

Android Application for Social Awareness System

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Abstract-The proposed system will help us in our day-to-day life everyone facing the issues of cleaning, while road accidents and major problems to lady candidate while travelling. The application provides cleaning and overall awareness in the social field. It will also help in safety among people. The user will send a photo and corresponding actions will be taken. User will use the app in smartphones. Every age group from children to elder is using smartphones and all are connected with each other through social media by android. The system uses location based services and GPS for providing location. Application at the server side android mobile will be used to perform the task of providing help. Application on the client side will be used to capture the image and send it to the server for processing.

Keywords: Android, GPS, LBS, Social Awareness, Mobile app.

I.INTRODUCTION

Usage of mobile phone is increasing rapidly. It is because this is most important tool in every individual's life and it is increasing for every age group from children to old age people. Different kind of mobile phones are available in market and few simple mobiles that are just used for calling and messaging only, but by using Smart phones people life became easier and secure in all sense. Smart phones in today's World are found to be based on different Operating systems (OS). For ex., Nokia's Symbian OS, Apples IOS, RIMs BlackBerry OS, Microsoft's Windows Phone, Google's Android OS, Samsung's Bada Operating System. Android has large number of developer's applications that increasing the functionality of the devices [1]. Android Operating System gives variety of application with user friendly behavior and it is widely used on Cell Phones. Android powers hundreds of millions of mobile devices in more than 190 countries in the world. This is largest installed base of android mobile platform and growing fast-every day another million user's power up their Android devices for the first time and start also for apps, gaming and also for digital content. As every age group from children to old age people are using smart phones and all are connected with each other through social media using android. Some of them are Whats app, Hike, Hangout and so many others. We should take advantage of these in our day-to-day life to solve the problem which we face daily. The problems like:

- "Cleaning of City or Campus or Hospitals which causes diseases."
- "Road Hazards."
- "Riots in City."
- "The proposed system facilities user to help departments for cleaning and also useful for overall awareness in social field."
- "Helpful for municipality corporation"

- “Useful for animal and forest safety.”
- “Women safety”

There is one of the big issues of cleaning in society which not only disturbs the environment but also causes diseases. To solve these problems we have introduced the system that is “AndroSocio”. It will be easy to help people by clicking a single photo. So due to that we are using different technologies like android, GPS , Location Based Services, Google Maps and Image sending techniques. We are mainly focusing on Location detection using GPS. The location of the client can be predict by the mobile carrier hence it finds great use during Emergency since it can be used during the emergency/health hazard to locate the mobile clients.

II. LITERATURE SURVEY

A location-based service (LBS) is a mobile application that is dependent on the location of a mobile device, like mobile phone. Verrantasetal defined LBS services as follows:

“Information services accessible with mobile devices through the mobile network and utilizing the ability to make use of the location of the mobile device “Open Geospatial Consortium” defined LBS service similarly: “A wireless-IP service that uses geographic information to serve an android phone user, any application service that exploits the position of a mobile terminal.” A Location Based Service (LBS) is an information and entertainment service, accessible with mobile devices through the mobile network and utilizing the ability to make use of geographical position of the mobile device.[5]

Location Based Services consist of parcel tracking and vehicle tracking services.

LBS have two major actions, that is:

- Obtaining the location of user.
- Utilizing this information for providing services.

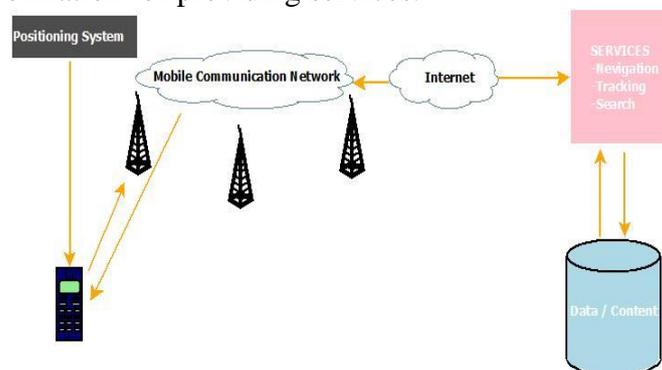


Fig1: LBS components and Service Process

2.1.1 Different Existing Apps

There are few similar apps. But there are also some drawbacks of these apps –

- Some of those apps are limited to particular city.
- Some can't locate the appropriate location.
- Also some of them are unable to work properly in water too.
- This outputs improper area due to wrong location.
- Some are having alarms which will produce sound.
- Some don't have good 'search' function.

III.SYSTEM ARCHITECTURE

3.1 The Purpose of the System

There is a need to aware people about the effects of unhealthy environment. Also there is a need to increase the safety among people. Road accidents are also increased in large amount. It is very necessary to avoid such things.

As existing system supports aforementioned issues, there is a need to develop a mobile app. Main features of the modules which will solve these issues are -

- In cleaning module, we will locate the proper location from where the photo of garbage is sent. According to the module, the captured photo will be sent to the concern Authority to take an action.
- In accident module, the area where the accident is occurred will be found. According to the area, we will send the photo to the nearby police station and if necessary, to the Ambulance. Further actions will be taken by these Authorities.
- In other module, photo of the respective damage is sent to the police station or concern Authority. This module will contain the safety of girls/children, the area wherever any type of damage (like leakage, burns, hunting, riots, etc.)

The proposed system will be advantageous in -

- Helping us to give safety to the people.
- As the assistant tool which will help to clean the environment.
- As it is modular, it becomes easy to use.
- Supporting the emergency departments.
- Connecting the people to the Authorities immediately and getting help in few minutes.

3.2 System flow

System Design includes all the major features in the project that is GUI or front end and the structure of the database or back end. System design is to give a feel of the actual software that is executed.

The system architecture is divided into two main component server and client.

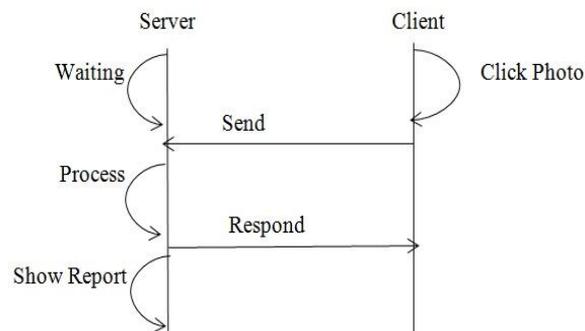


Fig2: System Flow

Client Side

For Client Side User who will use this application, first user will open that application. There are three modules of proposed system like Cleaning, Accident, Other issues like Women Safety, Animal Attack, Municipality related problems. In this case User will take a snap of according to incident and send it to related authority. Example, If it is related to cleaning user will click the snap of garbage and send it to the concern authority. According to that action will take place. User can also able to provide complaint message and location. It's related to Accident then who really wants help that user will take snap and send it to Police and If Accident is big enough then it will also send to the Ambulance. According to that action will take place. User can also able to provide complaint message and location. If any other problems are there then they will be also solved accordingly.

Server Side

For Server Side Location will be check using GPS from where is complaint from and from which domain whether it is from Cleaning, from Accident, from others then it will inform to the authority accordingly. There is one record is maintain at server side will check whether complaint is valid or not. Invalid user Id will get warning and if complaint from that user id will again and again and is more than three times then that user id will be blocked forever. If complaint is valid then Action will take place.

Algorithm for Location Tracking Using GPS [6]:

The Steps of **Localize Intelligence Algorithm** are:-

1. Android Client receives the Signals and Coordinates from the Satellite.
2. Design a Localized Location Engine. The Engine works in twoParts:-
 - a) **The Location Engine:** The location engine works with help of Android Location API. The following steps are performed:-
 - **Get Coordinates:** It will take Coordinates of Android Client received from satellite.
 - **Reverse Geocoding:** The received Coordinates are then converted into geographical place.
 - **Localized Refinement:** Each geographical place is now matched with Localized data (user defined locations). The User defined Locations or pre-specified Locations are stored in Database. The result provides the relevant and refinedLocations.
 - b) **Plotting engine:** This Engine takes the Refined Locations and plotted them on map. The Engine works in coordination with Google map API.

CONCLUSION

The proposed will play the vital role in making the campus clean which further will affect in the safety of students from diseases and accidents. This will affect in making the clean city by reducing the pollution. It will also help in making safety among people. The application is based on location based services and it uses GPS for providing location to the application. By creating a mobile app, it will be easy to use this app by common man also. After doing the survey, we gathered that there is really a big scope in application development in mobile domain. In generalized mode of this app, user can use it in every emergency purpose, also in every security purpose. Application can be developed in iOS (supported by Apple) as Apple is considered as parallel operating system to Android as per the facilities it provides.

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