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Review Paper on TraffiCop Android Application

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Abstract: ***RTO officers or traffic police have a lot of workload of making registration, license issue, etc., which requires a lot of paperwork. As a result, people can't get the things done in right time, which is the waste of time and energy. The use of mobile devices, such as smartphones in field data collection has increased recently due to the emergence of Global Position Systems (GPS) and Wi-Fi Internet access. Timely and handy field data collection is required for quick response during emergencies. In this paper, we introduce a TraffiCop Android Application to collect the field data from personal mobile phones. The main objective of this work is to demonstrate a real-time field data collection method that can be used by Traffic Department. The purpose of this system is to allow the Traffic Police Officer to send the field collected data to the server. The information gathered using field data collection can include current location, and images captured during a crime scene. The data at server side can then be used for analysis and decision making.***

Keyword**: *Real-Time Field Data Collection, Traffic Police, Analysis and Decision making, GPS, Smart City Project, TraffiCop App.***

I. INTRODUCTION

Data collection is one of the important tasks for many spatial information users. Field data collection is one of the first steps for spatial information users, especially for geographers, geologists, biologists, crop scientists, ecologists, etc... Accurate field data collection is also necessary for adequate spatial data analysis and proper decision making. The rapid emergence of data management methods has evolved into the Information Age. Powerful database systems for collecting and managing data are in use in all large and mid-range companies. All such data hold valuable information, which could be used to improve decision making and optimize success.

The traditional pen-and-paper based field data collection is a time-consuming task. Hence this is not practical to use in real-time disaster information collection, which requires a quick emergency response. However, recent developments in mobile communication, GPS, the Internet and portable computing devices allow us to conduct field data collection in a timely manner. Moreover, under the client-server setting for field data collection, a field user may take advantage of data to access. Web-based traffic system is an android application that reports real-time traffic crimes to the server. In existing traffic system, the storage of records of vehicles and civilians breaking traffic rules is not real time. In the proposed system, we will develop a TraffiCop Android Application which can be used to take real-time data as well as location and transfer it to the server. So we are reducing the manual work and errors in the system. Using this system we can keep track of the number of traffic crimes occurring within a particular area and the same information can be used by the traffic police department for decision making and analysis. [2]

II. LITERATURE SURVEY

Nishigandha Gawas, Tayyaba Shaikh, Namrata Ambarkar, Pooja Mishra, Prof. Atul Shintre, Prof. Pratik Adhikarir & Prof. Amber Hayat [1] has proposed system as The Enhanced RTO system provides a fast and convenient way to pay the penalty amount when driver caught by traffic police after breaking some traffic rules. Also, all user can access all his information about the penalty history and admin keeps the record of all the updating. It is more reliable to use for drivers and provides transparency and security better than the existing system.

Komal Kalbhor, Akshaya Misal, Shilpa Kalbhor [2] has proposed system as This system will help traffic authorities to mark the area with more number of traffic crimes committed in that area. Thus we look forward to developing an android application for traffic police officers and a web application using JSP and servlet with MySQL as a backend for higher authorities. The higher authorities can use this system for analysis and take decisions. This system will, therefore, reduce the manual work and errors in the current traffic system.

Payal Raut, Priyanka Garad, Charul Patel, Ashwini Fake and Shailaja Jadhav [3] has proposed system as The applications of traffic information have become more popular with the improvement of the condition of the wireless network, mobile devices and so on. Analysing the system architecture, the researchers realized the functions of the searching real-time traffic information, location and police's location by making use of the Google Map or GPS technology. It realized the functions of data searching, data importing

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and modifying through the SQL database. The traffic police mobile office system based on Android can provide easy communication between traffic police working information and the traffic information. It also can get the real-time traffic information, which improves the efficiency of traffic service and management. Also, it provides an information source for managing the traffic. It is very important for the security of the society. It also maintains the complete information about the user who committed the crime and fine generated.

III. EXISTING SYSTEM

A. In current system whenever vehicle driver breaks any rule then police officer catches him and ask for his license.
B. The user shows his license and traffic police office charges him for whatever rule he braked.
C. In existing system all is manual process i.e. traffic police manually checks for charges in his list. Sometimes it may make mistake while seeing charges so the driver will pay wrong charges for his penalty.
D. Sometimes traffic police impose high charges by his own then at that time corruption may take place, because drivers request policeman to take a small amount and leave them without a receipt. So there is corruption happen. [1]

IV. PROPOSED SYSTEM

RTO department has to face many cases of corruption. So, providing a digitized solution will also help to make the system more clean and transparent. Thus, keeping in mind these two objectives our paper proposes a solution which will not only be economic but will also have a practical approach in Smart City Project. The traditional system consumes more time to generate a report and perform statistical analysis. The proposed system will help to generate a quick report as this process is fast and automated. [3]

V. METHODOLOGY

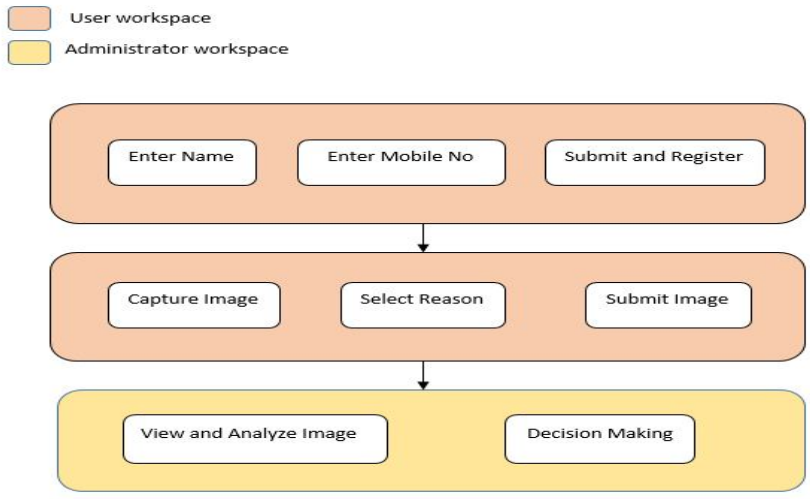
The architecture of this system is client-server architecture. The server side is managed by the administrator of the system which consists of admin side and user interface. The administrator has the right to add the traffic police, delete the entry of any traffic police and keep the track of their locations.

The admin interacts with the system through Graphical User Interface (GUI) and provides the login identifications to any newly added traffic police. The server keeps the track of the location of traffic police through Google Maps using the Global Positioning System (GPS).

The database keeps the complete records of any user who violated the traffic rule along with the required details. The client side consists of complaints and user interface. The client side is for the end-users i.e. the traffic police officers.

The traffic police use an android application to communicate with the server. The server gives the details of fine to be collected based on the rule violation registered for that user by the traffic police. The user is notified through message by the server after successful collection of fine by the client. In case of any communication failure between client and server, the client can store the record of the user in its local database. [3]

VI. MINDMAP



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VII. EXPECTED OUTCOME

This system will help traffic authorities to mark the area with more number of traffic crimes committed in that area. Thus we look forward to developing an android application for traffic police officers and a web application as a backend for higher authorities. The higher authorities can use this system for analysis and take decisions. This system will, therefore, reduce the manual work and errors in the current traffic system. [2]

VIII. ADVANTAGES

A. Central platform to report traffic issues – Saves time as paperwork is reduced.
B. To mark the area with more number of traffic crimes.
C. Stop corruption involved in concerned authority.
D. Encourage people to follow traffic rules to ensure the safety of the masses.
E. Makes the traffic system stricter so that people strictly follow the traffic rules.

IX. LIMITATIONS

A. Internet connectivity or wireless network is compulsory to transmit the data.
B. Android phone is required.

X. MODULES OF THE PROJECT

A. Admin Module

1) Admin can login into the application.
2) Admin check the images at server site and imposes the fine or penalty according to the rules braked and reason selected with the photo clicked at traffic police site.

B. Traffic police module

1) Traffic police login to the android application.
2) If any person caught by traffic police violating the traffic rules then the police will click the photo of the person violating the traffic rules.
3) After clicking the photo the traffic police will submit the photo with a valid reason to the server site.

XI. TECHNOLOGY & PROGRAMMING LANGUAGES

A. Hardware Requirements

1) Android Mobile
2) Intel processor III and above

B. Software Requirements

1) MS SQL Server
2) SDK for Android 2.2 and above
3) Windows Operating System
4) Eclipse

XII. CONCLUSION

This system will help traffic authorities to mark the area with more number of traffic crimes committed in that area. Thus we look forward to developing an android application for traffic police officers. The higher authorities can use this system for analysis and take decisions. This system will, therefore, reduce the manual work and errors in the current traffic system.

XIII. FUTURE SCOPE

The system will provide efficient maintenance of the fine records as well as user's details. The user's details stored in the form of images on the server database can be further used if required by extracting the data through image processing. For implementing purpose we need to make sure whether the user is aware of this automated system. Further modules may be added into the system for awareness purpose to promote traffic awareness amongst them. [3]

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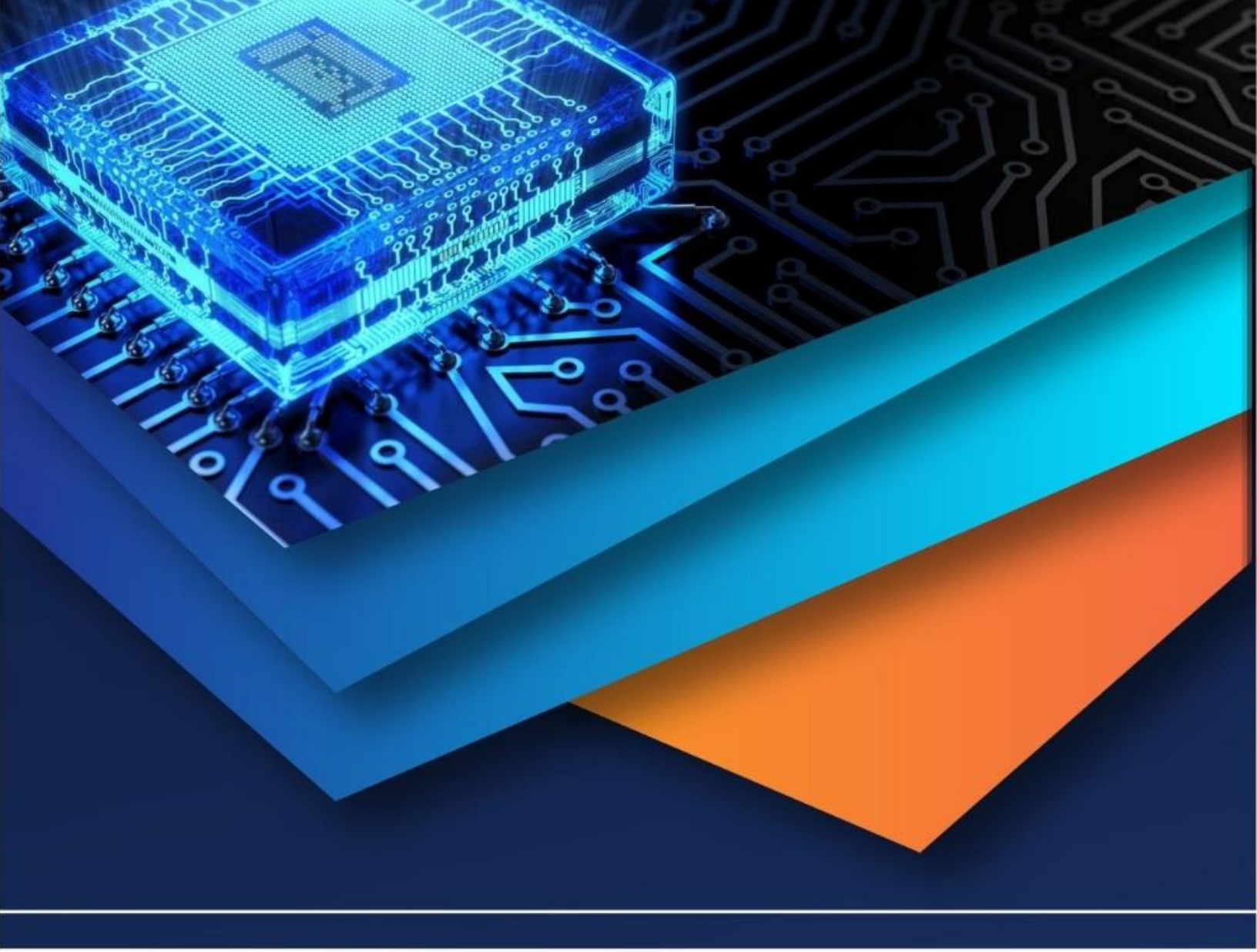

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