

# WHAT ARE KILLER ROBOTS/LETHAL AUTONOMOUS WEAPONS SYSTEMS?



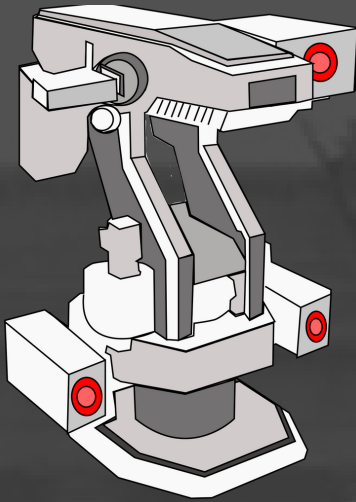
**KILLER ROBOTS OR LETHAL AUTONOMOUS WEAPON SYSTEMS (LAWS) ARE COMPLETELY AUTONOMOUS WEAPONS THAT CAN SELECT AND ATTACK TARGETS WITHOUT SIGNIFICANT HUMAN CONTROL.**

**THIS MEANS THAT THE DECISION TO DEPLOY LETHAL FORCE WOULD BE DELEGATED TO A MACHINE. THIS FAR-REACHING DEVELOPMENT WOULD FUNDAMENTALLY CHANGE THE WAY WAR IS CONDUCTED.**

**THE FUNCTION OF SELECTING AND ATTACKING TARGETS AUTONOMOUSLY COULD BE APPLIED TO SEVERAL PLATFORMS, FOR EXAMPLE IN A BATTLE TANK, A FIGHTER PLANE OR A SHIP.**

**IT IS UNDENIABLE THAT ARTIFICIAL INTELLIGENCE (AI), IS THE RESULT OF THE DEVELOPMENT AND WIDE ADVANCES IN SCIENCE AND TECHNOLOGY. THE LEVELS OF PROGRAMMING AND COMPUTATIONAL ABSTRACTION, ARE ASPECTS THAT ARE LEADING THE NEW FORMS OF WAR IN THE CURRENT ERA, SO MUCH SO THAT THE AUTONOMY TO MAKE DECISIONS OF LIFE AND DEATH IS BEING LEFT TO THE MACHINES.**

**BELOW ARE SOME OF THE AUTONOMOUS WEAPONS SYSTEMS BEING DEVELOPED BY SEVEN COUNTRIES THAT ARE SEEKING TO BECOME LEADERS IN ARTIFICIAL INTELLIGENCE AND HAVE INVESTED THE MOST IN THEIR MILITARY APPLICATIONS: THE UNITED STATES, CHINA, RUSSIA, THE UNITED KINGDOM, FRANCE, ISRAEL AND SOUTH KOREA.**



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**MADE BY: HANWHA (SOUTH KOREA).  
SOLD TO: SOUTH KOREA.**

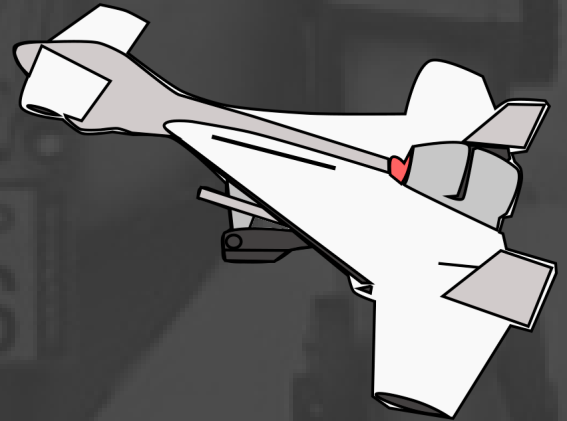
THIS STATIONARY ROBOT, ARMED WITH A MACHINE GUN AND A GRENADE LAUNCHER, OPERATED ALONG THE BORDER BETWEEN NORTH AND SOUTH KOREA. IT CAN DETECT HUMANS USING INFRARED SENSORS AND PATTERN RECOGNITION SOFTWARE. THE ROBOT HAS A SUPERVISED AND AN UNSUPERVISED MODE. IT CAN IDENTIFY AND TRACK INTRUDERS, WITH THE ABILITY TO SHOOT THEM.

**MADE BY: ISRAELI AEROSPACE INDUSTRIES (ISRAEL).**

**SOLD TO: CHINA, INDIA, ISRAEL, SOUTH KOREA AND TURKEY.**

THIS 2.1 M LONG MISSILE IS LAUNCHED FROM A LAND VEHICLE. IT IS ARMED WITH A 15 KG EXPLOSIVE WARHEAD. THE HARPY CAN PROWL FOR UP TO NINE HOURS STRAIGHT, LOOKING FOR ENEMY RADAR SIGNALS. IT AUTOMATICALLY DETECTS, ATTACKS AND DESTROYS ENEMY RADAR EMITTERS FLYING TOWARDS THE TARGET AND DETONATING.

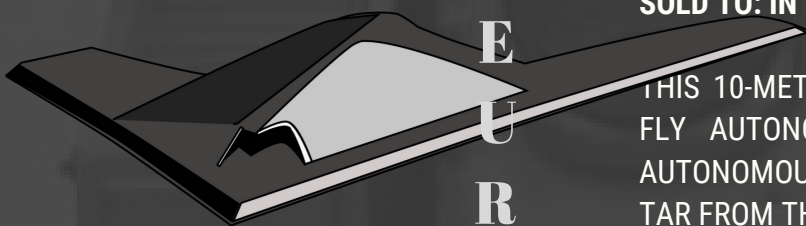
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**MADE BY: DASSAULT AVIATION (FRANCE).  
SOLD TO: IN DEVELOPMENT**

THIS 10-METER-LONG UNMANNED COMBAT AIRCRAFT CAN FLY AUTONOMOUSLY FOR MORE THAN 3 HOURS FOR AUTONOMOUS DETECTION, LOCATION AND RECOGNITION OF TAR FROM THE GROUND.

THE NEURON HAS FULLY AUTOMATED TURNING CAPABILITIES, TARGET ADJUSTMENT AND COMMUNICATION BETWEEN SYSTEMS.



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**MADE BY: THE PENTAGON - UNITED STATES.**

**SOLD TO: IN DEVELOPMENT.**

THIS 40M LONG SELF-NAVIGATING WARSHIP IS DESIGNED TO HUNT ENEMY SUBMARINES AND CAN OPERATE WITHOUT CONTACT WITH A HUMAN OPERATOR FOR 2-3 MONTHS AT A TIME. IT IS CURRENTLY UNARMED. U.S. REPRESENTATIVES HAVE SAID THAT THE GOAL IS TO ARM THE SEA HUNTERS AND BUILD UNMANNED FLEETS WITHIN A FEW YEARS. HOWEVER, IT HAS BEEN SAID THAT ANY DECISION TO USE OFFENSIVE LETHAL FORCE WOULD BE MADE BY HUMANS.

# WHAT ARE **NOT THE KILLER** **ROBOTS?**



CURRENTLY, ARMED DRONES ARE STILL UNDER THE CONTROL OF A HUMAN OPERATOR WHO OPERATES THE WEAPON SYSTEMS FROM A DISTANCE AND IS RESPONSIBLE FOR SELECTING AND IDENTIFYING TARGETS, AS WELL AS PULLING THE TRIGGER AT THE TIME OF FIRING. ON THE OTHER HAND, WE'RE NOT TALKING ABOUT THE TERMINATOR'S CONCEPT OF SCIENCE FICTION. THIS IS UNLIKELY TO BECOME A REALITY IN THE NEXT FEW DECADES, IF AT ALL. THE ISSUE OF KILLER ROBOTS, OR AUTONOMOUS LETHAL WEAPON SYSTEMS, IS THE ELIMINATION OF SIGNIFICANT HUMAN CONTROL OF CRITICAL TARGET SELECTION AND ATTACK FUNCTIONS, BEARING IN MIND THAT SOME OF THESE SYSTEMS MAY BE CURRENTLY UNDER DEVELOPMENT AND COULD BE DEPLOYED IN THE YEARS TO COME.

# IMPACT AND RISKS FOR THE CIVILIAN POPULATION

## 1 PROLIFERATION

KILLER ROBOTS OR LETHAL AUTONOMOUS WEAPONS SYSTEMS MAY GENERATE PANIC, FEAR AND DEVASTATION IN THE CIVILIAN POPULATION, CONSIDERING THAT THEY CAN BE RELATIVELY INEXPENSIVE COMPARED TO THEIR PRODUCTION, SO THEY CAN SIMPLY BE REPLICATED WITHOUT ANY RESTRICTIONS. THIS INCREASES THE LIKELIHOOD THAT THEY WILL PROLIFERATE AMONG A WIDE VARIETY OF ACTORS, INCLUDING DICTATORS AND NON-STATE ACTORS.

## 3 ETHICS

A MACHINE SHOULD NOT BE ALLOWED TO MAKE DECISIONS ABOUT THE LIFE AND DEATH OF A PERSON, SUCH DECISIONS SHOULD NOT BE REDUCED TO AN ALGORITHM OR PROGRAMMING, BEARING IN MIND THAT THIS GOES AGAINST THE PRINCIPLES OF HUMAN DIGNITY AND THE RIGHT TO LIFE.

A ROBOT OR PROGRAMMING DOES NOT UNDERSTAND OR RESPECT THE VALUE OF HUMAN LIFE, THEREFORE, IT DOES NOT HAVE THE CAPACITY TO MAKE A "DECISION TO KILL"; THAT TAKES INTO ACCOUNT, IMPLICITLY OR EXPLICITLY, HUMAN DIGNITY, IT IS SIMPLY COMPLETING THE TASK FOR WHICH ITS ALGORITHM WAS PROGRAMMED OR DESIGNED.

## 2 LEGALITY

WITH THE DEVELOPMENT AND USE OF KILLER ROBOTS, INTERNATIONAL LEGAL INSTRUMENTS SUCH AS INTERNATIONAL LAW (IHL) AND INTERNATIONAL HUMANITARIAN LAW (IHL) WOULD NOT BE CONSIDERED, AS THE DECISION OF LIFE AND DEATH CANNOT BE MADE BY A MACHINE/ROBOT/PROGRAMMING, BUT THESE WEAPON SYSTEMS MUST BE UNDER THE CONTROL OF A HUMAN/COMMANDER, WHO UNDER HIS EXPERIENCE IN TIMES OF CRISIS (COMBAT) CAN PRECEDE HUMAN ACTIONS AND MAKE THE FINAL DECISION.

IT IS VITALLY IMPORTANT TO NOTE THAT THESE TECHNOLOGICAL ADVANCES IMPLEMENTED TO LETHAL WEAPONS DEVALUE AND DEHUMANIZE THE FUNDAMENTAL DECISION TO TAKE A LIFE IN TIMES OF CRISIS, AND DO NOT RESPECT THE IMMINENT VALUE PLACED ON HUMAN LIFE AND DIGNITY.

# IMPACT AND RISKS FOR THE CIVILIAN POPULATION

## 4 RESPONSIBILITY

LETHAL AUTONOMOUS WEAPONS SYSTEMS CREATE AN ACCOUNTABILITY GAP AS TO WHO WOULD BE RESPONSIBLE IF AN ILLEGAL ACT WERE TO BE COMMITTED. WHO WOULD BE RESPONSIBLE: THE MANUFACTURER, THE DEVELOPER, THE MILITARY COMMANDER OR THE ROBOT ITSELF?

## 6 UNPREDICTABILITY

DEPLOYMENT OF LETHAL AUTONOMOUS WEAPONS SYSTEMS COULD LEAD TO ACCIDENTAL WARFARE AND RAPID ESCALATION OF CONFLICT, AS WELL AS OTHER UNINTENDED BUT DANGEROUS CONSEQUENCES.

IT IS NOT CLEAR HOW LETHAL AUTONOMOUS WEAPONS SYSTEMS DESIGNED AND DEPLOYED BY OPPOSING FORCES WILL REACT AND INTERACT WITH EACH OTHER. THESE WEAPONS COULD BE HIGHLY UNPREDICTABLE, ESPECIALLY IN THEIR INTERACTIONS WITH OTHER AUTONOMOUS SYSTEMS AND WHETHER THEY ARE CAPABLE OF SELF-LEARNING.

## 5 ARMS RACE

STATES WOULD START AN ARMS RACE IN ORDER TO DEVELOP AND USE LETHAL AUTONOMOUS WEAPONS SYSTEMS. QUICK ADVANCES IN ROBOTICS AND ARTIFICIAL INTELLIGENCE APPLIED TO MILITARY TECHNOLOGY WOULD HAVE DESTABILIZING EFFECTS AND THREATEN INTERNATIONAL PEACE AND SECURITY.

## 7 OWNERSHIP OF KILLER ROBOTS

THE EMERGENCE OF KILLER ROBOTS OR LETHAL AUTONOMOUS WEAPONS SYSTEMS AND THEIR POSSIBLE OR FUTURE USE BY CRIMINAL OR TERRORIST GROUPS WOULD HAVE A NEGATIVE CONNOTATION IN THE FACE OF THE INEVITABLE LARGE-SCALE WARS OR GLOBAL ARMS RACES THEY MIGHT CAUSE.

THESE SYSTEMS COULD BECOME WEAPONS OF MASS DESTRUCTION, CAUSING AN EPIDEMIC OF VIOLENCE AND DEATH BOTH NATIONALLY AND IN THE INTERNATIONAL SYSTEM. KILLER ROBOTS OR LETHAL AUTONOMOUS WEAPONS SYSTEMS ARE A NEW THREAT TO NATIONAL, REGIONAL AND INTERNATIONAL PEACE AND SECURITY, AS THESE WEAPONS SYSTEMS WILL NOT ALWAYS BE UNDER THE CONTROL OF THE PUBLIC AUTHORITIES OF STATES, BUT CAN BE DANGEROUSLY ACQUIRED AND FINANCED BY NON-STATE ARMED GROUPS, CRIMINAL OR TERRORIST GROUPS.

# COMMITMENTS OF THE INTERNATIONAL COMMUNITY AND CIVIL SOCIETY

IN THE MULTILATERAL DIALOGUE SCENARIOS OF THE UNITED NATIONS AND DISARMAMENT IN GENERAL, THE TOPIC HAS BEEN DISCUSSED LEAVING AS A RESULT A SERIES OF DISCREPANCIES AMONG STATES, EMPHASIZING SOME FACTORS SUCH AS THE LACK OF A GLOBAL DEFINITION ON THE ELEMENTS AND CHARACTERISTICS OF AUTONOMOUS WEAPONS SYSTEMS. ON THE OTHER HAND, IT IS NECESSARY TO NEGOTIATE AND CREATE A LEGALLY BINDING INSTRUMENT (A TREATY) THAT SUCCEEDS IN REGULATING THE NEW TECHNOLOGIES THAT ARE BEING IMPLEMENTED AND ADAPTED TO WEAPONS, IN ORDER TO MITIGATE THE NEW RISKS AND THREATS TO NATIONAL AND INTERNATIONAL SECURITY.

LIKewise, STATES HAVE TO ADJUST THEIR LEGAL AND CONSTITUTIONAL FRAMEWORK (LAWS) TO THE APPROVAL OF LAWS TO ESTABLISH RESTRICTIONS AND ADMINISTRATIVE AND CRIMINAL OBLIGATIONS TO THE INDUSTRY OR PRIVATE SECTOR THAT HAS EXPERIMENTATION AND INNOVATION WITH THE TECHNOLOGIES IMPLEMENTED TO THE WEAPONS SYSTEMS, IN ORDER TO AVOID THAT THESE FALL INTO THE HANDS OF THOSE OUTSIDE THE PUBLIC POWER, SUCH AS CRIMINAL OR TERRORIST GROUPS.

FINALLY, IN ACCORDANCE WITH INTERNATIONAL HUMANITARIAN LAW AND INTERNATIONAL HUMAN RIGHTS LAW, HUMANS ARE THE ONLY ONES WHO CAN MAKE DECISIONS (HUMAN JUDGMENT) IN TIMES OF WAR AND/OR IN CRITICAL LIFE AND DEATH SITUATIONS ON THE BATTLEFIELD.