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Android Based Public Grievances Complaints

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ABSTRACT

Complaint registrations for government bodies i.e.: EB, PWD, etc. are offline. The seriousness of the problem is often not known by offline means. Even reporting some of the difficulties to Government departments have ended up in imagination based the manual letter writing at specific timing. A mechanism to accept complaints from citizens 24 × 7 would be the expectation from both the citizens and the government bodies. With number of people using mobile phones is increasing, it has become a need for users to provide on their mobiles, all facilities one is been utilizing on the internet. The proposed system enables and assists citizens to lodge compliant and seek redressed through their mobile phone. It is based on android UI interface system and it emulates the functionality of the web portal based complaint filing system. This application allows the user to complaint against different departments and they can attach a image as a proof, in case of complaining about a instance on that time period itself will helps the user as to capture image from their application itself and allow to complaint.

Keywords: Android, Global Positioning System (GPS), Mobile internet

INTRODUCTION

Android is a software stack for mobile devices that includes an operating system, middleware and key applications. Android is a software platform and operating system for mobile devices based on the Linux operating system and developed by Google and the Open Handset Alliance. It allows developers to write managed code in a Java-like language that utilizes Google-developed Java libraries, but does not support programs developed in native code. The problem in the existing system is it is not possible to visit the particular office for complaining, and it is not possible to provide proof for complain the particular problem in case of complaints forward threw mail also not sufficient enough as to initiate every department. And there is no possibility to find the fake complaints and take action on them. The proposed system based on android UI interface system emulates the functionality of the web portal based complaint filing system. The users use the mobile phone and do not need to access the web portal interface directly to file their complaint. The user downloads an application onto his mobile phone. The user runs the application on his phone to get a welcome screen. The system allows the user to compose his complaint in 160 characters. In this project the user can take a snap shot of the particular problem i.e.: water leakage, power cable hanging around, tree fall, unsocial activity etc. The application will augment the current position through Global Positioning System(GPS) where the picture is taken. The above augmented picture is sent to the concerned authority. The priority of the complaint would be raised if the numbers of them are considerably more in an area. The map is drawn; here it is colored with red, yellow or green flags respectively ward wise, depending upon the no. of complaints received in an area. Statistical information is maintained such as the no. of complaints received ward wise, no. of them solved, a graph to provide. The pictures are also displayed to the general public on a discussion forum, where they can post their comments. Moreover public can know the status of their complaints. The status will be intimated through the email-id, which the user specify in the complaint page. This application is basically created to help the people to solve the problems which they face in their day-o-day life. It is user friendly application. It takes less time to post their complaints. The main idea is to provide essential, cheap and easy complaint registration redressal system.

RELATED WORKS

Aditi Mhapsekar, Uma Nagarseka, Priyanka Kulkarni andDhananjay R. Kalbande et al have developed an architecture for Voice enabled Android application for vehicular complaint system using GPS and GSM SMS technology. This application uses speech to text functionality to describe the complaint. It obtains the GPS coordinates, appends it at the end of the complaint information and sends the information as an SMS message to an SMS server over the GSM network. The server fetches this information and stores it in the database. The web interface then plots this information on a map.Kim Nee Goh, Yin Ping Ng, Kamaruzaman Jusoff, Yoke Yie Chen and Yoon Yeh Tan have developed an architecture for GPS based road management system. The proposed system obtains GPS coordinates on a cellphone

supporting Assisted GPS. The complaint along with the GPS information is send via an SMS to an SMS server over the GSM network. The data in the SMS is retrieved and stored in a database. This information is then plotted on Google Maps.Umar Farooq, Tanveer ul Haq, Muhammad Amar, Muhammad Usman Asad and Asim Iqbal have proposed a system based on GPS and GSM to improve public transportation management services in Punjab province of Pakistan. Each bus is equipped with an In-BUS Module that sends information about its location and number of passengers to a base station using SMS. The base station uses the information received from all buses to respond to user requests for the location of a particular bus. The BUS Stop module on every bus stop receives information from the base station about the buses arriving at that stop, and displays this information on a dot matrix display.There are existing systems by which the complaints can be registered. Aditi Mhapsekar, developed GSM-SMS complaint system in which a person can send the complaint to a response number as SMS. It may cost the person as per their network transaction charges. There are other conventional means like making a direct call to that particular department and there are web portals for some government departments which can be accessed through internet connection through which users can register and login to fill in their complaint. GPRS play an important role for transmitting data at a favorable price from residential buildings to central billing centers and providing extra services for the user. This cellular network consists of cells, which are formed by many low power wireless transmitters. With the moment of mobile devices having cellular modem, transmission of data is also exchanged between cells to cell, which facilitates non interrupted data flow. This way it forms a point to point architecture. This technology offers extensive data coverage, no maintains costs and network fully maintained by carrier.

EXPERIMENTS AND RESULTS

Implementation is the stage of the project when the theoretical design is turned out into a working system. Thus it can be considered to be the most critical stage in achieving a successful new system and in giving the user, confidence that the new system will work and be effective. The implementation stage involves careful planning, investigation of the existing system and it's constraints on implementation, designing of methods to achieve changeover and evaluation of changeover methods.

ANDROID

Android is a software stack for mobile devices that includes an operating system, middleware and key applications.[4] Android is a software platform and operating system for mobile devices based on the Linux operating system and developed by Google and the Open Handset Alliance. It allows developers to write managed code in a Java-like language that utilizes Google-developed Java libraries, but does not support programs developed in native code.

A. User's complaint registration: User has the responsible to register before login inside the app, the user has to register with his Username, password, date of birth and hid national ID number, all these data has been stored to backend service of android SQLite. This SQLite favors to store data in encrypted format. The fields left in this registration modules, should satisfies validation, registered user cannot register again because the user name should be unique.

Figure.1.Complaint Type Selection

B. Capturing the image: The user can take a snap shot of the particular problem i.e.: water leakage, power cable hanging around, tree fall, unsocial activity etc. The image is loaded automatically into the application when user uploads.Capturing the current situation is not must, if user has any other sort of problem which cannot be captured, the user can upload the

complaint without the picture, but any how the location will be updated without any blank space. Such a null validation will be removed from the data storage space.

C. Location tracking: The location will be tracked using location manager GPS will be in ready status when the app is opened once the picture has been captured the Location fields will be auto filled in LATITUDE LOGITUDE format manual entry has been restricted, Receiving notifications from the Location Manager when the location has changed.The application will augment the current position through Global Positioning System (GPS) where the picture is taken. The above augmented picture is sent to the concerned authority. The priority of the complaint would be raised if the numbers of them are considerably more in an area.

Figure.2.Complaint Form

Kernel based location detection algorithm: The proposed kernel-based algorithm outperformed the traditional algorithm on most criteria associated to activity place detection, and offered a stronger resilience to GPS noise, managing to detect up to 92.3% of actual stops, and estimating stop duration within 5% error margins at all tested noise levels. Instead of grouping temporally contiguous and spatially near-by points on a point-by-point basis, the proposed algorithm operates globally by calculating a kernel density surface. This allows deriving a smoothed surface corresponding to the probability density function of a random sample of 2D points, the strength of the smoothing being controlled by the bandwidth. Local density maxima, or peaks, are then retained as candidates for actual stops. GPS points are further allocated either to a peak or to a trip segment. This makes it possible to establish a history of stops and trips.

Performance indicators: *Global performance* was measured by computing the number of stops detected per track. Processed tracks would be classified as 'on target' when three stops were detected, and 'false negatives' or 'false positives' when detecting respectively fewer and more than three stops. Tracks with detections of three stops resulting from a combination of false negatives and false positives, i.e. for which distance between a detected stop and the closest true stop was greater than 1,000 m, were considered as outliers and discarded (four cases).

Spatial accuracy was established as the Euclidian distance between a detected stop and the closest true stop. This metric was computed for the subset of tracks for which three stops were detected only (the 'on target' group).

D. Storing data into database: MySQL has been chosen for backend service in web service, this web service has been developed by PHP. Once the department has been chosen from client side i.e., from app, the information gathered inside the app will be transferred to the web service, and these data will be stored and supported by MySQL. MySQL, the most popular Open Source SQL database management system, is developed, distributed, and supported by MySQL AB.

E. Response from client side: When the admin or the Department head tried to post the comment for a complaint or they try to remove the complaint from DB, a notification will be sent to the client who posted the complaint. A persistent icon that goes in the status bar and is accessible through the launcher, (when the user selects it, a designated Intent can be launched).Post a notification to be shown in the status bar. If a notification with the same id has already been posted by your application and has not yet been canceled, it will be replaced by the updated information. Admin can also view the location on which the complaint is posted. The location is provided using latitude and longitude. The below figure shows the sample complaint location in Google map.

F. Architectural design: The below architecture diagram shows the overall pictorial explanation. This description explains the way in which the application works. Users can use this App to register complaint over a particular department from a particular locality. The GPS locates the place where the photo is taken and stores in the tracker.

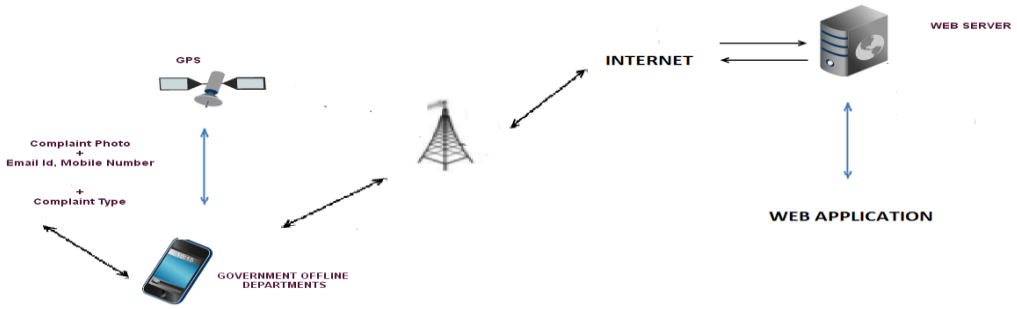

Figure.3.Architecture

Future work: Each and every day the government of India requires a new system of updating to update peoples welfare, these sorts of welfare updates will be succeeded by providing a new system of service, a service will be perfected by systematical procedures in this project a new scope of a mobile system has been introduced, although the project has been perfected still all department has to be bring under one shelter like hospital law and civil departments and these system will be brought up by the future development taking time under concern my proposal will stop under particular point

CONCLUSION

This application is developed for the Government bodies' complaint system this application helps the user to complaint regarding the problem they facing to the particular department and once the action taken it will be updated to the user. The user can view the status of complaint at any point of time this application is user friendly for complaint to the government bodies.

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