Intelli I Detector

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Abstract- *In today's fast emerging world, shopping has become a vital part of human life because of urbanization and rapid increase in standard of living. Thus Shopping has become a craze of today's generation. In order to meet the rapidly increasing demands of the people, we come across various digital solutions which assist the people in their shopping as an assistant. And one of the best solution to it is an Intelligent Shop detector which is based on the augmented reality, the emerging technology in the 21st century. Intelli I Detector provides augmented reality interface wherein people can simply use ubiquitous smart phones to face mall retailers, then Intelli I Detector will automatically recognize the retailers and fetch their online reviews from various sources (including blogs, forums and publicly accessible social media) to display on the phones. Technically, Intelli I Detector addresses two challenging data mining problems, including 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 Intelli I Detector is an cloud based application which provides multilingual interface to seek different requirements regarding the shopping.*

Keywords- 1.Intelli I Detector.
2. location-based augmented reality.
3.Client/server application.
4.Distributed databases.
5.Android.
6.ICT(Information and Communication Technology)

I. INTRODUCTION

Shopping is an important part of our daily life and today's vibrant economy. According to the Year 2013 Singapore government report among receipts totaling S$23.5 billion, 29% of them (~S$6.85 billion) are for shopping, food & beverage. With the proliferation of smart-phones and ubiquitous supporting of 3G/4G/LTE networks, we have the opportunity to enhance the shopping experience through mobile technology. In this paper, we demonstrate Intelli I Detector, a novel location-basedaugmented reality application, for intelligent shopping in mall.The key functionality of Intelli I Detector, is toprovide an augmented reality interface – people can simply use ubiquitous smartphones to face the retailers (e.g., PastaMania and Starbucks), then Intelli I Detector will automatically recognize the retailers (i.e. it is PastaMania or Starbucks) and bring their online reviews from various sources (including blogs, forums and publicly accessible social media) to display on the phones. It is worth noting that, Intelli I Detector provides seamless location-based augmented reality, which makes the review obtaining process much easier – the user now does not need to type the retailer name or browse through some retailer catalogue; instead she just simply raises the phone camera against the retailer for immediately getting its reviews displayed at the right location. Technically, the retailer recognition is achieved by the location and the orientation information sensed by the phone, as well as the mall's floor plan. Wehigh light that, as we are dealing with the indoor environment, we use the WiFi signals instead of GPS to do the localization. Using WiFi signals for localization is popular, because unlike other localization technologies such as iBeacon3 or image recognition [1], it is inexpensive and can leverage existing infrastructure without new hardware. II.

II. NOVELTY OF INTELLIGSHOP

To the best of our knowledge, Intelli I Detector is the first indoor location-based augmented reality application that integrates heterogeneous-device wireless localization and automatic online content crawling for intelligent shopping. Intelli I Detector is different from other notable location-based augmented reality applications in the market.

For example,

Monocle4 is a feature provided by Yelp.com's mobile app; it allows user to view the nearby businesses by using the camera on the phone and pointing it at the surroundings. However, Monocle only supports outdoor (by GPS) augmented reality, and its content is solely from Yelp's reviews. Similarly, for location-based augmented reality, Junaio5 also focuses on the outdoor scenario, and its content mainly comes from either user contribution or Google map. It is worth noting that, GPS does not work indoor; hence, Intelli I Detector is clearly different from Yelp's Monocle and Junaioin supporting indoor location-based augmented reality. There is few location-based augmented reality system that can support indoor use.

III. PROJECT IDEA

As said by Wayne Dyer If you change the way you look at things, the things you look at change. Augmented reality, when graphics or the normal computer displays are brought into the real world which gives an illusion of its existence to the environment, such technology is known as augmented reality (AR). Don't you think; it sounds exciting that AR just not add graphics, sounds and haptic feedback but also sense and smell to that Virtual reality world. Today augmented reality has spread its wings not just into gaming but also into our day to day life. From retail business to health sector. Augmented reality shown its capabilities and showcased its future scopes to all of us. In the retail sector, where it can change the whole shopping experience and will definitely bridge the gap between the online and physical store. Whereas, in health sector nothing more fascinating than understanding a human body or for that matter any physical body ina 3D aspect rather than a 2D image or graphics.

IV. MODULES

1. User Login
2. Admin Login
3. Video Processor and Analyzer
4. Providing result as rating and review of shops.

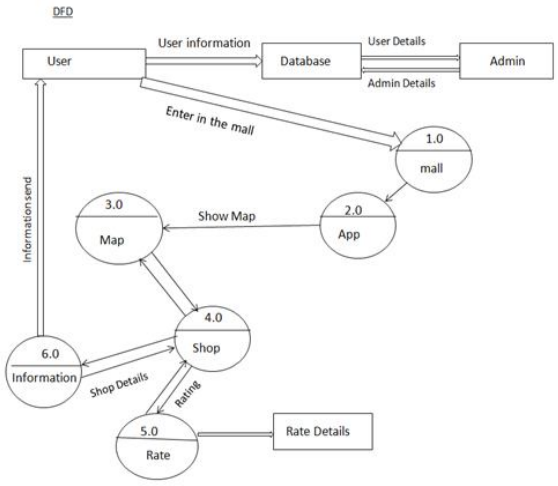


Fig. Data flow diagram

V. LITERATURE SURVEY

Topic: An interactive augmented reality imaging system for minimally invasive orthopaedic surgery

Description: In orthopaedic surgery, it is important for physicians to completely understand the three-dimensional bone structure for several procedures. To achieve this goal, it is required to image the patient several times XI using C-arm scanner from different positions during the surgery. This procedure is time consuming and increase the x-ray dose given to both patient and physician. In this paper, we propose an augmented reality imaging system for minimally invasive orthopaedic surgery. The system is based on mapping the x-ray image to the real object such that the number of x-ray shots during the surgery can be significantly reduced. We consider two imaging scenarios that can fit with different cases. Results obtained through clinical data indicate that the proposed approach has a potential usefulness in real applications.

2. Topic: User Friendly Calibration for Tracking of Optical Stereo See-Through Head Worn Displays for Augmented Reality

Description: In recent time devices like Google Glass and Oculus Rift gained a lot of public attention. So the field of Virtual and Augmented Reality has become a more and more attractive field of study. Optical Stereo See-Through Head Worn Displays (OST-HWD or OST-HMD) can be used for Augmented Reality, but have to be calibrated. This means, that one has to find a configuration that aligns the image shown on the displays with the environment, which is observed by the built-in camera. If this is not done, the augmented virtual image would not align with the real world. In this paper, the process of this calibration approach is divided into two stages, hardware and user calibration, but with less constraints for the positions of the cameras, which makes it easier to use. We aim at a more user friendly suite for the calibration of OST-HWD devices. Therefore both of therefore mentioned stages are combined in a new quick step-by-step installation wizard, which is written in HTML and JavaScript to ensure easy usability. We apply a new minimization model in order to simplify and make robust the calculations of the virtual plane. In addition to that the required hardware components, including camera and calibration rig, were simplified. The implemented software has been evaluated for its results of the computed virtual plane, intrinsic data and eye positions of the user. Finally a user study was conducted to rate the usability of the calibration process.

3. Topic: Augmented reality assisted localization for indoor navigation on embedded computing platform

Description: This paper presents an alternative navigation tool that can be used in indoor environment. This is due to restrictions on GPS signals that cannot be detected in indoor locations. The work presented here shows the development of an interactive indoor localization system that uses live input video capture and can identify location markers to indicate its

current location. In addition, augmented reality is also used to superimpose augmented reality objects above the location markers to indicate the direction to be taken by the user, which assists the user in navigating to the chosen destination. The developed system was implemented on a Raspberry Pi, an embedded computing platform, with a USB camera and display glasses for the live video capture and display devices respectively. It was tested in UniversitiTeknologi PETRONAS' Information Resource Center, across multiple locations and different floors of the center

4. **Topic:**Developing a GeoPackage mobile app to support held operations in agriculture

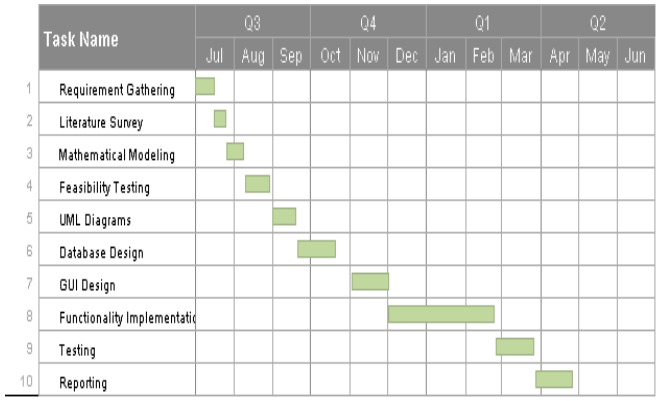
Description: GeoPackage, an open format for geospatial information, provides a gateway to bridge agricultural geographic information and mobile devices such as smartphones and tablets. In this paper, we present a Cordova framework based GeoPackage mobile application to support held operations in agriculture. By implementing GeoPackage SDK on mobile application, GeoPackageles can be easily accessed, managed, and visualized in held operation. Based on Cordova framework's powerful extensibility, the application can be run on multiple mobile platforms such as iOS, Android, and Windows Phone to meet requirement of clients using different types of mobile operating system.

ADVANTAGES:

1. Ease of access
2. Localization efficiency can be improved in the updated versions.
3. Multiple languages Support
4. Provides the customer reviews.

Project plan;

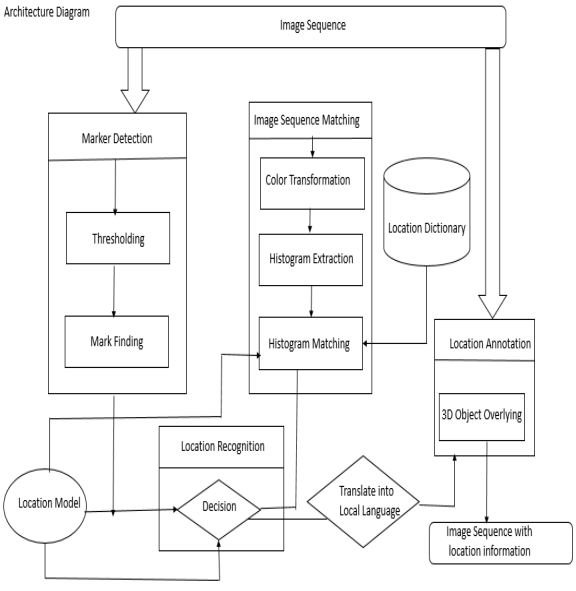
- Requirement Specification
- Literal survey
- Technology familiarization
- Start design
- Working on the application
- Preparing documentation



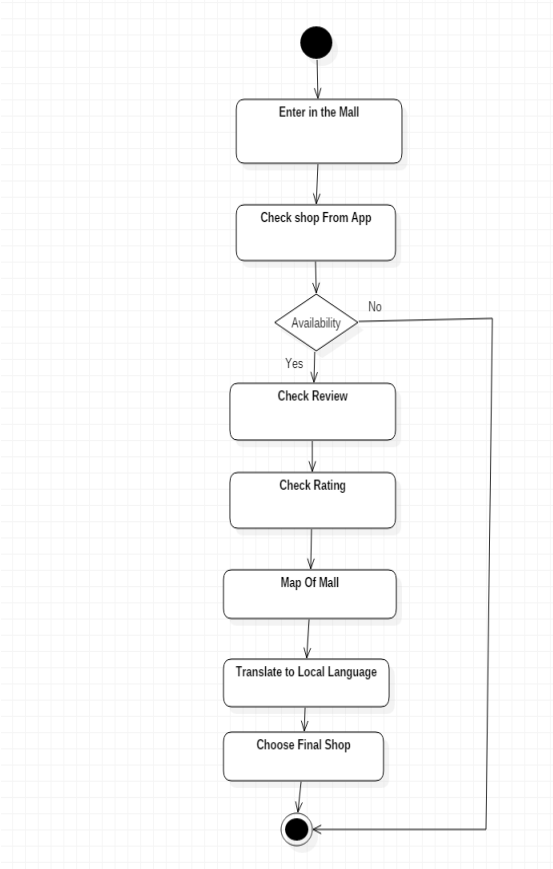
OBJECTIVE:

The presented Intelli I Detector, a novel location-based augmented reality application for intelligent shopping in malls. Intelli I Detector allows people to use ubiquitous smart phones to get the reviews of interested retailers by augmented reality. Technically, Intelli I Detector is a successful application upon solving two challenging data mining problems: 1) robust feature learning in the cold-start heterogeneous device localization task; 2) learning to query in the cold start retailer content gathering task. We demonstrate the effectiveness of Intelli I Detector in a test bed established in a real mall of Singapore. In the future, we consider to leverage heterogeneous inertial sensors on the phones [1] to reduce the site surveying effort in a large-scale deployment. Besides, we are also interested in designing more compact display for the online information.

SYSTEM ARCHITECTURE:



ACTIVITY DIAGRAM:



VI. CONCLUSION

We presented Intelli I Detector, a location-based augmented reality application for intelligent shopping in malls. Intelli I Detector allows people to use ubiquitous smartphones to get the reviews of interested retailers by augmented reality.

We demonstrate the effectiveness of Intelli I Detector in a test bed established in a real mall of Singapore. In the future, we consider to leverage heterogeneous inertial sensors on the phones to reduce the site surveying effort in a large-scale deployment.

VII. FUTURE SCOPE

In future, this smart system can be used to explore other inter-disciplinary domains such as Machine Learning.

It can be implemented in other applications such as Intelligent Car Problem detector.

The future of augmented reality seems really bright and progressive. Like other different evolving technology, AR also faces some obstacles regarding technical issues, to social, ethical, financial problem.

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