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Related Categories: Cybersecurity and Cyberwarfare; Science and Technology

GOOGLE'S CONTROVERSIAL AI PRINCIPLES

Google has revealed new principles governing the company's use - or misuse - of artificial intelligence. The announcement comes in the wake of mass employee protests after the company agreed to use AI for supporting potentially lethal military purposes, such as increasing the accuracy of drone targeting for the Pentagon's Project Maven program. Among other objectives, the use of Google-based AI must now "avoid creating or reinforcing unfair bias" and "be socially beneficial." Additionally, Google has also defined ways in which artificial intelligence would not be used. These restrictions govern the use of AI in "weapons or other technologies whose principal purpose or implementation is to cause or directly facilitate injury to people," and in "technologies that gather or use information for surveillance violating internationally accepted norms of human rights." However, despite objections, Google also signaled that it plans to support government and military initiatives, including cybersecurity as well as military recruitment and training. (*New York Times*, June 5, 2018)

BRIDGING THE DRONE WEAPONS GAP

A drone's effectiveness in combat is always limited by how many weapons and how much ordinance it can carry. The Marine Corps' new sea drone, the MUX, has now provided an innovative solution to this traditional problem. The MUX has the ability to designate targets during flight, and subsequently to guide or repurpose the weapons of other vessels or aircraft in the region. Its ability to "co-opt" nearby weapons systems gives the MUX a potentially "unlimited magazine," making it one of the most dangerous hunter-killer drones currently in use. (*Marine Times*, June 11, 2018)

RUSSIA TARGETS SPACE DEBRIS... AND SATELLITES?

ROSKOSMOS, the Russian space agency, has announced plans to create a "space gun" designed for the destruction of space debris that threaten nearby satellites. The space platform is actually a laser combined with a large telescope that will be constructed at the Altair Optical-Laser Center. The system is "expected to be powered by a solid-state generator" similar to many being used in U.S. directed energy weapons. Although the laser's declared purpose is benign, it has significant dual use potential. The ground-based laser may be able to target and destroy civilian and military communication and surveillance systems in low earth orbit and military aircraft in line of sight. (*American Military News*, June 13, 2018)

TOWARD THE AUTOMATIC TANK

The role of humans in tank warfare may have shifted once again with the newest upgrade to the THeMIS unmanned ground vehicle (UGV). Estonian defense firm Milrem has turned the hybrid diesel/electric UGV into a lethal anti-tank drone by adding a turret capable of carrying two of the most sophisticated anti-tank missiles currently available - which are capable of destroying tanks (even those equipped with hardened steel plates) within a three mile radius. In addition to its anti-tank capabilities, the THeMIS also helps move soldiers out of harm's way; it is equipped to scout, provide fire support, and assist ground troops with carrying cargo. (*Popular Mechanics*, June 14, 2018)

MILITARY AI: ORGANIZING FOR SUCCESS

Artificial Intelligence is one of a few emerging technologies with truly game changing military potential, and it has consequently become a major focus of the U.S. military. In an effort to spur AI advancement across the various military branches, the Pentagon has created a new Joint Artificial Intelligence Center (JAIC) to oversee the development and use of almost all AI for defense purposes. The JAIC will be responsible for any AI-related projects over \$15 million, with efforts at lower funding levels remaining the domain of the military's respective services and agencies. The purpose of the new center is to create a "set of AI standards... tools, shared data, reusable technology, processes, and expertise for the whole Defense Department," according to the relevant Pentagon memo. Officials hope that the JAIC will facilitate greater inter-agency AI collaboration and help counter recent AI advancements made by Russia and China. (*Breaking Defense*, June 29, 2018)