

**The Bill Blackwood
Law Enforcement Management Institute of Texas**

Computer Aided Dispatch and Records Management Systems

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ABSTRACT

In today's society, law enforcement agencies are required to create and maintain proper records which are accessible to the public. The topic and purpose of this research paper is to find out whether or not law enforcement agencies are more effective when implementing and maintaining effective records management and computer aided dispatch systems. The issue is whether such effective systems will create a better department, which could eventually create a better community. The methodology used in this research includes a review of available literature, a survey of agencies serving a population of less than 250,000 people and interviews of these agencies in order to gather details and explanations of the findings. The results of the research indicate that implementing and maintaining effective records management and computer aided dispatch systems do allow a department to be more effective, ultimately creating a better community.

TABLE OF CONTENTS

	Page
Abstract	
Introduction.	1
Review of Literature	3
Methodology	6
Findings	7
Discussions/Conclusions	12
References	14

INTRODUCTION

For many years law enforcement has been dealing with the advancement of technology. According to Pattavina (2005), in today's society, 100% of police departments (serving a population of over 250,000 people) are using Computer Aided Dispatch (CAD)) and Records Management Systems (RMS). While Police Departments that serve large communities have been utilizing computer systems for years, smaller departments struggle with paper records, handwritten reports, creating statistics manually, or inadequate computer systems that do not accomplish today's requirements. The need to acquire and maintain an adequate level of technology is pressing, since the recordation of criminal activity is both required and requested in order to be effectively reported.

To assure clarification of this topic, the Computer Aided Dispatch System (CAD) and Records Management System (RMS) must be defined. A (CAD) allows emergency operations and communications to be augmented, assisted or partially controlled by an automated system. It can include, among other capabilities, computer controlled emergency vehicle dispatching, vehicle status, incident reporting, and management information (IACP, 2005). An (RMS) is an agency-wide system that provides for the storage, retrieval, retention, manipulation, archiving, and viewing of information, records, documents, or files pertaining to law enforcement operations (IACP, 2005). These two systems could be integrated to assure maximum technological potential for law enforcement agencies.

This research paper is intended to find out if updated and effective technology (RMS and CAD systems) is needed to maximize an agency's potential. With

technology utilized in all aspects of business today, acquisition of this type of technology in all law enforcement agencies may better the quality of service performed by the agencies? For instance, it may reduce the number of man-hours utilized on tasks that these systems maintain and complete and possibly eliminate or reduce the costs of reproduction, storage and the processing of records.

In order to properly come to a conclusion, this author will examine written materials on this subject, interview administrators of law enforcement agencies, and conduct a survey of agencies, which serve a community of less than 250,000 citizens. As stated earlier, agencies serving larger communities are usually equipped with adequate technology and are able to be better equipped due to the availability of funds from larger tax bases. While acquisition of funds is the greatest obstacle, it really should not be an obstacle in delivering quality service to the public.

This research is anticipated to demonstrate that effective and updated technology is greatly needed in all law enforcement agencies. This author hopes to show that the acquisition of such systems will increase the number of hours a patrol officer can be present in the field, instead of spending time in the office writing reports or obtaining needed information. Also, this research proposes to demonstrate a decrease in hours utilized for the production of vital statistics needed for: reporting to the governing bodies and the mandatory reporting to databases such as Uniform Crime Reporting (UCR), and the newest version of UCR the National Incident Based Reporting System (NIBR). Both of these databases are maintained by the Federal Bureau of Investigations. It is also anticipated that the research will find that the amount of funds utilized in the duplication, storage and processing of records within the agencies could

be decreased due to the limited amount of paper and supplies required. The findings of this research will affect all aspects of law enforcement agencies, since all of the employees of an agency utilize technology. It would also affect the community the law enforcement agency serves.

REVIEW OF LITERATURE

Over the years, law enforcement agencies have struggled to obtain and maintain an effective records management system. In the beginning, records management systems were created as spread sheets and simple lists of case #'s. Technology has now taken us to the level of where an officer can enter his report, search for warrants, and research the database for names, vehicles, and case information. This advance in technology has allowed departments to consolidate certain duties, since the computer systems can do the same work in a fraction of the time a person can accomplish the same task.

Records management systems have evolved over time to allow law enforcement agencies to utilize them for crime prevention techniques. With all of the information derived from a case being entered, systems can cross reference similar cases to show crime patterns which allows for a greater opportunity to deter crime and arrest offenders. Crime mapping, which is a tool utilized to show where the crimes are occurring within a given jurisdiction, can also help prevent crime. This allows a department to concentrate on specific areas where most of the crime is occurring. These crime prevention tools can be ascertained from an effective records management system in a very short amount of time, which eliminates supervisors from having to create such tools manually.

With every law enforcement agency comes the responsibility of statistics. Statistics range from Uniform Crime Reporting (UCR), racial profiling, personnel attendance and records, to Inventory control. The UCR Program was conceived in 1929 by the International Association of Chiefs of Police to meet a need for reliable, uniform crime statistics for the nation (FBI, 2006). Since that time, departments have been required to submit criminal statistics which are published by the Federal Bureau of Investigations yearly. Compiling these statistics manually requires a great deal of time and effort on a regular basis, which a records management system could compile in a small amount of time. The same circumstances occur with racial profiling statistics, which are required by the individual states. Both of these statistics could be entered into the records management system, and kept in real time, allowing easy access for daily, monthly, or yearly statistics.

Evidence kept by a law enforcement agency requires extensive documentation for court purposes. When evidence is collected and stored, a chain of custody must be created and maintained. In departments without an effective records management system, such records are handwritten or kept on a spread sheet. With a records management system, evidence can be entered, logged in and out of the property room, and a final disposition can be logged. This type of file would lessen the occurrences of being challenged in court, on the chain of custody.

Personnel records and inventory records can also be kept in a records management system. Keeping these types of records in the same system as all other department records allows the administration of a law enforcement agency to access them quicker. While most departments have computerized records of all of the

aforementioned types, they are not easily accessible to all personnel authorized to have access. An effective records management system that is networked properly would allow every authorized individual to access the system. Once the individual would access the system, permission would be allowed for access to the files needed by that individual. This type of security feature keeps the integrity of all of the files kept within the records management system.

Technology advancements have created an easier and more effective way for dispatchers to forward information to the officers. CAD system functions include call taking, location verification dispatching, unit status management, and call disposition. According to Drescher (1995), this system would allow a police department to improve call-taking service to the public, provide greater accuracy, efficiency, speed in responding to calls for service, minimize data handling, increase officer productivity and resource management, enhance officer safety with detailed information on call locations, provide accurate, up-to-date information for management control, and provide additional system capacity due to growth or crisis. This is accomplished because the CAD system, which integrates with the RMS system, would be accessible to anyone that is granted access.

In an effective CAD/RMS integrated system, several other requirements must also be met. The computer equipment, such as network servers and compatible and capable computers for both desktops and vehicles are required. All of the systems available list the specifications of hardware and accessories required for that particular system. The individual agencies can decide the degree of the system they are requiring

for their agency. Without meeting those minimum requirements, the system chosen might not be utilized to its maximum capabilities.

METHODOLOGY

This research paper is intended to find if updated and effective technology, RMS and CAD systems, is needed to maximize the agencies potential. This author believes that the implementation and maintenance of effective records management and computer aided dispatch systems would maximize an agencies potential, ultimately creating a better community. The primary method of inquiry used will be a one page survey that was distributed to various departments across the State of Texas. This survey consists of five questions to ascertain if the departments have a computerized records management system or computer aided dispatch system. The survey also will request information regarding the average amount of time an individual officer spends on writing reports per shift. Finally, the survey will ask for the officers opinion on whether or not having an effective computer aided dispatch/records management system would allow a department to be more efficient.

After the surveys are returned, this author will conduct personal and/or telephone interviews with the departments. These interviews are intended to obtain specific information on the effectiveness of the existing records management and computer aided dispatch systems. The interviews will also be conducted to find the amount of time auxiliary personnel utilizes to create statistics and enter information into their existing systems, if they have one.

After obtaining the information from the surveys and interviews, this author intends to analyze the data by charting the results. Once the charts have been created,

this author will create graphs to illustrate the percentages of the departments that have records management systems and/or computer aided dispatch systems in place. This author will then detail some of the reasons given regarding the effectiveness, or lack there of, of the current systems. This author will also list the reasons given by the agencies as to their beliefs of why or why not they believe having an effective records management/computer aided dispatch systems would allow an agency to run an efficient department that would allow for maximum customer service.

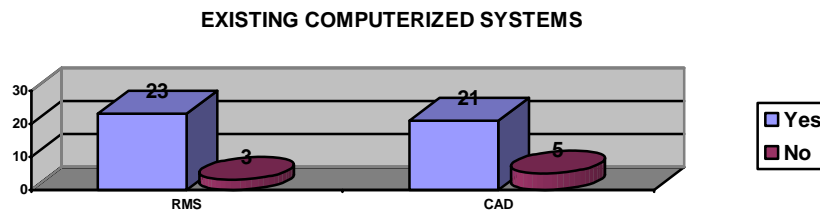
This author expects to find that a majority of the departments surveyed have some type of computerized records management system. Of these, the author expects that about thirty percent of the agencies are probably not content with the existing systems, due to outdated software. This author also expects that the reason for having an outdated system, or no system at all, will be attributed to funding issues that do not allow for updates, or the purchase of new systems.

FINDINGS

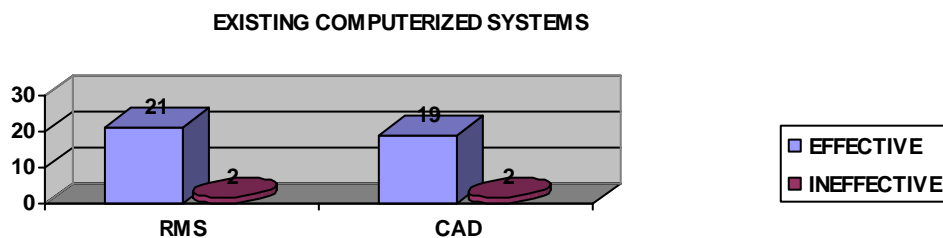
All of the data received from the surveys and interviews was analyzed to determine how many departments had existing computerized records management/computer aided dispatch systems. Data was also analyzed to determine whether or not the agencies believed that their current systems and the way they are being utilized are effective in maximizing the service of the department.

Twenty-six surveys were received from agencies serving a population of less than 250,000 people. Of the surveys, it was found that eighty-eight percent of the agencies had an existing computerized records management system in place. It was also found that eighty percent of the departments had an existing computer aided

dispatch system (see chart below). When the agencies without an existing records management/computer aided dispatch system were asked why they did not have one, the response was found to be financial reasons.



Of the number of existing systems, the agencies were asked if they believed the systems were effectively utilized. It was found that eighty-eight percent of the agencies believed the records management systems were effectively utilized (see chart below). It was also found that ninety percent of the agencies believed the computer aided dispatch systems were being utilized effectively (see chart below). When this author asked the agencies (of the ineffective systems) why they believed the systems were ineffective, they advised that outdated equipment and software would routinely cause the systems to be ineffective. This author researched further to find that the reason for outdated equipment and software was due to financial reasons.



Upon further inquiry of details regarding the ineffectiveness of the systems, this author found in one case that the systems that were purchased had incurred problems since the inception of the addition. It was further explained that the system purchased

was obtained through a formal bidding procedure and the contract was awarded to the lowest bidder, which met the requirements on paper. It was also found that the decision was not made directly by the agency, but by the governing body of the local government. In the second case, it was found that the system was adequate, but the equipment being utilized was outdated which hindered the system, making it work slower. It was further explained that reports would be lost in transmission from the mobile units to the server. This caused the officers to abandon such transmissions and enter their reports via desktops in the agency offices.

In the surveys, the agencies were asked for an approximate amount of time per shift an officer would spend writing reports. It was found that the average amount of time, per officer, was two hours. In the cases where a records management system existed, the agencies advised that a majority of the reports were entered onto a computer format in the field and either transmitted from their mobile computers, or were turned in on a computer storage unit. These agencies advised that such a process allowed an officer to be visible in the field, which increased the amount of patrol hours. These agencies also advised that the procedure for processing of reports by the supervisors and the patrol officers was streamlined since corrections could be made on the computers and the report downloaded onto the system before the end of each shift. This allowed for the report to be accessed quicker by the administration of the agency, as well as the investigations division. The investigations division of these agencies advised that having quick access to the actual report allowed them a better opportunity to clear cases and follow up on good information.

In the surveys, the agencies were asked if they believed having an effective records management system allowed for a more efficient department. One hundred percent of the agencies believed an effective system would increase the service level of a department. Comments given included: easier and faster tracking of cases, better exchange of information between divisions and agencies, access to more timely information, allows for more efficient use of personnel and storage of data, allows for better data analysis, and allows for officers to be informed on the status of cases being investigated

In the aspect of statistics, it was found that the records management systems had programs that allowed any authorized employee to create statistics within minutes. The agencies advised this was extremely helpful in creating statistics for crime prevention techniques, since the system would sort out crimes by severity, location, day, and time. This allowed the supervisors to allocate personnel to the areas where crimes were occurring in greater numbers, which would mostly reduce the crime in those areas. It also allowed for quicker development of statistics that needed to be forwarded to external agencies, such as UCR. In the agencies without a records management system, the above mentioned statistics were developed manually, which was found to take one individual several days to complete.

During the interviews with these agencies, it was found that the records management systems allowed a department to save on monies that were utilized for paper and printing. The agencies advised that administration and investigations personnel were no longer requiring a copy of the report. They advised that most reports were read on the computer screen and copies were only made when they needed to

forward it to an external division, such as a mayor, city council, or district attorney's office. The agencies also advised that storage of all records was reduced from large office space to computer servers which could be kept in an authorized employee's office.

In regards to the computer aided dispatch systems, it was found that they allowed for a more effective way of gathering information for dispatchers, as well as a good way of forwarding information to the officers in the field. The agencies advised that the computer aided dispatch systems were all formatted for dispatchers to enter information that was required for the case. This allowed for fewer incidents where the dispatcher failed to obtain information that would be vital to the officer in the field. It was also found that the forwarding of said information via the computer system, as well as the radio system, allowed the officer to view all of the information prior to arrival on the scene, which prepared the officer for the call. This was found to be a great concern for officer safety. The agencies also advised that the system minimized the amount of unnecessary radio traffic. The system allows for messages and status of the officer at the scene to be transmitted via computer, and accessible to everyone on the system, instead of being transmitted on the radio.

Overall, it was found that the implementation and maintaining of effective computer aided dispatch and records management systems impacts a department in the level of service, financially, and in effective use of personnel. Such impacts create a better department, which ultimately creates a better community.

CONCLUSIONS

This research paper is intended to find if updated and effective technology, RMS and CAD systems, is needed to maximize the agencies potential. This author believes that the implementation and maintenance of effective records management and computer aided dispatch systems would maximize an agencies potential, ultimately creating a better community.

After analyzing the data, it was found that the agencies that have existing records management and/or computer aided dispatch systems were able to operate in a more effective manner. This is in regards to information obtained by a dispatcher and disseminated to the officers in the field. It is also regarding the amount of time an officer spends in the field, instead of in an office entering reports into a computer. It also allows for better management of cases, access to information, storage of information, and creation of statistics for reporting and use for internal dealings.

The issue that can be viewed as a hindrance to this study is the amount of departments surveyed and contacted. The number was just a small portion of departments that served a population of less than 250,000 people. While this can be viewed as a hindrance, the agencies surveyed and contacted were widely spread throughout the state of Texas. It consisted of agencies within urban settings, as well as rural settings. Overall, this author believes that such a variety of agencies still clearly details the issues that all departments face in dealing with records management and computer aided dispatch systems.

Overall, it was found that the implementation and maintaining of effective computer aided dispatch and records management systems impacts a department in

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