

# **The use of Early User Demonstrations (EUDs) for Risk Reduction in the UH-60 Modernization Program**

## **Abstract**

The UH-60 BLACK HAWK Modernization program was established to meet new requirements for increased lift, range, and survivability, and address the challenges of the aging utility helicopter fleet. The PMO UH is successfully implementing the Simulation Modeling for Acquisition, Requirements, and Training (SMART) philosophy in the UH-60 Modernization Program. The UH-60M PMO will implement M&S as a method to demonstrate system effectiveness and save costs in the Test and Evaluation phase. Furthermore, the UH-60 PMO understands that investing in M&S during the Risk Reduction and Engineering and Manufacturing Development (EMD) phase will result in substantial saving for future upgrades and modernization activities to the UH-60 platform.

The PM-Utility Early User Demonstration (EUD) #1 was conducted at the Aviation and Missile Research and Development Center's (AMRDEC) Advanced Prototyping Engineering and eXperimentation (APEX) Lab from 8 to 11 January 2001. The purpose of EUD1 was to: allow pilots (users), designers, and representatives of the PMO to identify possible User issues and design solutions based on the current configuration; provide an opportunity to define the metrics necessary to measure Situational Awareness (SA) resulting from information presented to the pilot; establish Measures of Effectiveness/Performance (MOE/P) for future SA design and analysis activities; provide lessons learned for EUD2; and to facilitate initial Human Factors Engineering of candidate instrument panel configurations.

The purpose of this paper is to discuss the benefits of the Early User Demonstration concept, present the results of EUD1 and outline the roles of EUD2 and EUD3.