The Robotic Cow Fundraiser – Cranbrook Kingswood School

The basic principle of the game is that the participants in the game pick a letter or a number from a board with the letters and numbers (36 in total) on it. The robotic cow is placed on a field that has the same letters and numbers as are on the board (again 36). The field is 12’ x 12’ and is the same size as a VEX Robotics competition field.

The cow robot itself has a four motor, four wheel motor drive train that uses vexplorer wheels for traction and power. The tootsie rolls that fall out are inserted through the back on a conveyor belt built with vex tank tread and tank tread flaps. The cow has a PIC controller and was programmed using EasyC V2 for Vex. Dual bumper sensors are used to detect the walls of the field.

Once several participants have selected a letter or number, the robotic cow is started. The robotic cow moves around the field in a random way until it comes to a stop. When the cow comes to a stop the conveyor hidden under the cow suit activates and moves one space and drops candy on the mat where it stops. The participant holding the matching letter or number to the one where the cow has made a deposit is declared the winner. The cow stops three times during each round. The winner receives a large packet of tootsie rolls as their reward.

This game can be used as a fundraiser for various programs and we intend to use this as a fundraiser for our robotics program. Participants will be able to buy a letter or a number. The winners receive the packet of candy. We tested our prototype at a recent event. We had thousands of visitors, and this game proved extremely popular with the crowd.

