HiVR Product Planning (Draft)

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May 4, 2016

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1 Introduction

In this document, the following will be discussed: first, a MoSCoW model to determine which features are needed. Second, a product backlog with global user stories based on the features that are needed. Third, a release plan according to what should be finished following the road map. Last, a description of when a feature is done, when a sprint is done and when a release is done.

2 Product

2.1 High level product backlog

The MoSCoW model for the project is:

Must have	Connect with Unity VR environment running on another PC
	Generate map from Unity VR environment
	Display static elements of the Unity VR environment
	Display dynamic elements of the Unity VR environment
	No performance impact on the Unity VR environment
	Smooth movement on the map
	Show subsection of the map located around the user
Should have	Change the characteristics of characters in the Unity VR environment
	Move characters in the Unity VR environment
	Change TV screen in Unity VR environment
	Play sounds in Unity VR environment
	Small map displaying the entire Unity VR environment
Could have	Touch screen support for the GUI
	Create scenarios in advance
	Zooming in the map
	Display trajectories of moving characters
	An option to release the focus from the patient and freely move around on the map
	logbook of commands given to characters for therapist
Won't have	Realistic graphics
	Recording and playing back the events on the map
	Connecting with more than one Unity VR environment at the same time
	Connecting more than one client to the Unity VR environment at the same time

2.2 Road map

Sprint	Task
1	Writing various design documents
2	Simple UI to display map
	Initial protocol specifications
	Finalizing design documents
3	Finalize protocol specification
	Connecting to Unity from the GUI
	Rendering a map with static elements in the GUI
4	Implementing the protocol in the Unity plugin
	Implementing the protocol in the GUI program
5	Rendering dynamic elements on the map
	Interacting with elements on the map
6	Displaying a small map of the entire environment
	Touch screen support
7	Finalize project have bug free working build
8	Software launch and final presentation/report

3 Product Backlog

3.1 User stories of features

- As a therapist I want to see a clear visual overview of the virtual world
- As a therapist I want to be able to see the objects in the virtual world
- As a therapist I want to be able to see the moving objects in the virtual world
- As a therapist I want to be able to see trajectories of moving objects in the virtual world
- As a therapist I want to be able to see the patients location in the virtual world
- As a therapist I want to be able to see the patients field of view in the virtual world
- As a therapist I want to be able to see the state of objects in the virtual world

- As a therapist I want to be able to manipulate the state of objects in the virtual world
- As a therapist I want to be able to see which objects can be manipulated
- As a therapist I want to be able to touch objects to manipulate them
- As a therapist I want to change what the patient can see on the television
- As a therapist I want to play sounds in the virtual world
- As a therapist I want to play sounds from a specified location in the virtual world
- As a therapist I want to see a small mini-map displaying the entire map without the small details
- As a therapist I want to be able to change the walking direction from the actors
- As a therapist I want to see the trajectories that actors will move to
- As a therapist I want the visual overview to update 30 times or more per second to make it smooth
- As a therapist I want the majority of the interface to be supported without a keyboard
- As a patient I don't want my immersion to be interrupted
- As a patient I don't want to notice any bad performance caused by the visual overview of the therapist
- As a patient I want to see an environment that can be influenced by the therapist
- As a patient I don't want to see a big or immediate difference when the therapist changes something
- As CleVR I want to be able to extend the functionality of the software
- As CleVR I want to be able to run the map software on another PC than the VR environment

- As CleVR I want the visual overview to have a small or not noticeable performance impact on the Unity environment
- As CleVR I want to have good performance if we add more then 100 objects
- As CleVR I want to have at least 80% test coverage of the new code
- As CleVR I don't want to use more then 5 external Unity packages because of license issues

3.2 Initial release plan

The releases are planned from week 2 of quarter 4 which starts at April 18 till week 9 of quarter 4 which starts at June 14.

Week	Task
1	Documentation and planning
2	Simple UI to display map
	Design documents
3	Communication protocol specification
	Unity plugin that can be connected with
	Render a map with static elements in the UI
4	Protocol implementation in both the UI and the Unity plugin
5	Render dynamic elements on the map
	Option to interact with elements on the map
6	A small map displaying the entire environment
	Touch screen support
7	Feature complete final release
8	Feature complete bug free release and final report

4 Definition of done

4.1 Backlog items

A feature is done when the following points are met:

- All criteria of the corresponding user story are met
- Continuous integration build is successful
- 80% or higher test coverage

- Can be demonstrated to other team members without problems
- Approved by two other team members after manual functional test
- Can be merged into current master
- Code is documented and no Visual Studio extensions warnings

4.2 Sprint

A sprint is successful when all items in the backlog are done according to the preceding definition and no critical bugs exist in the issue tracker.

4.3 Release

A release is done when CleVR gets the demo and documentation.

5 Glossary

CleVR VR development team at Yes!Delft, focused on virtual reality therapy solutions. `http://clevr.net/`. 7

MoSCoW Must have, Should have, Could have, and Would like but won't get. Clegg, Dai; Barker, Richard (2004-11-09). Case Method Fast-Track: A RAD Approach. Addison-Wesley.. 3

Unity Unity is a game development platform, can be used to make 3D environments. `https://unity3d.com/unity`. 3