SURVEY ON SHOPPING APPLICATION USING AUGMENTED REALITY

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Abstract: This paper presents the results of a survey of a shopping application using augmented reality. One of the most important things is that Internet shopping is getting progressively famous as it refines the shopping to the comfort of the homes rather than spending money on fuel and driving to a shop. The greater usage of smart phones and tablets increased the amount of time consumers spend online. E-shopping can be taken to the following stage with comfort and development with the assistance of Augmented Reality in this quick moving world.Augmented reality is a technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view. Increased the truth is an innovation that superimposes a PC created picture on a client's perspective of this present reality, subsequently giving a composite perspective. These types of applications empower the clients to buy effortlessly and full in-store experience. It utilizes the Content Based Image Retrieval method look the caught picture of an item and recovers its points of interest from the database.

I. INTRODUCTION

Augmented Reality is a procedure that empowers clients to collaborate with their physical surroundings through the overlay of advanced data. While being investigated for a considerable length of time, all the more as of late, Augmented Reality moved out of the examination labs and into the field. While the majority of the applications are utilized sporadically and for one specific errand just, present and future situations will give a nonstop and multi-reason client experience. Consequently, in this paper, we exhibit the idea of Pervasive Augmented Reality, intending to give such an ordeal by detecting the client's present setting and adjusting the AR framework in view of the evolving necessities and requirements. We present taxonomy for Pervasive Augmented Reality and context-aware Augmented Reality, which classifies context sources and context targets relevant for implementing such a context-aware, continuous Augmented Reality experience. We further summarize existing approaches that contribute towards Pervasive Augmented Reality. Based our taxonomy and survey, we identify challenges for future research directions in Pervasive Augmented Reality [1]

II. RELATED WORK

Object identification is one of the popular concerns in the field of robotics and mobile computing. This paper mainly focuses on the feasibility of displaying common and readily available feature tracking algorithms which can serve the object identification capability without having fiducial markers.

- Object detection - Detecting the existence of an object.
- Object recognition - Recognizing the object as one out of a cluster of objects having similarities.
- Object identification - Determining the exact object

Object detection is the process of detecting key-points on the image. In object extraction a descriptor is computed for each key point. The main duty of object identification is to find point correspondence between two images [2].

IntelligShop is novel location-based augmented reality application which supports intelligent shopping experience in malls. Technically, this application addresses two challenging data mining problems. I.e. Robust feature learning to support heterogeneous smartphones in localization and learning to query for automatically gathering the retailer content from the Web for augmented reality. This system uses Wi-Fi signals instead of GPS to do the localization. The recognition is achieved by the location and the orientation information sensed by the Smartphone. One of the main features of IntelligShop is that it is the first indoor location-based augmented reality. It integrates heterogeneous-device wireless localization and automatic online content crawling for intelligent shopping. [3].

A Fully Functional Shopping Mall application is made for quicker and easier ways to do shopping. Some of the difficulties that people face is when they do shopping include having to travel a long distance without knowing the availability of the items, difficulty in finding relevant shops inside a shopping mall. In order to overcome such problems a fully functional shopping application is proposed. It contain details about all the shops inside a mall, available items, customer with list and a map. It uses a mobile application developed using android and server side module. Bluetooth is used to identify the vertical and horizontal position of the customer. [4]

Vision-Based Location Positioning System is mainly applicable in Indoor Navigation which uses Augmented Reality. Location is identified by using prior knowledge about the layout of the indoor environment. This system employs the augmented reality technique to provide location information to persons unaware with the layout of an indoor environment. The system has several features such as economical solution and inferior performance. Economical solution means the marker that identifies each location is a simply printed on paper, and the mobile PC and camera are general devices that can be implemented in software. [5]
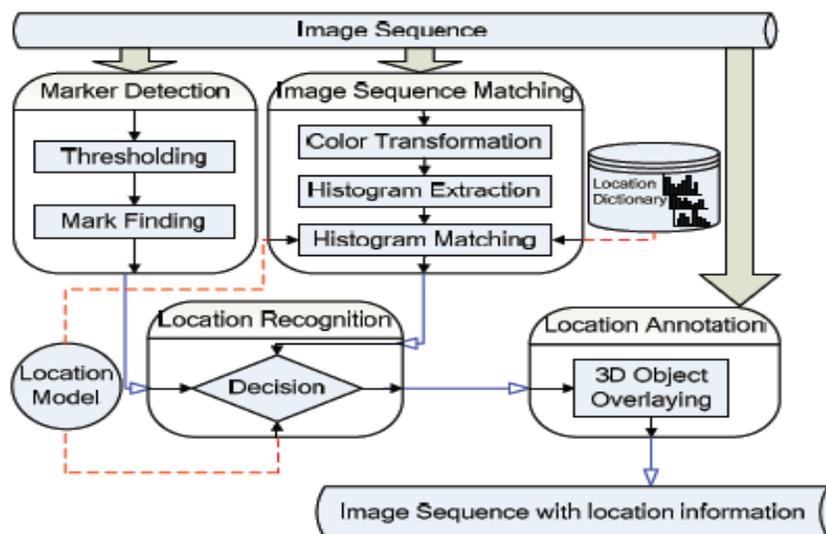
Fig.1 process diagram of the Vision-Based Location Positioning System [5]

EYEPLY is a baseball proof concept which uses mobile augmentation for entertainment and shopping venues. It is the only application with a multi-faceted revenue model that uses contemporary technologies. This application platform applies existing third-party data, introduces new social activities and marketing. EYEPLY is only available for smart phone devices that have GPS, interactive color screen, video playback. The three viewing modes of this application are MAR, point based and map viewing modes. [6]

EyeBuy is a system mainly used in tablets that enriched by augmented reality which aid consumers with reduced visual acuity during shopping at a super market. This was developed in Android operational system mainly because of its open-source characteristics and wide range customers in the market. It provides independence in the process of choosing and acquiring relevant information about the available product options arranged on shelves for people. When the users' starts launching the application, the system will start environment identification stage, in which it searches for, through each frame captured by device's camera, objects matching with those described in its previously supplied database. [7]

Pseudo Eye is the next generation shopping application using augmented reality. It can runs on different platforms like Android and Windows Phone. The user can have in-store experience through the augmented reality. This system uses content-based image retrieval (CBIR) technology. This application captures image or a real product that has to be purchased by the user. [8]

CONCLUSION

From this paper we can conclude that Augmented reality is another step further into the digital age as we will soon see our environments change dynamically either through a smartphone, glasses, car windshields and even windows in the near future to display enhanced content and media right in front of us. This has amazing applications that can very well allow us to live our lives more productively, more safely, and more informatively.

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