DOD officials say autonomous killing machines deserve a look

While military requires person in loop, robots might decide when to shoot in future.

by Sean Gallagher - Mar 4, 2016 8:14pm EET



"Destroy all carbon-based life forms" would be a very bad algorithm for autonomous killbots.

US Army

At the National Defense Industrial Association's Ground Robotics Capabilities conference on Thursday, Department of Defense officials discussed the possibility of the US military fielding autonomous armed robots to fight alongside troops or act on their own, particularly in "highly competitive, highly contested space" behind enemy lines. "We have to think about what autonomous kinetic options really look like," said Melissa L. Flagg, a deputy assistant secretary of defense in the DOD's Acquisition, Technology, and Logistics Directorate.

That thinking is still in its early stages, Flagg said. But military officials are looking hard at the possibility of developing robotic systems that are capable of acting on their own if remote control is cut off and decisions must be made on when to deploy a weapon—whether it's an armed drone dropping a bomb or launching a missile or a ground robot firing weapons. "These are hard questions, and a lot of people outside of us tech guys are thinking about it, talking about it, engaging in what we can and can't do," she said. "That's important. We need to understand and know that it doesn't necessarily need to happen, but we also have to put the options on the table because we are the worst-case scenario guys."

So far, the military has largely steered clear of deploying remotely operated ground weapons of any kind, though it has heavily invested in the development of armed "unmanned ground vehicles." The military did deploy remote-controlled machine gun turrets in Afghanistan as stationary defenses. But

Marine Colonel Henry Lutz, the DOD Joint Staff's robotics and autonomous systems team officer in charge, said that soldiers were reluctant to use them because of the safety risks—both to fellow soldiers and civilians. "Understanding that in a counter-insurgency environment you can do more harm than good, there was not a level of trust," Lutz said.

Lutz's team is, however, preparing a concept-of-operations document for the Joint Chiefs of Staff on how the military would use robotic weapons by 2035—including semi-autonomous systems that could act on their own if an enemy used electronic warfare to jam communications from the human in charge. But the concept document would be about capabilities, not policy. "Just because we are capable of doing something, it doesn't meant that's what we do," he said.