# MOOS-IvP Open Source Marine Autonomy Project

In 2006 MIT launched the open source marine autonomy project, www.moos-ivp.org, dedicated to providing autonomy software, documentation and training to the marine robotics community. This work began in 2000 in the MIT Sea Grant AUV lab, and Department of Ocean Engineering, and continues currently in the Department of Mechanical Engineering. This work has been primarily funded by the Office of Naval Research since 2000. Over the last twenty years it has also matured through applied marine robotics efforts funded by DARPA, NOAA, NSF, NASA and several industry partners including Battelle, Lockheed Martin, General Dynamics, Thales UK, and Brunswick Corp. In 2012, with a generous 5-year grant from Battelle, MIT developed a new graduate course in Marine Autonomy, MIT 2.680, committed to the intersection of autonomy, sensing and communications challenges in marine vehicle applications of ocean environmental and DoD sensing.

The MOOS-IvP open-source C++ modules represent over 35 work-years of development that have been fielded on dozens of platform types around the world since its initial release in 2006. There are three themes are key to the architecture: platform independence, module independence, and nested capabilities. See www.moos-ivp.org.
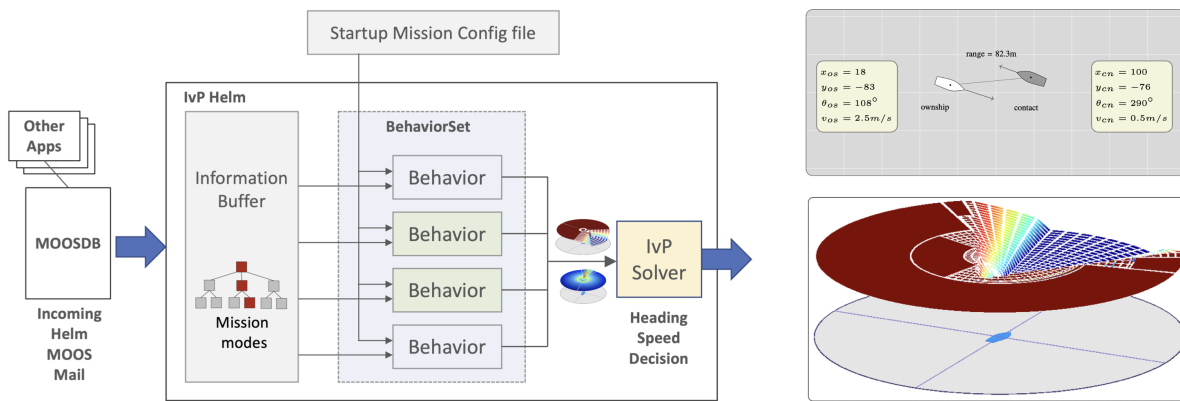
Status:	Ongoing since roughly 2000
Sponsors:	Office of Naval Research, Code 311, Dr. Behzad Kamgar-Parsi
Prior Sponsors:	ONR Code 32, Battelle
People:	Michael Benjamin (PI), Henrik Schmidt, Paul Newman (MOOS)
Software:	MOOS-IvP public codebase
Documentation:	https://oceanai.mit.edu/ivpman

MIT Robots

Bluefin-21UUV, ClearpathHeronUSV, AutonomousSailboat, MorpheusUUV, BostonWhalerUSV, WAM-VUSV

Relevant Links

- The MOOS-IvP main software website
  www.moos-ivp.org

- The MOOS-IvP main documentation website
  https://oceanai.mit.edu/ivpman