An Overview of the Berkeley MOB DP Project

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Abstract

The Mobile Offshore Base (MOB) is a large, self-propelled, floating, pre-positioned ocean structure formed of three to five modules and reaching up to 1,500 meters in length. It must accommodate the landing and take-off of C-17 conventional aircraft, host 3000 troops, carry 10 million gallons of fuel and provide 3 million square feet of internal configurable storage. The alignment of the modules is maintained through the use of slew-able thrusters and/or connectors.

The University of California at Berkeley's involvement with the ONR Mobile Offshore Base project resulted in a three-year effort meant to provide insight into the design and architecture of coordinated DP systems (systems involving the DP of a structure or vessel relative to another floating ocean structure or vessel), a simulation environment in which different MOB concepts could be tested and evaluated, and an experimental scaled platform (1:150) on which the coordinated DP control algorithms were implemented and evaluated.

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