Real Options for Naval Ship Design and Acquisition:
A Method for Valuing Flexibility under Uncertainty

by

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ABSTRACT

The United States Navy is facing a need for a novel surface combatant capability. This new system of ships must be deigned to meet the uncertainty associated with constantly changing required mission capabilities, threats, and technological advances. Flexibility in design and management will enable these systems to maximize their performance under changing conditions. Real options involve the 'right but not the obligation' to take a course of action. Real options embody the flexibility that allows projects to be continually reshaped, as uncertainty becomes resolved. This thesis seeks to identify and analyze the real options available for the design and acquisition of naval ships. This thesis also seeks to determine the value of these options and determine the best types and amount of flexibility to design into naval systems in order to maximize the value of the system over time under uncertain conditions.

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