

Exploring the Effects of Manned-Unmanned Teaming (MUM-T) on Aerial Vehicles

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Author Note: The authors would like to thank Colonel Hise Gibson from the Department of Systems Engineering of the United States Military Academy for his guidance, unwavering assistance, resourcing and in-depth analysis of the project. We would also like to thank Mr. Scott Van Broekhoven from the Massachusetts Institute of Technology (MIT) Lincoln Laboratory for giving us this opportunity to contribute to this project. We would also like to thank the USMA faculty and cadets who were helpful in determining the scope of the problem and the final results.

Abstract: This paper explores the capabilities of Manned-Unmanned Teaming (MUM-T) of aerial vehicles within the United States Army. The MUM-T concept refers to the idea of pairing a manually controlled vehicle to an Unmanned Aerial Vehicle (UAV) such as the General Atomics MQ-1C Gray Eagle or the AeroVironment RQ-11 Raven with the intent of saving soldier's lives and expanding our area of operation. Currently, MUM-T operations serves one specific purpose: to take the soldier out of the fight. This approach is made possible by placing the unmanned systems in the "front lines" and allowing soldiers or pilot to operate from a safe distance. While this is a fairly new concept, this study attempts to evaluate the UAV's ability to increase lethality and survivability of our existing and future air combat vehicles. The main objective for this project is to provide the U.S. Army with a recommendation for the most optimized way of utilizing existing unmanned systems.

Keywords: Systems Engineering, Manned-Unmanned Team (MUM-T), Unmanned Aerial Vehicle (UAV)