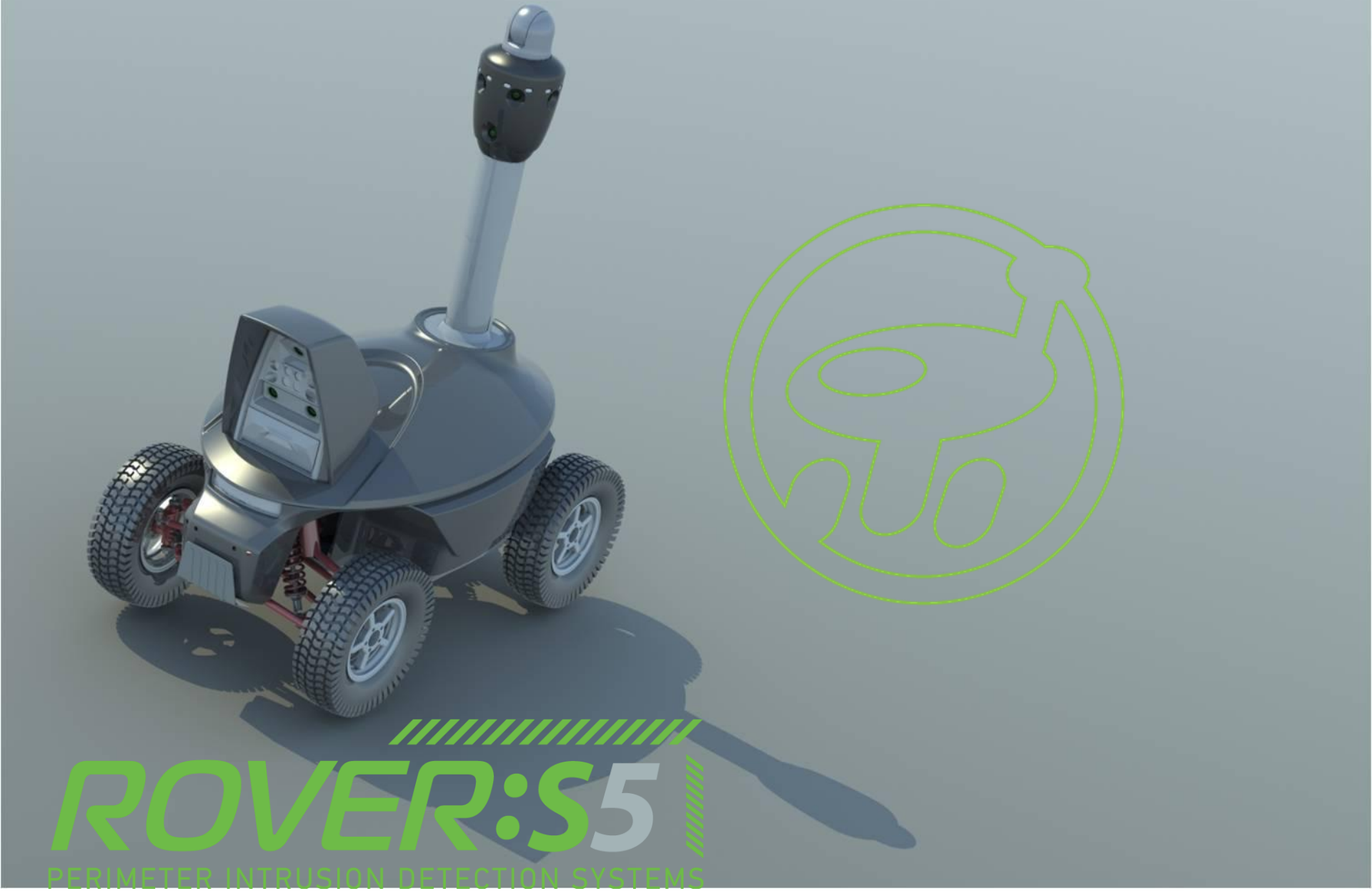

ROVER:S5

PERIMETER INTRUSION DETECTION SYSTEMS

Next Step of Security Technology

Security technologies went through major developmental steps

Every 20 – 30 years, new technology solutions arrive, and security service providers should be on par with there new technologies

1910 –1930 – Security alarms

1960 –1970 - Electronic locks. Access Control.

1980 –2000 – Video cameras (CCTV)

2015 - - Security robots

Why robots are the natural development step for the security systems? Robot vs. Human

- Robots are constantly vigilant, day and night.
- Robots don’t sleep, don’t get distracted, don’t drink coffee, don’t talk on the phone, don’t watch TV, don’t go to the bathroom, don’t play video games…
- Robots work 24/7
- Robots patrol their designated routes regardless of the weather.
- Robots don’t feel heat or cold. They have no problem with wind, rain or snow.
- Robots are eager to check on any suspicious activity.
- Robots don’t take sick leave, they don’t have vacations or holidays.

Will robots replace humans? No

Robots take over the routine security operations but don't replace the security guards. You can reduce the number of guards at the facility but the quality of protection will raise.

SMP Robotics – Next Step of Security Technology

Are robots dangerous to humans? No

SMP Robotics – Next Step of Security Technology

Are there many problems with robots? No

What do we offer? Rover S5 Security Robot.

ROVER S5 Security Robot is a mobile video surveillance system that continuously patrols the secured area, which greatly increases the reliability of protection and dramatically reduces the dependence on human factor, especially when patrolling vast areas.


ROVER:S5
PERIMETER INTRUSION DETECTION SYSTEMS


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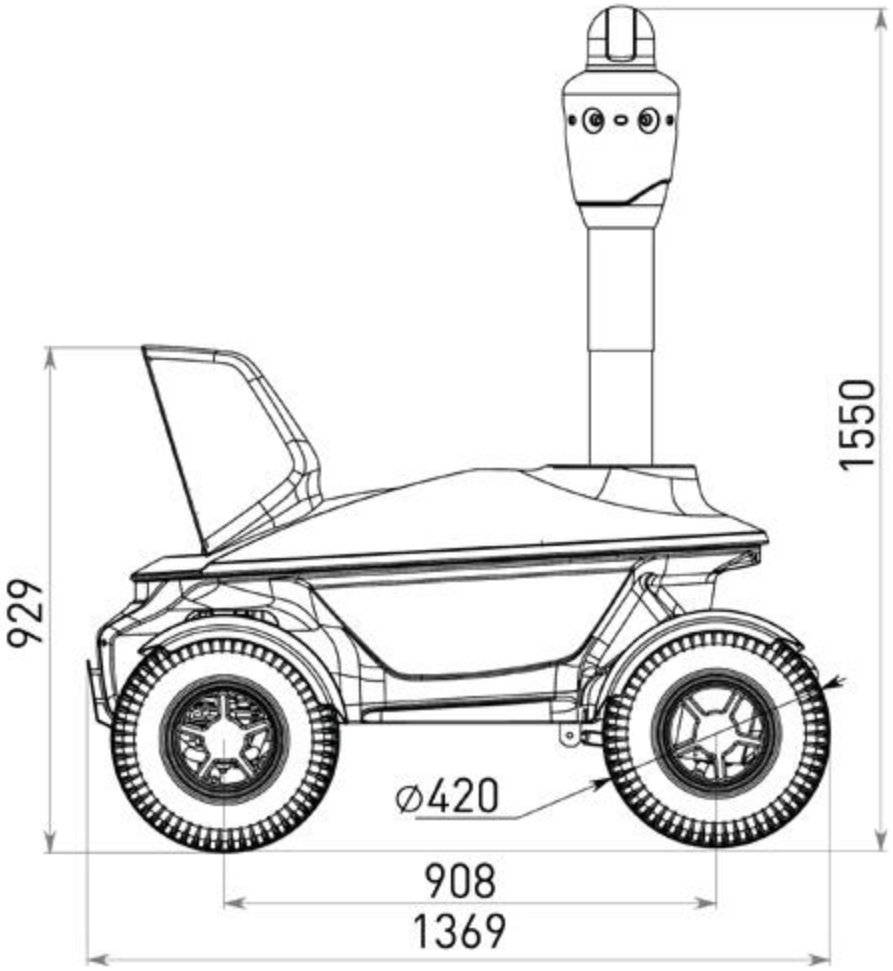
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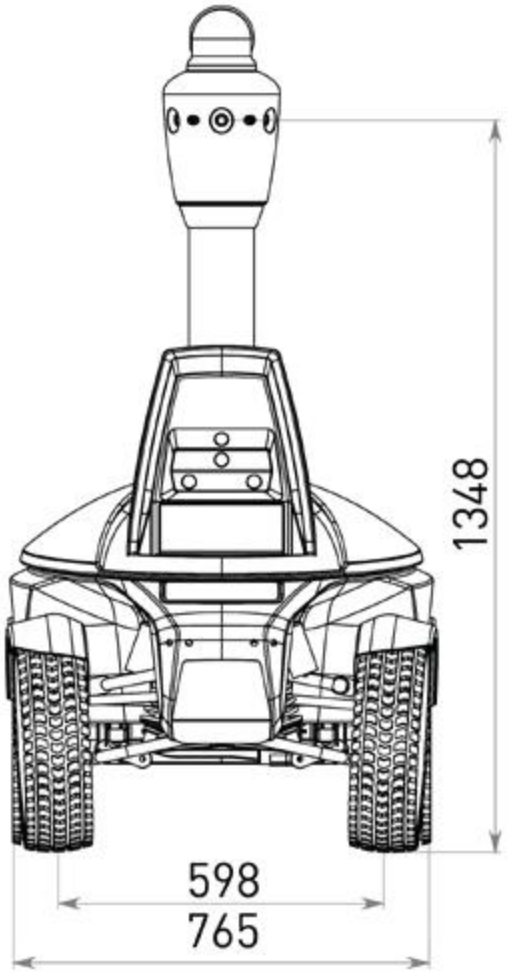
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Security robot “ROVER-S5”

- Panoramic video surveillance and motion detection
- Automatic target acquisition and tracking with PTZ camera
- Remote video surveillance on a tablet computer, built-in DVR
- Autonomously follows the route in patrol mode
- Automatic obstacle avoidance

- Stops in position ideal for video surveillance
- Autonomous nighttime operations
- Autonomously passing pedestrians, cars and other robots
- Automatic or manual activation of the strobe light and siren
- Elements of artificial intelligence
- Returns to base when batteries discharged
- Automatic battery charging
- All weather, day-and-night operation

Technical Specification

Active Security

- The industries worldwide are switching from passive security (passwords, locks, ID check) to Active Security.
- Robotic patrol of external perimeter is the vital component of active security.
- You learn about intrusion threat not after, but before the intrusion to protected territory takes place.
- It is better to proactively remove threat than mitigate its consequences.

Technology

AI SOLUTIONS

SMP Robotics developed state of the art AI (Artificial Intelligence) solutions for the swarm of robots. Our robots are Autonomous, not Remote-Controlled machines.

ARTIFICIAL INTELLIGENCE

MULTI-AGENT SYSTEM

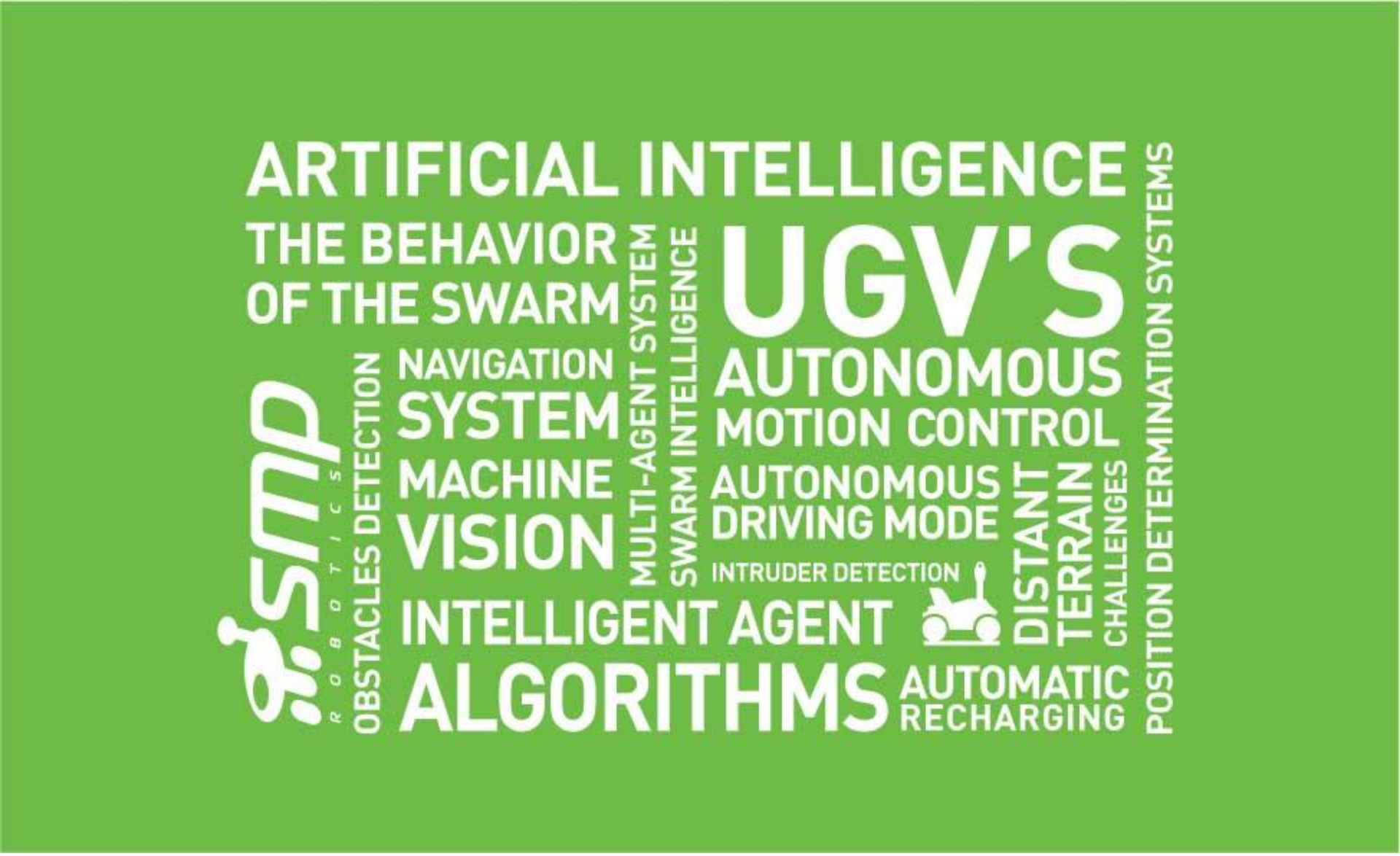
INTRUDER DETECTION

The most exciting things happen when our robot detects an intruder. We call this behavior the Swarm Intelligence. Upon detection of an intruder the robot stops moving along its designated route and switches to the optimal path to the intruder.

UNIQUE NAVIGATION CONTROL SYSTEM

State of the art autopilot with computer vision network comprised of three video devices, each designed to perform a specific integrated function.

WELCOME TO NEXT LEVEL OF UGV WITH ARTIFICIAL INTELLIGENCE…


ARTIFICIAL INTELLIGENCE
THE BEHAVIOR OF THE SWARM
UGV'S
NAVIGATION SYSTEM
AUTONOMOUS MOTION CONTROL
MACHINE VISION
AUTONOMOUS DRIVING MODE
INTRUDER DETECTION
INTELLIGENT AGENT
ALGORITHMS
AUTOMATIC RECHARGING
OBSTACLES DETECTION
MULTI-AGENT SYSTEM
SWARM INTELLIGENCE
DISTANT TERRAIN
CHALLENGES
POSITION DETERMINATION SYSTEMS
smp ROBOTICS

Hazardous Materials Security

Rover S5 Hazmat is perfect independent robot to collect information about air pollutants, temperature and radiation.

In addition to the standard set of cameras, Rover S5 Hazmat robots are equipped with special gas analyzers, temperature and radiation detectors, and other devices per customer’s order.

ROVER-S5 HAZMAT ROBOT IS ABLE TO PERFORM REMOTE INSPECTION TASKS AT THE INDUSTRIAL FACILITIES WITHOUT HAVING TO DIRECTLY ACCESS HAZARDOUS AREAS. ITS OPERATION DOES NOT REQUIRE HUMAN PRESENCE.

Hazardous Materials Security

Alarm systems are only triggered if some environmental parameters are outside of the normal range. The facility staff does not have to monitor the process all the time.

Our system provides not just the financial savings, but more importantly, relieves humans from repetitive routine tasks and improves execution of the wide range of inspection tasks.

Incorporation of Robots in the Enterprise Security Structure

The process includes the following steps:

- Contracting and purchasing the robots.
- Development of on-site robotics implementation system.
- Infrastructure creation (WiFi, charging stations, video storage servers, sensors).
- Purchase of WiFi routers, installation of charging stations , equipping the security guards with tablet computers.
- Training of robots on-site
- Integration of computer control system for groups of robots.
- Personnel training.
- Testing of alarm and response systems.

And finally…

Dyson vacuum cleaner vs. iRobot

vs.

Dyson iRobot

Dyson vacuum cleaner is better than iRobot in every way except for one. iRobot vacuum cleaner is preferred by people who do not like vacuuming. People preferred iRobot. Mr. Dyson fought for 5 years and now is developing robot vacuum cleaner…


ROVER:S5
PERIMETER INTRUSION DETECTION SYSTEMS