Laser Tag Robot Competition

HEC, Ryerson University

November 24, 2006

1 Overview

Participatants construct robots to compete against each other in an autonomous game of laser tag. Each robot will be equipped with an IR gun and IR sensitive detectors. The guns will emit uniquely modulated beams of infrared light that will identify them.

HEC, Ryerson will provide the gun and the detectors to each participating team. Teams may be asked to write a short presentation on the design of their robot. Rooms in the Geroge Vari Engineering building are being considered for an arena. A nominal entrance fee will be charged to each team to cover expenses, it should be around $20.

2 Rules

No combustion engines. Robots may not use any form of combustion engine.

Dimensions. The maximum size of a robot is 30 x 30 x 30 cm.

Weight limit: 22kg. Robots will be weighed on a scale at registration.

Qualifying round. A demonstration of the robot will take place before any fights in order to qualify the operation of its laser sensing equipment.

No battlebots. Robots may not physically damage other robots.

No IR equipment. Teams may not equip their robot with IR equipment other than that provided by HEC.

Landing strip. The robot must be equipped with a "landing strip" for the IDMFT. (Specifications to be determined.)

3 Equipment from HEC

HEC will provide a standard "laser gun" unit (affectionately called IDMFT) including a broadcasting beacon.

3.1 Preliminary specifications for the IDMFT

Interface: 4-pin Molex

Pin-out: +5V, Rx (Fire), Tx (Hit), GND