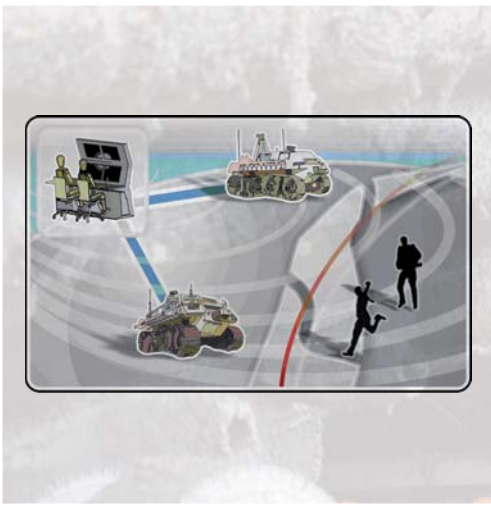
TALOS

Transportable Autonomous patrol for Land bOrder Surveillance system



TALOS is an innovative, Adaptable Land Border Large Area Surveillance System based on transportable surveillance integrated with fast deployable mobile unmanned ground (UGV) and air vehicles (UAV) which will address new challenges of external land borders of enlarged European Union.

Project objectives

TALOS project proposes to develop an integrated, adaptable land and large area (including devastated environment) surveillance system that:

›› Is capable of Detecting, Locating, Tracking and Tracing:

- individuals,
- vehicles,
- hazardous Substance,

›› Combines remote and autonomous platforms featuring:

- multi sensor data fusion (including biological and chemical),
- active imaging,
- data Fusion,
- command Control & Communication.

The TALOS project main objectives are as follows :

›› To design the Integrated, Adaptable Land Border Large Area Surveillance System based on Unmanned Ground and Air Vehicles (TALOS system).

›› To run research works in the main topics addressed by TALOS project, i.e.: Unmanned Ground Vehicles (UGV), Command and Control, Communication, Virtual prototyping.

›› To implement the core components of the designed TALOS system as a proof-of-concept prototype in the Integrated Project (IP).

›› To set-up and run the TALOS demonstrator (prototype) that will show the main benefits of the proposed approach.

›› To promote the usage of TALOS system concept all over Europe, and to contribute to the on-going efforts of their standardization in Europe.

›› To show the cost-effectiveness of the TALOS mobile / transportable concept as opposed to conventional stationary border surveillance solution.

The main TALOS innovation covers :

›› Scalability – its ability to change easily system scale due changes in the requirements and local conditions such as border size, topography, density of surveillance elements etc. ;

›› Autonomous capability based on sets of rules (artificial intelligence) - programmed to the computers of the UGV's and the Command & Control system ;

›› Mobility/transportability - the whole system will be Mobile / Transportable installed in standard containers, transported on trailers for fast deployment in selected border zones (according to intelligence) ;

›› Tactical learning/adaptation behaviour - during development process, system will be adapted to local operational requirements, operators will be interrogated, and their needs implemented in system mission planning module.

›› No need for fix infrastructure or fences – TALOS system, owing to its mobility and transportability, does not require any fixed infrastructure as well as fences.

›› Enables response to intrusion in minutes – system will respond to intrusion in the matter of minutes, not hours.

›› Usage of "green" energy – in remote locations (where it is impossible to connect to standard power liens) the energy will be drawn from the natural sources e.g. by means of solar panels (sunny area), wind towers (windy area), water wheels (near to rivers).

INFORMATION

Acronym:
TALOS

Grant Agreement N°:
218081

Total Cost:
€ 19,906,815

EU Contribution:
€ 12,898,332

Starting Date:
01/06/2008

Duration:
48 months

Coordinator:

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