Engineering Notes No. 7.2

## INFORMATION

**NAME:** William Reimer

**DATE:** 01/16/25 - 01/23/25

**Sprint: 7**

## JIRA BACKLOG

**Responsible for:**

* Create 3D scan of ERAU for Acclivis

**Contributed to:**

* Creation of test cases

## RESOURCES & DOCUMENTS CONTRIBUTED TO

***Table 1 - Contributions***

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Resource/Document** | **Location** | **Contribution Description** |
| 01/20/25 | 3D map | Blender, OpenStreetMap | Finished making 3D map, sent files off to Acclivis to create key to make environment in PolyVerif. Now waiting on response. |
|  |  |  |  |

## COMPONENTS TESTED

***Table 2 - Testing***

|  |  |  |  |
| --- | --- | --- | --- |
| **Date Tested** | **Component** | **Result** | **Comments** |
| N/A |  |  | No testing of software has occurred yet, still determining specifics of test cases. Testing of test cases and simulation will occur in Sprint 8. |
|  |  |  |  |

## PROBLEMS SOLVED

***Table 3 - Solutions***

|  |  |  |
| --- | --- | --- |
| **Date** | **Problem** | **Solution & Notes** |
| N/A | N/A | See testing |
|  |  |  |

## PROBLEMS TO ADDRESS NEXT

***Table 4 – Future Problems***

|  |  |
| --- | --- |
| **Problem** | **Description** |
| Test cases | Have started working on test cases for PolyVerif, specifically, working on Python scripts to run alongside the simulation. Similar to how PolyVerif currently operates, using current code as reference material. |
| Issues with 3D map | Acclivis is having issues loading textures in the 3D render created. Will address issues and check textures in Blender. Am not seeing issues on my end, but will investigate further. |

## MEETING NARRATIVE NOTES:

***Table 5 – Meeting 1***

|  |  |  |
| --- | --- | --- |
| **01/21/25** | **Meeting Type:** Class/Standup/Presentation | |
| Met with Product Owner(s): Y/N | | |
| **Problems Brought Up:** | | |
| **Problem** | | **Proposed Solution** |
| Future Tasks | | Talked with Dr. Akbas on future tasks to achieve. Was instructed to refine test case scope, and get a schedule drafted on the specifications of these test scenarios. |
| Implementing AI | | Asked about implementing machine learning to PolyVerif. Was given go ahead and to further refine plan in coming days. |
|  | |  |
| **Other Items Updated on:** | | |
|  | | |
| **Additional Notes:** | | |
|  | | |

***Table 6 – Meeting 2***

|  |  |  |
| --- | --- | --- |
| **01/23/25** | **Meeting Type:** Class/Standup/Presentation | |
| Met with Product Owner(s): Y/N | | |
| **Problems Brought Up:** | | |
| **Problem** | | **Proposed Solution** |
| Working on Test scenarios | | No current problems at this time, just working on testing the implementation of custom Python scripts in PolyVerif. Initial tests are successful. |
| 3D map update: Acclivis is not able to load the textures in the 3D map | | Will look at textures: try to recreate map and see if paths are correct. See if map works on other software. |
|  | |  |
| **Other Items Updated on:** | | |
|  | | |
| **Additional Notes:** | | |
|  | | |

## NOTES:

Group Notes:

01/21

Training questions for NE

* Training data
  + Simulation - PolyVerif
* What it improves
  + Mission planning, control validation
    - Should change car movements
      * Its given a starting point and then it changes its moves after
      * Is there any way we can have this change dynamically
      * Reaction time of driver is important  -- point system
* Areas we can be lax on

SERENA – increase font size on the test scenario flow chart

Start taking videos of PolyVerif test cases

We need this stuff now so we aren't crying later when it doesn’t work

We are locking the requirements!!!!  we are locked into whatever we tell Dr. Akbas

01/23

Meet in the MicaPlex (yay free Celsius).

Map needs to be in .fbx file format, .fbx is textureless in blender.

Get into contact with the UAS department to see if they have a 3D scan of the map.

Draft up an email for Akbas about UAS

Make a short list of the things we want to do with the AI for Quentin