

# Smart Visitor Assistant Management System

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**Abstract**— Smart visitor assistant management system is designed to provide a mapping of internal structure of any area which is commonly used by unknown visitors. The application is able to show the shortest distance to desired location entered by the visitors. The ability to detect the location is provided on the smartphone while direction is estimated based on the scanners which are provided to show the correct directions as well as the system will track the visitors

**Keywords:- Track, Mapping, Shortest Distance, Scanner.**

## I. INTRODUCTION

VAMS provides an easy method for fresh visitors ,new students, staff in college campus as well as easy for front desk officer to search the ongoing visitor of the day. They will be timely notified of the current visitor visiting their department. Searching method is faster and the system will give output that user needs.

If unknown person don't know the way, how to reach to destination. Then this system explain you how to reach to destination, the main purpose of this system is to avoid complexity when new visitor enters into the any Structure and find the path A university campus is a

particularly suitable scenario for this type of analysis because it represents, on a small scale, a cross-section of the urban fabric of the city.

In particular, thanks to the information collected and shared by heterogeneous sensors, it is possible to improve the services provided to students, teaching and administrative staff, while also making them more efficient. Moreover, a campus can be regarded as a social ecosystem in which different entities coexist and interact with each other, thanks to social tools allowing users to share information.

By means of innovative intelligent data analysis algorithms, the intelligent system will be able to elaborate an action plan by enabling specific actuators to set the environment to the desired state, satisfying both global constraints as well as any preferences expressed by the user[3].Following this approach, energy consumption issue can be addressed using a set of sensors and actuators allowing to monitor and change the state of the environment, for example, by switching off the lights of a particular campus area when no students or technical staff are detected at some time

## II. PROBLEM STATEMENT

Currently, most organization is using the manual method in keeping track of all the incoming and out going visitors records in each of the department.. The main purpose of this system is to avoid complexity when new visitor enters into Any Structure and find the path.

### III. LITERATURE SURVEY

Liang Chee Liang, Noor Azhar Shamsudin have propped a smart orientation Guide that is designed to provide freshmen a mapping of directional guide for commonly used building within a university compound. The application is able to calculate the distance between two location and displays the estimated arrival time for the user. The ability to detect the location is based on the GPS functionality provided on the smartphone while time is estimated based on the distance of route as well as the mode of transortation.smart orientation.

M.N.Noorhuzaimi S.Junaida;A Norzaiah;K Heui chen have discussed about the Electronic visitor information system (E-VIMS) has been developed to replace traditional visitor registration and visitor information management activites.E-VIMS able to record visitor information during visitor registration by using visitorpsilas Malaysia government multipropose card(myKad).The concepts underlying in E-VIMS are myKad,smart card,personal computer/smart card(PC/SC) and data management.This application enables capturing new visting record by auto-clock in/out,and assignment of visitor pass.visitorinformation are recorded in a centerlized database server,which provides data management and manipulation through searching and report generating.

Vincenzo Agate,Fedrico Concone,Pierluca Ferraro have proposed about a technology that is consistently gaining significant interest in diverse areas of the tourism industry,particularly in many areas,they are associated with history,knowledge or learning and experience sharing(Morabito,2014) build environment such as historical homes,castles and museums are among the most important forms of heritage which comprise of past history.the country as promsing tourist destination has a considerable number of museums.the chapter concludes that the replication of AR technology application is a possibilty in Bangladesh requiring three initial facts namely (1) lack of experts with relevant expertise (2) display space capacity enhancement and (3) interest creation within the visitor.

TABLE 1  
SUMMARY OF LITERATURE SURVEY

Sr.no	Paper Title	Author	Remarks
1.	Getting places on time: Smart Map Orientation Time	Liang Chee Liang, Noor Azhar Shamsudin	Smart Map,Tracking GPS, navigation
2.	E-Visitor information management System(E-VIMS) using myKad	M.N.Noorhuzaimi S.Junaida;A Norzaiah;K Heui chen	MyKad
3.	WiP:Smart Services for an Augmented Campus	Vincenzo Agate,Fedrico Concone,Pierluca Ferraro	Using the technology 3G,4G,Wi-Fi

### IV. OBJECTIVE AND SCOPE

The Smart Orientation Guide application is to substitute the use of paper map on complex areas. It will certainly help users like new visitors or new staff to find places on the particular areas within a short period of time

### V. SYSTEM ARCHITECTURE

The system architecture consists of:

#### Hardware Requirements:

1. Raspberry pi 3 b+
2. RFID
3. Scanner

#### Software Requirements:

1. 2GB RAM
2. 500 GB Hard Disk
3. Windows OS

## VI. HARDWARE TO BE USE

We propose an automatic system to provide user with the mapping of internal structure of any area which is commonly used by unknown visitors, which consists of the raspberry pi, scanners, sensors, rfid .

### A. Raspberry pi:

An SD card inserted into the slot on the board acts as the hard drive for the Raspberry Pi. It is powered by USB and the video output can be hooked up to a traditional RCA TV set, a more modern monitor, or even a TV using the HDMI port. This gives you all of the basic abilities of a normal computer. It also has an extremely low power consumption of about 3 watts. To put this power consumption in perspective, you could run over 30 Raspberry Pi's in place of a standard light bulb! figure 3.



Fig.3 Raspberry pi

### B. RFID:

**Radio-frequency identification (RFID)** to automatically identify and track tags attached to objects. An RFID tag consists of a tiny radio transponder; a radio receiver and transmitter. When triggered by an electromagnetic interrogation pulse from a nearby RFID reader device, the tag transmits digital data, usually an identifying inventory number, back to the reader. This number can be used to inventory goods. There are two types. *Passive tags* are powered by energy from the RFID reader's interrogating. *Active tags* are powered by a battery and thus can be read at a greater range from the RFID reader; up to hundreds of meters. Unlike the tag doesn't need to be within the line of sight of the reader, so it may be embedded in the tracked object. RFID is one method of (AIDC)

RFID tags are used in many industries. For example, an RFID tag attached to an automobile during production can be used to track its progress. Since RFID tags can be attached to cash, clothing, and possessions, or implanted in animals and people, the possibility of reading personally-linked information without consent has raised serious privacy concerns.<sup>[2]</sup> These concerns resulted in standard specifications development addressing privacy and security issues. and ISO/IEC 29167 use on-chip methods for untraceability, tag and reader and over-the-air privacy. specifies a data structure for RFID and providing data, source and read method authenticity. This work is done within Tags can also be used in shops to expedite checkout, and to prevent theft by customers and

employees through the assembly line; RFID-tagged pharmaceuticals can be tracked through warehouses; and in livestock and pets enables positive identification of animals.



## VII. ADVANTAGES:

1. Easy data entry.
2. Restricted Entry
3. Enhance security in organization.
4. Digital record of visitors for future use.

## VIII. LIMITATIONS:

1. Mandatory carrying of rfid tag everywhere for visitors.
2. Continuous power and internet supply is required.

## IX. CONCLUSION:

*The smart visitor assistant management system is the application which is able to show the shortest distance to desired location entered by the visitors. It is designed to provide a mapping of internal structure of any area which is commonly used by the unknown visitors.*

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