IPSC IT FEST 2026

Judging Rubric

Terra Incognita

The Doon School

DEHRADUN

This document is part of the Terra Incognita document pack. It sets out how a team is scored. Every criterion is scored by counting or measuring, except that the repository is scored by checking the listed items.

1. Total

1.1 Total points available: 100.

Criterion	Points
2.1 Grid map	70
2.2 Return to the starting position	15
2.3 Repository	15
Total	100

2. Criteria

2.1 Grid map (70 points)

The organisers compare the displayed grid map (Arena Specification §6.4) with the reference map (Arena Specification §6.3), cell by cell. They count three numbers:

- W is the number of wall cells in the reference map;
- C is the number of cells that the map shows as wall and that are wall in the reference map;
- F is the number of cells that the map shows as wall and that are "no wall" in the reference map.

Grid map points = 70 × (C − F) ÷ W, with a minimum of 0, rounded to one decimal place.

A perfect map scores 70. A map with no wall cells scores 0. Marking a cell as wall when it is not wall removes the same number of points as a correctly marked wall cell adds. A map that is not shown, or is not shown as set out in Arena Specification §6.4, scores 0.

2.2 Return to the starting position (15 points)

The final distance is measured for every team at the end of its official run: from the point on the floor directly below the robot's centre mark (found with a plumb line) to the intersection point of the X, to the nearest millimetre.

When every team has run, the teams are ranked by final distance, the smallest distance first.

Rank	Points
1	15
2	14
3	13
Each next rank	1 point fewer than the rank above
14	2
15	1
16 and below	0

Teams with the same final distance share the same rank and each receives the points for that rank. The next rank number is skipped for each extra tied team: for example, if two teams tie for rank 2, both receive 14 points and the next team is rank 4 with 12 points. A team whose run is disqualified is not ranked and receives 0 points.

2.3 Repository (15 points)

Each item is either met or not met. There are no partial marks.

Item	Points	Met when
R1 Timeliness	3	The link was given to the organisers by the deadline (Rulebook §10.2).
R2 README	4	The top-level README states the SLAM method used, the list of sensors and the steps to start the robot.
R3 Source code	4	The repository holds source code for each of the robot's SLAM, localisation, mapping and navigation functions.
R4 No stored map	4	The repository holds no file that stores the arena layout or the positions of fixed obstacles.

3. Negative marking

Event	Deduction
Each wall contact (contact between the robot and a wall or fixed obstacle), provided no damage has taken place	2 points per wall contact
The robot damages any part of the arena	Disqualification from the run (Rulebook §6.2)

A team's total score is not reduced below 0.

4. Who scores what

4.1 The organisers score criterion 2.1 and the deductions at the arena, on the day. They measure the final distance for criterion 2.2 at the arena, and give the points for 2.2 once every team has run.

4.2 The Terra Incognita event team marks criterion 2.3 from the repository. The external judge receives a copy of the marking sheet but does not re-mark it (Fest Policy §4.9).

4.3 Loop closure and localisation consistency are not scored separately. They show in the grid map.

5. Tie-breaks

5.1 In the event of equal total scores, the tie-break order is:

- first: higher Grid map points;
- second: higher Repository points;
- third: lower official run time, measured from the start of the official run to its end (Rulebook §3.1).

5.2 If teams remain tied after all listed tie-breaks, the teams share the placing. This matches Rulebook §3.4.