VIRTUAL HUMANS
FOR SERIOUS GAMING
PRODUCT PLAN

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Delft April 28, 2016

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1 Introduction

Tygron is a company that builds serious games for urban planning. A game usually consist of a scenario (such as planning a new city area) in which several players play different roles (such as major, city planner, environmental agency, etc.) So, these games are meant to be played by a group of people. Tygron is interested in simulating some of these people with Virtual Humans, so that you can play the serious game also when not every player in the scenario is present.

The Virtual Human developed by us will take the roll of a public service manager. Its goal is to build shops, parking places, restaurants and such in optimal location so that profit can be made.

2 Product

2.1 High-level product backlog

Within this section the high-level features will be defined using *MoSCoW*. MoSCoW uses four categories to separate the features by level of importance. The categories are:

Must Have: Features that are of high importance. With those features the agent is considered as properly working.

Should Have: Features that are considered favourable. Without the agent should still be functional and should properly work.

Could Have: Features that are of low importance. When there will be enough time to implement, the features will be present.

Won't Have: Features that won't be implemented.

2.1.1 Must Have

- Build one type of building (non contextual)
- Buy land
- Sell land
- Demolish:
  - Land
  - Buildings
- Own indicator(s)

2.1.2 Should Have

- Build more types of buildings:
  - shops
  - parking lots
  - Horeca
- Low Level Communicating:
  - Information about the changing surroundings
  - Calculate efficient placing of buildings
- Achieve Goals:
  - Dont go bankrupt
  - Reach indicators considering shops
  - Reach indicators considering parking lots
  - Reach indicators considering horeca

2.1.3 Could Have

- Understanding the used language between stakeholders
- Negotiating with other stakeholders:
  - Be able to barter prices

2.1.4 Wont Have

- understanding messages send by human stakeholders.
- interacting with human stakeholders:
  - understanding messages send by human stakeholders.
  - sending messages to humans

2.2 Roadmap

Below we described per sprint which part of the product we are going to make.

2.2.1 sprint 1

During this sprint, we will find out how the software works and make a start with all documentation.

- Try different scenarios and stakeholders when using the software of Tygron.
- Make the product vision document.
- Make a product plan.
- Think of a scenario with different stakeholders and a conflict.

2.2.2 sprint 2

During this sprint we will make a final scenario and find information about our stakeholder. And make sure the stakeholder can do some of the basic actions.

- Choose a indicator for our stakeholder.
- Make demo of basic implementation of stakeholder.
- The stakeholder should be able to build one type of building.
- the stakeholder should be able to demolish land and buidlings.

2.2.3 sprint 3

During this sprint we will make sure the stakeholder is able to do all the basic actions during the game.

- The stakeholder should be able to buy and sell property.
- The stakeholder should be able to build in context to its indicator.

2.2.4 sprint 4

Durig this sprint our stakeholder should be able to reach his goals.

- The stakeholder should be able to reach its indicators target.
- The stakeholder should be able to make sure it doesn't go bankrupt.
- Make demo in order to show how our stakeholder is able to reach its goal.

2.2.5 sprint 5

During this sprint the stakeholder should be able to notice what other stakeholders do.

- Make the stakeholder notice the other stakeholders.
- Keep track of the decision of other stakeholders.

2.2.6 sprint 6

During this sprint the stakeholder should be able to calculate efficient placing of buildings.

- The stakeholder should be able to calculate if owned property is good for building.
- The stakeholder should be able to calculate if other land is good for building.

2.2.7 sprint 7

During this sprint we could add more indicators to the stakeholder.

- The stakeholder is able build more shops
- The stakeholder is able build horeca
- The stakeholder is able to build parking lots.
- Make Demo in order to show the finished stakeholder

2.2.8 sprint 8

During this sprint we will end everything about the stakeholder and make sure it can work with the other stakeholders made by other groups.

- run tests with other teams.
- clean all code.
- deliver the code.
- deliver all documentation.

3 Product Backlog

3.1 User stories of features

As a public service management bot
I want to build a building on ground that I own
So that the indicator which is applicable for the building will go up.

As a public service management bot
I want to demolish a building that I own
So that I can use the ground for other things

As a public service management bot
I want to buy land
So that I can build stuff

As a public service management bot
I want to sell land
So that I have more money

As a public service management bot
I want to build a building on ground that I own
So that the indicator which is applicable for the building will go up.

As a public service management bot
I want to be notified if houses are demolished
So that I can decide if I want to build a supermarket near there or not

As a public service management bot
I want to understand the used language between stakeholders
So that I can communicate with other bot stakeholders.

3.2 User stories of defects (if applicable)

As a public service management bot
If the game crashes
I want to stop running
So that I don't mess things up.

3.3 User stories of technical improvements (if applicable)

3.4 User stories of know-how acquisition

3.5 Initial release plan (milestones, MRFs per release)

4 Definition of Done

In this section we will define when something is done. We will discuss when a backlogitem is done, when sprints are done and when the final release is done.

4.1 Backlog items

A backlog Item is done when it is 65% tested. Also it needs to be checked by all members, and everyone should agree that this item is implemented correctly. All test should pass and the code should be merged to the master branch.

4.2 Sprints

A Sprint is done when the features that should be tackled during this sprints are done. There should be an reflection about the sprint and we should have contacted the TA's.

4.3 Final release

The final release is done, when all items stated in section mustaves are implemented and at least 65% tested. Like during every sprint. Also the most items stated in section should have should be implemented and tested.
The product owner should have seen multiple demos and agrees with the final product.
The product should be well documented according to the documents specified on blackboard.