(CUI) SHRIKE: AN AI ENABLED FORWARD OBSERVER FOR THE ARMY OF 2030

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ABSTRACT

Project Shrike is a software package co-developed at the US Army Artificial Intelligence Integration Center (AI2C) and Carnegie Mellon University's Software Engineering Institute (SEI). Shrike enables any service member to leverage commercial off the shelf (COTS) and program-of-record small unmanned aerial systems (sUAS) to instantly produce data required for call for fire (CFF) missions. With human-in-the-loop approval, the software employs ray projection, photogrammetry, and AI algorithms to exploit electro-optical (EO) and infrared (IR) imagery fused to UAS key-length-value (KLV) meta-data to produce accurate Military Grid Reference System (MGRS) coordinates of an observed target. Shrike uses computer vision to detect potential military targets, algorithms to estimate the target's real-world MGRS coordinate, computer vision to recognize kinetic impacts, and algorithms to correct indirect fire (IDF) trajectories. Shrike curates a machine-speed kill chain for any service member through a simple, single-click user-friendly interface.