Criminal Investigation Case Management

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Abstract

Welcome, to the Twenty-First Century. Computer technology will change how criminal investigations are conducted by law enforcement agencies throughout the world. Unfortunately, many law enforcement agencies have not or have been slow in adapting to the change. Analyst predictions suggest that because of the rapid development in computer technology crime will increase. Because of the development in computer technology manually conducted case management and criminal investigations will have to succumb to change. Law enforcement agencies that do not adapt to change will invite insufficient criminal investigations into their departments. With the capabilities of computer technology today it is imperative that law enforcement agencies develop software to manage and conduct criminal investigations in a more effective and efficient manner. The technology that is ultimately developed must be capable of linking together other inter-investigative units within that department, as well as other outside law enforcement agencies.

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CRIMINAL INVESTIGATIONS: The Problem

Many law enforcement agencies today still use manual investigative techniques to conduct criminal investigations. Manual investigative techniques consist of investigators having to compile many documents by hand, or manually, if you will. The documents are then sorted, base on the relationship to the case, and placed into individual folders. The folders are then placed into an according type file to be managed by an investigator in charge of the investigation. This file will contain the hand written documents of, victim and witness statements, an evidence list of property collected from scene investigations, scene documentation and photographs, a list of suspect(s), and miscellaneous information that may later prove to be pertinent to an investigation.

Several problems can arise from manual investigations. The problems can have a serious effect the outcome of an investigation. Investigations sometimes require long hours of manual labor to investigate a crime. The long hours of manual labor eventually will cause investigators to become fatigue. This fatigue will cause investigators to make mistakes while conducting an investigation, make poor decisions and bad judgments, and increase the collection of insufficient documentation and data compiled from scene investigations. In the article: Managing major case investigations: suggestions for supervisors; "Supervisors should monitor the well-being of their personnel throughout a major case investigation. Accordingly, supervisors should prioritize the investigative steps and ensure that investigators have sufficient opportunities for breaks during the day. If the crime scene requires extensive processing, supervisors should arrange to have the

area sealed and secured until the following day, when rested investigators and technicians can resume where they left off. Exhausted and overly stressed personnel become prone to making mistakes." Sullivan, M. (1998, January).

Poor inadequate filing systems used to store, retrieve, and up-date case information create other problems and subject investigations to an even higher rate of mistakes and errors. Documents are incorrectly filed, misplaced, or even lost. The biggest problem with this type of filing system is that it does not have the ability to, cross-reference cases against other similar cases, cross- reference a suspect(s) and identify them in other cases, or cross- reference collected evidence, such as, weapons, DNA samples, etc. in other cases.

As you can see I have honed in on the word cross-reference. For it is the key to building any criminal investigation case management system. The new technology utilized for criminal investigations in the Twenty-First Century must be able to quickly gather data, computerize the compile data, and cross- reference the data so as to arm the investigators with all known information surrounding the investigation.

It cannot be stressed enough how important it is to conduct a good thorough investigation and do it right the first time. Going back to re-do crime scene investigations to collect missed evidence, and correct mistakes will diminishes the credibility of investigations. Case in point, the JonBenet Ramsey murder, as reported by ABC Good Morning America,

"It has been nearly a year now since the body of 6-year-old JonBenet **Ramsey** was found in the basement of her Boulder, Colorado, home. But instead of yielding answers, the **murder** investigation has only produced more questions. It has been plagued with accusations of shoddy police work and possible conflicts of interest among police and prosecutors."

TOM FOREMAN, ABC News: Good morning, (voice-over) "The police clearly made mistakes, by failing to secure the crime scene, by allowing friends of the family to walk through the house, by letting the dead girl's father, John **Ramsey,** find and move her body."

CRAIG SILVERMAN, Former Denver Prosecutor: "Let's face it, the law enforcement effort thus far has been dysfunctional." **JON-BENET RAMSEY MURDER INVESTIGATION** Relevancy: 100; (ABC Good Morning America) *TOM FOREMAN, JOHN MILLER, CHARLES GIBSON, LISA McREE;* 12-15-1997 Size: 15K Reading Level: 7.

Criminal investigations that peak the interest of the Media and Politicians will also create problems. The constant media scrutiny and political fallout from high publicity investigations place investigators under the microscope. When this happens every move or decision made regarding investigations are questioned or challenged. Again, this evident in the JonBenet Ramsey murder case, as reported by media outlets ABC Good Morning, and All Things Considered (NPR),

TOM FOREMAN: ABC News (voice-over) And former Denver prosecutor Craig Silverman says, "add to that a virtual war between the police chief and the Boulder district attorney over handling of evidence and sharing of evidence with **Ramsey** family attorneys, and the case was doomed."

CRAIG SILVERMAN, Former Denver Prosecutor: "The bickering between law enforcement officers, detectives being removed from the case, accusations flying back and forth..."

TOM FOREMAN, ABC News: "All of that hurts the ability to get a conviction." **JON-BENET RAMSEY MURDER INVESTIGATION** Relevancy: 100; (ABC Good Morning America) *TOM FOREMAN, JOHN MILLER, CHARLES GIBSON, LISA McREE;* 12-15-1997 Size: 15K Reading Level: 7.

Linda Wertheimer, Marcia Brandwynne, HOSTS, All Things Considered (NPR): "In Boulder, Colorado today, the chief of police announced he is replacing one of his top investigators in the murder case of JonBenet Ramsey.

Police Chief Tom Koby also announced he's adding three more investigators to help track down the child's killer."

MARK ROBERTS, NPR REPORTER: "Chief Koby announced today that police Commander Mark Beckner will replace Commander John Eller, who has supervised the murder investigation from the beginning."

ROBERTS: "Koby defended the work of Boulder investigators to find the killer in the JonBenet Ramsey murder case, but he admits mistakes were made."

KOBY: "The officers and detectives who first went to the Ramsey residence responded to the reporting of a kidnapping, and did what was necessary to manage a kidnapping situation. Those involved in this first day also were able to transition the focus, once we understood that we were really dealing with a homicide. It is accurate to say that if we had it to do all over again, we would do it differently." Mark Roberts, Linda Wertheimer, Marcia Brandwynne, *Top Investigator Replaced in Ramsey Case*., All Things Considered (NPR), 10-10-1997.

As one can clearly see in the Ramsey Case pressure from the media caused internal bickering within the Boulder, Colorado Police Department, bitter political accusations between the Prosecutor's Office and the Boulder, Colorado Police Department, and dwindled the publics' confidence in the Boulder, Colorado Police Department ability to solve the case. Unfortunately, the negative media attention of the Ramsey investigation will impact the Boulder, Colorado Police Department for many years to come.

CASE MANAGEMENT: The Problem

The managing of criminal investigations can be a difficult task to achieve. Before the emerging development of technology supervisors would find themselves manually shifting through numerous reports in a case file to ensure that all leads have been followed, attempt to develop a strategic plan for the case, and prepare an up-date on the current status of the case. Managing criminal investigations is a time consuming

procedure, but never the less, a very important part of any investigation as noted by

Captain Michael J. Sullivan, Criminal Investigation Division, Dubuque, Iowa, Police

Department. "Once the initial stages of an investigation have been completed, supervisors

must be prepared to manage the case follow-up. In many ways, successful follow-up

presents a very different set of challenges for which supervisors must be prepared."

Sullivan, M. J. (1998). Managing major case investigations: suggestions for supervisors

[On-line]. FBI Law Enforcement Bulletin, v. 67, (Jan. 1998) p. 1-5.

Another important step in managing criminal investigations is the challenge of

controlling the case file. Because of the complexity of some criminal investigations

supervisors have a myriad of duties to perform. Supervisors must utilize a method to

keep track of completed duties and secure case files under their control. "It is crucial to

the success of any long-term investigation that supervisors establish an effective system

for controlling case files." Sullivan, M. (1998, January). Today software exists to aid

supervisors in managing criminal investigations. Supervisors should make use of

available computer software programs for cataloging and analyzing their case files.

CRIMINAL INVESTIGATION CASE MANAGEMENT: The Need

As a sergeant with the Detroit Police Department, in the City of Detroit,

Michigan, and currently assigned to the Gang Squad Unit, my contact with juveniles,

some as young as six (6) years old, between the ages of 14 and 19 have been numerous

and frightening. Although just a few years ago a six (6) year old juvenile offender would

be considered an exception to the norm, but today that is not the case as evident in the Kayla Rolland's shooting (Mt. Morris Township, MI. February/ 2000). It was through these contacts that I realized that crimes such as Armed Robbery, Sexual Assault, Non-Fatal Shootings, Gang Violence and Homicides committed by juvenile offenders were on the rise. Information garnered from surrounding communities and other states indicated that the City of Detroit is not alone in this new crime surge by juvenile offenders.

Several media outlets have published reports that have noted the expectant increase in crime by juvenile offenders. "An upcoming teenage male population boom in the U. S. will further fuel the current wave of violence. Violence is committed disproportionately by young men, and statistics reveal that the number of teens between 15 and 19 will increase 21 percent by 2005, compared with 12 percent for the total population." Gest, Ted.; Friedman, Dorian R. (1994). The new crime wave [On-line]. U.S. News & World Report, v. 177, 94, 26-8. Predictions by criminologist across the country suggest a new crime wave, "Teen Violence."

Law enforcement agencies are looking for ways to hire more police officers to combat the expectant rise in violent crimes committed by juvenile offenders. There was at one time talk of President Clinton introducing a new law enforcement proposal to the U. S. Congress that would put a police officer in every school in America. It is unknown what happened or the disposition of that proposal but critics have said that, "The proposal is not realistic." The lack of funding from Federal, State, and Local governments has made the task of hiring more police officers an even more difficult one to achieve.

While law enforcement agencies continue to fight the difficult battle of finding funds to hire more police officers, agencies must continue to strive for ways to utilize technology that will provide relief in the burden of labor intense manual criminal investigations and case management type of systems.

In Bangkok, Thailand the Metropolitan Police Bureau reported in February, 1998 that, "By next year, Thai police will become familiar with new technology. High technology communication equipment will play an important role in their working lives."

"He added that the police plan to link local information from 69 police stations in Bangkok as well as information regarding criminal methods, arrest warrants, crime records, released inmates and criminal cases, with the main C3I (Command, Control, Communication and Information) system." Author not available, *Thai police go for high technology*. The Nation (Thailand), 01-27-1998 [On-line]. Internet. January 27, 1998. Available:http//www.elibrary.com WORLDSOURCES ONLINE, INC.

The spread of gang violence perpetrated by juvenile offenders across America has also heightened the need to use new technology in an effort to track gang-related information, which is becoming increasingly more important as gang activity spreads. In the State of Georgia, Judge Hilton Fuller, a DeKalb County Superior Court judge and chairman of the Georgia Courts Automation Commission provided funding for a new online database project. The electronic data-sharing project was designed by Senior Research Scientist Lisa Silla and her team in the information Technology and Telecommunication Lab at the Georgia Tech Research Institute, with the ability to share

information with several Georgia counties and states, superior and juvenile courts.

Becker, T. J. (1998). Technology boosts crime fighting [On-line]. American City & County, v. 113 no9, p. 10.

Lastly, the need to develop technology to deal with crime in a more effective and efficient way is clear for law enforcement agencies. If the prediction of " a new crime wave," especially among young adult males, hold true then the hiring of more police officers will do little in the effort to continue to reduce crime.

CRIMINAL INVESTIGATION CASE MANAGEMENT: The Development

The development of technology in Law Enforcement is nothing new. Science and technology are becoming vital parts of criminal investigations in ways other than DNA technology. Witkin, G. (1994). High-tech crime solving [On-line]. U.S. News & World Report. V. 117, (July 11 '94) p. 30. In the mid-1980s the Federal Bureau of Investigation introduced the Automated Fingerprint Identification Systems (AFIS). The AFIS system was developed to provided computerized storage and rapid matching of new prints against a police departments or a state's entire inventory, perhaps millions of fingerprint records. Over the last ten to fifteen years and leading into the new millennium other technology such as, using computerized composite imaging to replace hand drawn composites, the installation of video cameras in police cars to video tape traffic stops, and the increasing use of digital cameras for the purpose of storing and building databases of photographs.

Developing an efficient an effective criminal investigation and case management system to produce better police reporting, the storing of data, and to assist in planning strategies for law enforcement agencies was once though to be a monumental task. This system should consist of a database with the ability to provide investigators with detailed information on case investigations, current history and data on suspect(s), and case dispositions and status. Law enforcement agencies must include technology that would also allow computer systems to network with other agencies to quickly disseminate information to other agencies in an effort to thwart mobile offenders that commit crimes in different areas.

The linking of this type of system would allow access to other law enforcement agencies and provide them with the same information. This information could be used to possibly assist in establishing a subject(s) modus operandi, assist other cities or state with their investigations by supplying critical up to date data, and to conduct joint investigations when warranted.

In 1994, the City of Atlanta, Georgia "devised a plan to create and install a computer system that would link 11 city departments and make tasks that once generated reams of hand-written documents fully computerized." "It was a major, major undertaking," said John Cuffie, director of the Bureau of Management Information Systems, the city department that coordinated installation of the Criminal Justice Information System. (The Atlanta Journal and Constitution, 08-02-98, pp C01)

In summarizing the article in the Atlanta Journal and Constitution, the Criminal Justice Information System, would electronically link the criminal justice system with the Atlanta Police Department, electronically store and instantly retrieve data of arrests records, jail bookings, and court dockets. The system would keep a lasting record of crimes committed and criminals arrested in Atlanta. (The Atlanta Journal and Constitution, 08-02-98, pp C01)

As with any major change in operating procedures, the computer system (CJIS) utilized by the Atlanta Police Department did not go without a glitch. Crime reports, a critical component of the system could not be integrated. Computerized crime reports for submission to State and Federal authorities had to be hand-corrected by temporary workers for more than a year. Utilizing technology to develop a computerize system to conduct criminal investigations can be a mind-boggling experience, as evident by the Atlanta Police Department. Nevertheless, the Atlanta, PD continued to work through the problems with their computer system and looking forward to expanding its capabilities.

The development of the case management computerize system should be constructed to reflect a mirror image of the criminal investigation aspect of the system. Because supervisors are responsible for the management of criminal investigations the construction of the system should include additional technology exclusively for supervisors to perform their managerial duties. Supervisors must be able to access the entire case file in order to perform the multiple tasks required to effectively manage criminal investigations. Captain Sullivan, Dubuque, Iowa, PD, "suggests that in helping

to manage the follow-up case investigation, supervisors should control files, take care of the details, cooperate with other agencies, keep investigations focused, and commend hard work. He contends that by adopting fairly simple procedures, supervisors can meet the challenges posed by often complex investigations," Sullivan, M. (1998, January).

CRIMINAL INVESTIGATION CASE MANAGEMENT: The Technology

During the last ten years technology has changed the way Americans live throughout the world. Law enforcement agencies are not immune to the changing ways of technology. To support this statement one only has to take a look at the phenomenal success of technology stocks during the same ten-year period of time. The trading of technology stocks on the NASDAQ has soared to unbelievable highs also during this same ten-year period of time. By now you are probably thinking, "What does trading technology stocks have to do with law enforcement? Well, I'll tell you, if the trading of stocks in technology has steadily increased during this same period of time then companies that develop technology have steadily increased as well. In a nutshell, technology exists to assist law enforcement agencies in adapting to the changing ways of conducting efficient and effective criminal investigations and case management.

One of the first companies that really struck my interest and is probably the reason I choose to do my research project on this subject is a company called Allstar Knowledge Engineering. The company specializes in criminal investigations and case

management software. I have had personal contact with the company and met several of their sales representatives as well as meeting the president of the company. I have also been fortunate enough to represent the Detroit Police Department, as one of several law enforcement agencies that were invited by the company in November of 1999 in Baton Rouge, Louisiana, where we attended a presentation and participated in a hands-on demonstration of a modified criminal investigation/case management software product, formerly known as the Cane system.

The Cane system was designed to adhere to federal guidelines (Omnibus Crime and Safe Street Act Section 28CFR23), which details the laws pertaining to the gathering, maintenance, dissemination and purging of intelligence information. The company modified the existing Cane software and re-named it Allstar's Intelligence Management Systems or simply just "AIMS."

"**A**llstar's **I**ntelligence **M**anagement **S**ystems provide inter-department and outside agency information sharing that is strictly controlled by the agency/department that enters the information. The multi tier access allows law enforcement officers to determine what and how much of their information is accessible to others outside the department." Allstar Knowledge Engineering [On-line]. Internet. August 18, 1999. Available: http: //www.allstarknowledge.com

It was through the hands-on participation of the AIMS software that I learned that the need to develop technology to assist law enforcement agencies in criminal investigations and case management was imperative. During the demonstration the

company encouraged criticism of the software so that they could identify problems and further modify the software to benefit law enforcement agencies.

There are three major areas that the AIMS's software addresses, Intelligence Gathering and Information Management, Investigation, and Unit Management.

- Improve Unit efficiency by minimizing manual effort and streamlining the flow of intelligence and case information. This can allow the unit to work a greater number of cases without corresponding increase in manpower.

- Upgrade the quality of, control over and access to both intelligence and case related information. This should not only increase the effectiveness of the unit but also allow for improvements in the arrest to conviction ratios by managing the information vital to the judicial process (i.e. chain of evidence, chain of events and chain of information).

- Increase the amount of forfeiture/condemnation revenues as a result of both of the above.

- Improve management control over the unit by providing expense control and manpower analysis systems as well as a variety of qualitative and quantitative activity reports (e.g. Manpower Reports, Drug Reports, UCR Summaries, Overtime Usage Reports, etc.). Allstar Knowledge Engineering [On-line]. Internet. August 18, 1999. Available: http: //www.allstarknowledge.com.

Upon conclusion of the Allstar Knowledge Engineering's software presentation and demonstration I was very impressed with the ability of the AIMS's software. The software was able to provide good detailed information on criminal investigations, structured case management support, and agency information sharing/linking capability.

Through web searching on the Internet I was able to locate several technology companies that produce criminal investigations and case management software. I narrowed my choices down to just one other company that peaked my interest and seemed to be case-on-point in terms of this research paper. I will not spend a lot of time writing about the company but I will briefly discuss the company's mission statement and the potential of the software that the company produces.

The Public Safety Management Company is the second company to peak my interest with their law enforcement software product. My only experience with their company is from what I gathered through the use of the Internet. Researching the history, mission statement, and software products of the company revealed that:

"**PSM**, formerly known as "CHIEFS", has been providing software and system solutions to law enforcement, fire and EMS organizations since 1985. **PSM** developed two prior generation public safety application products, which were successfully installed and supported in well over 500 agencies throughout the United States and Canada. Our staff boasts decades of law enforcement command and operational experience to compliment our MIS management, training and development expertise. **PSM** is a proven

experienced public safety solution provider with over 15 years of experience acquired from implementing and supporting over 500 public safety customers."

"**Mission:**

- To develop, market and support the finest most advanced Public Safety application products in the industry.

- To provide the finest product and system support in the industry.

- To provide our customers with invaluable system design, consulting and project management expertise derived from years of operational experience in the field, and from implementing state of the art systems at law enforcement and Fire Service organizations all over the United States and Canada.

- To always provide our customers with leading edge, state of the art technology and thereby protect their investment in technology.

- To establish and maintain long-term relationships of mutual trust with our customers and business partners based on our record of meeting our commitments in a timely and accurate manner.

Technologies to Better Protect and Serve."

"**Law Enforcement Records System, LERS:**

The **PSM 2000 *Plus*!** Law Enforcement Records System (LERS) is a Windows 98 / NT 4.0 end-user, client/server design, year 2000 compliant, extremely comprehensive, state-of-the-art Law Enforcement Records product. LERS, and all other **PSM 2000 *Plus*!** Products, utilizes Microsoft SQL Server as a database engine, and include all of the following options as part of the core Records Management System:

- Personnel Records & Training

- Case Reporting

- Adult Arrest/Booking

- Juvenile Offender

- Field Contact

- Property and Evidence Tracking

- Towed Vehicle

- Citation Tracking

- Traffic Crash Report

- Wants/Warrants

- Intelligence

- Case Management

- Weapons Registration

Sample Screen Shots of LERS

- Bicycle Registration

- Animal Registration

UCR Reporting is completed as part of the Police Case Report. There is no redundant entry of data in the system and, because of our unique design, an officer or supervisor can view an entire report at a glance, without cumbersome menus or password screens, or other unnecessary navigation routines.

The system was developed from the ground up by PSM Staff. It was not developed using a "code generator" tool, but rather in a cohesive, unified, relational database design with full consideration for the access and retrieval needs of the law enforcement professional." ©1998 Public Safety Management [On-line]. Internet. Available: http: //www.psm2000.com/inf.asp

In concluding my review of the Public Safety Management Company, one can easily see that the company's, three (3) core objectives, which are, the company's history, the company's mission statement, and the company's law enforcement software products, are clearly focused on providing law enforcement agencies with the most user friendly advanced technology available today.

CRIMINAL INVESTIGATION CASE MANAGEMENT: The Conclusion

In concluding this paper and providing the researched information on law enforcement technology I find that it is clear that law enforcement agencies must develop a more efficient and effective system to combat crime. If the predictions of "A new crime wave," made by criminologist across the country materialize, then juvenile offenders and young adults are expected to be the perpetrators with the larges involvement. "Young black and Hispanic men, those with the highest violent crime rates, will increase 24 percent and 47 percent respectively." Gest, Ted.; Friedman, Dorian R. (1994). The new crime wave [On-line]. U.S. News & World Report, v. 177, 94, 26-8.

Lastly, in writing this paper I choose this topic to showcase the current problems that law enforcement agencies face today. Ineffective documentation of criminal cases, constant media scrutiny, and the political and public out-cry for justice are the biggest problems that investigators have to deal with today. Through this research paper I have attempted to explain the problems of criminal investigations and case management from the beginning, to the need for improving, to developing an effective system, and to the availability of law enforcement software. It is my hope that this paper might help other law enforcement agencies in accepting the challenges of technology relating to criminal investigations and case management systems.

References

Sullivan, M. J. (1998). Managing major case investigations: suggestions for supervisors [On-line]. FBI Law Enforcement Bulletin, v. 67, (Jan. 1998) p. 1-5.

JON-BENET RAMSEY MURDER INVESTIGATION Relevancy: 100; (

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Replaced in Ramsey Case., All Things Considered (NPR), 10-10-1997.

Gest, Ted.; Friedman, Dorian R. (1994). The new crime wave [On-line]. U.S.

News & World Report, v. 177, 94, 26-8.

Author not available, *Thai police go for high technology*. The Nation (Thailand),

01-27-1998 [On-line]. Internet. January 27, 1998. Available:http//www.elibrary.com

WORLDSOURCES ONLINE, INC.

Becker, T. J. (1998). Technology boosts crime fighting [On-line]. American

City & County, v. 113 no9, p. 10.

Witkin, G. (1994). High-tech crime solving [On-line]. U.S. News & World

Report. V. 117, (July 11 '94) p. 30.

Hairston, J. (1998, August 02) Atlanta police technology falls short: Task that

should be automated are still done by hand. The Atlanta Journal and Constitution, , pp

C01

Allstar Knowledge Engineering [On-line]. Internet. August 18, 1999. Available:

http: //www.allstarknowledge.com

©1998 Public Safety Management [On-line]. Internet. Available: http:

//www.psm2000.com/inf.asp