M – ELROB 2012

7th European Land-Robot Trial
24-28. September, Thun, Switzerland
www.elrob.org

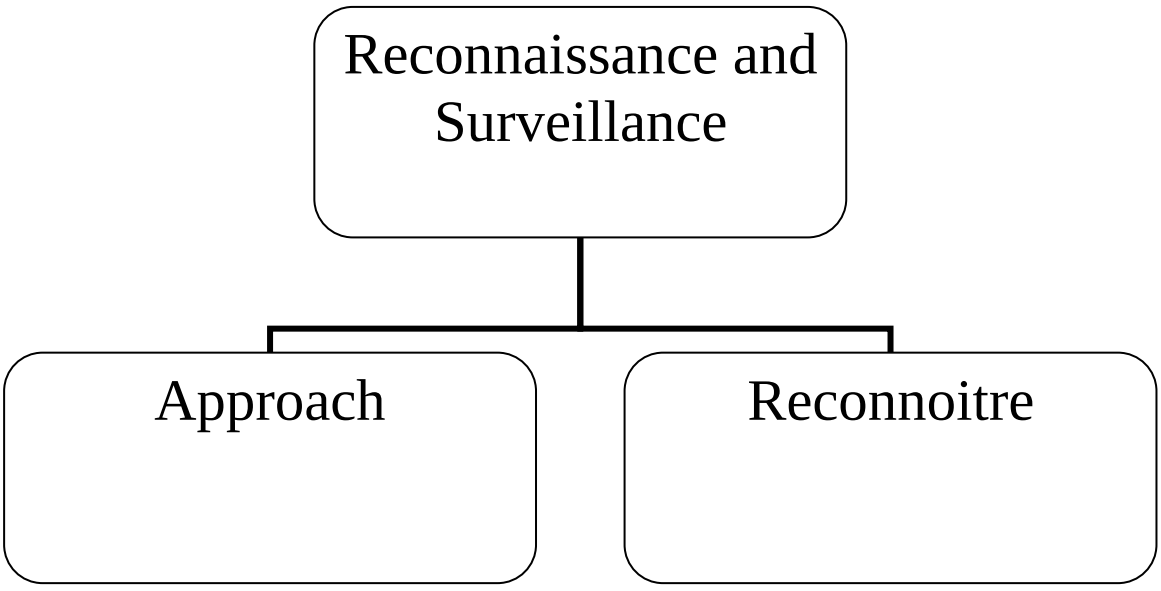
REAL TASKS, IN A REAL WORLD SCENARIO

Reconnaissance and surveillance

Reconnaissance and surveillance is a key military task. It can be divided into two scenarios. First the approach of the target area and second the reconnaissance of the target area.

Due to this, the ELROB 2012 reconnaissance and surveillance trial is subdivided into independent tasks/trials. Approach will be done by day and by night!

To give more participants the chance to take part in ELROB 2012, you can choose in which parts of the reconnaissance and surveillance trial you want to participate.



!!! The document is subject to change and refinement!!!

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Reconnaissance and surveillance - Approach

The daylight scenario serves as the qualification for the identical night scenario.

Environment:

Non-urban area, vegetation, grass, sand, water, stones, bushes, roads and paths.

Situation:

A target area located in up to 1500m (meters) distance has to be approached.
There will be dynamic objects and static obstacles on the route.
Dead ends, sharp turns, road blockings and narrow passages can occur.
Traffic presence at the route is to be expected.

Objective:

Approach target location with highest autonomy possible.
Perform reconnaissance on the way to and at target location.
Search for particular markers with special characteristics.
If found, acquire imagery and position of marker and report to control station.

Execution/Implementation:

Approach target location by using given UTM coordinates.
Traverse given waypoints (UTM coordinates) on the way to destination.
This should be done with maximum autonomy available.
If possible, transmit live position and imagery to the control station.

Timing:

Duration approx. 30 min.

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Constraints:

The troop will receive a section of a digital map with UTM co-ordinates that have to be traversed in the given order; see example in the rules.

The scenario ends with reaching

1. the target location and transmission of the acquired data or
2. time limit and transmission of the acquired data

what ever occurs first.

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Reconnaissance and surveillance – Reconnoitre

The daylight scenario serves as the qualification for the identical night scenario.

Environment:

The forest area consists of dense woodland. Roads, footpaths, and some barracks complete this area. Barricades, barriers or any kind of blockades can occur.

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Target area

Situation:

A target area has to be reconnoitred.

There will be dynamic objects and static obstacles in the area.

Dead ends, sharp turns, road blockings and narrow passages can occur.

Traffic presence in the area can be expected.

Objective:

Reconnoitre target area with highest autonomy possible.

Perform reconnaissance at target area.

Search for particular markers with special characteristics.

If found, acquire imagery and position of marker and report to control station.

Execution/Implementation:

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Reconnoitre target location outlined by given UTM coordinates.

This should be done with maximum autonomy available.

If possible, transmit live position and imagery to the control station.

Timing:

Duration approx. 45 min.

Constraints:

The troop will receive a section of a digital map with UTM co-ordinates that specify the boundary of the area; see example in the rules.

The scenario ends with reaching time limit and transmission of the acquired data whatever occurs first.

!!! The document is subject to change and refinement!!!