Networked Ocean - Networked Ocean and Vehicles for Communications and Data Collection in Remote Oceanic Areas

DESCRIPTION
The project concerns the development and demonstration at sea of a networked vehicle system for persistent communications and data collection in remote oceanic areas. The system is composed of a long endurance autonomous surface vehicle (ASV), long endurance autonomous underwater vehicles (AUV), long range unmanned air vehicles (UAV), helikites, and control stations. The ASV is both a communications hotspot and a docking base (for AUVs), operating 24/7 in remote ocean areas. The ASV supports smart routing protocols for direct communications, via persistent UAV relays, or delayed data transfer to control stations. The control stations provide advanced planning and execution control capabilities, as well as dissemination of data. The system supports inter-operability protocols to allow expansion to vehicles from third parties.

The project is organized into 6 work-packages: 1: Project management and systems engineering; 2: Communications and inter-operability; 3: Unmanned vehicle systems; 4: Land/Ship control stations; 5: System integration and testing; and, 6: Demonstration at sea. The project builds on technological, scientific and operational experience of a consortium of FEUP (leader), IPMA, and Portuguese Navy from Portugal, and AMOS from Norway.

PROJECT PROMOTER
Faculty of Engineering, University of Porto (FEUP)

PROJECT PARTNERS
Portuguese Sea and Atmosphere Institute (IPMA), Naval Research Center - CINAV

TOTAL COST
372.321€

TOTAL ELIGIBLE COST
372.297€

EEA Grant
316.452€

OUTCOME
Outcome#2 - Improve monitoring of marine waters

OUTPUT
Capacity on fixed or mobile unmanned oceanic and coastal monitoring operations increased

INDICATOR
Number of communications services for supporting smart platforms for collecting and disseminating marine environment and human activities data at remote oceanic areas

TARGET
1 Service