NASA SBIR/STTR Technologies

A5.01-8555 - UAS Demand Generation and Airspace Performance Impact Prediction

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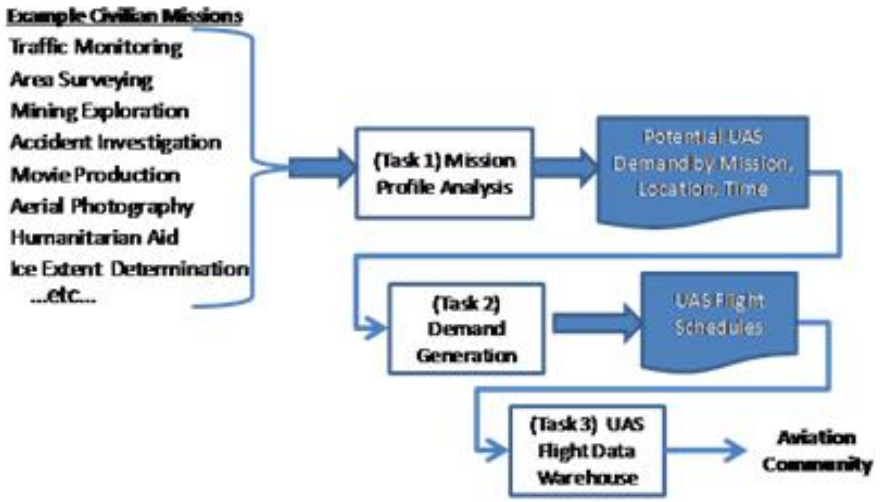
Identification and Significance of Innovation

There are three innovations in our proposal: (1) we propose to use activity-based modeling with expected UAS mission profiles to develop credible demand forecasts; (2) we propose to build technology that will translate these forecasts into flight data sets for UAS vehicles; and (3) we propose to build a data warehouse containing multiple flight data sets prepared for different UAS missions, that can be accessed by aviation researchers for particular analysis needs.



Estimated TRL at beginning and end of contract: (Begin: 1 End: 2)

Technical Objectives and Work Plan

Demonstrate the feasibility of our approach by performing the following tasks:
-Design and exercise an activity-based modeling system for UAS missions.
-Translate UAS demand information from the activity-based modeling into specific flight times and locations
-Store the resulting flight data sets in a data warehouse
-Demonstrate the utility of these flight data sets by running an example UAS analysis on its impact on airspace utilization.

NASA Applications

The NASA UAS program needs credible sources of future UAS demand to run scenarios in fast-time and real-time simulation systems.

Non-NASA Applications

The aviation community, in determining the impact of UAS worldwide, also requires a credible source of UAS demand for scenario development and analysis.

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