

ADVANCED EV3 PROGRAMMING LESSON

An Alternative Idea: Moving Crooked



By Droids Robotics





Lesson Objectives

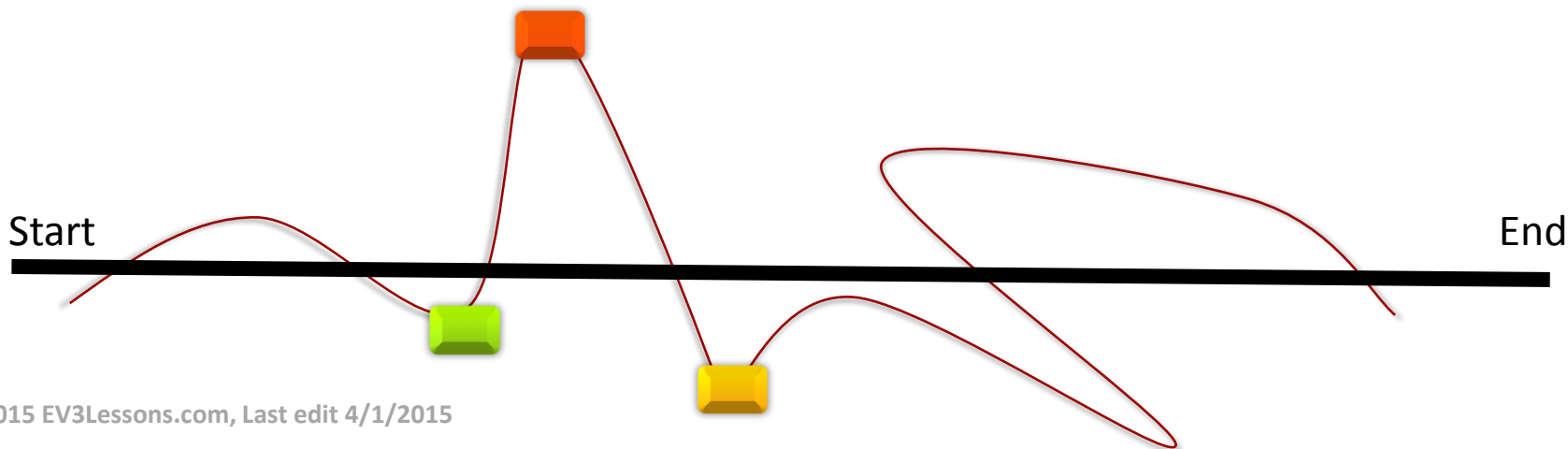
1. Learn the importance of moving crooked
2. Learn how to optimize traveling crooked





Why Move Crooked?

- Moving straight is over-rated
- It is much more fun to go crooked!
- You can crash into the maximum number of objects on the way to your destination
- As an added bonus, you may never reach your destination!





Step 1: Don't Make Plans

- Making plans and writing pseudocode is the worst possible idea
- Crookedness thrives on no goal and no plans
- So we recommend that you just start programming
- This will save a lot of time and increase the success of your move crooked program



Step 2: Optimize Crookedness

➤ Wheels:

- Easiest way is to pick two wheels that are not the same size
- Some robotics teams spend time matching wheels. If you have time, find the pair of wheels that are LEAST similar
- Make sure your back and front wheels are close together.



➤ Brick:

- The best spot for a brick is very high up (we prefer at the height limit)
- Crookedness and occasional flop overs will be guaranteed



➤ Motors:

- Put all your motors and attachments on one side of the robot (left side or right side)
- This will ensure excellent weight distribution for crookedness





Step 3: Disconnect Sensors

- Sensors are a big problem if you want to go crooked
- We recommend that you disconnect your sensors:
 - Color Sensors will want to follow lines – they should be the first to go
 - Ultrasonic Sensors will tell you how far you are from an object and let you avoid them. This will not work for us.
 - Gyro Sensor is the worst one of all. It helps you move straight!
 - Touch Sensor is debatable – you can use it to make sure you hit all the objects!
- Since a Crooked Sensor has not yet been developed, just go ahead and disconnect all existing sensors, except Touch! Moving without a sensor is the best tip for moving crooked.



Discussion Guide

- What is the key first step to moving crooked?
 - Ans. Don't plan your program

- What is some hardware you need to move crooked?
 - Ans. Your brick should be high, motors and attachments on one side and use mis-matched wheels

- Are sensors a good idea for moving crooked?
 - Ans. No!!!!



Just Kidding!

HAPPY
APRIL FOOL'S
DAY!!!

-From EV3 Lessons



Credits

- This funny tutorial was created by Sanjay Seshan and Arvind Seshan from Droids Robotics in honor of April Fool's Day.
 - Author's Email: team@droidsrobotics.org
- More lessons at www.ev3lessons.com



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