

## Engineering Notes No. 3.2

### INFORMATION

**NAME:** Isabella Acosta

**DATE:** 10/22/24 - 10/28/24

**Sprint:** 3

**Responsible for:**

- Engineering Notes 1 (ensuring that everyone is up to date on these and they were uploaded to GitHub)
- Engineering Notes 2 (ensuring that everyone is up to date on these and they were uploaded to GitHub)
- Engineering Notes 3 (send out reminders and ensure everyone is keeping up with these)

**Contributed to:**

- Determine a General Scenario within Polyverif
- Determine Beginning Scenario Within Intersection
- Become Familiarized with Equipment in Micaplex
- Project Presentation
- Peer Evaluations
- Scene Creation in Polyverif to Model ERAU Campus

## RESOURCES &amp; DOCUMENTS CONTRIBUTED TO

*Table 1 - Contributions*

Date	Resource/Document	Location	Contribution Description
N/A	N/A	N/A	N/A

## COMPONENTS TESTED

*Table 2 - Testing*

Date Tested	Component	Result	Comments
10/24/24 (Class)	Unity Hub (without Sandbox)	Successfully installed!	Sandbox is giving errors, unable to install it due to lack of updates.
10/24/24 (Evening)	Switched from Ubuntu version to 18.04 to 24.04.1	LTS - no current issues	Continue working with OS.
10/24/24 (Evening)	Blender file loading	Having issues, not working (Image loading in purple, and all textures gone)	Needs to be installed locally to avoid hidden files, working around this by locally installing Blender and RenderDoc

## PROBLEMS SOLVED

**Table 3 - Solutions**

Date	Problem	Solution & Notes
10/24/24 (Class)	Sandbox is giving errors, unable to install it due to lack of updates.	Continue to trouble shoot
10/24/24 (Class)	Figuring out how to upload the 3D model of the campus.	Continue researching
10/24/24 (Evening)	Having issues with loading in blender file of map.	Most likely needing to do it locally, as there may be hidden files within blender that store the texture.
10/24/24 (Evening)	Image loading in purple, and all texture gone	Working around this by locally installing Blender and RenderDoc
10/24/24 (Evening)	Planning on Uploading map and copying BASIC Test file to Polyverif, bust cost money	To circumvent the paywall originally used by Jacksonville, used OSM and OSM2World <ul style="list-style-type: none"> <li>▪ OSM, Open Street Map, is a completely free website that lets you download 3D map information from satellite scans into .osm files (steps to do so are in meeting notes at in the meeting section)</li> </ul>
10/24/24 (Evening)	Uploading map to PolyVerif is not possible right now	We are working on reverse engineering the structure of the format.

## PROBLEMS TO ADDRESS NEXT

**Table 4 - Future Problems**

Problem	Description
Completing SRS document	All team members will contribute to completion of the SRS document.
Create a new simulation	Get in contact with Acclivis for guide/assistance on scenario creation.

## MEETING NARRATIVE NOTES:

**Table 5 - Meeting 1**

10/22/24	Meeting Type: StandUp/Class/ETC	
Met with Product Owner(s): Y/N		
Problems Brought Up:		
Problem	Proposed Solution	
Continue to work with Polyverif	Continue to troubleshoot and get guidance on how to install/run Polyverif simulation	
Other Items Updated on:		
Additional Notes:		
<ul style="list-style-type: none"><li>Tuesdays meet in LB 374, and Thursdays meet in MP 224</li><li>Began working on SRS document</li></ul>		

**Table 6 - Meeting 2**

10/24/24	Meeting Type: StandUp/Class/ETC	
Met with Product Owner(s): Y/N		
Problems Brought Up:		
Problem	Proposed Solution	
Sandbox is giving errors, unable to install it due to lack of updates.	Continue to trouble shoot	
Figuring out how to upload the 3D model of the campus.	Continue researching	
Other Items Updated on:		
<ul style="list-style-type: none"><li>Met in MP 224 to try to get Unity installed on the Linux computer to be able to run Polyverif.</li><li>*Did not meet with product owners</li><li>Completed Engineering Notes (due tonight).</li></ul>		

<ul style="list-style-type: none"> <li>• Successfully installed Unity Hub (without Sandbox)! Yippie!</li> <li>• Switched from Ubuntu Version 18.04 to 24.04.1 LTS - no current issues.</li> </ul>
<b>Additional Notes:</b>

*Table 7 - 10/24/24, Evening*

10/24/24	Meeting Type: StandUp/Class/ETC/Micaplex	
Met with Product Owner(s): Y/N		
Problems Brought Up:		
Problem	Proposed Solution	
Having issues with loading in blender file of map.	Most likely needing to do it locally, as there may be hidden files within blender that store the texture.	
Image loading in purple, and all texture gone	Working around this by locally installing Blender and RenderDoc	
Planning on Uploading map and copying BASIC Test file to Polyverif, bust cost money	To circumvent the paywall originally used by Jacksonville, used OSM and OSM2World <ul style="list-style-type: none"><li>OSM, Open Street Map, is a completely free website that lets you download 3D map information from satellite scans into .osm files (steps to do so are in meeting notes at in the meeting section)</li></ul>	
Uploading map to Polyverif is not possible right now	We are working on reverse engineering the structure of the format.	
Additional Notes:		
<ul style="list-style-type: none"><li>Planning on Uploading map and copying BASIC Test file to Polyverif</li></ul>		

- To circumvent the paywall originally used by Jacksonville, used OSM and OSM2World
  - OSM, Open Street Map, is a completely free website that lets you download 3D map information from satellite scans into .osm files
    - <https://www.openstreetmap.org/export#map=16/29.19057/-81.04786>
  - OSM2World is an accompanying Java executable that allows you to view .osm files and turn them into .obj files for use in blender and unity.
    - <https://osm2world.org/download/>
- First, the user must select a city that they want to pull Data from.
- Then, the user must load the program using the edit drop down, which allows for 3D scans instead of 2D (3D scans require a FREE account)
- Must select edit with iD
- Export selected data, and import it into OSM2World
- Let it load, and export it as an obj file. Can then be used in blender and unity

## NOTES:

We made more progress in this part of this sprint, but also ran into more errors. We were able to successfully install Unity, but without Sandbox, which inevitably gave us errors. Uploading our map gave us some errors as well, but we will continue to troubleshoot and contact Acclivis and use all resources possible to get Polyverif working as it should. We also will continue working on our documentation and update our Jira with our progress reflecting our progress as well as our setbacks.