NASA SBIR/STTR Technologies

A2.01: Unmanned Aerial System (UAS) Safety Analysis Model (USAM)

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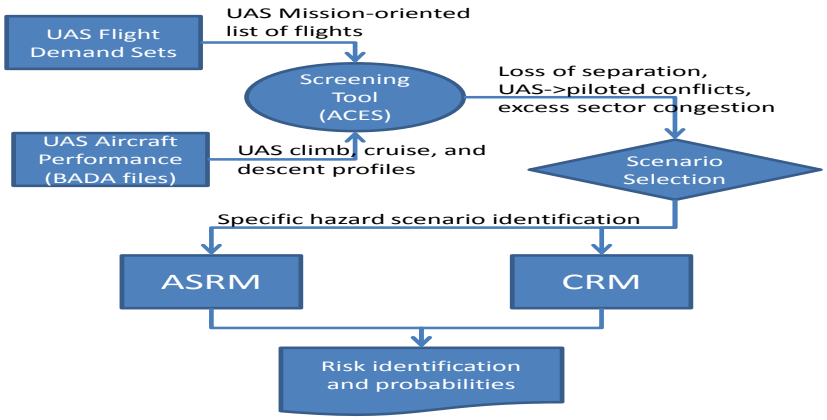
Identification and Significance of Innovation

The proposed USAM tool provides a credible UAS safety analysis framework that enables identification, analysis, and quantification of the safety issues that surround the integration of UAS in the National Airspace System (NAS).



Expected TRL Range at the end of Contract (1-9): 1-3

Technical Objectives and Work Plan

Prototype a data-driven, integrated safety analysis methodology that enables safety analysis of issues related to interaction of piloted flights with UAS aircraft.

- **Identify the specific scenarios to be analyzed by ASRM (Aviation System Risk Model) and CRM (Collision Risk Model).**
- **Hazard identification and safety risk modeling in ASRM.**
- **Configure and run the CRM to compute the collision probabilities.**
- **Analyze the outputs from ASRM and CRM to compute probability of loss of separation as well as collision.**

NASA and Non-NASA Applications

NASA: Space Communications and Navigation Program (SCaN)

Non-NASA: Federal Aviation Administration (FAA), UAS Manufacturers, Joint Planning and Development Organization (JPDO)

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