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VR Cinema

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FRAMELESS

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Abstract — ***A virtual reality cinema experience using a smartphone and Google Cardboard or similar inexpensive VR headset.***

Keywords — VR Cinema, Head Tracking, Eye-Gaze Trigger, Google VR, Cardboard, Daydream, VR for the masses

A "VR - Cinema Hall" in which you can sit wherever you want, play whatever you want. It's your personal movie hall. All you need is a VR headset and you're set!

- Perfect real-time head tracking. Plays all kinds of images and videos formats from your mobile phone device.
- Immersive user-interface.
- Both gaze and external trigger enabled. Compatible with both magnetic clipper and Bluetooth remote control. So, the lack of a magnetometer is no issue, but gyroscope is imperative.
- Beautiful Hovering menus that can be triggered using eye-gaze, magnetic triggers or using Bluetooth controllers.

You can even see the projector dust!

Note: The main USP is that it can run on a variety of smartphones and with low-cost VR headsets based on the Google VR platform, like Cardboard and Daydream.

I. BASIC FUNCTIONALITY OVERVIEW

Every hovering menu or interactable object inside the VR mode can be interacted with using:

- Eye-Gaze.
- Magnetic clippers or buttons.
- A Bluetooth controller or remote controller.

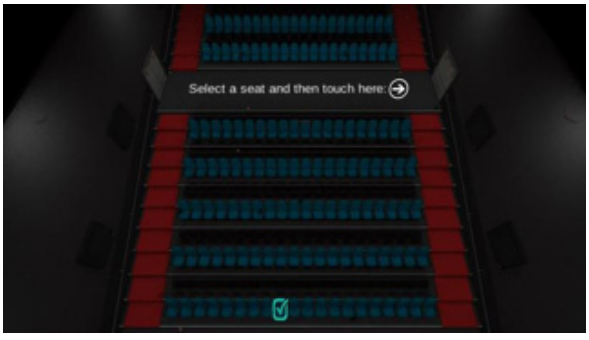

Figure 1 - Shows the UI with which the User can interact both in and outside VR to select the seat where they would like to be seated during their personal premiere.

When the User takes his gaze away from the movie screen, the movie is paused for their convenience and a pause menu is displayed (See Fig. 2). As soon as the User starts focusing on the movie screen, the pause menu goes away. The User can also interact with this to open the Remote Control.

Using the Remote Control (Fig. 3),

- The User can go back to the home screen of the app.
- The User can change their seat.
- The User can use the Seek bar to forward or rewind the movie.
- The User can quit the application.

II. CONCLUSION

This Application demonstrates the possibilities and comfort that are possible using VR and how, with the evolution of technology, such an experience is available to a broad audience.

Future Roadmap:

- Allow multiplayer, basically allowing multiple family members and friends have a shared viewing experience inside VR Cinema Hall.
- Reduce the app size and make distribution easy.
- The majority of the code was written in 2016, Some design and UI/UX elements have to be updated to the latest design and accessibility standards.

Figure 2 - When the user the stops viewing the screen, the movie is paused and as soon as he begins watching it again , the movie is resumed and the pause hovering card goes away. This card can also be used to open the "remote control menu"

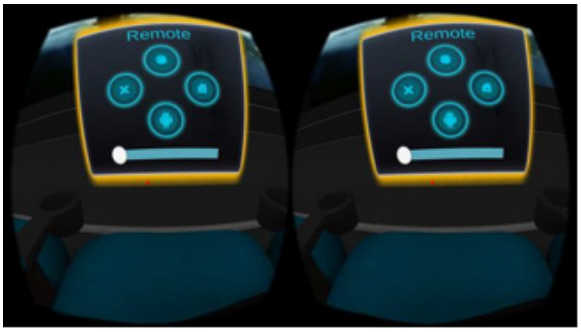

Figure 3 - Fig. 1. The Remote-Control Menu card is basically the key to the various functionalities of your VR Cinema.