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# Modeling Aerial Ports of Debarkation

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*The views expressed herein are those of the author and do not reflect the position of the United States Military Academy, the Department of the Army, or the Department of Defense.*

**Author Note:** Barret Crawford, James Kelly, Krishawn Tillett, and Raphael Waruinge are majoring in either Systems Engineering or Systems Management and participating in their senior capstone in the Department of Systems Engineering at the United States Military Academy. It is a year-long project under the advisement of Elizabeth Schott, a lieutenant colonel in the U.S Army currently serving as an Academy Professor in the Department of Systems Engineering. This project was funded by the Military Logistics Division of the Engineering Research and Development Center in Vicksburg, Mississippi.

**Abstract:** United States military operations conducted over the past few decades have primarily been supplied through Sea Ports of Debarkation (SPODs) and Aerial Ports of Debarkation (APODs). The large majority of items are moved through SPODs; however, crucial items and highly sensitive items are primarily transported through APODs due to speed of delivery and security considerations. Although the functions of APODs are outlined in Army doctrine, training, and operating manuals, the actual layout and flow of the internal operations at an APOD are not. The purpose of this project is to build a verified model of the internal operations of an APOD in an operational theater in order to inform decision makers on resilient and optimized supply chain options. The model will be used by the Engineering Research and Development Center (ERDC) to inform their larger modeling efforts of the military logistics network and provide insights to future alternatives to APODs.

*Keywords:* Aerial Port of Debarkation (APOD), Military Logistics, Discrete-event Simulation, Military Applications