Overview:

SoutheastCon 2015 provides a challenging game of robotics skill. Each team must successfully navigate a white line (will vary for each round), play three classic road trip games, and bring one playing card to the finish line. Each team will have 5 minutes to complete the tasks. Teams can place the assigned games in any orientation/locations within each white square. No toys will be secured to the board and mechanisms that secure the toys to the board are not allowed.

The Playing Surface:

The competition will take place on a single standard sheet of plywood painted flat black with white navigation lines.

5/8 in. x 4 ft. x 8 ft. Sanded Pine Plywood - Home Depot: Model # 326135 Store SKU # 326135

The Vehicle
The vehicle must fit in a 1’x 1’ square, may not be taller than 1’. It must be self-propelled, autonomous and may not be remotely controlled in any manner. It cannot contain any flammable liquids, gases, or explosives. The vehicles cannot project any objects either in the playing field or out of the playing field, and all parts of the vehicle must remain attached (i.e. the vehicle may not split into multiple pieces). The vehicle may not present any danger to the judges, the spectators, or the playing board.

**Playing Rules**

When called, the team will have 1 minute to place their vehicle in the starting square, align toys and then wait until the visible RED LED signal is shut off. Once the signal in shut off the timer is started and the vehicle will have a maximum of five minutes navigate and play each of the games. The game will end when the five minutes expire or when the robot crosses the finish line or if any part of the robot leaves the playing board.

**Games - Toys"R"Us**

4. Standard 52-card deck – Toys"R"Us # (TBD)

**Judging and Scoring**

In matters of scoring and judging, the judge's word is always final. Scores will be determined by:

1. Navigation on the white line (5 points) – Drive on the white line (must cover the line all of the time)
2. Play Simon for 15 seconds (15 points) – Correctly match the lights & sounds. For every second Simon is played and the error sound is not sounded you get 1 point. The timer starts and points are earned when the robot presses the center button on Simon.
3. Draw “IEEE” on the pocket Etch A Sketch (20 points) – Each letter is worth 5 points – The Etch A Sketch dial can be set to any location the team wants in advance. (letter size/style TBD)
4. Twist one row 180 degrees on the Rubric Cube (5 points)
5. Pick up one card from the deck of cards and hold it to cross the finish line (5 points)
6. The amount of time it takes to complete to cross the finish line. If a robot does not cross no time point are awarded.

The final score will be the total of the three rounds. The team with the greatest number of points wins.

The team with the most points at the end of the multiple rounds will be the winner. If two or more teams have the same number of points and exact time than additional rounds will be played until a winner can be determined. Final round between first and second place will take place at the Awards Dinner.

**Tournament Format**

The competition consists of three rounds. Each team will have three rounds in which to base their final score. Each team will complete the game once then each team will go again and once more to total three rounds. At the end of the three rounds, the final scores will be calculated and a winner announced.

Flash and video cameras will be allowed in the spectator area. All designs should take this into account.

**Additional awards will be given for:**

The most creative design will be one which implements strategy, shows originality, and one which displays a high level of engineering skill.
FAQ
(Frequently Asked Questions)

Q: What is the exact # for the Rust-Oleum White paint from Home Depot?
A: TBD.

Q: What type of wood, thickness and sanding will the course be?
A:
5/8 in. x 4 ft. x 8 ft. Sanded Pine Plywood
Home Depot: Model # 326135 Store SKU # 326135

Scotch Blue 0.94 in. x 60yds. Painter’s Tape
Home Depot: Model# 2090-1J Store SKU # 958999

Q: Will you be using liquid or spray paint and how will it be applied?
A: The paint will be rolled on liquid black & white paint.

Q: Possibility of having walls surround the playing surface?
A: None. The course will be on the floor with no walls.

Q: Will the playing surface be elevated?
A: No, it will be on the floor.

Q: Will there be a painted white square around each toy area?
A: Yes.

Q: How will the LED be mounted to the course? Flushed or pushed-up?
A: LEDs will be flush against the board.

Q: What type of RED LED are you going to use on the course?
A: Red colored LED. Specifications TBD.

Q: How will the LED be driven? Steady on or pulsed?
A: The LED will be steady on.

Q: Does the timer start when the LED display goes out or when the car first moves?
A: When the LED goes out, the robot should start. Will be clarified.

Q: How will the current contest/scoring information be displayed to the crowds?
A: LCD projector.

Q: How close do you allow team members/visitors to be to the course?
A: Everyone will be at least 4 feet from the board’s edge.

Q: How do you handle two teams that both complete the task?
A: The one who does it the quickest wins. If there is a tie then another match will take place.

Q: Do we have a preliminary round to qualify?
A: No.
Additional Questions and Answers

Q: Does playing Simon mean beating Simon?
A: No, but must be played accurately for 15 seconds.

Q: Do the playing cards have to be left in usable condition?
A: Yes. Creases and folds are OK.

Q: Can the robot separate into multiple parts/other robots?
A: No.

Q: Does the robot have to stay the same dimension the whole time?
A: No. The robot may expand but must begin and end as a 1x1x1 robot.

Q: Can you knock the deck over and pick up the card?
A: TBD

Q: Does the IEEE drawing on the Etch-A-Sketch have to be block or stick lettering?
A: TBD

Q: Does the robot have to be inside the white block to play the games at each station?
A: No, but it can enter the block if you want.

Q: Will there be minimum distances from branch to branch on the course?
A: No. Distances will vary.

Q: Do the games on the course have to be played in order?
A: No.

Q: Can I add objects to support/prop up the games?
A: No.

Q: Will the course always be 90 degree angles?
A: Yes with the exception of any arc lines.

Q: Will there be sequestration?
A: Yes.

Q: Will the games/toys be at the same spots every round?
A: Yes. All games will be in the same spots but the intersections and paths will vary.

Q: Will the road circle back?
A: No.

Q: Will there be walls around the course?
A: No.

Q: Will cameras/photography equipment be banned?
A: No, but intentional flash usage and sabotage will be handled.

Q: Does the toy have to be visible or can the game go inside the robot?
A: No. All games must remain outside of the robot and be visible and audible at all times.

Q: What does the visibility of the Etch-A-Sketch have to be?
A: TBD

Q: Will there be mock up courses?
A: Yes we will have various mock ups.

Q: Will the Rubik’s cube always be a new one?
A: TBD. Will be clarified.

Q: Will the cube be original or off-brand Rubik’s cube?
A: Original.

Q: Can we turn any row or column of the Rubik’s cube?
A: Yes.

Q: Can we place the toy in any spot within the white block?
A: Yes.

Q: Can we scramble the Rubik’s cube?
A: No.

Q: Does the robot have to follow the lines on the course?
A: No.

Q: How close will the line be to the edge of the board?
A: TBD.

Q: Will there be dead ends?
A: No.

Q: Will you be penalized if you pick up more than one card?
A: TBD.

Q: Can the robot remove the game/toy from the area of the white block to do the task and then put it back inside when finished?
A: TBD. Will be clarified.

Q: Will we have to set down the playing card?
A: No. Playing card must cross the finish line with your robot.

Q: Does the robot have to turn a specific face on the Rubik’s cube?
A: No.

Q: What if a robot goes off the board and runs into another board?
A: We will have people will be there to grab any runaway bots.

Q: Will the Rubik’s cube be solved?
A: Yes.
Q: Can the robot be powered on the whole time?
A: Yes.

Q: Can run data be stored?
A: Yes. Run data is allowed to be stored directly onto your robot. You may not use any other resources to store the data. (Example: resources that would require you to upload/download actively into your bot as it runs)