CS491 – Autonomous Vehicle Design

Engineering Notes No. 11.2

INFORMATION

NAME: William Reimer

DATE: 03/12/25 - 03/18/25

Sprint: 11

JIRA BACKLOG

Responsible for:

Converting Blender 3D model into an environment compatible with the Scenic-SUMO environment

Convert the 2D Blender file to a format compatible to the Scenic-SUMO model, and export it.

Contributed to:

Determine Final requirements for the end of the semester

RESOURCES & DOCUMENTS CONTRIBUTED TO

Table 1 - Contributions

Date	Resource/Document	Location	Contribution Description
03/18	Blender Conversion 3D to 2D	Blender / Micaplex	Finished up last details on the Blender file. Ready to export once Scenic-SUMO is ready.

COMPONENTS TESTED

Table 2 - Testing

Date Tested	Component	Result	Comments
n/a	n/a	n/a	Unable to test export from .blend to Scenic-SUMO until successfully implemented onto micaplex computer

PROBLEMS SOLVED

Table 3 - Solutions

Date	Problem	Solution & Notes
03/08 – 03/11	Unable to proceed with map export until Scenic-SUMO is installed	I can still do research on what I potentially may need to do and help other teammates.

PROBLEMS TO ADDRESS NEXT

Table 4 – Future Problems

Problem	Description
03/18	Once Scenic-SUMO is installed, I will have to immediately work on map exporting.

MEETING NARRATIVE NOTES:

Table 5 – Meeting 1

No meeting – Spring Break

Table 6 – Meeting 2

MM/DD/YY	**Meeting Type:** StandUp/**Class**/ETC
Met with Product Owner(s): Y/N	
Problems Brought Up:	
Problem	**Proposed Solution**
VerifAI should be able to automate its own test cases, removing the need for writing our own.	Need to test it at the Micaplex
VerifAI has been tested with Scenic before, if we can implement it, we should be able to do dynamic test cases.	Need to test it at the Micaplex
Other Items Updated on:	
Sent screenshots of .blend maps to group	
Additional Notes:	
N/A	

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NOTES:

Unedited Notes:

03/18

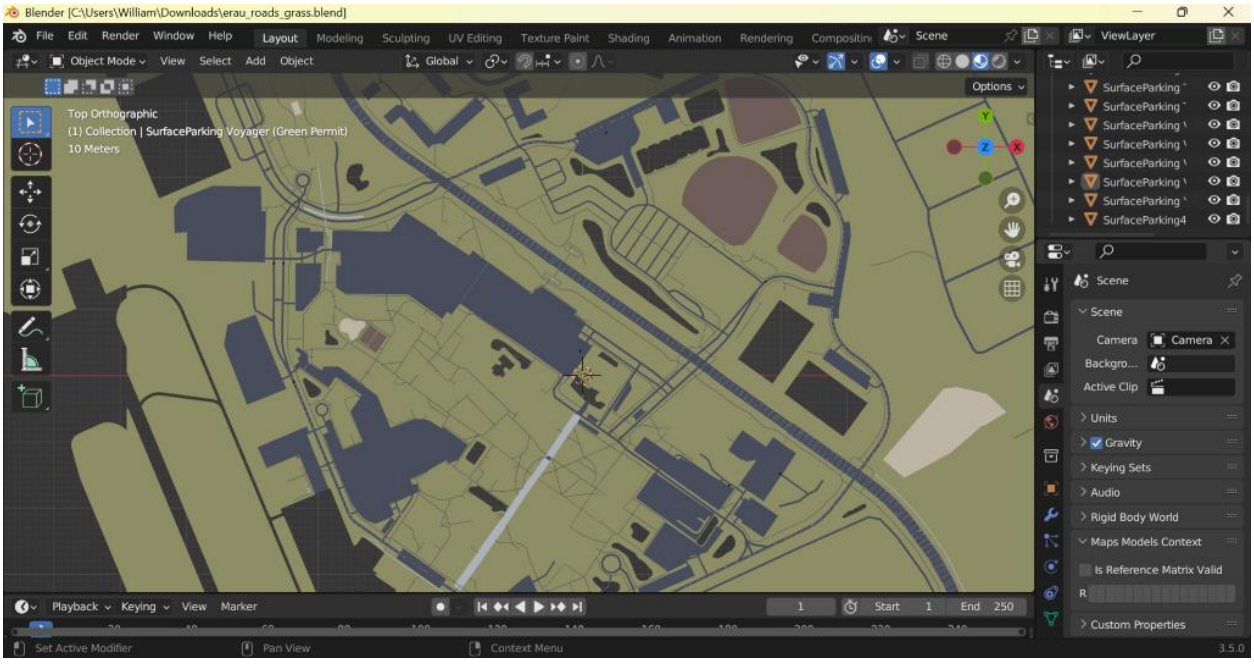
First meeting after Spring Break, met in LB 374

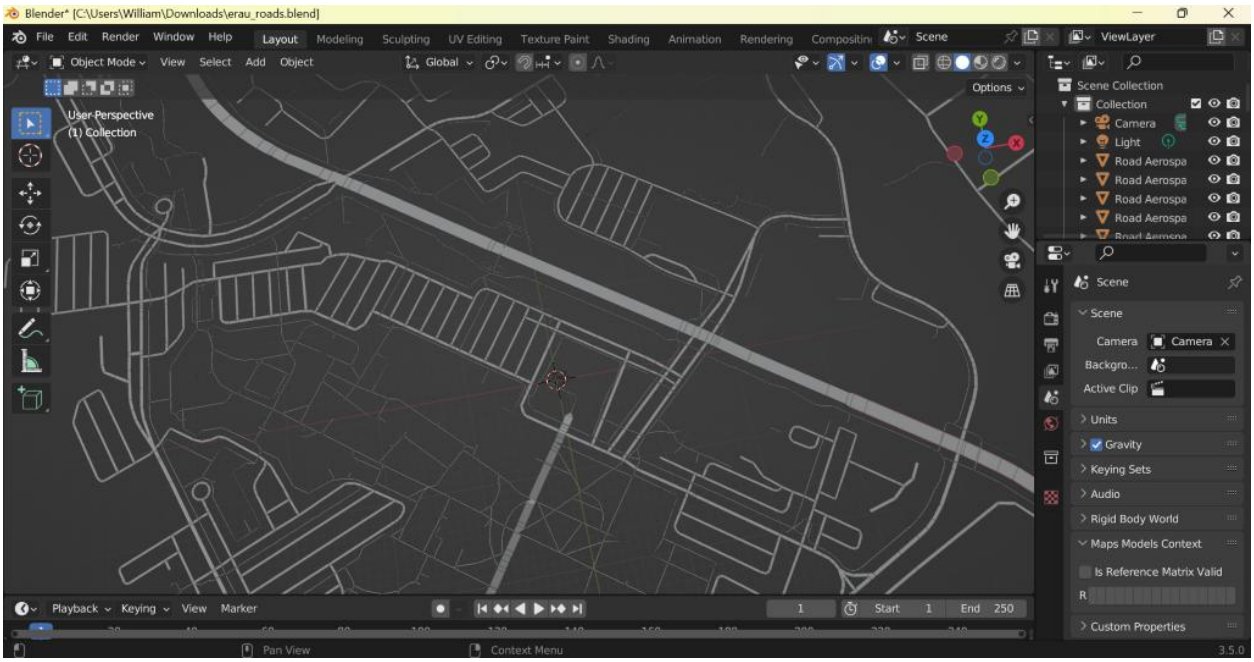
Email Quentin about confirming if Scenic-Sumo is downloaded correctly, It may be missing something or broken – yippie!

"Should be an easy install" - Hannah

Will is going to send us any progress that he has on the map., created a 2D map. Need to determine if the installation was correct.

Uploading two screenshots, one has the road, the other is with color.





Serena has been working on the AI, which needs to be implemented in Python, "keep it simple" - Hannah, looking at VerifAI as a fallback plan.

Scenic is installed, need to factor in the SUMO portion developed by Quentin.

VerifAI has been tested with Scenic before, if we can implement it, we should be able to do dynamic test cases. See if it can work, that one of the last minute changes that we need to make since we were unable to make progress. This is currently our most viable option. The shift from 3D to 2D was due to shifting away from PolyVerif as it did the hard LIDAR coding for us.

We don’t want to repeat the mistakes of PolyVerif.

Change our test cases to not be the running a red light, due to ***circumstances***

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Serena focuses on VerifAI and Scenic and Hannah will focus on SUMO.

In theory, VerifAI should be able to automate its own test cases, removing the need for writing our own. Need to figure out how to differentiate it from just saying "yeah it works"

"Cool to see" according to Akbas:

Uses VerifAI + Scenic implemented into NeuroEvolution. Hopefully get something done within the next 5 weeks. Can try to use the pre-verified test cases from PolyVerif to see if it works.