

Team Information

Picture of vehicle:



Name of vehicle:

VEGA



Picture of team leader:

Name of team leader:

Aleksander NOWAK

Team Name:

Storm Robotics

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Team Description:

The Storm Robotics Team is Polish Naval Academy's entry into the ELROB2011. The team is largely composed of faculty and students from Polish Naval Academy (PNA), under the

Team Information

leadership of Aleksander Nowak (Director of Satellite Systems and Navigational Devices Lab). The Storm Robotics Team is supported by three persons who do not work or study in PNA.

Our vehicle is called VEGA. The VEGA is based on a prototype Unmanned Ground Vehicle 4x4 wheels platform, powered by 4 electric engines. All processing takes place on two computers – navigational and recognise. They are powered by a battery-backed, electronically controlled power system. The vehicle incorporates measurements from GPS/DGPS/EGNOS, two 6DOF IMU (inertial measurement unit) integrated with three axis magnetometers, barometer and GNSS receiver, three MEMS gyros and four wheel speed for dead reckoning (DR) navigation. While moving, the environment is perceived through LIDAR, a stereo camera pair, one spherical camera and a monocular vision system. All sensors acquire environment data at rates between 1 and 100 Hz. Map and position information are incorporated in between 1 and 10 Hz, enabling the VEGA to avoid collisions with obstacles in real-time while advancing along the ELROB2011 route.

The development of the VEGA system began in June 2009. At the time the of the initial team application, the vehicle is largely functional.

Sponsors:

At the time - no sponsors.

Selection of scenario:

1. Reconnaissance and surveillance
2. Camp security
3. Autonomous navigation
4. Transport - mule

Proof of citizenship: