

Welcome to the Cinema!

Report

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1. Introduction

In this project for the discipline of Virtual Intelligence Environments, the objective was to create an environment chosen by the student and apply all the concepts given in the 15 lectures of this semester.

With this I decided to create a cinema room. This cinema room was not thought as a big cinema room as the ones we usually go to, but as a cinema for a house. This means that the cinema is small thinking about a mansion owner's friends and family gathering. The project has some interactivity that will be further explained.

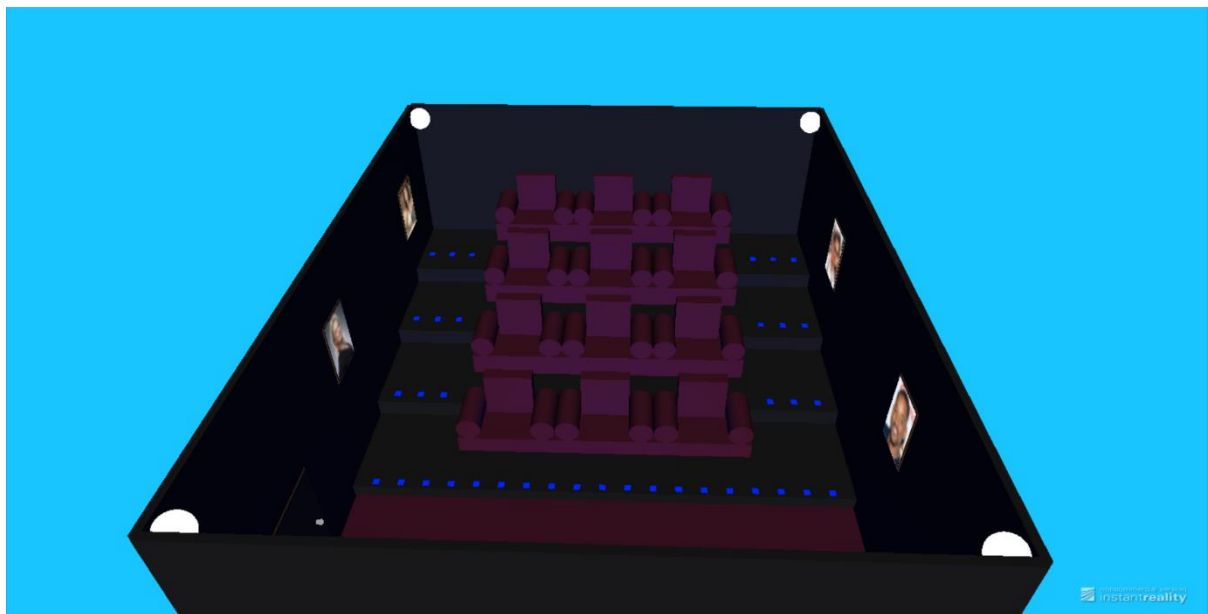


2. The Cinema

The project is, as said before, presented in VRML/X3D and to be more immersive, the viewpoint starts in the middle of the cinema room.

2.1 The non-interactives

To allow a better viewing of the room walls from the outside, the background was turned to blue (making a contrast). As the non-interactive parts of the room, we can start by the 4 walls that the room has, and the floor. Also, we have 4 steps of stairs to create the amphitheatre effect that the cinemas usually have and need. On each step there are 3 chairs which makes a total of 12 chairs in the room (not forgetting it is a cinema room for a mansion and not for a mall). Each chair was designed with 2 geometry Boxes for the back support and the seat and 2 Cylinders for the arm supports. In the beginning the objective was to make the door also interactive, but there were no times as I had other projects from other disciplines also to deliver in close dates. Finally, the last non-interactive part of this room are the 4 portraits on the wall. Each portrait was created with 2 geometry Boxes, one for the frame and the other one for the famous actor or actress. To be able to put the actors and actresses faces on the portraits, they were texturized with an image texture.

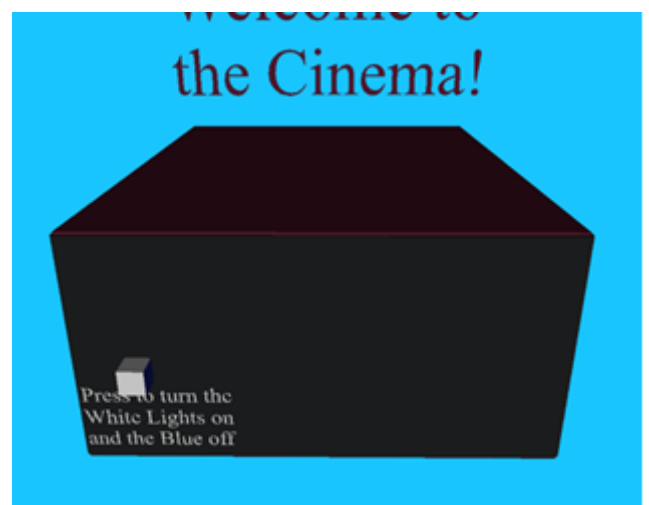
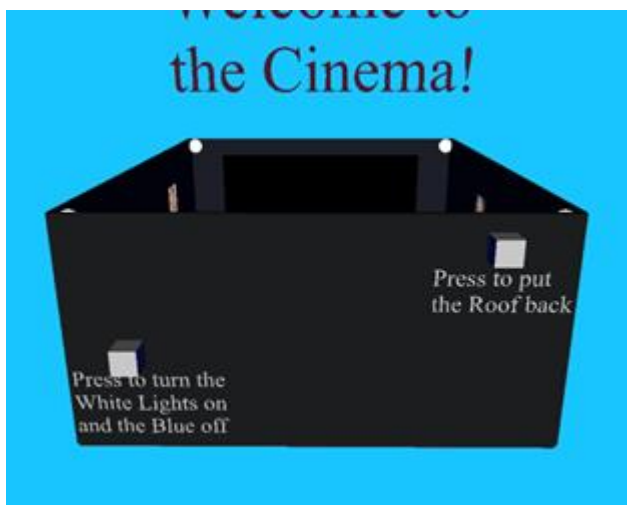
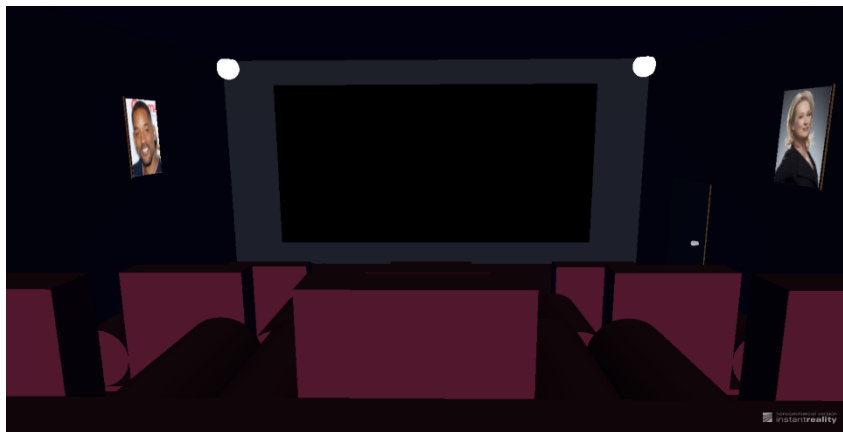


2.2 The interactives

2.2.1 The Roof

To allow the viewer to see better the room, for example from up, the roof is removable and can be put back. Once you click the roof this will disappear, and a button with text will appear in the back wall of the cinema on the outside. Clicking this button, will put the roof back and make the button and the text disappear.

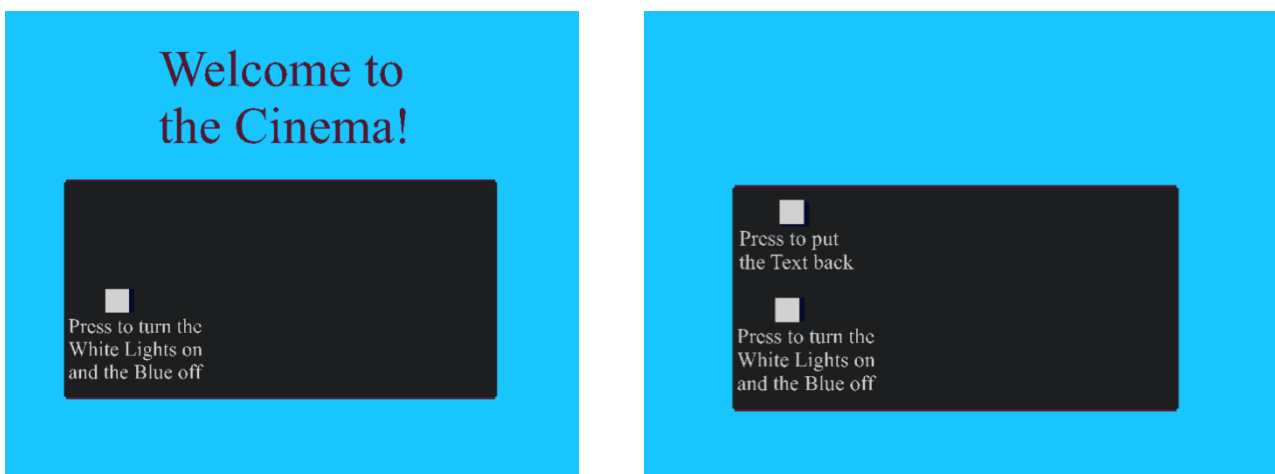
The roof was made with 1 geometry Box as well as the button and the text was made with geometry text. The button and text are white to make a contrast with the wall.



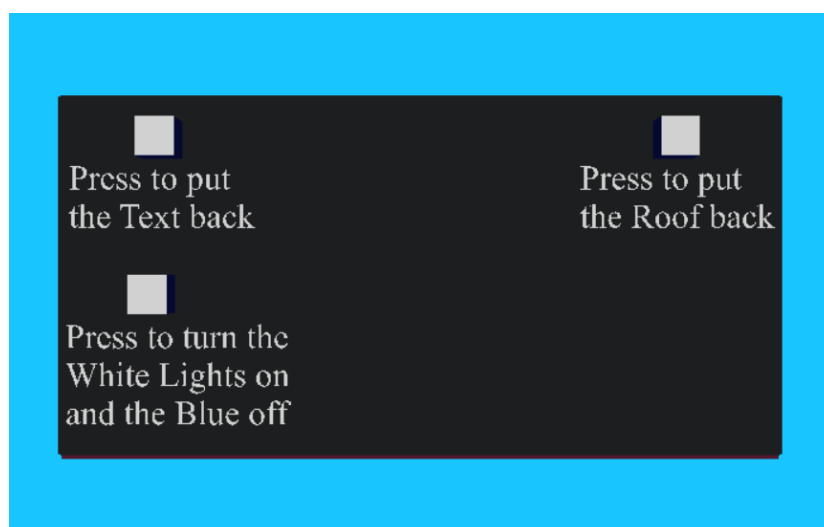
2.2.2 The Welcome Text

Outside the room there is a friendly welcome text that says, “Welcome to the Cinema!” which is also the name of the project. This text, like the roof can disappear to allow a better visibility of the room to the viewer. And, just like the room, by clicking the text, this will disappear and a button and some text in the same place will appear to restore this text.

The text was made with 1 geometry Text as well as the button text and the button was made with geometry Box. The button and text are white to make a contrast with the wall.



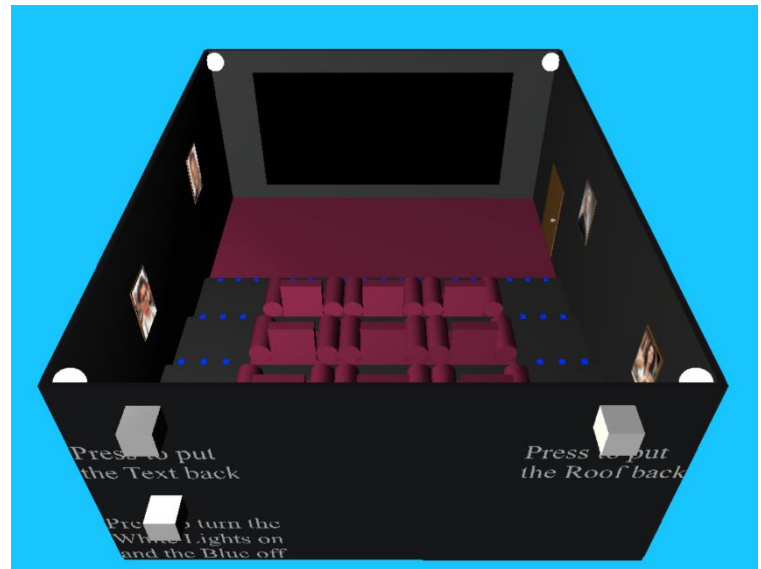
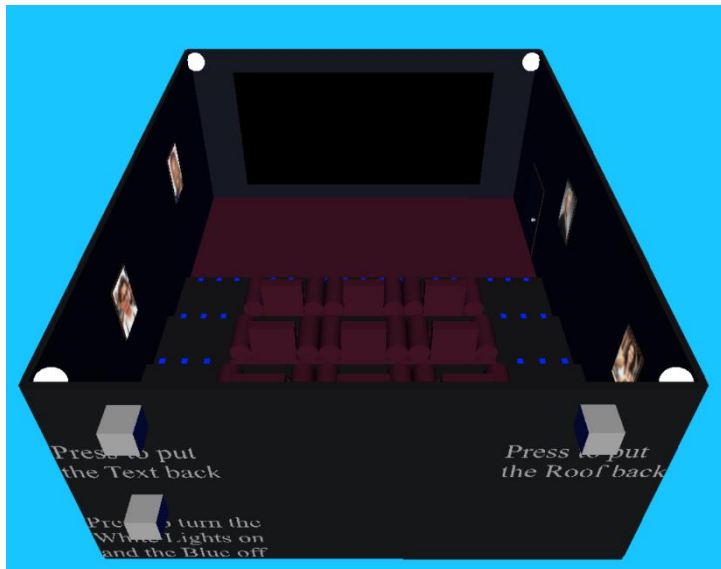
The full button wall looks like this when all the buttons are visible:



2.2.3 The Lights

Just like in a cinema, there are 2 types of lights. The 4 white ones on the corners are the room lights, that give off a lot of light and are not turn on during the movie. The Blue lights on the stairs are always on during the movie to allow the people to see where the stairs end and avoid accidents. Since when the blue lights are on, the white ones are supposed to be off and vice versa, I created a button that does exactly that. Once the room is loaded, the blue lights are the ones that are on, like the movie is going to start, but once the viewer presses the button, the blue lights turn off and the white ones turn on, illuminating the whole room.

The white lights were done with Spheres with some light emission and a Point Light for when they are on and the blue ones with geometry boxes also with light emission and the Point Light for when they are on.

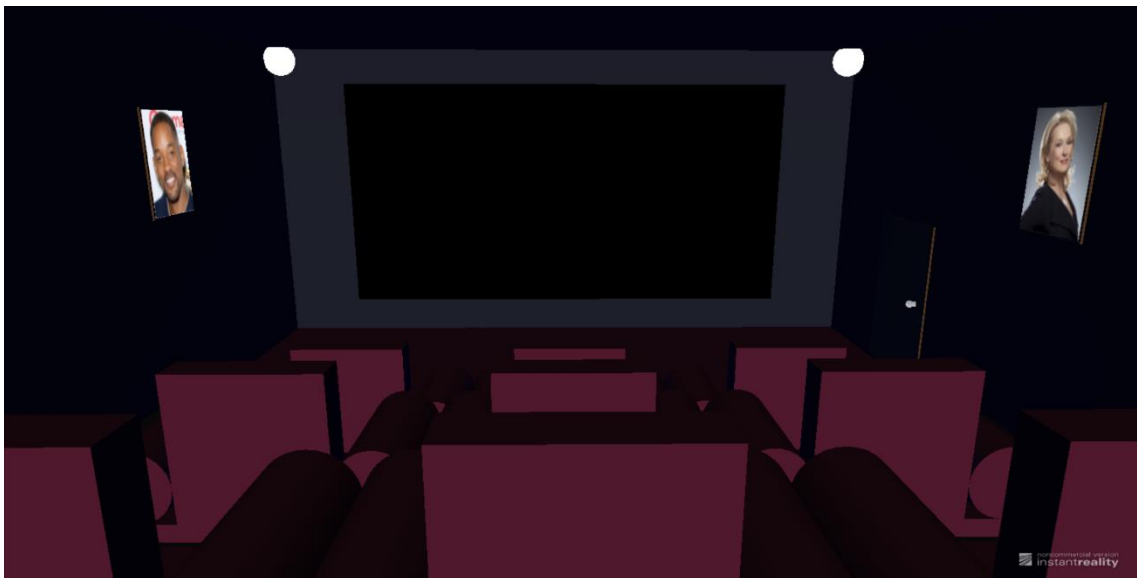


As seen in the pictures, the blue light intensity is way smaller than the white one, because these ones are not supposed to illuminate the entire room, just alert to the edges of the stairs.

2.2.4 The Screen

This cinema room would not be a cinema room if there was no movie going on the screen, so a small movie looping was inserted into this screen. The screen only turns on, there is no turn off, because no one wants their movie to stop in the middle. To start the movie all the viewer has to do is to click the screen.

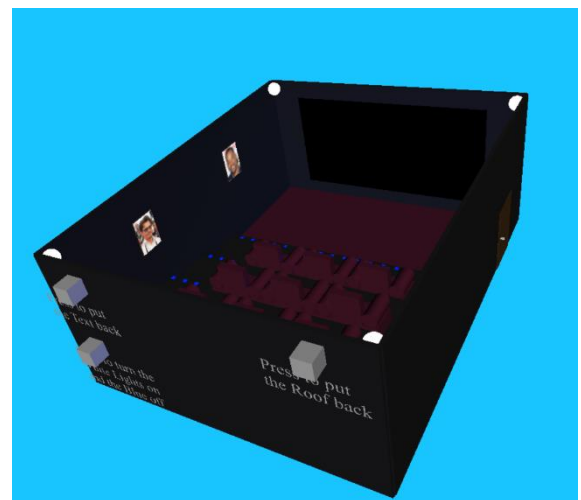
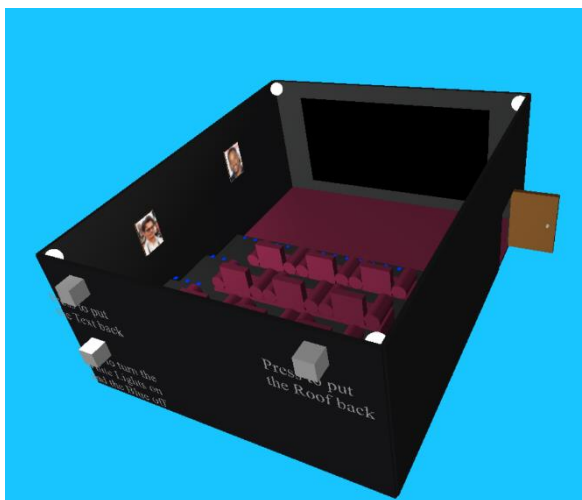
The screen was created with a geometry Box, and to be able to have the movie on, a Movie Texture was used.



2.2.5 The Door

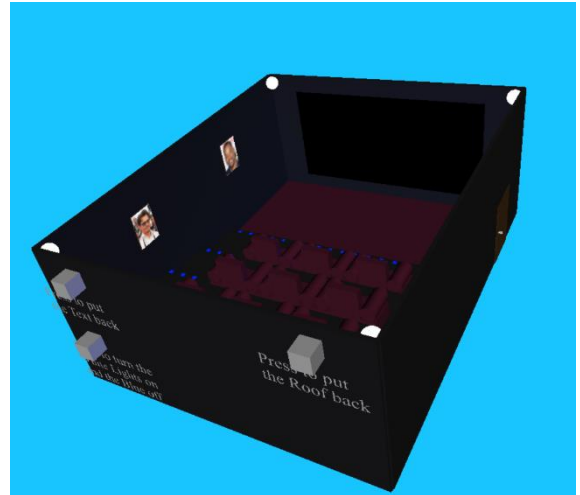
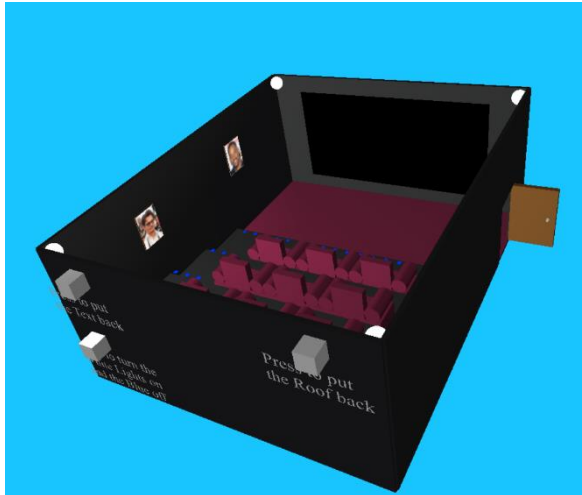
In this project the door is animated just like in a real cinema. The door starts the model opened and when the user presses it, the door closes. If the user presses it again, the door opens again.

The door was created with 1 geometry Box for the door per si, 1 Cylinder for the doorknob part that goes through the door, and 2 Spheres that created the grabbable part of the doorknob. The full doorknob was texturized with a metallic picture to create the metallic look of a doorknob. Once the door is pressed, a translation and rotations happen, the rest of the door (each part that composes it) stairs the same in relation to one another.



2.2.6 The Intelligence

As it is possible to see in the previous images, a part of intelligence was added to the room. There is an event happening to the lights once the door opens and closes. Like in a real cinema, when the door is opened, the white lights are on and the blue ones off. And also, when the door is closed, the white lights go out and the blue ones turn on.



3. Conclusion

Since this project, there is no part of lisp in it. Since I was not able to install de lisp system (should have asked for the teacher's help) I was not able to do that part of the project. However, I gave my best in the VRML/X3D part.

Even though this inconvenience happened and there were other projects to be delivered, I still did my best in this one and I hope it is what the teacher was looking for.

4. Affirmativ

No part of this work has been submitted in support of another module, degree, or any other qualification at the HTW Dresden or any other university or institute of learning. I confirm that the work presented has been performed and interpreted solely by me except where explicitly identified to the contrary. Any use made of the works of other authors, in any form (e.g., ideas, figures, text, tables etc.), have been properly cited and/or acknowledged.

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24/07/2021