

For the Army, drone and counter-drone ops go 'hand in hand'

By: Mark Pomerleau, March 17, 2017 (Photo Credit: Sgt. 1st Class Michael Guillory/Army)

In a first-of-its-kind multi-domain training lane at Fort Riley, Kansas, the Army is beginning to train and integrate small unmanned aerial system operators alongside counter-UAS operations.

Small UAS operations at the division level and lower are a two-way street, according to personnel involved in the multi-domain training range and UAS training at Fort Riley.

In an ideal scenario, the Army would like to prevent their small UAS assets from potential enemy jamming, Chief Warrant Officer 4 Sarah Good, 2 nd Brigade UAS Officer, told C4ISRNET in an interview. Advanced adversaries such as Russia have demonstrated a very capable jamming tool kit in Ukraine against UAS.

"We have to do it both ways. We have to see what their capability is to jam and see what our capability is to avoid that jam or counter that jam," Good added.

This involves integrating and training electronic warfare forces alongside UAS operators. "Now that [UAS operators] understand that the jamming is out there, the operator can understand when his aircraft is being jammed or when it's just going lost link," Chief Warrant Officer 4 Samuel Kleinbeck, Division UAS at Fort Riley, told C4ISRNET. "So he knows that he'll be able to recognize that the EW is out there."

Within this multi-domain battle aspect, Maj. Gen. Terrence McKenrick, commanding general of Joint Modernization Command, explained recently during the AUSA Global Force Symposium that during training exercises the Army is working to get "left of launch," to ensure enemy UAS don't get airborne. McKenrick highlighted non-kinetic means of accomplishing this such as leveraging cyber and electronic warfare capabilities to take out ground control stations prior to UAS launch.

"We're doing that here," Kleinbeck said. He said UAS operations and counter-UAS operations "run hand in hand." He also noted that they are thinking ahead in counter-UAS by trying to defeat the

person controlling the aircraft rather than just taking the aircraft out itself. By disrupting the link of the system, the UAS will return "home" and hover over the person controlling it. EW can then hone in on the signal and find the person as well to be neutralized.

In developing the training course and multi-domain lane, Good said they want to develop skill sets and proficiency, but they have to also learn how to counter other UAS within the same airspace. This involves knowing what is out there and training with off-the-shelf models as adversaries use these systems and often modify them "for nefarious use against us," she said.

Better training

Regarding the small UAS training itself, Good explained that the previous training models were not very good and a gap existed. Rather than sporadically training, Good said they wanted to get to a point where soldiers could train every day, hence the training program and range.

"We want capable UAS operators who get good training, who know how to first operate the RQ-11 Raven and the RQ-20 Puma, which are very good systems but there's some complexity to them," she explained. "We want to add in the quadcopters, then add in smaller micro-sized elements."

Every brigade has around 20 Ravens, Good said, divided up among the companies down echelon.

From an operational perspective, these small UAS assets could be used either to gain intelligence prior to moving in on a target or during operations.

The main reason they believe in building up the small assets, Good asserted, is to get at the intelligence, surveillance and reconnaissance gap at lower echelons. With these systems units have an operator that knows exactly what's going on in the battlefield. It allows them to get an "instant visual of what's going on," Kleinbeck said.

Future of multi-domain training

With the first known multi-domain training lane in the continental U.S. in the Army, Kleinbeck said to the best of his knowledge, ground force commanders and brigade combat teams can run their forces through the lane where they know they'll encounter EW with both the red and blue UAS in one training lane.

Good explained there is the possibility to add other aspects and elements to training utilizing multi-domain training lane such as counter-IED and ground robots.