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Innovative Mobile Application to File Social Grivances using Geo Information System

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Abstract: Placing complaints to any offline government bodies is a very tedious task. This is basically because locating the government office can be problematic. Direct complaint registration may be time consuming process. According to a survey, usage of Android based devices has increased drastically than other Mobile OS. Due to increased Android users, using mobile application to register complaint is easier and more effective. The complaint is registered with the help of the picture of the problem and sent through the internet with the presence of Cellular Data. The location is identified using GPS as it improves the accuracy of location identification and the complaint can be addressed in an effective manner.

Keywords: Android, Global Positioning System, Mobile OS, Mobile Internet.

I. INTRODUCTION

The seriousness of any social problem is often not known by offline means. Even after reporting some of the unsocial activities they end up with the sketch of the accused based on the eye witness. A mechanism to accept complaints from citizens 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.

In this the user can take a snap-shot of the particular activity i.e.: water leakage, power cable hanging around, tree fall, unsocial activity etc. The application will augment the current position where the picture is taken. The above augmented picture is sent to the concerned authority. Statistical information is maintained such as the no. of complaints received category wise. The users use the mobile phone and do not need to access the web portal interface directly to file their complaint. The user downloads this application onto his mobile phone. This is basically created to help people solve the problem's which they see in their day-to-day life in their surroundings.

It proposes a natural English enabled mobile interface which can be used to lodge complaints. The essential idea is to provide an easy, cheap and quick mode of complaint registration around the clock. It is very easy because there is no long procedure of filling up of any forms or much details of self & hence saving our valuable time too. It doesn't require the citizen to remember any specific information to lodge their complaint. The mobile channel makes active citizen participation possible because of the higher penetration of mobile phones in India.

II. EXISTING SYSTEM

Existing system is categorized in two ways one is manual and the other is web based application. In manual system, people have to use a hard copy to write the complaint. People have to always search the location of the government office.

Government has to save the complaint as hard copy. In web based application, the location information must be specified by the user. The communication is point-to-point, it uses HTML/XML request .The point-to-point communication works for only low-interest information.

III. PROPOSED SYSTEM

In proposed work we use latitude and longitude. It uses multimedia broadcast multicast services. The mobile application will provide a direct communication between government and people.

The picture will show the information of the damaged or affected area. Using SFC we information can transfer the location of the area to the government which has to be repaired.

IV. ADVANTAGE OF PROPOSED SYSTEM

- It reduces the work load for government in searching the location.
- It serves as the best application for bringing the problems in the society to the notice of the government.
- Transferring the photo will make the government to understand the importance of the measures to be taken.

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V. PROPOSED ARCHITECTURE

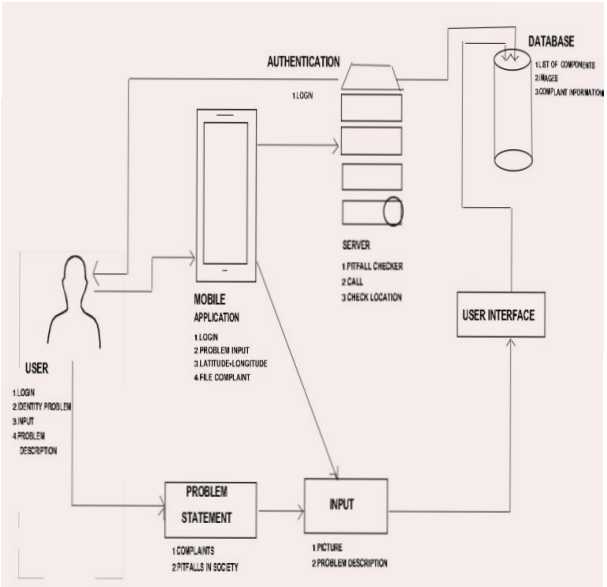

FIG. 1.Architecture Diagram

VI. TECHNOLOGIES USED

• GLOBAL POSITIONING SYSTEM :

The GPS system is used to track the location of mobile device from which complaint is being registered.We are going to place complaint by using mobile application. Along with these request we will embed the location from which request are gettingplaced. This is going to work by GPS tracking system.It will make use of Google Maps and API's.

• ANDROID OS

Android is a mobile operating system (OS) based on the Linux kernel and currently developed by Google. With a user interface based on the direct manipulation, Android is designed primarily for tablets and smart- phones. The OS uses touch inputs that loosely correspond to real-world actions like swiping, tapping, pinching, and reverse pinching to manipulate on-screen objects, and a virtual keyboard. Due to this increased and varied existence of Android OS in almost all hand held devices, Android application becomes more available to almost all the end users who are in line to post a complaint on any organization.

• CELLULAR PACKET DATA

It's was a wide-area mobile data service which used unused bandwidth normally used by AMPS mobile phones between 800 and 900 MHz to transfer data. The service was discontinued in conjunction with the retirement of the parent AMPS service. It has been functionally replaced by faster services such as UMTS/HSPA.

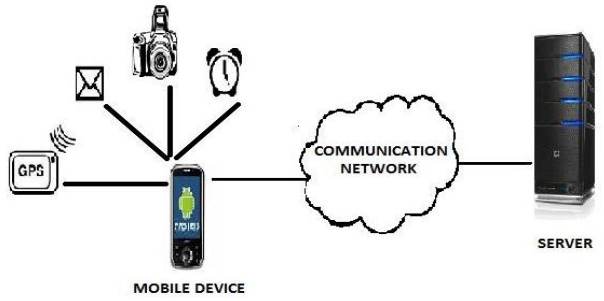

FIG.2.Overview Of Proposed System

Sequence diagram represents the various activities involved in the application in sequential order

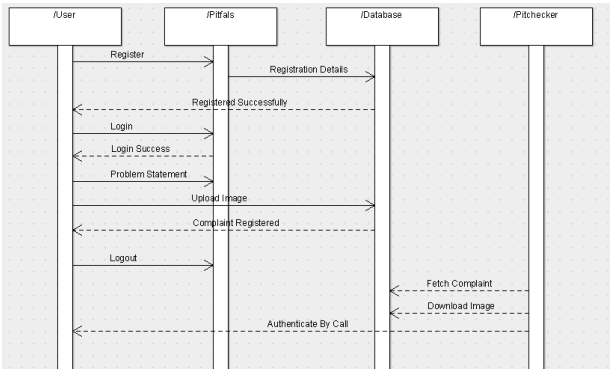

Fig.3.Sequence Diagram

VII. RESULTS AND DISCUSSION

Our Android application provides the users with an easy way to lodge complaints for all social based problems using one of the most frontal mobile devices which is available almost in most places. This is biggest advantage of utilizing Android based application due to the increased reach in the number of users.

1. USER'S COMPLAINT REGISTRATION

The user can register the complaint using the android application in the first module where the user can describe his complaint and register his complaint based on the type of complaint. The user can also take apicture of the event in this module and send to the particular department.

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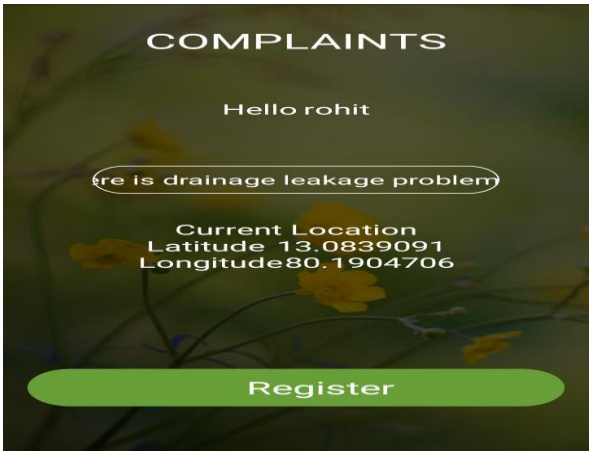
Here, the GPS tracker in the mobile devices records the place where the complaint picture is taken and hence the location data is also sent to the administrator. Therefore the location can be plotted on the map and response team can be dispatched quickly.

2. COMPLAINTTRANSMISSION MECHANISM

This module is responsible for carrying the complaint data through internet. The data is sent as HTTP request and is

3. COMPLAINT RECEPTION: ADMIN SIDE

The registered complaints are viewed by the administrator in their system with the help of JSP pages as utilized in many web services. It improves the overall efficiency and also provides easy construction or coding methods for the developers The Complaint is received in a list wise form as show below and the location of each complaint can be viewed through Google maps which serve as a global mechanism for locating any given data acquired from GPS efficient and provide the user with quick response from the application. JSON [6].and administrator. The data between the application and server is transmitted using JSON and REST.



Complaint details

Sr.No.	Tel No.	Vehicle No.	Issue	Time Date	Latitude Longitude	Status	Location
1.	9967231231	MH 23 PW 3245	Overpricing	18:20 21.09.2012	19.22591 72.84342	Resolved	View
2.	9934356547	MH 99 AA 4563	Denial of Service	18:00 21.09.2012	19.12563 72.83568	Resolved	View
3.	7654839222	MH 21 LM 6745	Misbehaviour	17:40 21.09.2012	19.25634 72.85591	Resolved	View
4.	9834788389	MH 09 AA 8934	Denial of Service	17:10 21.09.2012	19.37821 72.83922	Pending	View
5.	3427878300	MH 02 AZ 3420	Denial of Service	16:30 21.09.2012	19.45327 72.86981	Pending	View

FIG: SAMPLE COMPLAINT TABLE

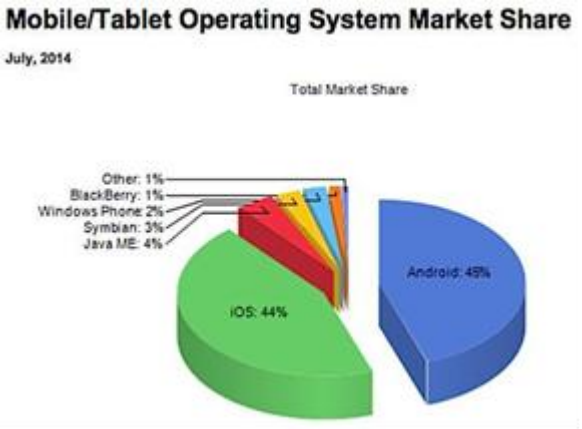


FIG.4.PIE CHART

VIII. CONCLUSION

This project provides a direct communication between the citizen and the municipal corporation. This will again help in registering the problems that one is facing in particular area and by continuously following up them will result in a good, clean and peaceful environment. Just one click and you can lodge a complaint anywhere, anytime intended. This application makes complaints easier to coordinate, monitor and resolve. The aim behind developing this mobile application is to make cities a better place to live in.

IX. FUTURE ENHANCEMENT

1. On Introduction of this Project will be able to give an opportunity to common man to make his environment better than today. In this manner the common people to deliver his complaints and problems to municipal authority as well as let the municipal authorities to address the issue as soon as possible.
2. If registration is done using Aadhar Card then registration can be done authentically and problems
3.In Future we shall develop IOS app for Apple phone users.

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BIOGRAPHIES

Dr. G. Nalinipriya has completed Bachelor of Engineering in Electronics and communication engineering from Madras University, Completed M.E Degree from Anna University Chennai and PhD Degree from Anna University Chennai. She has published and presented papers in many peer reviewed International, National conferences and Journals. She is a member of many professional bodies like ISTE, IEEE, ACEEE, CSTA and WRI. Her research interest includes Data mining, Wireless networks, Mobile databases, Web security and Ubiquitous Computing. Presently she is working as a professor in Information Technology department of Saveetha Engineering College.

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