

Objective:

Explore new “paradigm” engine controls concepts / approaches with potential for synergistic airframe system benefits. Conduct a conceptual design and trades analysis for an integrated engine / airframe controls system for improved airframe performance and reduced cost of ownership;



Goal Attributes

- Improved Fuel Burn
- Reduced System Weight
- Improved Production Cost
- Improved Maint. Cost
- Improved Reliability

Approach:

- Leverage Air Force VAATE-DIRECT Controls Initiative
- Exploit model-based controls software to enhance performance and health management
- Improved CBM capabilities; automated HIT(Health Indication Test) and real-time power assurance.
- Leverage More Electric Engine/Aircraft (MEE/A) and electric accessory opportunities if applicable
- Define airframe / engine synergistic opportunities; evaluate impact of distributed control components
- Identify technology shortfalls which need further development to meet future Army Aviation Requirements

Contractual Schedule/Timeline

- 6.2 Broad Agency Announcement (BAA) in 2Q FY14
- Proposals Due 45 Days Later
- Contract/TIA award 4QFY14
- 2.0 Year Effort planned
- Potential Multiple Planned Awards
- Government Purpose Rights to Data
- Product: Conceptual Design/Trade Analysis

Product / Attributes

- Clean sheet analyses for airframe / engine control and health management systems to define “design-trade space” for optimizing overall control system architecture / integration opportunities
- Analysis / Impact of Control Systems approaches on certification / qualification requirements

Benefits to the Warfighter

- Provides improved mission capability for future rotorcraft
 - reduced system weight / improved fuel burn
 - adaptive / reliable controls for improved operability
 - real time performance for mission planning
- Reduced logistic footprint and O&S Cost
 - integrated condition based maintenance
 - reduced production cost and obsolescence costs

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.