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ASSIGNMENT: MILITARY AND UNMANNED MACHINE TECHNOLIGIES

Autonomous military system has become an integral part of any modern army, it has been used by armed forces around the world for many decades and can be traced to their past as early as the first world war and their importance to the battlefield.

They can be found performing various combat roles from search and rescue, explosive disarmament, fire support, reconnaissance, logistics support and lethal combat duties.

Autonomous system for the military has come to prominence and large-scale use in recent years, they were first put in use during the first and second world war and the cold war. Some early unmanned vehicles were designed and built during the first world war.

Examples of autonomous military vehicles are; Ripsaw MS1, DRDO Daksh, Goalkeeper CIWS, Guardium, Packbot, Talon, Mule, Atlas, Black knight, Protector USV, etc.

An unmanned vehicle is a vehicle without a person on board, they can either be controlled or remote guided vehicles or they can be autonomous vehicles which are capable of sensing their environment and navigating in their own.

The first major mobile robot development effort named Shakey was created during the 1960s as a research study for the defence advanced research project agency.

* Reasons for the rising investments in unmanned vehicles and autonomous system for military purposes;

It allows the army to improve the combat effectiveness of the future forces, development of robotic autonomous system solution within army formation emphasis human machine collaboration, integrated human machine teams will allow forces to learn, adapt, fight, and win under uncertain situation. Robotic autonomous system enable teams gives leaders time and space to make decisions that achieve tactical and operational gains.

It will help ensure that the army can address three compelling challenges; to increase speed of adversary actions, including greater standoff distances; increased use of robotic autonomous system by adversaries; increased congestion in dense urban environment where communication will be stretched to the breaking point.

Increase situation awareness; complex terrain and enemy countermeasures limit solders, abilities to see and fight at the battalion level and below, advancement in the system allow for persistent surveillance and reconnaissance over wide areas, often going where manned systems cannot, thereby increasing standoff distances, survivability and reaction time for commanders.

Excessive equipment requirement reduces stamina and endurance. Autonomous system lighten equipment loads and increase soldiers speed, mobility, stamina and effectiveness. Robotic autonomous system facilitates mission command by collecting, organizing and prioritizing data to facilitate decision making as well as improving tactical mobility while reducing cyber, electronic and physical signatures.

Logistics distribution is resource intensive. Soldiers and teams become vulnerable at the end of extended supply lines. Air and ground unmanned systems and autonomy-based capabilities enhance logistics at every stage of supply movement to the most forward tactical resupply points, robotic autonomous system moves material to the most urgent points of need and provide options for army logistics distribution to the war fighter.

* Implication of the growing sophistication in unmanned military technologies for future warfare.

In the present, war’s terror arrives more silently. War has changed and remained the same, the origin of future wares is already here, being laid in policies and ambitions, rivalries and resources, greed and grievances. The technologies that will be used to dominate and destroy are already in use or development. They are stated to bring more conflicts to the cities, where casualties will multiply, along with chaos and fear. War is always bad, but it’s going to become much worse.

There are reasons that coming wars will be more, not less, deadly. As weapons system become increasingly accurate through satellite positioning, surgical strikes on military target will seem more viable.

Also, the psychological impact upon children living in basement, subject to that sounds and tremors of bombardments, isolated from social system, education, adequate, sanitation, facing food and medical shortage is inestimable. And chemical weapons litter the wreckage that children play in.

* Impact on the will to fight solders

better transportation; military transportation tech is being improved from the ground up, the U.S now has, in its fleet, an inexpensive autonomous warship capable of patrolling the ocean for two to three months sans crew, this warship also has tanks equipped with specialized cameras that are linked to soldiers combat helmets to give them visibility to both optical and thermal system without exposing them to risk.

Better communication; the military communication system is better than ever. Drones aren’t just for combat missions they are also being used to monitor enemy activities. These technologies allow the process and sharing of information at multiple levels of security classification on a single handheld device.

* Is human still relevant in technologically driven warfare? Highlight the relevance of man in future warfare.

The thought of an intelligent machine to have the ability to perform any projected warfare task without any human involvement and intervention using only the interaction of its embedded sensors, computer programming, and algorithms in the human environment and ecosystem is becoming a reality.

Amidst these complex security challenges and the sea of unknown coming out ways, what remains for the safety and security of human race is the role of programmers and programming along with the integrity of semiconductors chips. War has been and still be the most massive collective project human beings undertake, but it has been evolving quickly in a very different direction, one in which human being have a much smaller role to play.