

International Journal of Computer Science and Mobile Computing



A Monthly Journal of Computer Science and Information Technology

ISSN 2320-088X

IMPACT FACTOR: 6.017

IJCSMC, Vol. 6, Issue. 2, February 2017, pg.152 – 155

Virtual Reality Box

**Dhruv Sengupta¹, Koustubh Dubey¹, Joy Haldar¹, Manisha Verma¹,
Priyanka Naidu¹, Mukesh Barapatre²**

¹B.E. Final Year, Dept. of CSE, S.B. Jain Institute of Technology, Management & Research, Nagpur, India

²Professor, Dept. of CSE, S.B. Jain Institute of Technology, Management & Research, Nagpur, India

¹cronosengupta@gmail.com; ¹kossi.dubey@gmail.com; ¹joy.sudhamoy.haldar@gmail.com;
¹manishaverma264@gmail.com; ¹priyanka26.naidu@gmail.com; ²mukesh.barapatre@gmail.com

Abstract— Virtual Reality (VR), sometimes called Virtual Environments (VE) has drawn much attention in the last few years. Extensive media coverage causes this interest to grow rapidly. This Android application basically focuses on Screen casting that is Frame casting. Thus the mobile station is fixed in the Virtual Reality and is controlled by the Gyroscope which is an in build device in the mobile phone, to handle the control. This project gives an opportunity to change your phone into 3D cinema and lets you enjoy 3D world at anywhere and anytime. In this paper we present a mechanical device called the Virtual Reality box. This Virtual Reality will help to develop a real world environment.

Keywords: Dimensional, Interactive, Sensor, Mechanical, Gyroscope, Virtual Reality

I. INTRODUCTION

Virtual Reality VR is characterized as "a reasonable and immersive reproduction of a three-dimensional condition", made utilizing intuitive programming and equipment, and experienced or controlled by development of the body". Virtual reality(VR) refers to the computer technologies that use software to generate realistic images, sounds and other sensations that replicate a real environment, and simulate a user's presence in this environment. Virtual Reality actually brings the user into the digital world by cutting off outside stimuli. In this way the user is solely focusing on the digital matter. We use a mechanical device called the Virtual Reality box. This VR box consists of two adjustable lenses this requires a small display of at least 5.5 inches. Smart phones can be used for that display. We intend to screen cast the pc/laptops display on the mobile device. The phone has an inbuilt Gyroscope which can be used as an input device for the pc. In virtual reality studios and any modern first person shooter games this will develop a total virtual reality which will actually baffle the user with its real time work. The virtual

reality generally includes the following: Head Tracking, Motion Tracking and Eye Tracking. The Head Tracking means that when you wear a VR Box the picture in front of you shifts as you look up down and side to side or Angle your head. Head Tracking is one big advantage the premium headsets have over the likes of cardboards other Mobile VR headsets. Eye Tracking is possibly the final piece of the VR puzzle. An infrared sensor monitors your eyes inside the headset so FOVE knows where your eyes are looking in virtual reality.

II. LITERATURE SURVEY

- 1) *A Review Paper on Oculus Rift*- The Oculus Rift is a light weight headset that allows a user to step into the game and look in any direction. It is currently present in developer kit versions. Two-developer kit versions are released DK1 and DK2. The DK2 is much more advanced version of the oculus rift as compared to DK1. Oculus Rift not only provides immersions of visions but also provides sound and tactile feedback.
- 2) *Augmented Reality Technologies*: Augmented Reality (AR) technologies is used to enhance our perception and help us to better see, hear and feel our environments in new ways. It describes work performed at many different sites and explains the issues encountered when building AR systems. A basic design decision in building an AR system is the method to accomplish the combining of real and virtual world. AR supplements the real world with virtual objects that appear to coexist in the same space as the real world.
- 3) *Instructional Screencast: A Research Conceptual Framework* : Multimedia technology usage in teaching makes learning process more fun as well as it facilitates understanding of a content more effectively. One of the multimedia based instructional media is screencast. Screencast is a digital video that displays a part or the entire capture of the computer screen, where the voice may be included to describe the activity on the screen. The use of screencast as instructional media in the teaching and learning process is important, especially in learning the use of a software application.

III. GOALS OR OBJECTIVES

- To screen cast the pc/laptops display on the mobile device.
- To create shooter games, which will develop a total virtual reality and baffle the user with its real time work.
- To control the mouse pointer of the laptop with mobile gyroscope

IV. SYSTEM DESIGN

A. *Flow – Chart*: A flow-chart representing on how the things will work from different users point of view

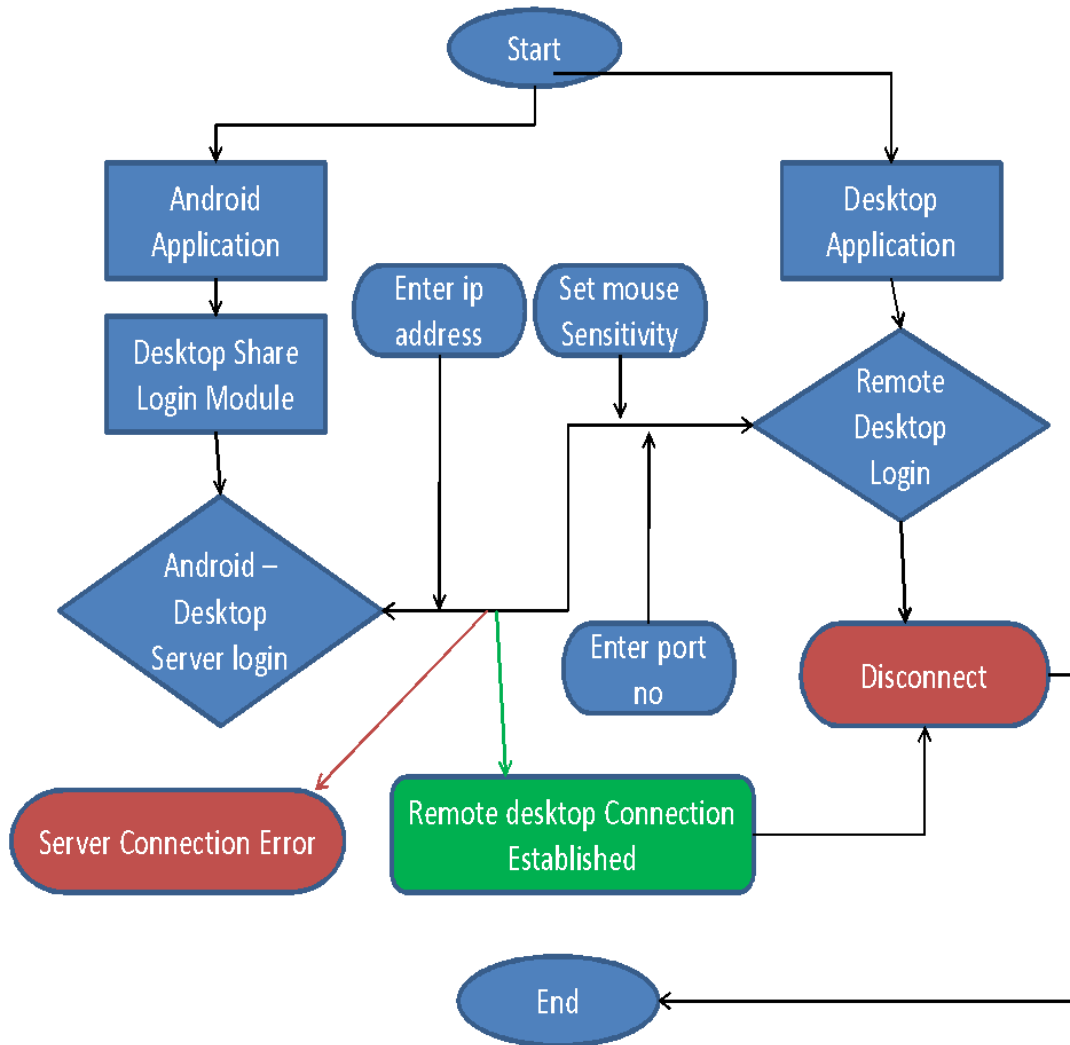


Fig. 1, Flow- Chart of System

B. *Use-Case Diagram*: A use case diagram is representing of different users’ interaction with the system. A use case diagram identifying the different types of users of a system and the different use cases and are accompanied by other types of diagrams as well.

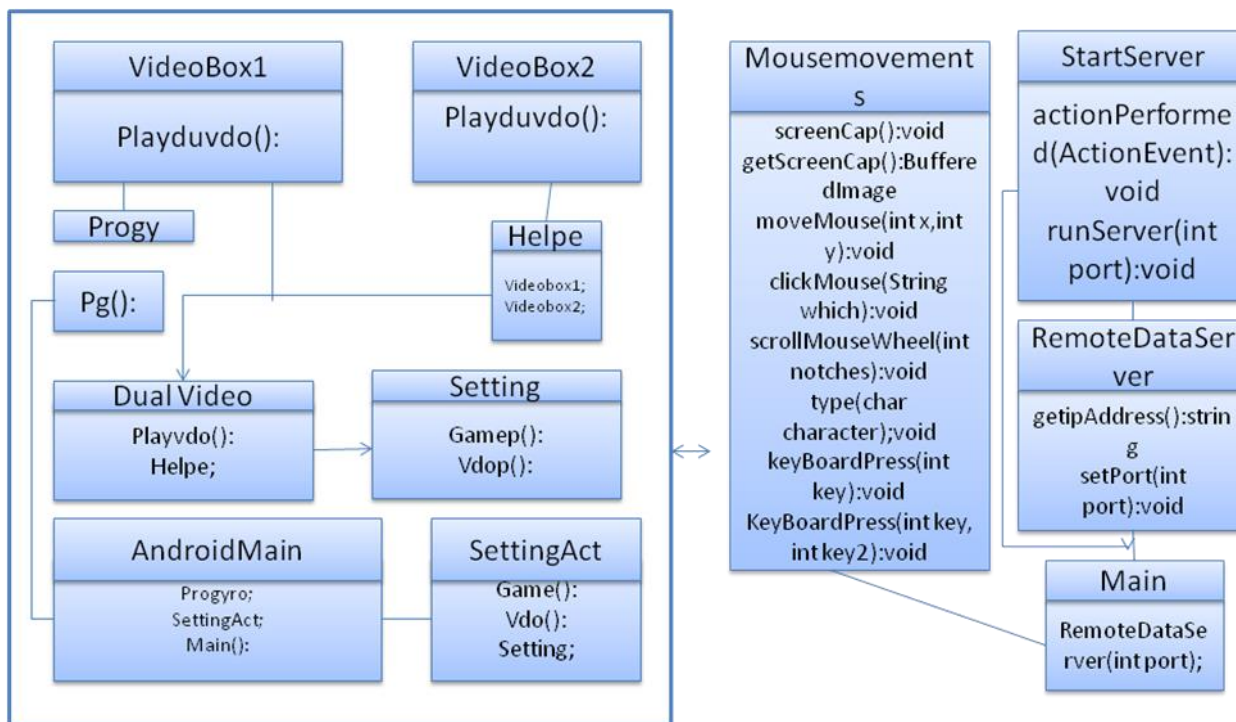


Fig. 2, Class Diagram of System

V. CONCLUSIONS

The Survey helps in building the system for Virtual Reality. It focuses on the providing the users with a virtual environment. With this study, we have proposed efficient *Virtual Reality Box working*. With this proposed system the movement of the person wearing the VR box will be able to control the mouse pointer. In VR studios and any modern first person shooter games this will develop a total virtual reality. Thus the proposed system will enable the users to experience things in a new way.

References

- [1]. “Virtual reality (VR)” Encyclopedia Britannica. 2009. Encyclopedia Online. 11 Dec.2009
- [2]. Strickland Jonathan “How Virtual Reality Works.” howstuffworks.com .N.p.,n.d. Web.9 Dec. 2009. <<http://electronics.howstuffworks.com/gadgets/other-gadgets/virtual-reality8.html#>>
- [3]. “Exorex the Video Game by Virtuality.” Arcade history. N.p.,n.d. Web.9 Dec. 2009. <<http://www.arcade-history.com/?n=exorex&page=detail&id=12496>>
- [4]. “Dactyl Nightmare SP, the Video Game by Virtuality.” Arcade history. N.p.,n.d. Web.9 Dec. 2009. <<http://www.arcade-history.com/?n=dactyl-nightmare-sp&page=detail&id=12495>>