

# **VRTimeLine**

## **Project Proposal**

*A novel approach for viewing timelines in virtual reality*

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### **Approach**

When the user enters the virtual reality app, he will be looking at the center and will be looking at a time line eg. the design history timeline. He can scroll through the timeline by looking to the left to go back or to the right to go forward. When the user finds an event that he wishes to learn more about they, he can look up to find more details about that event (text, pictures). To go back to the timeline view, the user can move his head to the original resting position. He can bring his head back to the resting position to get back to the timeline. A future enhancement can be that If the viewer wishes to view other timelines, like US History, war, art, etc., he can look down and he will be presented with these other categories of timelines. The user can select the timeline he/she wishes to view and get the head back to the original resting position to view that timeline.

In our app, there are three levels of display. The bottom level consists of the different types of timelines, like furniture, art, or war. The middle level is a detailed timeline of a certain type and the top level is a more detailed description of an event in the timeline corresponding to the one that the user selected.

There can be three head positions that the user can have which map to interactions with these three levels

Looking up: when the user is in a position with his head tilted upwards(eyes facing up), he will be able to see top level which has the details of the selected event.

Looking down: when the user is in a position with his head tilted downwards(eyes facing down). This position will allow the user to see the different timelines available. This is the bottom level as per our hierarchy as explained above.

Looking straight: when the user is in a position with his head in the normal resting position(eyes facing parallel to the ground), he will be able to see the timeline. This timeline can be scrolled using horizontal head movements.

Looking left/right: It will cause the timeline to move in the opposite direction - basically, if you look to the right, the timeline moves to the left having the impression that the user scrolled to the right on the timeline

Technologies that will be used:

Cardboard SDK, Unity Engine, Unity Playmaker plugin

## Prototype



## Grading Milestones

10% - Name and welcome page

10% - Help screen(demo)

10% - Basic setup (first view, looking straight, is the timeline)

30% - Implementing 3 views- Top, Bottom and Eye-level view

10% - Head tracking/Controlling

30% - Scrolling while looking left/right

### Extra Credit:

30% - implement 'ease'. There is a slow start to the scrolling. Looking further right or left increases the speed of scrolling, Turning the head towards the center beyond a certain threshold brings the scrolling to a halt.

10% - usability testing

20% - Ability to switch timelines

5% - app store submission

## References

1. <http://www.google.com/get/cardboard>
2. <https://developers.google.com/cardboard>
3. <http://www.hutonggames.com/index.html>
4. <http://unity3d.com/>