Application for 3D Interface using Augmented Reality

Shwetambari Kharabe, C. Nalini , R. Velvizhi

Abstract: *Augmented reality (AR) has been used in the last years as a weapon for enhancing co-operation between the real world and virtual environments. The goal of this work is to develop an android application which will raise the value of tourist on-site experience in an innovative way via AR technology. This survey will especially focuses on museum tourism. Museum consisting of distinct sections faces difficulties of tourist management. If guides are not accessible this application can take place of human guide. In historical section of museum, one can scan the 2D image of object and can gain its 3D view along with its information. In music section, tourist can scan the image of singer and application will play famous melodies related to that singer. This data will be stored on the Cloud. This application is done by using well known technologies such as Unity 3D and Vuforia. Usage of such tools and technologies gives great opportunity to convert imagination into reality.*

Keywords: Augmented Reality, Augmented Reality based 3D display, Augmented Reality based Music Player, Cloud Computing.

I. INTRODUCTION

Extended reality (AR) is a live quick or roaming point of view on a physical, authentic condition whose reasonable depiction are developed (or upgraded) by PC created material data, for instance, sound, video, PC structures workmanship or GPS data. [1],[3],[5]

Expanded reality applications are written in indisputable 3D programs that help the originator to join movement or significant automated information in the PC structure to an extended world "marker" as a general rule. Exactly when a figuring contraption's AR application or program module gets mechanized information from a known marker, it begins to execute the marker's code and layer the correct picture or pictures.

II. PROPOSED SYSTEM
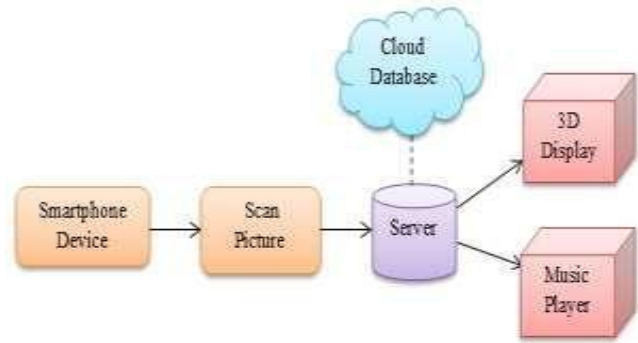
In proposed system, we have used predefined markers for recognition. As shown in above Fig.1. User scans marker image through his/her Smartphone device. System will scan the marker and process to system server. All data is stored in cloud database. System server checks cloud data for corresponding visuals and displays the 3D view of available information. If user scans the marker and if its related music is available then system will start music player and play the music. If no information is available in database then system will generate error "No information is available".

III. RESULTS

In proposed system, we have used predefined markers for recognition. As shown in above Fig.1. User scans marker image through his/her Smartphone device. System will scan the marker and process to system server. All data is stored in cloud database. System server checks cloud data for corresponding visuals and displays the 3D view of available information [6]. If user scans the marker and if its related music is available then system will start music player and play the music. If no information is available in database then system will generate error "No information is available".

We proposed a novel framework for museum tourism which makes use of Smartphone to recognize image markers. System consist of local cloud instead of global cloud database. Because it is cost efficient and convenient for small scale user. [2],[4],[6]

Through the login page user will connect to local cloud server by providing appropriate username and password. Before this user have to register. User information will be stored on local cloud database. [8],[10] ,[12]

System provides multiple languages, which includes English as well as regional language i.e., Marathi. User can select language as per their convenience. [19],[21], [20],

After selecting the language AR camera will start. User have to scan the image markers then four toggle buttons will appear on screen which provides different choices such as information, audio, 3D model, video

IV. FUTURE WORK

This framework gives an easy to understand interface which would intuitively get data. As future work, expanding the picture acknowledgment precision rate and lift the all out speed of procedure is the primary activity, with the goal that the preparing time required will be less. Adding highlight to output pictures other than predefined pictures will ease client to recover data. We will give progressively intuitive offices of data recovery and let clients feel advantageous. [13], [15] ,[17]

V. CONCLUSION

In this paper we have clarified a framework for the client will most likely view articles present in gallery in 3D see and can listen music of prevalent vocalists. Enlarged Reality (AR), a developing Human-Computer Interaction innovation, which plans to blend or cover PC created 2D or 3D virtual articles and other input with true scenes. This new methodology offers client to learn things by envisioning in genuine world. This framework gives easy to understand interface which is based on cloud engineering. [14],[16], [18]

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