

## Sprint retrospective #8

Context project: Virtual Humans for Serious Gaming

Group: WhySoSerious

| User Story                                                                                                                       | Task                                                                                                                                           | Member responsible | Assigned to | Estimated Effort (hours) | Priority (A-E)                                                                                            | Actual Effort | Done   | Notes                                                      |
|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------|--------------------------|-----------------------------------------------------------------------------------------------------------|---------------|--------|------------------------------------------------------------|
| As a developer, I want to have a report on the product, so my stakeholders understand how to use the product.                    | Create a draft of the Final report.                                                                                                            | Max                | Marciano    | 8                        | A, deliverable for this sprint                                                                            | 8             | Yes    |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Max         | 8                        |                                                                                                           | 8             |        |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Dennis      | 8                        |                                                                                                           | 8             |        |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Rico        | 8                        |                                                                                                           | 8             |        |                                                            |
| Course requirement separate from project.                                                                                        | Create an individual essay on team dynamics within our project team (2 pages A4)                                                               | Max                | Marciano    | 3                        | A, deliverable for this sprint                                                                            | 3.5           | Yes    |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Max         | 3                        |                                                                                                           | 3             |        |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Dennis      | 3                        |                                                                                                           | 3             |        |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Rico        | 3                        |                                                                                                           | 3.5           |        |                                                            |
| Course requirement separate from project.                                                                                        | Let several people play against our virtual human for the report of interaction design (field evaluation).                                     | Dennis             | Marciano    | 2                        | A, deliverable for this sprint                                                                            | -             | No     | Moved to next week, to be incorporated in the final report |
|                                                                                                                                  |                                                                                                                                                |                    | Max         | 2                        |                                                                                                           | -             |        |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Dennis      | 2                        |                                                                                                           | -             |        |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Rico        | 2                        |                                                                                                           | -             |        |                                                            |
|                                                                                                                                  | Create and integrate the report for interaction design into our final product.                                                                 | Rico               | Marciano    | 2                        | A, deliverable for this sprint                                                                            | 0.5           | Partly | We made a beginning, but it is not yet complete.           |
|                                                                                                                                  |                                                                                                                                                |                    | Max         | 2                        |                                                                                                           | -             |        |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Dennis      | 2                        |                                                                                                           | -             |        |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Rico        | 2                        |                                                                                                           | -             |        |                                                            |
| As a developer I want to have an up to date architecture design paper, so that we have a high level description of our product.  | Create the final version of the Emergent Architecture Design                                                                                   | Dennis             | Max         | 3                        | A, deliverable for this sprint                                                                            | 3             | Yes    |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Dennis      | 3                        |                                                                                                           | 3             |        |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Rico        | 0.5                      |                                                                                                           | 0.5           |        |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Marciano    | 0.5                      |                                                                                                           | 0.5           |        |                                                            |
| As a virtual human, I want to have ways to handle my budget when it is low, so that I can fulfill as much indicators as possible | When the virtual human is low on money (in the lowBudget module) build cheap student housing (if our variety indicator allows it)              | Rico               | Rico        | 2                        | A, listening to our indicators is necessary cause this will tell if the agent is doing its job correctly. | -             | Yes    |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Marciano    | -                        |                                                                                                           | 2             |        |                                                            |
|                                                                                                                                  | When the virtual human is low on money (in the lowBudget module) sell land (if our variety indicator tells us to build luxury student housing) | Rico               | Rico        | 2                        |                                                                                                           | 0.5           | Yes    |                                                            |
|                                                                                                                                  |                                                                                                                                                |                    | Marciano    | -                        |                                                                                                           | 1             |        |                                                            |
| Course requirement separate from project.                                                                                        | Create a document as a response of our information skills feedback.                                                                            | Dennis             | Max         | 1                        | B, It could save us time on having to do the resit                                                        | -             | No     | We were informed that these mails didn't help.             |
|                                                                                                                                  |                                                                                                                                                |                    | Dennis      | 1                        |                                                                                                           | -             |        |                                                            |



|                                                                                                                                                                             |                                                                                                           |          |          |   |                                                                                                                                                                |     |        |                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------|----------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                             | Work on the information skills resit                                                                      | Marciano | Marciano | 3 | A, needed to complete the course.                                                                                                                              | 4   | Yes    |                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                             |                                                                                                           |          | Max      | 3 |                                                                                                                                                                | 4   |        |                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                             |                                                                                                           |          | Dennis   | 3 |                                                                                                                                                                | 3.5 |        |                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                             |                                                                                                           |          | Rico     | 3 |                                                                                                                                                                | 3.5 |        |                                                                                                                                                                                                                                                                                                      |
| As a developer I want my code to be properly tested so that it is easy to see that it works.                                                                                | Write tests for the goal agent                                                                            | Dennis   | Dennis   | 6 | B, important because of the the software engineering aspects of the course                                                                                     | 4   | Partly | Goal tests don't work as expected. Tests that pass locally may still fail in travis.                                                                                                                                                                                                                 |
|                                                                                                                                                                             |                                                                                                           |          | Rico     | 4 |                                                                                                                                                                | 4   |        |                                                                                                                                                                                                                                                                                                      |
| As a develop, I want my virtual human to have space enough space to build on so that it can improve its student housing indicator.                                          | Demolish the biggest piece of land (gardens/nature) first.                                                | Rico     | Rico     | 2 | B, we need land to build on but we don't need to demolish everything.                                                                                          | 3.5 | Yes    |                                                                                                                                                                                                                                                                                                      |
| As a developer, I want my virtual human to sell land that it doesn't need, so it won't lower its indicators by selling needed land.                                         | Sell land that has buildings that do not influence our building and variation indicators (in noBudgetMod) | Marciano | Marciano | 2 | B, selling land will help the agent                                                                                                                            | -   | Yes    | Took a lot of time since there is an extra stakeholder on the map that nobody uses but the agent tried to sell to this stakeholder. This is not possible of course. It took a long time to figure out what was wrong with it. I fixed this by simply skipping the sell proposal to this stakeholder. |
|                                                                                                                                                                             |                                                                                                           |          | Rico     | - |                                                                                                                                                                | 6   |        |                                                                                                                                                                                                                                                                                                      |
| As a developer, I want my virtual human to be able to react to buy and sell requests from other stakeholders.                                                               | React to requests from other stakeholder.                                                                 | Marciano | Marciano | 3 | B, important for interacting with other agents                                                                                                                 | 4   | Partly | Still busy with implementing this, will finish it this weekend, so our agent won't cause a deadlock on the other agents.                                                                                                                                                                             |
| As a developer, I want to stay in touch with the people at Tygron, so they can help us with possible problems and inform us about changes and difficulties with the engine. | Meeting at Tygron.                                                                                        | Marciano | Marciano | 3 | C, will help us with sdk issues and meet with the other groups.                                                                                                | 3   | Yes    |                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                             |                                                                                                           |          | Max      | 3 |                                                                                                                                                                | 3   |        |                                                                                                                                                                                                                                                                                                      |
| As a developer I want to be able to test my goal code so that continuous integration is possible                                                                            | Create tests for the filterpercepts action in the connector                                               | Dennis   | Dennis   | 4 | C, We don't have much time for this anymore but it doesn't interfere with the functionality of the agent                                                       | 5   | Yes    |                                                                                                                                                                                                                                                                                                      |
| As a user, I want my program to be fast and responsive, so I can efficiently do my job.                                                                                     | Attempt to make GetRelevantActions faster by filtering on buildings owned by the active stakeholder only. | Max      | Max      | 2 | D, this is not necessary for the virtual human to behave correctly.                                                                                            | 1.5 | Yes    |                                                                                                                                                                                                                                                                                                      |
| As a developer, I want my virtual human to have a good relationship with the Municipality, so it is easier to have it reach its goals.                                      | Upgrade flats to flats with green rooftops to get a better trust-relation with Municipality               | Marciano | Marciano | 2 | D, not strictly necessary, but our agent might get more permissions from Municipality. We expect this to have more effect in the long run than the task below. | 0   | No     | To create this functionality we needed to add upgraded versions of the functions we are using. This means several indicators would also have to be rewritten.                                                                                                                                        |
|                                                                                                                                                                             |                                                                                                           |          | Rico     | 2 |                                                                                                                                                                | 0.5 |        |                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                             |                                                                                                           |          | Max      | - |                                                                                                                                                                | 1.5 |        |                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                             | Immediately sell some green land to the Municipality when the game starts.                                | Marciano | Marciano | 1 | E, not strictly necessary, but our agent might get more permissions from Municipality.                                                                         | -   | No     | The Municipality had a change of plans, so they won't be interested in buying land, since they downgrade their budget.                                                                                                                                                                               |

This week's sprint includes a lot of A priority tasks. This is because it is a week with a lot of deliverables

## Extra work

| Task | Assigned to | Actual effort | Notes |
|------|-------------|---------------|-------|
|------|-------------|---------------|-------|



|                                                                                                    |          |     |                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------|----------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Create sprint retrospective of this week.                                                          | Marciano | 1   |                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                    | Dennis   | 1   |                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                    | Max      | 1   |                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                    | Rico     | 1   |                                                                                                                                                                                                                                                                                                                                    |
| Review code                                                                                        | Marciano | 3   |                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                    | Dennis   | 3   |                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                    | Max      | 3   |                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                    | Rico     | 2.5 |                                                                                                                                                                                                                                                                                                                                    |
| Send requests to the municipality when the virtual human has planned a building in the simulation. | Rico     | 0.5 |                                                                                                                                                                                                                                                                                                                                    |
| Code refactor                                                                                      | Rico     | 1   |                                                                                                                                                                                                                                                                                                                                    |
| Added unified method for action parameters and tests for it.                                       | Max      | 1.5 |                                                                                                                                                                                                                                                                                                                                    |
| React to indicators (change to implementation with goals)                                          | Marciano | 4   | Could not test implementation last week, because the Tygron server was down. When testing it didn't work so I had to fix it. After that there were some changes requested on the PR. Also testing took some time, because of running the agent multiple times to see whether implemented goals were adopted and dropped correctly. |
| Resolve merge conflicts in the VirtualHumansContext repo                                           | Dennis   | 1   |                                                                                                                                                                                                                                                                                                                                    |

### Main problems encountered:

| Problem     |                                                                                                                                                                                                                                                                                                                                  |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description | There is a unplayable stakeholder in the game. When the agent tried to sell land, it sold this stakeholder. So when we tried to test selling land, the offer of our stakeholder was not visible.                                                                                                                                 |
| Reaction    | After a lot of time we discovered the unplayable stakeholder. To make sure the virtual human does not try to sell land to this stakeholder, we have determined the unplayable stakeholders ID and made sure our agent does not sell to it. We did not remove this stakeholder because we can use it as a kind of spectator mode. |

| Problem     |                                                                                                                                 |
|-------------|---------------------------------------------------------------------------------------------------------------------------------|
| Description | Sometimes tests for the virtual human suddenly stopped, this made our builds fail on Travis CI, while locally the tests passed. |
| Reaction    | We have commented these tests so the Travis build passes. Also we discussed with Sander about these tests                       |

| Problem     |                                                                                                                              |
|-------------|------------------------------------------------------------------------------------------------------------------------------|
| Description | This week the Tygron Engine randomly started failing, without any update whatsoever. (This only happened on Friday with Max) |
| Reaction    | We are at the final stage of the project and being able to run the engine is not imperative anymore.                         |

### Adjustments



- Not everyone was on time during our planned meetings. Even though this wasn't a big problem it could be improved in future project so that everybody can start working at the same time and can communicate their problems.

