DETERMINING OPTIMUM AUDIENCE FOR STORYTELLING VR APPLICATIONS FOR THE ELDERLY

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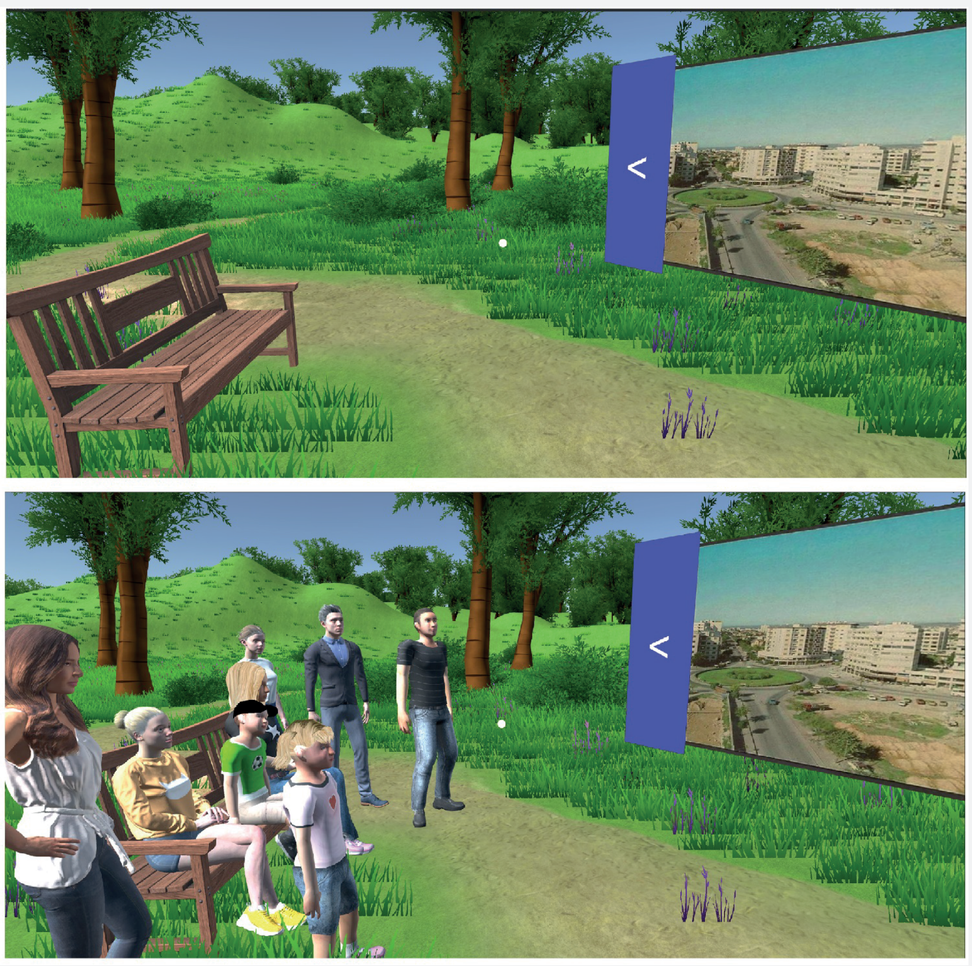
1. INTRODUCTION

Seniors are exposed to a variety of technologies, aimed at improving their quality of life. Among those technologies, Virtual Reality (VR) can offer elderly users the opportunity to become immersed in virtual worlds where they can interact with their environment, giving them a realistic experience and allowing them to actively participate in creative experiences. The aim of our work is to provide to elderly with a user-friendly, and enjoyable Virtual Reality(VR) application that incorporates activities for promoting their wellbeing.

2. PILOT VR APPLICATION

- To study whether a VR storytelling application can really help the elderly, we created a pilot application that offers the user a pleasant experience reminiscing about their younger years.
- The scenario of the application takes place in a forest that offers the users the freedom to move in the space listening to natural sounds so that they can feel immersed and relaxed.
- In front of the user is a billboard with four photos from the decades when the user was young and instructions that the user can read and hear when starting the application.
- At the same time there is interaction with the virtual audience, which includes adults and children, located around the user asking the user to describe the photos displayed on the billboard.



Screenshot from the prototype VR application.

3. DETERMINING AUDIENCE FEATURES

An important feature of this application relates to the characteristics of the virtual audience. A questionnaire-based study was staged in order to allow the determination of the optimum audience features.

DEMO VIDEO

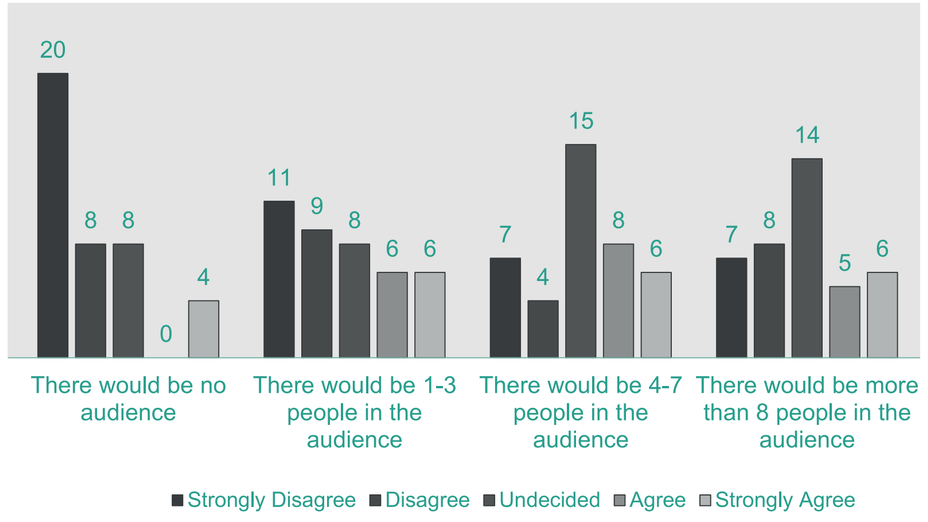
3.1 QUESTIONNAIRE

- An online questionnaire was created where it was open to the public but mainly addressed to people who have some knowledge of virtual reality and to people over 60 years old.
- The questionnaire was measured on a Likert scale with values of 1 representing the highest level of disagreement at each question and 5 representing the highest level of agreement.
- There were also some screenshots from the application so that the user could understand the content of the application.
- To collect the sample, the questionnaire was sent to two groups through social networking, the majority of which are members over 50 years old.

3.2 PRELIMINARY RESULTS

- 40 participants completed the questionnaire
- 15 males and 25 females
- Between 18– 70+ years old
- 20 of the 40 were over 60 years old
- 26 of the 40 had never used virtual reality before
- 23 out of 40 found such an application interesting and useful

You would feel more comfortable telling a story to a virtual audience where:



3.3 DISCUSSION

- The virtual audience should include 4-7 avatars adults and children, with increased interaction in the form of hand movements. Finally, an important element that will be added is the preferred number and type of photographs indicated in the responses (five photos showing views of the native country of the users from the chronological period 1970-1990).
- Apart from the basic set of 'generic' photographs, the user will be given the opportunity to upload their preferred photographs.

CONCLUSION AND FUTURE WORK

The aim of our work is to contribute to improving the daily life of the elderly through the development of dedicated VR applications that target elderly users. To optimize the experience of the end users, the applicability of certain design factors has been investigated through a dedicated evaluation process. The preliminary results show that there will be a need to redesign our pilot VR application according to the needs of the elderly.

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