ATS – An Autonomous Traffic Simulation

Bryant Pong, Derek Schultz, Matt Hancock

Rensselaer Polytechnic Institute

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***Abstract***: **In today’s world, autonomous cars are becoming more of a reality with each passing day. The prime example of such a vehicle is of Google’s autonomous car. Supporters of autonomous vehicles envision a future in which every day driving hassles, such as traffic jams and car accidents, become a thing of the past. They claim that since autonomous vehicles will have the ability to communicate with all other surrounding vehicles, one’s autonomous car will be able to “predict” the movements, actions, and responses of its neighbors to keep traffic moving safely and efficiently. While our team is supportive of the development and advancement of these autonomous vehicles, we are curious to see if such claims are true as the number of vehicles on a road increases. We created the Autonomous Traffic Simulation (*ATS*), a discrete-event simulation built upon the open source ROSS framework(1). Our simulation models a simple, yet common everyday occurrence: traffic lights at intersections. We will use this simulation to model how well the ideal autonomous vehicle will traverse from a starting point to a destination point**

References

1. “ROSS Wiki Main Page”, *Rensselaer Polytechnic Institute*. <http://odin.cs.rpi.edu/ross/index.php/Main_Page>,

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