CRIME INTELLIGENCE SYSTEM

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Abstract: This capstone project is a systemic study on police monitoring to promote better police governance. The test bed for this study is for the Philippine National Police (San Juan Police Station). This systematic study intends to break new grounds in attempt to assist the Philippine National Police to improve their services through the use of technology. In addition, this research paper also further contributes to the literature on policing and crime monitoring. The country's national police have had a long history of corruption, unethical conducts and other institutional matters which resulted to poor governance and mismanagements. The study promotes a decision support model through which the organization could better the monitoring of crimes in order to improve policing. This model can greatly aid in their decision making in terms of police allocation, scheduling and assignment and could be useful to police organizations in other countries dealing with the same governance issues. According to this year's statistics, crimes within Metro Manila went up by almost 60%. This should not be a cause for contentment and complacency. In order for the PNP to gain the public's trust back, they must strive to improve crime prevention, guarantee public safety, and sustain order. If technology and innovation are properly applied and practiced; criminal intelligence allows the police to effectively understand criminality and can help them improve their decision-making in the future. The research paper's main goal is to create a better future for each and every one of us. Crime detection and prevention is essential in order to provide safety to the people. If safety and security is provided, we can get more out of our lives and make a huge difference. It is very important to address this issue because crime prevention applies to everyone, every day, regardless of their age and gender.

Key Words: Crime Intelligence System, Philippine National Police, Information and Communication Technology

1. INTRODUCTION

"Crime is as old as mankind itself." Schafer stated that ever since the biblical misconduct happened during the period of Adam and Eve, although cultures of humanity have developed and rules have been formed since then, violence has continued. [1] Crime has been present from the very start of humanity and has never stopped. Furthermore, crime has become a "common societal phenomenon" that it is deliberated now as part of an organization's functional element.

There are different beliefs as to what cause people to commit crimes. The common misconception is that crime is caused by poverty or other forms of social deprivation, but those are

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just a few of the many possible reasons. One example that can support this is a concept introduced during the 1940s by Edward Sutherland called "white-collar crime". [2] Sutherland diverted the attention of the people towards crimes committed by individuals that belong to the upper class and corporate elite. There is no certain and single solution with regards to stopping crime, but there are ways to prevent them before things get out of hand. In order for crime to be fought, people must become aware of the existing laws and the crimes happening in their environment. Law enforcers are a very important part of the society, because they can dictate what must be avoided and decide what punishments to give to those who disobey.

Presently, the Philippines' law enforcement suffers from numerous methods of misconducts among its personnel. These greatly contribute to the diminishing public trust and confidence of the citizens toward the police and high crime rate in the country which the team wants to address. This study intends to be able to explore crime management concepts such as decision support system, mapping, analysis, management and geographic information of crimes to amend community-based Philippine policing.

The main goal intended for the study of this research is to be able to explore crime management and information system development concepts in applying to community-based crime prevention. The main scope of the research study is the accuracy and reliability of crimes in the Philippines. It mainly focuses on the management of crimes from the initial reporting of the crime until the investigation process. This research is mainly focused on the city of San Juan making the police headquarters and precincts in the city the test bed of the study.

2. METHODOLOGY

Extensive research about the topic was conducted to understand how crime prevention are being performed not just n the Philippines but also in other countries. Benchmarking was performed by studying the systems used by other countries. The proponents conducted series of interviews and ocular visits at the Pasig PNP in order to capture their actual operations and unearth their actual problems. After formulating the proposed system, the proponent started developing the system using Rapid Application Development (RAD) methodology. RAD was developed as a solution to software develop projects with time constraints (Sommerville, 2004). This essentially posed as a perfect model to be used primarily due to the development time decrease because the project is being prototyped as the project progresses. Added to this methodology, the proponents also used Rapid Prototyping in order to present the concept with the target users.

The RAD methodology demands discipline and commitment not only of the proponents but also with the target users. The PNP Pasig had participated in the entire duration of the project. Along with the user insights, Computer-Aided Systems Engineering (CASE) tools were used in order to further improve the overall quality of the system. It also made system construction fasted offered assistance in the design-automation techniques, code

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generation, and computer-aided planning and analysis of system development. The different phases of software development of the RAD methodology are Requirements Planning, User Design, Construction, and Cutover phases. (Sommerville, 2004)

3. RESULTS AND DISCUSSION

The team developed the system with two main features:

3.1 Centralized Blotter System

This system captures vital information of a crime when it is being reported. Documents provide by the complaint can be uploaded into the system. This system was patterned from existing Blotting systems and the actual practice of the precinct. All necessary documents such as incident report, endorsement letters and affidavits can be printed using the system. Tracking of the status of the complaints can be performed with the system.

3.2 Integrated Crime Control System

The system includes crime mapping. Since the blotter records have the information regarding the crime's time, date and place of incident, these blotter records saved into the database will be plotted to determine where crimes are usually happening. Every type of crime will have its own color coding for representation and the number of crimes that occur in a specific place. The plotting of the crime map will be per barangay basis. In addition, there will also be a filtered option to be able to view the map by time, by crime, or both by crime and time. There will be a plotting of crime that happened in a specific place after the recording of the blotter is done to be visible to both the police and the community. There will be differences with the details and information that will be shown to the community and the police. In the community, the plotting of crimes will only be shown but it is in real time. While in the police side, there will be a decision support to help the tactical officer in decision making when it comes to allocating of policemen.

The system also has the following modules:
A. Station Module

Every station should register first to the system. The registration process starts upon when each station enters their details such as the station name, address, phone no, station in charge etc. and then gets a User ID from the system. Once the prospective station registers with the system they can access the existing blotter records of all police precincts.

B. Crime Module

This module is used for entering all details about the crime. It contains the date and

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time, police station where it is recorded, place, nature of crime, location of the crime, etc. Suspect documentation is the gathering of two types of information: basic and medical. Both of this information is saved in the database of the system. File number, mug shots, name, address, birthday, relatives, physical attributes, crime committed as well as fingerprints are some of the basic information that is recorded. The basic information is used to have a detailed description of the suspect. Medical information, in the meantime, is used to determine how the suspects be treated in the correctional facility. There is also a search feature where the user will be able to look for specific blotter data that they were looking for. There will also be a notification feature where whenever there will be a blotter submitted to the assigned investigator will be notified if there will be a pending case for investigation.

C. Mapping Module

In this module, the community would be able to access the crime mapping in which they can detect crime occurrences through certain notifications in the map. This will raise public awareness about their surroundings and this will also help to avoid the places that are prone to crime occurrences.

D. Crime Analysis Module

This provides the ability to pin map events and identify high crime areas within defined areas. This module has the features of sorting the crime according to its kind and number of occurrence. These features provide agencies with powerful investigative information that can save personnel hours of time-consuming research and mapping.

E. Case Monitoring Module

This allows users to maintain and monitor the case assignments about the cases for investigative officers. Information regarding case status, assignment, solvability, and progress will be accessible for enhanced decision making. These shall be sufficient to the mitigation of the usage of paper forms. With implementing this system, the likelihood of material lost will greatly be reduced. In addition, tampering of processes will ultimately lessen and at the same time heighten the PNP's security.

F. Reports Module

This allows the tactical users and the chief of the police to be able to generate reports that will help them in the monitoring crimes and whether the policemen are doing their jobs. This will also help in the decision making purposes of the law enforcers.

G. News Module

This module allows the user to edit certain news and headlines regarding the Philippine National Police. This will help the community to be aware of the accomplishments and progress of the police.

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4. CONCLUSIONS

The proponents were able to identify some of the major problems that were visible in the Philippine National Police. These problems focused mainly on the blottering and investigation part. These problems trigger the community not to report crimes happening since they find it useless and waste of time since they believe that the police are not capable of solving such crimes. The new system developed was able to help in making the organization's process become connected to each and every police station in the city for reference and monitoring purposes. Also it makes use of the information that received in order to maintain peace and order throughout the city. The system was used to support in the decisions of policemen for crime prevention. The system automates some of the processes that the organization is doing but there are still more processes that needs to be automated. This will eliminate the use of paper forms to lessen the expenses in supplies. The government should invest in upgrading and improving these type of processes since it will be very helpful not only to the government but to all of us.

The new system will be able to eliminate the redundancies when it comes to reporting a crime incident. Also, all the blotter records will be saved in a database wherein whenever there will be specific blotter records needed by the police, it will be easy to look and find since it will have storage. It will also eliminate the manual counting and computing of the reports which is very time consuming for them. The system also has a crime map feature that will help eliminate the manual and outdated crime map since it will be regularly updated. It will also be helpful in allocating police officers easily since the map is regularly updated with the crimes that are happening in the city. With the system, the police will be able to prevent crimes from happening by the use of the crime map. It will be able to help them in allocating police force throughout the city for crime prevention.

5. ACKNOWLEDGEMENTS

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