

# Centralized State Estimation of Distributed Maritime Autonomous Surface Oceanographers

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## Abstract

This paper considers the subject of running a centralized controller for the purpose of navigating a small Autonomous Surface Vehicle (ASV). The centralized controller is using a Kalman filter as a state predictor to improve the precision of the navigational aids mounted aboard. The work presents the design of the motion control system as well as the development of a protocol used to push through as much data on a standard 9.6 kbps data link simplex link.

The performance for the algorithms developed in this project, have been tested in Limfjorden in Aalborg, and towards the end, results of these tests are shown. R