TBM 2: Emergency in a building (Land + Air)

Team name: _____ENSTA BRETAGNE_____

Referee I (Land): _____MARIA_____, Referee II (Land): _____VICTOR_____

Referee I (Air): _____PACO_____, Referee II (Air): _____CARLOS_____

Date (DD/MM/YYYY): _____23/02/2019_____, Time (24:00): _____10:40_____

Duration: _____ (Max. 90 min) ☐ Timeout

Achievements

A: 25 (24)

PB: 2

Set A1: Outdoors

An **aerial robot** reaches WP1, WP2 and WP3 within 3m, avoiding obstacles along the route.	A1.1 WP1 A ☒ A1.2 WP2 A ☒ A1.3 WP3 A ☒
An **aerial robot** autonomously avoids obstacles 1, 2 and 3.	A1.4 ☐ A1.5 ☐ A1.6 ☐
A **land robot** reaches WP1 within 3m, avoiding obstacles along the route.	A1.7 WP1 L ☒
A **land robot** reaches autonomously WP2 and WP3 within 3m, avoiding obstacles along the route.	A1.8 WP2 L ☒ A1.9 WP3 L ☒
Within **30 minutes** of start of the run, a robot reports the correct location (within radius 5 m) of the **missing worker** outside the building.	A1.10 ☒
The missing worker is detected by the robot in real-time in an **automatic** way.	A1.11 ☒
An **aerial robot** deploys the first-aid kit within a radius of 2 m from the worker found outside the building.	A1.12 ☐
A **land robot** deploys the first-aid kit within a radius of 1 m from the worker found outside the building.	A1.13 ☒
Robots recognise the **damages** in the area outside the building *(each damage can only be scored once).*	A1.14 D1 ☒ A1.15 D2 ☒ A1.16 D3 ☒
Robots localise the **unobstructed entrance** in real-time in an automatic way.	A1.17 ☒
Robots localise the **obstructed entrances** *(each unobstructed entrance can only be scored once),*	A1.18 E1 ☒ A1.19 E2 ☒

detection →?

Set A2: Indoors

A **land robot** enters the building through the unobstructed entrance.	A2.1 ☒
An **aerial robot** enters the building through the unobstructed entrance.	A2.2 ☒
A **land robot** enters the building autonomously through the unobstructed entrance after trying to complete the outdoor achievements.	A2.3 ☒
An **aerial robot** enters the building autonomously through the unobstructed entrance after trying to complete the outdoor achievements.	A2.4 ☐
The land robot(s) builds a geometric indoor map of the building *(use the best map or a combination of land robots maps).*	A2.5 ☐ (incomplete)
The land robot(s) builds the map on-board during the operation. *(the map must be shown to the referees just after the run finishes).*	A2.6 ☐
The aerial robot builds a geometric indoor map of the building.	A2.7 ☐
The aerial robot builds the map on-board during the flight. *(the map must be shown to the referees just after the run finishes).*	A2.8 ☐
Robots recognise the **damages** in the area inside the building. *(each damage can only be scored once).*	A2.9 D1 ☒ A2.10 D2 ☒
Within **30 minutes** of start of the run, a robot reports the correct location (within radius 5 m) of the **missing worker** inside the building.	A2.11 ☐
The missing worker is detected by the robot in real-time in an **automatic** way.	A2.12 ☒
An **aerial robot** deploys the first-aid kit within a radius of 2 m from the worker found inside the building.	A2.13 ☐
A **land robot** deploys the first-aid kit within a radius of 1 m from the worker found inside the building.	A2.14 ☐

Set A3: General

The **land robot(s)** returns to the starting area once all the tasks have been done.	A3.1 ☒
The **aerial robot(s)** returns to the take-off/landing area once all the tasks have been done.	A3.2 ☒
The **land robot(s)** transmits live position and images/video to the control station during the run.	A3.3 ☒
The **aerial robot(s)** transmits live position and images/video to the control station during the run.	A3.4 ☒

Penalised Behaviours

The robot needs manual intervention during a run (e.g. the robot is stuck):	
Aerial robot	PB1 ☐ (max. 1)
Land robot 1	PB2 ☒ ☒ (max. 2)
Land robot 2	PB3 ☐ ☐ (max. 2)

The land robot leaves the operating area.	PB4 ☐ (max. 1)
The land robot-1 hits the obstacles.	PB5 ☐ ☐ ☐ ☐
The land robot-2 hits the obstacles.	PB6 ☐ ☐ ☐ ☐
The land robot changes batteries or is refuelled during the run.	PB7 ☐ (max. 1)

Disqualifying Behaviours

A robot damages competition arena (including the obstacles).	DB1 ☐
A robot does not conform to safety requirements for the competition.	DB2 ☐
The aerial robot leaves the flight volumes defined by the organisation.	DB3 ☐
The team does not provide the data after the required time.	DB5 ☐

Comment:

_____

WARNING: A disqualifying behaviour discards all other achievements in the current task. Use it only when it is really necessary (e.g. cheating).

Benchmarking data delivered appropriately: ☒ yes / ☐ no

(Time is 60 min after the end of the team's time-slot, formats as described in the TBM)

Team leader signature:

Referee signature: