Engineering Notes No. 10.1

## INFORMATION

**NAME:** William Reimer

**DATE:** 02/19/25 - 02/25/25

**Sprint:** 10

## JIRA BACKLOG

**Responsible for:**

Looking into the possibility of repurposing the current simulated environment created for PolyVerif into the new model that Quentin made

**Contributed to:**

- Debugging PolyVerif

- AI/NeuroEvolution research

## RESOURCES & DOCUMENTS CONTRIBUTED TO

***Table 1 - Contributions***

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Resource/Document** | **Location** | **Contribution Description** |
| 02/20/25 | Engineering Notes GitHub | GitHub | Organized GitHub for engineering notes |
| 02/25/25 | SDD v.1 Annotated Version | OneDrive/GitHub | Reviewed annotated SDD and noted changes for AI-focused updates |
| 02/25/25 | Simulation Environment/Map | Micaplex | Investigated reuse of PolyVerif's map/simulation environment for new model |

## COMPONENTS TESTED

***Table 2 - Testing***

|  |  |  |  |
| --- | --- | --- | --- |
| **Date Tested** | **Component** | **Result** | **Comments** |
| 02/25/25 | Quentin’s model (non-LGSVL) | Not yet functional | Unsure how long until it’s fully operational. Will ask Quentin for further assistance |
|  |  |  |  |

## PROBLEMS SOLVED

***Table 3 - Solutions***

|  |  |  |
| --- | --- | --- |
| **Date** | **Problem** | **Solution & Notes** |
| mm/dd/yy | Problem description | Solution and notes if applicable |
| 02/20/25 | PolyVerif debugging | Did not yield meaningful results; de-prioritized per Dr. Akbas |
|  |  |  |

## PROBLEMS TO ADDRESS NEXT

***Table 4 – Future Problems***

|  |  |
| --- | --- |
| **Problem** | **Description** |
| Identify how to implement map changes | Determine feasibility of reusing simulation environment and map from PolyVerif |
| Finalize alternate AI direction | Finalize and edit SDD to reflect the revised AI-focused direction |

## 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** |
| Serena was debugging PolyVerif with no helpful error messages | | Deprioritize PolyVerif and focus on getting something working instead |
|  | |  |
|  | |  |
| **Other Items Updated on:** | | |
|  | | |
| **Additional Notes:** | | |
| Serena noted the error message was generic and unhelpful  Serena noted the error message was generic and unhelpful | | |

***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** |
| Unsure how to progress with the project | | Develop a clear plan during the meeting and show it to Dr. Akbas. |
| Uncertainty around Quentin's model | | Focus on AI side (NeuroEvolution) until we have further progress to try and utilize time to the best of our abilities. |
|  | |  |
| **Other Items Updated on:** | | |
|  | | |
| **Additional Notes:** | | |
|  | | |

## NOTES:

Unedited log of Notes:

02/20

Met in MP 224

Serena on the computer, trying to debug PolyVerif

Organized the GitHub for the engineering notes

02/25

Met in LB 374, unsure of how to progress further with the project. We (Hannah) have Quentin's model that does not use LGSVL. Unsure of how long it will take to get it up and running.

Hannah not present, Serena running late.

"Error message was generic, did not reveal anything" - Serena

Work on the AI portion of the project, i.e. the NeuroEvolution side of work.

Get a plan fleshed out today so that why we can get straight to work on Thursday

"Don't worry about PolyVerif anymore, focusing on getting something working" - Dr. Akbas

Final SDS is due on Thursday, March 6th (03/06/2025). We don't have much to add to it.

Got to ask Clay if it is supposed to be the final SDD, as there is no SDS prior.

Go through the annotated version of SDD v.1 and make necessary edits.

Modify the design document to reflect the AI part of the project.

Read "The Nature of Code" chapter about NeuroEvolution.