG Activities in Phase I

The ESG will be the approval and acceptance authority for the NUOPC Concept of Operations (CONOPS) and Implementation Plan (IPLAN).

The NUOPC Program Manager's performance will be reviewed annually by the ESG, and the ESG will have the authority to replace the PM.

The ESG will approve nominees to fill the Nonresident Agency Coordinator positions on the NUOPC Management Staff. These Agency Coordinators will be directly accountable to the ESG.

Each Agency will nominate personnel for the Common Model Architecture Committee, Technology Transition Process Committee, and Unified Ensemble Operations Committee positions. The ESG will approve nominees to these Committees. Committee heads will provide annual reports on committee activities to the PM and ESG.

The PM will forward Committee recommendations on standards (software, hardware, and infrastructure) to the ESG. Upon agreement, the ESG will promulgate these standards across their respective agencies.

The NUOPC staff will develop, with inputs from the Tri-Agencies, a consolidated, prioritized list of common operational needs. The ESG will approve this list of common operational needs and provide them as a guide to the Research and Development (R&D) community. The ESG will approve recommendations from the NUOPC management staff for accelerated research and development and provide them to the Tri-Agencies for their action.

During Phase I, NUOPC management will develop and submit Program Objective Memorandum (POM) budgets to the ESG according to the following schedule:

1. 1st quarter FY08 – POM10 and FY09 spend plan
2. 1st quarter FY09 – FY10 budget submission
3. 3rd quarter FY09 – POM12 budget submission

6 Period of Service

The ESG will be established for the lifetime of the NUOPC Program. The ESG will select one member to serve as the ESG Chair, and the Chair will serve for a period of one year, at which time the position will be reassigned in rotation through the three agencies. The Principals will disband the Tiger Team when an interim or permanent management team is in place.

7 Signatures

**UNITED STATES
AIR FORCE**

**NATIONAL OCEANIC
AND ATMOSPHERIC
ADMINISTRATION**

**DEPARTMENT OF
THE NAVY**

**Deputy Director
of Weather, USAF**

**Assistant Administrator,
National Weather Service**

**Technical Director,
Oceanographer of
the Navy**

Date

Date

Date

Revision 1: 2 Jan 2014

Change first sentence of paragraph 2

The primary mission of NUOPC is to enable a Tri-Agency global atmospheric ensemble system, including the design standards, required research and development, operational implementation, dissemination and evaluation.

To

The primary mission of NUOPC is to enable a Tri-Agency global and limited area atmospheric, oceanic, ice, and space ensemble system, including the design standards, required research and development, operational implementation, dissemination and evaluation.