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Multi-Domain Operations: Precision Fires Integration

Cullen McGahan, Chase Prairie, Larry Quintana, and Frankie Turner

Department of Systems Engineering
United States Military Academy, West Point, NY

Corresponding Author: cullen.mcgahan@westpoint

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Abstract: One of the significant challenges the United States military faces is the synchronization of assets across the joint services. In the past, leaders have defaulted to deconfliction rather than synchronization. However, the success of Multi-Domain operations (MDO) is predicated on the ability to efficiently engage the enemy in multiple domains simultaneously in a time critical environment. In order to synchronize assets, we must reduce the corridor or space required to operate without fratricide. One way to reduce this corridor is to improve the shared operating picture and reduce the time required to initiate a strike by developing a common operation picture (COP) that each of the different branches can communicate and integrate fires on. Evaluating the effectiveness of COP systems necessitates the ability to compare system speed from detection to fires detonation, as well as compare the accuracy and effectiveness of employed fires. In order to assess this MDO challenge, our group created a value model to measure the effectiveness of existing systems and built an app to test their capabilities.

Keywords: Multi-Domain Operations, Precision Fires, Lockheed Martin, Data Integration