Product Vision

Context: Health Informatics

Group: HI1 a.k.a. Geen Naam (Group Number 4)

28-4-2016

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Introduction:

In the health informatics context we are working on a solution to help people with various sorts of psychoses. CleVR developed a virtual reality world in order to try and help these people through therapy in this world. In this world patients can interact with other people and objects all set in a shopping street. The world attempts to simulate real world situations to practice with. With this program it is possible to analyze the patient's behaviour during exposure to the virtual world.

We are asked to develop a program that tracks the virtual world using a 2D map representation of the world. In this map the therapist should be able to see all people and objects present in the world as well as being able to perform some basic actions on certain people or objects. These actions include talking, moving (following), changing emotions and interacting with other objects and characters.

In the rest of this document we will describe our vision of the product. We will do this by defining our target audience, stating crucial attributes to satisfy selected needs, compare to other similar products and finally set a target timeframe and budget.

Product vision

In the following part we will describe target audience, the customer needs that we need to address, the crucial attributes that we need to satisfy to these needs, a comparison to similar products on the market and finally the target timeframe and budget to develop and launch the product.

Target Audience

Our target audience are therapists that treats people with psychosis. Meet Truus that is one of the therapists. Truus is a 30 years old therapist. She treats people with a psychosis to overcome their fear. She has already some experience with treating people with acrophobia. That has been proven effective (Rothbaum, B. O., Hodges, L., Smith, S., Lee, J. H., & Price, L., 2000). The next step is to help people with agoraphobia and other social phobias. To do this CleVR has developed a 3D shopping street (H.I.V.R.S., 2014) where the patient can walk around. To improve the effectiveness Truus should be able to control the 3D environment. As Truus cannot join the environment with the patient we will create a 2D map where Truus can take control over the environment. As Truus has some older colleagues who are not that familiar with the newest technology it should be easy to use. This means we have to adopt our product to simplicity, meaning as low as possible amount of clicks. Also using icons where the action you expect to happen, also is the action that actually happens.

Customer needs to address

The product will address the needs of the therapist by displaying a real-time 2D version of the current state of the VR-world, with negligible delay between the actual VR-world that the patient is in and the therapist's 2D-map representation. The therapist will need to mainly focus on and monitor the patient, hence the product will have a simple and responsive GUI to keep the interaction with the 2D-map representation at a minimum. Yet, the manipulation of characters and other objects in the world needs to be effective to address and improve the patient's condition. Due to the fact that that these conditions vary from patient to patient, it should be possible for the therapist to easily create and maintain the focus on certain aspects of interaction from the patient and the other virtual characters and objects in the world.

Crucial attributes to satisfy these needs

The most crucial aspects of the application are the real-time and responsiveness constraint and the fact that it is easy to use, as the main focus of the therapist should lie on monitoring and evaluating the patient and not on manipulating the VR-world. Therefore, selecting characters and actions such as walking or triggering speech should be doable with 2-mouse clicks at most. Also it is important that the map is clear and should give a quick overview of the current state of the environment. We will use clear icons and abstract objects for this.

Comparison to similar products

Many companies which aim to find a way to resolve psychosis do not use virtual reality therapy. Most companies use special medication, depending on the problem of the patient,

or various kinds of verbal therapies, i.e. cognitive behavioral therapy (Psychosis - Treatment, 2014).
To test if this medication or therapy helps, or to diagnose the problem, they use real actors to simulate certain scenarios. Using actors is asking for problems, as the actors may not perform well, or are simply not available.
Another problem is the cost-factor, as it would be very expensive to pay for each actor.
Virtual reality takes away all these problems. The therapist is able to create as many actors as he/she wants and they all perform as the therapist wants them to perform.
Other companies send people directly in the real world, which can have many negative effects. For example a patient can get violent and affect others in the real world (Psychotic Disorders. (2016, April)).
Again using virtual reality solves these problems. When a patient gets angry at a virtual character, no real damage will be done to other people, and for the patients sake the program can be paused.

If we compare the product with existing products of CleVR, the products have the same core features: The patient is placed in a virtual environment, i.e. an airplane. The environment changes and changing factors from the environment apply on the patient. (H.I.V.R.S., 2014)
Hence this new product is a good addition to the other products which all address certain health problems.

Timeframe and budget
The last question we will answer is: what is the target timeframe and budget to develop and launch the product? (The Product Vision., 2009, January)) Answering this question we will have an insight into the most important resources, needed for a project. *"My favorite things in life don't cost any money. It's really clear that the most precious resource we all have is time."* (Steve Jobs).
For this project we have ten weeks from start to finish. The deadline is due to the 23rd of June. The biggest part of the first two weeks we are using for setting up the project. This means we only have 8 weeks to develop the real product.
The budget for this product is limited, or even better said, it is zero. More budget is not needed for this product. As we get the 3D environment from CleVR. The software we use is free software or software where we can get a student licence.
As we do not have any budget. We cannot afford high quality images and icons. With this fact we will mainly focus on the functionality of the product, rather than the looks of the product. As we also have a limited timeframe we cannot make the images and icons our self.

References

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