Particle Filter Project Visualizer

The new Term 2 Simulator includes a graphical version of the Project 3 Kidnapped Vehicle Project. Running the simulator you can see the path that the car drives along with all of its landmark measurments.

Included in the **Kidnapped Vehicle project Github repository** is program files that allow you to set up and run c++ uWebSocketIO, which is used to communicate with the simulator. The simulator provides the script the noisy position data, vehicle controls, and noisy observations. the script feeds back the best particle state.
The simulator can also display the best particle's sensed positions, along with the corresponding map ID associations. This can be extremely helpful when making sure transition and association calculations were done correctly. Below is a video of what it looks like when the simulator successfully is able to track the car to a particle. Notice that the green laser sensors from the car nearly overlap the blue laser sensors from the particle, this means that the particle transition calculations were done correctly.

Download Links for Term 2 Simulator

Term 2 Simulator Release

Running the Program

1. Download the simulator and open it. In the main menu screen select Project 3: Kidnapped Vehicle.
2. Once the scene is loaded you can hit the START button to observe how the car drives and observes landmarks. At any time you can press the PAUSE button, to pause the scene or hit the RESTART button to reset the scene. Also the ARROW KEYS can be used to move the camera around, and the top left ZOOM IN/OUT buttons can be used to focus the camera. Pressing the ESCAPE KEY returns to the simulator main menu.
1. The **Kidnapped Vehicle project Github repository README** has more detailed instructions for installing and using c++ uWebScoketIO.