DUTY ALERT AND CALL DATA RECORD ANALYSIS FOR POLICE

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ABSTRACT

If any police officer is absent on his duty, then the entire police department get notify. That he is posted on different region. If a specific officer doesn't know that where his duty is, then he can see the notification message on his mobile and directly go to the desired location to provide service to the people, also it will reduce the time.

Call Data Records amounts to an extremely large amount of information that is generated by telecommunication companies by making use of various call monitoring applications. It is the data record produced by documenting the details of a telephone call or other communication transactions (text messages, call durations, location, e.g.) that passes through a facility or device. With a Call Data Record, you will know the dates, times, and length of every call. You will also receive a complete list of any Instant Messages made, including time sent, time delivered and the addresses of those you communicated with CDR files are also used as evidence in criminal cases to estimate the locations of mobile phones and infer the locations of individuals.

Keywords: *Security, Call Data Record (CDR), Duty Alert.*

1.INTRODUCTION

The result alert system with email and SMS was designed to work as an online application or software. The system was designed to have a point of Entry which is to be used by the Administrator with the login privilege and role granted.

CDR-based geolocation is an increasingly common form of evidence used in criminal cases in US courts, but its practical aspects have received virtually no attention in technical literature, while being frequently discussed in mainstream media, often in a highly biased manner. The main objective of this paper is to identify scientifically acceptable CDR-based methods used to determine the possible locations of mobile phones, as well as methods that do not pass scientific scrutiny. The objective of crime data analysis is to identify the structure and patterns which exist among the criminals and anti-social element. Such analysis will help to solve many unsolved cases and can also give a crucial information to the investigative agency about the association among the criminals. Police departments typically maintain their own database in which crime details, arrests, geo location of crime and many other relevant information related to the crimes are stored. Even though these systems are slightly different from agency to agency, the basic purposes and functions are the same.

A web based portal for duty alert and call records .The product provides a framework, which helps to execute the duty , a critical process having many calculations and operations. It results in regular and timely action against crime reported. The information can be obtained easily and accurately.

1.1 Duty Alert

If any police officer is absent on his duty, then the entire police department get notify that he is posted on different region.

If a specific officer doesn't know that where his duty is, then he can see the notification message on his mobile and directly go to the desired location to provide service to the people, also it will reduce the time.

1.2 Call Data Records (CDR Analysis):

Call Data Records amounts to an extremely large amount of information that is generated by telecommunication companies by making use of various call monitoring applications. It is the data record produced by documenting the details of a telephone call or other communication transactions (e.g., text messages, call durations, location) that passes through a facility or device.

With a Call Detail Record, you will know the dates, times, and length of every call. You will also receive a complete list of any Instant Messages made, including time sent, time delivered and the addresses of those you communicated with. CDR analysis can be the keystone of the digital forensics' world, pulling all the elements together to effectively counteract anti-forensics.

Call data records show calls made and received and provide the following data:

- Date of call.

- Time of call

- Call duration

- Number making the call.

- Number receiving the call.

- IMEI - International Mobile Equipment Identity

2. LITERATURE REVIEW

The purpose of the literature survey in this paper is to identify various studies, models and papers in our proposed research area in an attempt to appreciate, make use of as well bridge a missing gap, if any, between different researches. Based on the information collected during the requirement gathering phase, it was observed that the traditional processes that are currently being used to solve crimes are slow-moving, time consuming and also tedious. Despite these drawbacks, it was noted that the result producing capabilities of a few approaches or processes were quite sublime. This called for an innovation or perhaps an enhancement in the already existing systems, to deal with crime on a digital level. we propose the utilization of the call data records (CDR) of suspects to generate leads towards crime solving. The system does not only analyse the CDRs but also exploits various patterns between various CDRs to produce significant results in terms of crime solving. In our proposed project, we are talking about accessing CDRs of the mobile number/s of the various suspects. As a result, it is important to note that many challenges need to be addressed during the implementation phase and before the deployment phase.
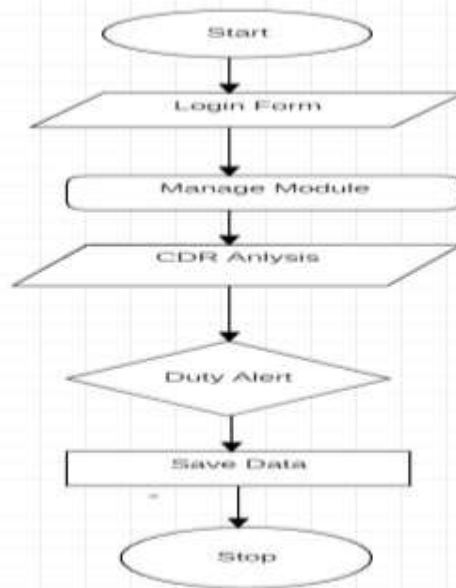
3. SYSTEM MODULE

3.1. Flowchart

Fig.1: Flowchart

3.2 Algorithm

      Step 1: START.

      Step 2: Open the software.

      Step 3: Click on the login button.

      Step 4: Module appears.

      Step 5: The CDR is imported in the software in excel format.

      Step 6: Duty notifies.

      Step 7: Information about staff saved database.
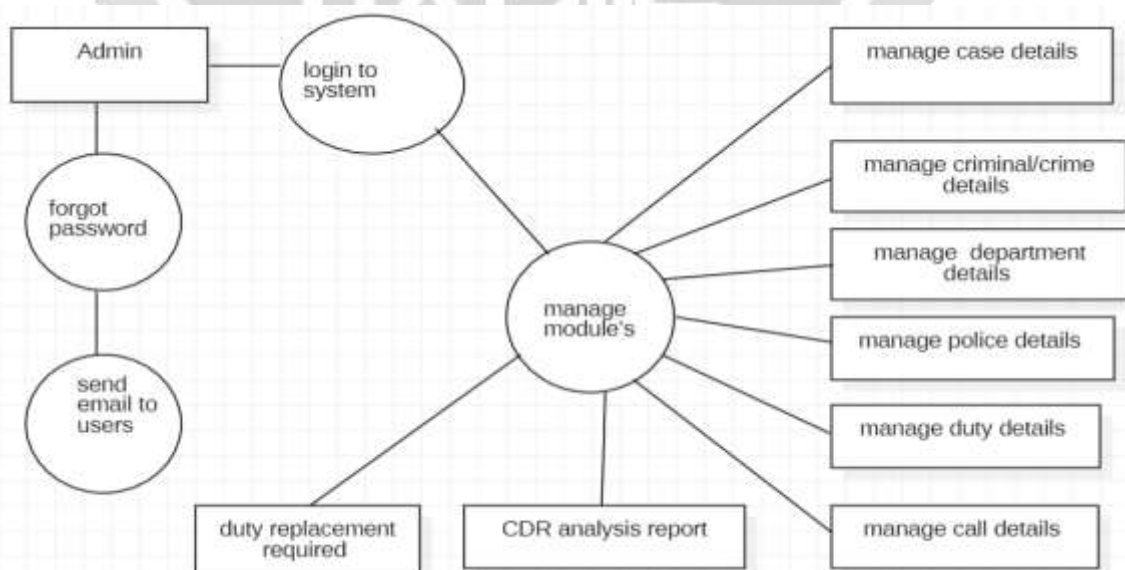
      Step 8: STOP.

3.3 System architecture

Fig. 2: System architecture

i. CDR analysis report

A call detail record (CDR) is data produced by a telephone exchange or other telecommunications equipment which contains the details of a telephone call or other telecommunications transaction (e.g., text message) that passes through that facility or device. A call detail record contains metadata – that is, data about data – containing data fields that describe a specific instance of a telecommunication. It does not include the content of the communication. The record contains various attributes of the call, such as time, duration, completion status, source number, and destination number. The Call Record Data provided by telecommunication service providers to the law enforcement agency is normally in standard tabular format (i.e. .xls or .csv file format as shown in Figure 4&5). These records are provided to the investigative agency on special request, after following some mandatory legal formalities. These file in tabular format sometime contains massive records and is challenging task for the investigator to analyse it and to make any interference. Investigative agency takes the help of in-house customized tools to do the analysis of CDR.

ii. Manage duty alert

If a specific officer doesn't know where his duty is, then he can see the notification message on his mobile and directly go to the desired location to provide service to the people, also it will reduce the time. If any police officer is absent on his duty, then the entire police department get notify that he is posted on different region.

4.RESULT

Fig 3.: Login for account

Fig.4: Sample Call Data Record of Suspect XYZ

Fig.5: Sample Call Data Record of Suspect XYZ

4.CONCLUSION

Duty Alert System with SMS is an innovative addition to the police sector, as it makes the availability of duty and grades a lot easier and efficient. Also, it makes SMS technology relevant in Police sector.

Call Record Analysis is a call management Software that allows administrators to use the solution to provide role-based access to police, manage password, and control data views by department. For any given case there will be many sources of information, and only by correlating all of them can we pinpoint the hidden information, which is potentially overlooked using standard techniques of analysis. Knowing the details of a cell is an essential element for the correct reading of CDR, thus placing a suspect in a certain building or area of the city at a certain time.

5. REFERENCES

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