Line Following

The Autonomous Panda System (APS) follows a line around the challenge board to navigate to each of the game stations. The Navigational subsystem controls the motors and wheels and moves them in response to the direction of the line following sensors. The APS stops at the game stations when they are identified.

Simon

The APS will navigate to the game station with the Simon Says game. The APS aligns itself over the Simon Says using the Navigational subsystem. Simon Says will be played by the APS using the Operational subsystem. The sensors on the APS will identify, record the light sequence, and it will move to respond to the sequence. (>= 15 seconds?)

Etch-A-Sketch

The APS will navigate to the game station with the Etch-A-Sketch using the Navigational subsystem. The APS aligns itself over the Etch-A-Sketch. The APS, using the Operational subsystem, will draw IEEE using the knobs on the Etch-A-Sketch.

Rubik’s Cube

The APS will navigate to the game station with the Rubik’s Cube using the Navigational subsystem. The Navigational system will identify the cube and align the APS over the Rubik’s Cube. One row of the Rubik’s Cube will be turned 180 degrees using the Operational subsystem.

Playing Card

The APS will navigate to the game station with the stack of playing cards. The APS will pick up one of the cards from the top of the stack without damaging any of the cards. The card will be carried from the game station to the finish line.

(Interfaces)