



# Driving Simulator in a Connected Vehicle Environment

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# Project

- Connected vehicles
- Collision prevention
- Speed advisory
- Stop light notification



# Project

- Driving Simulator
- VISSIM
- ARADA OBU (on board unit)
- RSU (road side unit)
- Econolite Traffic Controller

# Process

- Driving Simulator



# Process

- Unity - Coded in C#
- Communicates with VISSIM



# Process

- Arada OBU communication

```
mhs@mhs-VirtualBox: /usr/local/mate-release/mips/irc
Transmitted #4203# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4204# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4205# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4206# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4207# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4208# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4209# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4210# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4211# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4212# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4213# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4214# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4215# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4216# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4217# Dropped #0# Len #0#
Terminal is are: -37372.74,11730.29;
Transmitted #4218# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4219# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4220# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4221# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4222# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4223# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4224# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4225# Dropped #0# Len #0#
GPS Coordinates are: -37372.74,11730.29;
Transmitted #4226# Dropped #0# Len #0#
```

# Future Work

- Establish connection between RSU and OBU
- Establish communication between traffic controller and RSU

# Bibliography

- “The Business Model For Connected Vehicles.” *Ariasystems.com*, 2016,  
[www.google.com/imgres?imgurl=https://www.ariasystems.com/blog/wp-content/uploads/2016/07/connected-car-iot.jpg&imgrefurl=https://www.ariasystems.com/blog/interview-business-model-connected-car/&h=1283&w=2500&tbid=3EFze4V0YXIKNM:&q=connected+vehicles&tbnh=160&tbnw=312&usq=AaipzVEnLosBXzc1cU4cUiw4QA0%3D&vet=12ahUKEwj98ujDksfcAhUovlkKHfnoCWoQ\\_B0wG3oECAwQEw..i&docid=R-wJ27PQcw2P6M&itg=1&sa=X&ved=2ahUKEwj98ujDksfcAhUovlkKHfnoCWoQ\\_B0wG3oECAwQEw](https://www.google.com/imgres?imgurl=https://www.ariasystems.com/blog/wp-content/uploads/2016/07/connected-car-iot.jpg&imgrefurl=https://www.ariasystems.com/blog/interview-business-model-connected-car/&h=1283&w=2500&tbid=3EFze4V0YXIKNM:&q=connected+vehicles&tbnh=160&tbnw=312&usq=AaipzVEnLosBXzc1cU4cUiw4QA0%3D&vet=12ahUKEwj98ujDksfcAhUovlkKHfnoCWoQ_B0wG3oECAwQEw..i&docid=R-wJ27PQcw2P6M&itg=1&sa=X&ved=2ahUKEwj98ujDksfcAhUovlkKHfnoCWoQ_B0wG3oECAwQEw).