

RI16x62: The Final Contest

Introduction:

The story thus far... When we last met, you – the underpaid University students – were (more or less) happily supporting the intrepid Zwytwerp empire by mining gold for their gaudy watch export business.

Alas, ZASA's harmonious operation was ruined! A treacherous Bodork spy was discovered on your Zwytwerp mother ship (as was one of yours on the Bodork mother ship) and each of you lost several robots in the ensuing battle. During negotiations, you decided to request third-party arbitration instead of destroying one-another, as was your only other option (the concept of cooperating with the Bodorks is entirely unimaginable). At long last, your arbitrators, the Schwamorons, have proposed a solution:

Memo

From: SCFZBM (Schwamoron Council on Fixing the Zwytwerp-Bodork Mess)

We are truly surprised and impressed that you have made the logical choice of not pulverizing one-another's planets. Instead, you have turned to us, a race of incomprehensibly higher intelligence to solve your silly little dispute.

We are indeed an unfathomably superior race in every possible way, and it occurred to us to solve your problem by simply making for each of you all the gold you could possibly want. We have, after all, the ability to make any substance out of elementary particles, as does every self-respecting civilization in the galaxy. However, we realized that in this resolution there hid an opportunity for us. We are so intelligent and so all-understanding that we are rather bored and would love to take this opportunity to introduce our citizens to the spectator sport of watching you primitives play a little game. So here is our plan:

We will place both of your robots and mother ships on the asteroid surface and activate them simultaneously. Rest assured that your mother ships will be on opposite sides of a Giant Asteroid Trench. We will inform your robots of their precise position and orientation on the surface (they will be facing one of the four cardinal directions); the location of all the gold nuggets on the asteroid surface.

We will keep score and, at the close of the game, whichever robot team has delivered the most gold to its respective Mother Ship wins. We will then produce as much gold as that nation wants, give the computer science students on that nation's team 15 extra points for the quarter, and we will pulverize the other nation's robot control software using The Giant Magnet.

More Details:

The mazes will be, at a maximum, 14 by 7 nodes.

We will be using the same protocol for picking up, dropping, and transferring the gold as we did in the last lab.

SOUND SOUND SOUND SOUND

You will want to use funny and creative sounds in the contest. We're counting on you to be audible. The press will be there. Your friends will be there!

APPROPRIATE ATTIRE REQUIRED

Traditionally, each team dresses their robot in elaborate costumes. If you don't do so, we'll be sad.

Some final rules for the final contest...

- You will have **15 minutes** after the previous team finishes to:
 - Dress your robot
 - Get your code loaded
 - Make sure your sounds work
 - Get your robot positioned and initialized (i.e. get comm link established and select/load the maze file)
- The game will begin whether you're ready or not! Hint: Time yourself to make sure you can load up in a reasonable amount of time.
- The end of the game occurs when one of the following conditions occurs:
 - The game has been running for **X minutes**. X is probably 10.
 - One team fills their cargo bays.
 - All of the gold has been delivered or has become unrecoverable.
 - All motion has stopped or has entered the Infinite Loopdom.
- Once the game is over, the winner is determined as follows:
 - 1 The first team to deliver N golds to their cargo bays wins.

- 2 If no team delivers N golds, the team with the most gold delivered wins.
- 3 If the number of golds delivered is a tie, the team holding the most golds wins.
- 4 Beyond this, the winner is determined at the discretion of the judges. Attire and sounds will play a role at this point.