

Engineering Notes No. 13.1

INFORMATION

NAME: William Reimer

DATE: 04/02/25 - 04/08/25

Sprint: 13

JIRA BACKLOG

Responsible for:

Creating a Python script to convert .blend files to .net.xml for SUMO

Testing maps generated from Blender conversion for ScenicSumo

Contributed to:

Development and debugging of ScenicSumo maps

RESOURCES & DOCUMENTS CONTRIBUTED TO

Table 1 - Contributions

| Date | Resource/Document | Location | Contribution Description |
|----------|---------------------------------|----------|--|
| 04/08/25 | Python Blender Conversion | Blender | Wrote Python script to convert .blend to .net.xml for SUMO |
| | | | |
| | | | |

COMPONENTS TESTED

Table 2 - Testing

| Date Tested | Component | Result | Comments |
|-------------|---|-----------------|--|
| 04/08 | Blender-converted maps | Failure | .net.xml maps not yet successfully implemented |
| 04/08 | Make python script to convert Blender map to .xml map | Partial Success | The maps can be uploaded to Scenic, but they crash shortly after running |
| | | | |

PROBLEMS SOLVED

Table 3 - Solutions

| Date | Problem | Solution & Notes |
|-------|--|---|
| 04/08 | Successfully running the converted map in scenic | I need to find resources on this file type, and learn how to properly export this map so it runs. |
| | | |
| | | |

PROBLEMS TO ADDRESS NEXT

Table 4 - Future Problems

| Problem | Description |
|------------------------|--|
| Stable map integration | Risk of breaking ScenicSumo when adding new maps |
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| | |
| | |

MEETING NARRATIVE NOTES:

Table 5 - Meeting 1

| MM/DD/YY | Meeting Type: StandUp/Class/ETC | |
|---|--|--|
| Met with Product Owner(s): Y/N | | |
| Problems Brought Up: | | |
| Problem | Proposed Solution | |
| | | |
| Needed a way to create basic test cases for VerifAI | Feed in simple scenarios and improve iteratively | |
| | | |
| Other Items Updated on: | | |
| N/A | | |
| Additional Notes: | | |
| N/A | | |

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 | |
| New maps causing ScenicSumo to crash | Find documents and resources relating to .xml files | |
| | | |
| | | |
| Other Items Updated on: | | |
| N/A | | |
| Additional Notes: | | |
| N/A | | |

CS491 - Autonomous Vehicle Design

NOTES:

Unedited Notes:

04/03

Met in MP 224

Create basic tests cases to feed into VerifAI so that it can be improved upon and create its own tests cases

Isabella and Davian create more tests cases for this purpose.

Final Test Plan due on the 04/15/2025

Poster due on the 04/21/2025

10 minute video due on 04/24/2025

Researched how to create new map through OSM using OSMWebWizard

Potentially start coming to the micaplex on Tuesdays as we begin wrapping up the semester.

04/08

Met in MP 224, no Hannah, Will is trying to figure out how to implement the map, but we're all scared that it will break.

Will is trying to run ScenicSumo using the instructions left for us. He got it running! He wrote a script to make .xml files directly in blender.

Final Test Plan and Developing the test cases. worked on by Isabella and Davian, is due on the 15th

Serena is focusing on the VerifAI

FATAL ERROR warning after closing and trying to relaunch ScenicSumo with the new map, got resolved by replacing with the old map

Updated Scenic, caused issues

CS491 - Autonomous Vehicle Design

VerifAI is not compatible with the working version of ScenicSumo that we are using.

Serena fixed it! With VerifAI installed with the appropriate ScenicSumo version.