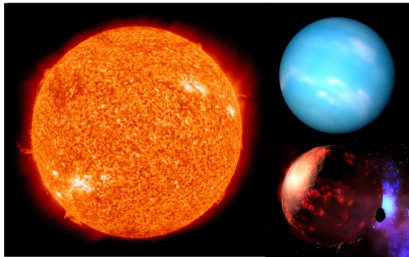


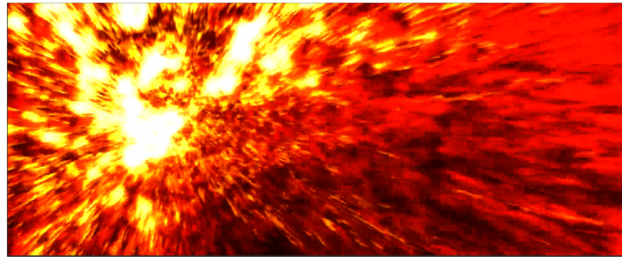
The VEX Star System uses transit ships to carry messages and people. But what happens when one of them explodes?

SPACE RESCUE



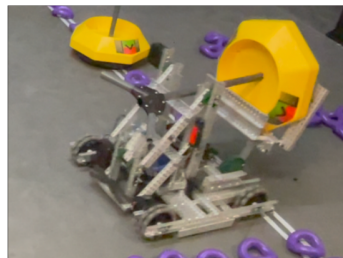
VEX STAR SYSTEM

The VEX Star System contains the Red and Blue Planets, competing for power.



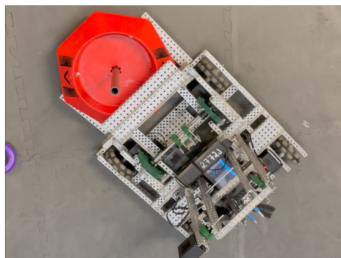
EXPLOSION

When a transit ship exploded, both planets realized that if they rescue more people than the other, they could have more power.



BUT

A solar flare that caused the transit ship to explode also messed with the rescue ship's controls, and it was left on autopilot for 15 time units. It was mildly effective at getting some of the life ships.



DRIVER CONTROL

When the crews regained control, the ships had 105 time units to rescue as many life ships as possible. At the last 30 seconds, neither was allowed to touch the other's planet.



IN THE END

The VEX government knew how to manage the competition between the Red and Blue Planets. The ambitious Red and Blue Captains did not back down, but never succeeded in rising to power.

This PDF is submitted for the 2022 Theme It Up Online Challenge. Our submission title is: Space Rescue.

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Video Content acted by members of 2772J (Sneha M. & Ruhi B.) or in public domain.

Video Content filmed by 2772J (Ruhi B., Megan J., Nikhi G., Sneha M., Vrinda B., & Jia J.) or in the public domain.

Team 2772J is a high school VRC team in San Ramon, CA, consisting of women & non-binary individuals passionately participating in robotics. We thank VEX Robotics & the REC Foundation for giving us an opportunity to make a difference and pursue our passion in robotics.

Space Rescue

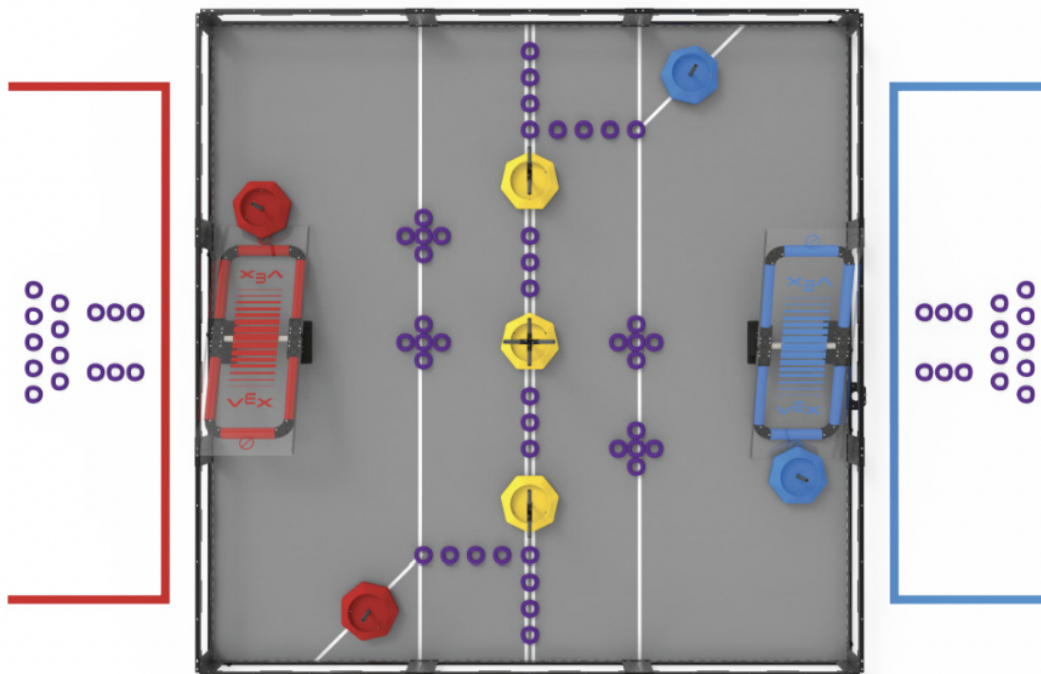
By Team 2772J

Space travel is one of the many dreams of our species. Throughout history, humanity has sought to first explore the unknown, and then conquer it. At this point in time, space is the final frontier. We explore first. Then, we conquer. Hypothetically, this sentiment will remain, if not increase, as we conquer space.

The red planet and the blue planet are both controlled by fearsome leaders looking to dominate the VEX Star System. When a populated transit ship exploded, it released several smaller life ships with survivors. The required rescue mission became a chance to prove that one planet was superior to the other before the VEX Rescue system rescued all survivors that both planets couldn't.

Each planet sent out two rescue ships with identification plates on each side. They were only cleared to fly within a 12 by 12 unit region. The ships also had a volume limit, needing to fit within a cube that was 18 inches on each side. They got to work to rescue these inhabitants, and their planetary pride.

When the rescue ships arrived at their starting positions, this was the scene that lay before them.



Each ring represents one small life ship. Each incoming rescue ship picked up 3 of these small ships on the way.

These small ships must be attached to larger life ships, towers in the form of mobile goals, in order to be rescued. One ring scored in the base of a tower allowed 1 person to be speedily rescued, while the rest had to wait for VEX to pick them up. A ring scored on the lower branch of a tower allows 3 people to be rescued at once. Rings scored on the highest branch of the tallest tower allow 10 people to be rescued at once.

Meanwhile, the towers represent bigger life ships. Planets are unable to access the controls of their opponent's life ships, as they are locked.

Pulling any other tower within 4 units of 2 edges of the allowed region pulls these towers into a planet's claimed territory. Twenty people can be rescued this way. Pulling a life ship or rescue ship onto a balanced platform rescues 40 people, as they are pulled onto the planet itself.

At the start of the rescue, a solar flare is determined to be the cause of the transit ship's explosion. While the rescue ships are built to withstand solar flare energy, their manual control systems are still temporarily disabled for 15 time units. During this time, the ship is on autopilot, steering towards and capturing life ships.

After these 15 time units, the energy dissipates, and crews are able to manually control rescue ships again. The crews work to rescue as many people for their planet as possible. Official VEX Rescue services are going to arrive in 105 time units and take over the entire mission, so the crews work quickly.

30 time units before VEX Rescue arrives, the two planets sign a pact to keep away from each other before VEX arrives. While the rescue ships can still enter a planet's claimed territory under the armistice of rescue, they can't come to the planet, represented by the platform.

If a rescue ship comes and leaves without causing problems, there is still a huge legal complication to work out. VEX Legal normally settles such indecisive cases by temporarily arresting 40 of the accused offenders. However, if a ship comes and does cause problems, especially with the rescue mission, then their respective planet leaders often choose to disassociate with the ships. The crews are smuggled back into their planet, and the rescue ship is left to float in space.

In the end, neither planet can overrule the other. The VEX government has learned lessons of humanity's past, so it keeps a strong central government to keep interplanetary conflict. All is civil, but each planet will continue to develop their strategy, technology, and skill in the name of planetary advancement.

