Strategy map

For the Eurobot competition we have decided to prioritise the titanium ores. We feel that the lunar modules may take too long to place in the moon base. Also spinning the dual-coloured lunar modules to match our teams colour seems very difficult to implement.

On the strategy map we have colour coded our robots order dependant on our teams colour. If the robot starts in the blue area, it will follow the blue numbers, and if it starts in the yellow area it will follow the blue numbers.

Each crater has a lift around its edge that is 4mm in height. This shall be no problem for our wheels.

Firstly the robot shall head out of the starting area and towards area 1. This crater is prioritised over the other areas because it contains 20 titanium ores among 8 moon rocks. These titanium ores could yield 60 points if returned to the cargo bay as planned. This crater is situated approximately 2 meters away from the starting area. The robot will approach from the north of the crater. Accounting for time taken to get in and out of the starting area, we expect returning the titanium ores from area 1 to the cargo bay will take 40 seconds. This will be longest part of our journey, but also reward the most points. Currently we expect the robot to hold approximately 20 titanium ores in its internal storage area. This was calculated by assuming that our non-deployed robot will utilise the full 12000mm parameter and have an approximately 0.9m2 sized internal storage. This will score 60 points.

After depositing the titanium ores from area 1 to the cargo bay, the robot will then head to area 2. This area contains 5 titanium ores with no moon rocks. This area is closest to the starting area (approximately 0.2 meters away). The robot will approach from the south of the crater. Gathering the titanium ores and depositing them in the cargo bay will take 15 seconds. This will return 15 points.

The robot shall head to area 3. This crater contains 5 titanium ores and 1 moon rocks. This area is the lowest priority as it is furthest away and only containing 5 titanium ores along with 1 useless moon rock. Completing this will take approximately 35 seconds and return 15 points.

Finally the robot will complete its funny action after 90 seconds. This will ideally take place in the starting area after the robot has deposited the titanium ores from area 3 into the cargo bay. However, the robot will launch the rocket where ever it is after 90 seconds. This ensures we will still score the 20 points in the case that the robot gets stuck or takes too long to complete an action.

Our current plan would score us 110 points and would take the full time limit to achieve this. This strategy is still open to adaptation. For example if time permits after the UK final, we may implement a second robot that will focus solely on the lunar modules.