Executive Summary

A high-speed fast patrol craft (FPC), intended to operate primarily in the littorals, has the primary mission of operating as a logistic shuttle to transfer supplies between a large-deck amphibious ship and forces ashore. Shuttle operations should be able to be conducted in sea-state 4. A 500 LTON craft weight enables it to stay under the $30 Million cost constraint.

To meet several mission needs in a relatively small craft, a mission re-configurable concept is proposed. Four FPC mission configurations are envisioned:

• Logistic Shuttle
• Command Post and Emergency Hospital
• Surface Fire Support and Air Defense of Forces Ashore
• Extra Fuel for Increased Endurance Range

In order to obtain the necessary high-speed and good seakeeping characteristics, several unconventional hull-types are considered for the FPC. Analysis shows the Air-Cushioned Catamaran (ACC) as the best hull-type for the FPC. The ACC is a catamaran style design but the sidehulls are provided with air cushions much like air cushions in a Surface Effect Ship.

Separate FPC propulsion and structural studies are included to evaluate use of advanced propulsion technologies and composite materials.