

# Augmented Reality using Paper Toy

Saurabh Maurya<sup>1</sup> Aditya Prakash<sup>2</sup> Sanskar Dubey<sup>3</sup>

<sup>1,2,3</sup>Department of Computer Science & Engineering

<sup>1,2,3</sup>IMS engineering College, Ghaziabad, U.P, India

**Abstract**— Augmented reality applications annotate real world with computer generated graphics. They make the surrounding environment interactive by overlaying digital 3D models or some plain text information over and around the tangible object. The research on Augmented Reality technology is one of the most important directions in current information technology field, these two technologies have been applied in various fields, such as education, medical treatment, construction, military affairs, entertainment, and the research on technical level is improving at the same time, while the research on evaluation of these two technologies and putting forward optimization program based on the user experience is quite unusual. In augmented reality we had clear the concepts to the students in a real like environment through 3D visual of object on screen that may be used to clarify or enhance understanding of a concept. We will convert 2D image into 3D environment through augmented reality.

**Key words:** Paper Toy, Augmented Reality

## I. INTRODUCTION

Should be more elaborated Augmented reality is a technology through which a user's real time view is enhanced by superimposing computer generated graphics on the viewing screen in real time. In marker based augmented reality, contextual digital information and animations are tied to an augmented reality marker in the real world. When the application receives digital information from a known marker, it begins to execute the marker's underlying connected functionalities and generates the respective 3D models. Augmented reality is an emerging technology and has found applications in various fields such as medical, defence, tourism and most recently in human safety. To develop the app that scan the 2D images scanned by camera that connects with appropriate 3D object after image recognition. It will provide good understanding of that concept by the dynamic environment. Professionals and researchers have striven to apply AR to classroom-based learning within subjects like chemistry, mathematics, biology, physics, astronomy, and other education or higher, and to adopt it into augmented books and student guides.

### A. Issues Statement

The validity and reliability of the results and reports produced by the systems are a major concern for the users. Perhaps, before the system is released to the market, the graphology professional body should ensure that the quality of the system has met the graphology standards.

### B. Method

In this we will we using Unity3D which will we used for making the 3D images and add that image on image.

A Vuforia SDK-based on AR application uses the display of the mobile device as augmented world where the real and virtual worlds appear to coexist. The application uses the live camera images on the display to represent a view of the real world. Virtual 3D objects are then superimposed on

the live camera image and they appear to be in the real world or display of device.

### C. Features

By integrating augmented reality into lectures, can expect that students will stay more focused and attentive on the topic.

Students can able to access models from their own devices via android application. And even teacher can create the 3-D Models of their own subjects. This will help the students to gain more knowledge and understanding of the concepts they are studying.

Student can able to access 3D model from their own mobile device this will be portable study material.

With a simple scan, students can access augmented models representing anything from a part of the wild life forest animals or the Fruit or the vegetable that can directly view 3D model of it from the android application.

## II. CHALLENGES & LIMITATIONS

The effective deployment of emerging technologies such as AR is still a challenge, because it requires the overcoming of various barriers. The first relates to physical and technological issues, dealing with the gap between the process of development proposed in software engineering for interactive applications and how these projects are being developed. The second relates to sociocultural issues. The last barrier is related to pedagogical and management issues. Although one of the areas most cited for the potential use of emerging technologies is education, very few projects are in fact implemented in schools to support learning in an effective way.

### A. Physical & Technological Issues

Educational applications supported by computers are usually developed by computer experts consulting with education professionals. In many cases, the applications are much more influenced by the computer specialists than by the education professionals this is the traditional use of technology in education.

The evolution of AR environment development tools in the last decade has been considerable; today there is a range of solutions available. Nevertheless, these solutions still require a high technical knowledge and/or considerable time to generate content, which makes it a challenge to create AR educational environment and to generate content in an easy and effective way.

### B. Sociocultural Issues

Sociocultural issues have also been an obstacle to the use of new technologies such as AR. The first obstacle is training teachers in the use of this technology. In this context, the teacher must be a student using AR. Maintaining the awareness of the use of these tools becomes essential in order to stay focused on one's purpose; otherwise there is a movement of some teachers to the use of technologies, as stated by. It is also necessary to promote technology usage

that is safe, healthy and responsible, that is, it is necessary to pay attention so that students do not become dependent on technology in the classroom, hampering their learning. In the Brazilian socioeconomic environment, equal access to technology should be considered. It is therefore necessary to ensure that everyone in the classroom has the same rights, and if there are extra activities, it must be ensured that everyone has equal access to educational tools.

### III. CONCLUSIONS

This research paper primary objective is to enhance the current education system by introducing concept of augmented reality through smart phones.

With this technology, students and teachers both will get benefited. Moreover, teacher can create their subject topics augmented 3D Models and smartly explain to their students. Even, students can better understand the topics explained with the help augmented Reality 3D Models.

AR books provide deeper understanding of complex content. It also help make process of learning brighter and engaging. Since the past three decades, Augmented Reality is emerging as one of the most powerful technologies in the field capability of superimposition it has been contributing to entertainment, education, medical, etc.

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