



The Voyageur Robotics team: Athen Lehtinen, Keira Cameron, Arik Van Der Loo, Bjorn Van Der Loo, and Ora Mortis, robot 6917

Intense experience at York U fuels a fresh enthusiasm for robotics

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The Voyageur Robotics team came back from the district competition at York University fired up... to say the least.

The team met Thursday afternoon at the school to unpack their robot, Ora Mortis, and talk about their experience at the First Robotics Deep Space competition.

The students - second year player Keira Cameron and newcomers Bjorn Van Der Loo, Athen Lehtinen, and Arik Van Der Loo - along with teacher Graeme Bond and mentor Mike Cameron, designed and built the robot over several weeks in January and February. First Robotics, which organizes these competitions in twenty-seven countries, develops a new challenge each year. Last year, over 3,600 teams designed and built robots to enter more than 150 competitions.

The talk came fast and furious about all that occurred over two very intense days of competition. Their pride in the performance of their robot was palpable.

This year's challenge involved collecting cargo (large round balls), storing them in cargo ships, then sealing the cargo ships with hatch covers. Teams could also score by entering and leaving the playing field from raised platforms. First Robotics threw a twist into the game with a 'sandstorm' - a period in each match when the teams could not see the robot or the playing field. Teams either used a camera on board their robot to see the playing field, or ran a pre-recorded program to operate autonomously.

The playing field is about the size of a tennis court, and has to be. Each match features two alliances of three teams each trying to outscore the other, so there are six robots in action at once (typically a robot covers about five square feet - 75 cm by 35 cm).

A team is allowed four players on the field (most teams are much

larger than the Voyageurs; some have two dozen members or more): three make up the drive team who control the robot (Cameron and Lehtinen) and feed cargo and hatch covers (Arik Van Der Loo), with the fourth (Bjorn) serving as drive coach. After a few fits and starts, the Voyageurs adopted a rigorous approach in their dealings with their allies in each match: talk to our drive coach if you want to communicate with us. Only he would have the ear of the drive team members.

In the early matches - the Voyageurs were in sixteen over the two days - the team earned a strong reputation for defense. Ora Mortis proved to be one of the fastest, most mobile robots in play, and its compact, minimalist structure made it tough as nails.

"We were the most annoying, obnoxious robot on the field," said Keira Cameron.

Robots are allowed to block and harass other robots, as long as they do not violate the perimeter of another robot (i.e., interfere with the electronic guts inside its bumper). Ora Mortis's speed and mobility (and the skill of its drivers) would allow it to confound

the plans of the opposing alliance so effectively that in one match all three of the opposing robots went after it (which meant, of course, they were not scoring points).

One of the keys in the competition is to team up with robots that have complementary skills. A team of three robots that each do one or two things very well is much more effective than a team of three robots that can each do everything.

"We saw one robot that could do everything - and it didn't make the playoffs (top eight of thirty-six teams) or get asked to [join an alliance] in the playoffs," said Arik Van Der Loo.

To play defense, you need a tough robot - one that can tolerate a good deal of banging around. And Ora Mortis proved itself.

"It was an absolute tank," said Mike Cameron.

"We never broke anything we couldn't fix," said Bjorn Van Der Loo.

That wasn't so true for their opponents. In one confrontation, an opponent made the mistake of reaching down into Ora Mortis with its ball handler; drivers

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The Voyageurs make some last minute adjustments prior to a match at the district competition at York U.

PHOTOS BY MIKE CAMERON