

EXHIBIT F

UTC Project Information	
Project Title	Machine Learning for Dynamic Airspace Configuration towards Optimized Mobility in Emergency Situations
University	Embry-Riddle Aeronautical University
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Funding Source(s) and Amounts Provided (by each agency or organization)	Source 1: U.S. Department of Transportation- Center for Advanced Transportation Mobility Amount: \$146,994.00 Source 2: Embry-Riddle Aeronautical University Amount: \$73,586.00
Total Project Cost	\$220,580.00
Agency ID or Contract Number	69A3551747125
Start and End Dates	October 1, 2020-March 31, 2022
Brief Description of Research Project	The objective of this project is to develop a prototype for dynamic airspace configuration (DAC). Through the use of machine learning (ML), we desire to achieve optimized mobility of air transportation in emergency situations.
Describe Implementation of Research Outcomes (or why Not implemented) Place Any Photos Here	Air traffic control (ATC) system is extremely complex so it is impossible to address every component under emergency operation. In this project, we narrow the research scope down to airspace configuration. Current national airspace configuration follows a static layout which cannot adapt to the dynamic air traffic conditions or incoming emergency events. Therefore, we propose to boost the current ATC system by developing a novel ML based dynamic airspace configuration (DAC) framework. Different from the traditional statistical and graphical based DAC approaches, the proposed ML-based framework aims to discover the difference of DAC on areas with different air traffic pattern, so that a mapping between ATC control and the air traffic evaluation metrics can be found. The proposed framework will provide: a DAC model

	that is able to self-adjust the airspace configuration based on the air traffic demands of different time periods of the day or emergency events, thus providing increased airspace capacity, safety and efficiency of ATC operations under unexpected situations with rapid demand changes.
Impacts/Benefits of Implementation (actual, not anticipated)	<ol style="list-style-type: none"> 1. The Public: A more accurate prediction and evacuation plan in emergency situations is desired by the public. 2. Airports and Airlines: The total number of flights and air traffic congestion can be improved, and bottleneck of overall performance can be avoided. 3. Authorities: The safety of ATC operations can be secured by balancing the ATCs workload, which in turn improve the safety and efficiency of the ATC operators.
Web Links <ul style="list-style-type: none"> • Reports • Project Website 	https://myerauedu-my.sharepoint.com/:w:/g/personal/xuc3_my_erau_edu/EVq2V_z28TVOupu2E3MYoHgBtOTR_i9lZN7Hs5ZbjxAhTQ?e=PuyBvy



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