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Updating the Alaska Public Safety Information Network

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An Administrative Research Paper
Submitted in Partial Fulfillment
Required for Graduation from the
Leadership Command College

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October 2006

ABSTRACT

The Alaska Public Safety Information Network (APSIN) has been in existence for over 20 years of service with technology growing at such an incredible rate it is hard to believe a system this old has kept up with the current needs of the criminal justice system today. The question is, is Alaska doing anything to update this system and is an updated system necessary? The problem here (either real or perceived as real) questions whether or not the state of Alaska is interested in updating APSIN or adopting a new criminal justice information system.

The author reviewed various literature regarding the needs of a new criminal justice information network and interviewed Lance Ahern who is in charge of the redesign of APSIN. The author also distributed a survey to classmates from various Texas law enforcement agencies. After researching the topic, the author came to realize that the new APSIN project is well on the way to becoming a reality and also found that Alaska has been updating the old APSIN throughout the years. However, this researcher believes that Alaska is in need of a brand new criminal justice information system. The state has taken on a huge project, having currently completed the design phase of this project, and it is now up to Alaska to fund this new criminal justice information plan in order to make it available to Alaskans.

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INTRODUCTION

In an era of windows operating systems and Macintosh computers, the public has become accustomed to the every day simplicity of using their home computers. For some who are new to law enforcement, a world without these simple operating systems is thinly seldom known. However, for some veterans a more complex computer system is something dealt with on a day-to-day basis. For the new person entering into law enforcement, it may be a shock when first exposed to an old operating system like the Alaska Public Safety Information Network (APSIN).

In the present age of new and easier operating systems, a lot of states (including Alaska) are working on upgrading their criminal justice information systems. Alaskan dispatchers (in most communities) and Alaskan State Troopers are still having to navigate a computer database system through function keys and formatting queries in a mnemonic-based transaction format. This type of system takes time to operate, time which is not usually a luxury for a police officer in the field dealing with subjects they are unfamiliar with.

The APSIN system, however archaic, has been a reliable and proven system since the early 1980's. The APSIN database stores more than 12 million records and its computer programs support over one-hundred separate on-line functions to include a variety of batch processing. It works reliably 24 hours a day and is used by over 2,500 authorized individuals from the federal, state and local agencies on about 850 terminals throughout the state of Alaska. On an average day, APSIN is used over 10,000 times in support of the law enforcement mission. ("State of Alaska FY2004 Governor's Operating Budget", 2006).

Over the past several years, more and more is being asked of the APSIN system from state and federal mandates. In this day and age, we also find that recorded statistics are becoming increasingly more important in order to secure grants, funding and local support. Unfortunately, APSIN does not handle this job very well. The purpose of this research is to outline the problems with APSIN in order to demonstrate the need for a better system in order to improve law enforcement in Alaska and determine whether or not APSIN needs an updated system today.

The author intends to use interviews with APSIN personnel to determine what the status is on a long promised updated APSIN system and evaluate what it will look like to the user. A survey of the author's classmates (who are Texas law enforcement officers) will be used to find out how long their average waiting time for information is and to establish whether or not these officers feel a long wait is a possible officer safety issue. The main source of information for this research paper will come from varies studies written for the state of Alaska on the necessity of an updated APSIN system, further considering how it should be implemented. The author anticipates discovering that the state of Alaska is not moving forward with a new APSIN due to financial considerations over the value of an updated system. Another explanation, however, may be that the complexity of such a change may also be an issue for consideration.

Whatever the reason, it is the author's belief that an updated system could greatly benefit the law enforcement community by: enhancing an already good system, making it easier to utilize for the purpose of fighting crime, and gathering information on how to better distribute, utilize and gain more resources.

REVIEW OF LITERATURE

Prior to the mid-1980's the original criminal justice information system for Alaska was the Alaska Justice Information System (AJIS). It is unclear when the AJIS system was brought on line but it served the state well during the 1970's. Being that AJIS was the original computerized justice information system for Alaska, it served that purpose surprisingly well considering the antiquated state of computers and telecommunications technology at the time. Even considering all of the limitations that faced AJIS, the system was able to provide a solid service to most of the law enforcement and other criminal justice agencies in the state. AJIS was able to reach places like Barrow in the far North to Nome in the far West, and Kodiak, Ketchikan and Sitka, as well as the larger population areas such as Fairbanks and Anchorage. However, late in the 1970's as the Trans Alaska Pipeline and North Slope oil fields were in full swing, it also brought with it the population, jobs and unfortunately the criminals to Alaska, which had a major impact on the entire criminal justice system in Alaska. It was now clear that AJIS would need to be replaced. (History of APSIN, 2006).

APSIN was planned, designed and built in the early 1980's and brought on line during the first half of 1984. (A New APSIN, 2006). The APSIN system is a legacy mainframe base, using a software AG database product called ADABAS. (History of APSIN, 2006). The APSIN system was designed in modules with the "core" module available when the system went online. The later planned and developed modules were implemented as funding and staff allowed. Some planned modules would never see the light of day. (A New APSIN, 2006). In the end the system was a centralized system that was person-centric with various other related pieces of information indexed

to the person. As it turned out, this design approach turned out to be ahead of its time and has since been adopted by other jurisdictions as they attempt to improve their previous disjointed databases. Telecommunication was originally accomplished over closed system network architecture (SNA), which had to be a hardwired dedicated line to any location where APSIN was to reach. In just the last few years, functionality has been added to allow APSIN sessions to be delivered over TCP/IP networks. (History of APSIN, 2006). This is just one example of how APSIN has evolved and been modified and updated since it's inception in 1984. Even now, APSIN is going through significant changes to meet ever-changing requirements and needs. These changes include what is stored, how it is stored and how it moves from one place to another. Just a few of the initiatives which have impacted APSIN has been: the Violence Against Women Act, the concealed handgun laws, the Jacob Wettering Crimes against Children and Sexually Violent Offender Registration Act, as well as the state sex offender registration law, the National Crime Information Center (NCIC) 2000 and others. (A New APSIN, 2006). Over the years, many of these additional functions have been added directly to the core system itself or they have been "hung" off APSIN in such a manner as to utilize more modern or flexible technologies to leverage the data that resides in APSIN. APSIN has done an excellent job of keeping up with the changing needs and with the new state and federal mandates concerning the types and methods of information that must be delivered. Much of the ability of APSIN to keep up with all of this is due to the excellent, original design concept. However, once again the state of Alaska has found itself at a point where the demands of the criminal justice system as well as ever-increasing state and federal requirements make it necessary to design and build an entirely new system.

The final chapter in the History of APSIN is now evident due to the redesign project started in 2001, which will replace APSIN as we know it today. (History of APSIN, 2006).

There are many issues relevant to why Alaska's criminal justice information network may need to be updated. However, only a few issues from the user's perspective will be highlighted in this research. One of the main issues may concern the idea that the human interface for today's software technology is not user-friendly and does not match the user communities work process well. This was noted in the surveys done by MTG Management Consultants, describing APSIN as being less than user-friendly. Specifically, these issues involve the effort required to navigate through menus and screens in order to retrieve information. (APSIN Summary Needs Assessment, 2000). As mentioned before, the APSIN system also links Alaska's criminal justice information with National Crime Information Center (NCIC) and National Law Enforcement Telecommunications System (NLETS). Once the user enters the screens for both NCIC and NLETS in order to request information from the other databases, they have to enter a request in a mnemonic-based transaction format. What this means is that fields within data blocks are defined by three-character identifiers, followed by a slash, e.g., NAM/john,doe.DOB/10221974.SEX/m. The data for each field immediately following the slash is then followed or terminated by a period. This type of request has to be done (in this specific format and within a certain time) in order to successfully send requests for information to a national database. (APSIN Interface Transaction Specifications, 1997). This points out the excessive steps needed to look

up a person or suspect's information in the national databases, which tends to indicate the non-user-friendliness of the APSIN system at the present time.

Another important issue surmises that APSIN does not easily support statistical analysis. Lance Ahern (the manager for data processing with the Alaska Department of Public Safety and the manager in charge of integrating a new Criminal Justice System to replace APSIN) told the author that statistical information was difficult for managers to access because of the programming required in order to access this information. The current APSIN application and databases do not adequately support statistical analysis. APSIN does not have a database management system (DBMS) that readily enables such queries. APSIN, in short, is not set up to do analytical processes online. What this means is if a police chief in any community in Alaska wants to know how many sexual assaults were prosecuted in his area and what the results were, he would not be able to do it by inputting criteria into APSIN and have it generate the data. If the chief of this community wanted, he could get in touch with an APSIN programmer and request this, in which case a programmer would set up a program for APSIN to access this information (L. Ahern, personal communication, August 15, 2005).

Other statistical information obtained from APSIN came in the form of Uniform Crime Reporting (UCR). However, at this time this UCR information is collected manually by personnel all over the state, a new system as planned would be a by-product of the case management which will do this task automatically system. It also would allow for the State of Alaska to come up to date with the rest of the country and start reporting in National Incident-Based Reporting System (NIBRS). Not only would

this bring APSIN up-to-date, it would bring it into compliance with Statute and Regulations regarding the collection of incident and arrest data.

This brings to the point the fact that the current APSIN system is not being in compliance with current federal mandates. According to Ahern, APSIN is currently not up-to-date with federal requirements and basically states that at this time there are certain security issues being addressed. The author, who is an APSIN user, noticed that in order to access APSIN currently, an APSIN user has to enter the system through two different user identification and password screens. Additionally, once the user is in the system, he or she has to have a password to access each and every screen in the system. Subsequently, two of these passwords change every forty-five days. Ahern did not go into specifics as to the federal requirements for security issues with APSIN, but did say that the new system will have less redundant security features than the current APSIN system (L. Ahern, personal communication, August 15, 2005).

Alaska is a unique state with an immense size of nearly 590,000 square miles only has a population of less than one-million residence, meaning that telecommunications is very expensive for the state and its residence. This less-than-ideal situation also means that technology in the far reaches of Alaska's rural areas do not have an advanced telecommunications system like the rest of the United States. Because of this, Alaska's strategy has been to reduce the demand, where possible, by using applications which send less data and bandwidth across the lines. However, while telecommunications resources are very expensive in Alaska, it is worthwhile to expand the current facilities. This could include opening new links to remote communities and extending current service levels as much as 20 times what is currently

available. This level has provided significant benefits to criminal justice agencies in the lower 48 states the payoff without a doubt would be even higher in Alaska, where geography makes communication so costly and slow. (Strategic Plan For Alaska's Criminal Justice Information System Integration, 1999).

Recently, the State of Alaska Department of Public Safety sent out a Digital Video Disk (DVD) on the redesign project of APSIN.   Bill Tandeske, the Commissioner of the Department of Public Safety (DPS), noted on this DVD that the state has moved forward on the new criminal justice system and that federal dollars had been secured for the project. However, he is asking for the state legislature to continue funding the project, which has already spent approximately 8 to 14 millions dollars on the design of the new system.   Also, on this DVD, Lance Ahern stated that the new system is operational as a test bed in a couple of communities and it should be up and running for the rest of the communities in about two years. Again on this DVD, Alaska State Trooper (AST), Colonel Julia Grimes explains the changing world putting new demands on APSIN. On this DVD, Katie Tepas, the Domestic Violence (D.V.) Training Program Coordinator with DPS, explains the importance for officer's to have easy access to suspects of D.V. crimes in order to facilitate the mandatory arrest requirements for officers. Again from the interview on this DVD Lance Ahern's explanation on how the new criminal justice system is already superior to APSIN when it comes to the user-friendliness of the new system in the collection of statistical data and the ability to easily search the system. The author surmised that the most important aspect of the new system came from this same DVD when AST Communications Center Supervisor,

Tammy Goggia, stated that a new system would enhance officer and trooper safety in the ability to quickly get the information to those officer's and trooper's in the field.

METHODOLOGY

Does the Alaska Public Safety Information Network need to be updated today? The author believes that for officer safety alone, the answer is yes. The author will use several sources of material constructed by the MTG Management Consultants (hired by the State of Alaska) to study the need for a New APSIN system as well as information from the Criminal Justice Information Advisory Board. The author will interview Lance Ahern, the manager in charge of the APSIN redesign project, and also speak with other people involved with APSIN with more general computer knowledge. The author will also survey 22 fellow classmates who rely on access to quick information in order to safely perform their jobs. The measurement the author proposes will consider whether or not access to quick and reliable information through a criminal justice information system could pose a significant officer safety risk.

From researching source material and conducting an interview with Lance Ahern, the author will be examining areas hindering the process of redesigning the Alaska criminal justice information system. Through the survey and other research, the author will try to determine whether or not the current system is antiquated enough to justify (for officer safety purposes) that a new criminal justice system is warranted. Finally, through discussions with other professionals in the field of computers and users of the APSIN system, the researcher hopes to determine if Alaska is due for this new and up-to-date criminal justice computer information system.

FINDINGS

In 1984 a new criminal justice information system called APSIN was unveiled. Now in 2006 we are anxiously waiting for a new criminal justice information system to replace APSIN. Is It really is time for a new criminal justice information system. It is surmised by the author that the hold up in replacing the current system known as APSIN maybe money, or the technical difficulties of such an endeavor, and most likely both.

For the researcher, the driving force behind a desire for a new criminal justice information system to replace APSIN is primarily officer safety. As officers do their jobs in today's world they expect fast and reliable information primarily because their safety may rely on it. Criminals come from all sectors of our demographic society and therefore cannot be visually picked out of a crowd of people. An officer is trained not to access a potentially dangerous situation by the age, race, sex, status, education level, or appearance of a suspect. Without infringing on a subject's or suspect's rights, the best defense for law enforcement officers today is quick and reliable information. In order to determine if officer safety is a sound reason for wanting an up-to-date criminal justice information system, a survey was conducted, surveying 21 Texas law enforcement officers selected for their years of experience and knowledge of law enforcement. The survey covered a large range of department sizes with the largest number of employed personnel being 50-200. Of the 22 officers given the survey, 100 percent answered this survey. This surveyed showed that 100 percent of the surveyed participants believed that waiting an extended period of time to receive information on subjects in the field is an officer safety concern. Most of these officers cited that in their

experience, the longer a subject waits and has knowledge that they are a wanted person, the more nervous and agitated, the individuals become.

Officer safety is obviously a big issue for the officer, but there is also a bigger picture here and that is the safety of the public. For instance when the children's protective services are investigating possible child abuse, it would be beneficial for CPS to have information on the subjects they are investigating. When the prosecutor is working a deal on a case it would behoove them to have all of the past criminal history of the defendant's they are prosecuting. The Criminal Justice Information Advisory Board Chair (1998) stated, "Lives are at stake, and it is not acceptable to lose a life for lack of ability to exchange data quickly and efficiently" (Strategic Plan For Alaska's Criminal Justice Information System Integration, 1999, p. 16). This advisory board was able to see that without a top-of-the-line criminal justice information system, the law enforcement profession cannot efficiently keep up with information on criminals and innocent people can and do die because of this.

The Strategic Plan for Alaska's Criminal Justice Information System Integration explains the problems with Alaska's Telecommunications System and it's 6 to 8 times higher cost than in the lower 48 states. The solution to this seems as simple as just opening new telecommunications links to remote communities and extending current service to up to 20 times higher than what is currently available. Unfortunately, the cost of such an endeavor is a staggering twenty-six-million dollars plus.

Will Judy, a private computer consultant for the city of Skagway, talked about the implications of having a system which takes a lot of bandwidth and data and tries to push it through telecommunications lines that are too inadequate to handle the flow of

bandwidth needed to send the data over the phone lines. The best way to describe this is would be to try and download a short movie via the internet through a dialup connection and one might quickly come to appreciate what the State of Alaska was able to accomplish with the current APSIN system. Currently, APSIN is able to get vital information to agencies all over the state in just seconds, and this is something that will be just as important in a new criminal information system (W. Judy, personal communication, September 19, 2005).

Judy addressed another issue not considered or even written about in the studies the state of Alaska has done concerning a new criminal justice information system. In an effort to make a new operating system user-friendly are we sacrificing efficiency. Anyone who has used an old system of F-key functions knows after you learn what each F-key functions it becomes easy to move about through a system. In fact the APSIN system has a menu for all F-key functions on each page of the system. Using a mouse on the other hand does not allow for this easy manipulation through a system and in all actuality can make it a system somewhat cumbersome. Ahern mentions his belief that with the mouse, drop down windows and overall user-friendliness of a new system, will out way the efficiency of the old system. However, Ahern admitted he is not an APSIN user, so in this case it maybe up to current users to evaluate the best system for efficiency sake. It does need to be pointed out that APSIN although difficult to navigate due to the inability to move backward in the system it still is many ways is a simple and easy system to use. The difficulty comes only when running out of state driver's license and suspects in NLETS and NCIC. It's possible this could be remedied with programming.

Living in a day where five years of technological advancements are equal to or greater than the last one-hundred years of advancement means that in order to get funding to buy and implement these tools, there has to be evidence to suggest a department or state needs these tools. One way to do this is through analysis of statistics. Many of these statistics need to be easily accessible by all levels of management, including individual local law enforcement entities. Ahern says the new online reporting capabilities of the new criminal justice information system is very user-friendly and allows commanders and management to drill down and dig into the data and find what they need and the system does it very intuitively.

CONCLUSION

The State of Alaska has waited for over 20 years to update their criminal justice information system. In this day and age information is imperative in order to keep up with criminal trends, criminal activity, the safety of the public and the safety of the officers in the field. The author concludes that it is time for APSIN to be replaced with a new criminal justice system. The research findings also suggest that APSIN is due to be replaced and (as stated in this report) Alaska is replacing the APSIN with a new system.

Department of Public Safety Commissioner, Ted Tandeske, stated in his presentation DVD on the new APSIN system that the redesign effort of APSIN is now well underway with the design complete and at this time the testing and integration of the new system is taking place. A full working model should be ready in about two years. Tandeske says federal monies have been secured to complete the project but eluded to the fact that continued state funding is still needed.

Furthermore Ahern suggests that at the moment the state seems dedicated to seeing this project through now. Interestingly, even Lance eluded to Alaska's failure to fund this project all the way through the process, which may explain why a project that was projected to be completed in 2004 still is not done and won't be done till possible 2008.

APSIN has a lot of information in it which was written in older programming languages such as NATURAL/COBAL and ADABAS DBMS. It will be up to the technicians who are currently working on the system to transfer this information to the new programming languages of today's workplace. However, with these two issues, the complexity of the exchange of information from old to new and the overwhelming cost of the project, it is understandable why the new criminal justice information system is not currently up and running.

Ahern says that the new system, designed by SAIC or Science Applications International Corporation, is up and running, and being tested today. The system is the SAIC ALIAS system or Automated Law Enforcement Information Access System. This system is currently being used by other states like Oregon and Washington (L. Ahern, personal communication, August 15, 2005).

The research clearly demonstrates that there is a need for a new criminal justice information system in Alaska. Although there are some hurdles for Alaska to take before the system becomes fully functional, it will, in the end, by delivering easy-to-access, quick information, with up-to-date technology will help keep track of and when necessary, arrest perpetrators of crimes.

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