

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

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**Automatic Vehicle Location Systems:  
Benefit or “Big Brother”?**

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

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September 2009**

## **ABSTRACT**

Automatic Vehicle Location (AVL) systems and their effects on law enforcement agencies is relevant to contemporary law enforcement because AVL systems are increasing in popularity and deployments. Due to this increasing popularity and deployment, it is relevant to examine what AVL's effects, both positive and negative, have been on law enforcement agencies that have deployed them.

There are several purposes of this research. First, it is to examine what AVL is and how it functions in a law enforcement capacity. Second, it is to discover what the positive and negative effects are of AVL. Finally, it is to draw recommendations and conclusions based on the totality of this research. The method of inquiry used by the researcher included a review of books, articles, reports, Internet sites, journals, and a survey of 50 law enforcement agencies inquiring about departmental issues, attitudes, and feelings on AVL for both the agency and their officers.

The researcher discovered that in agencies with an AVL system, the positive effects of AVL were more readily identified with than the negative effects. In addition, most agencies did see an initial resistance by their officers, which was overcome largely due to the effects of time and appropriate supervisory use. The researcher also discovered that in agencies without an AVL system, the positive effects of AVL were also more readily identified with than the negative effects; almost all believed their officers would either immediately or eventually accept AVL, and the overriding factor preventing AVL implementation was cost.

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## INTRODUCTION

For law enforcement officers, there can be no more frightening scenario than hearing a fellow officer's frantic voice on the police radio needing immediate help, and no one knows the officer's location. Dispatch shows the officer to be in-service, the officer is no longer responding on the radio, and the officer cannot be found at the last known location. Thus, no one knows what has happened to this officer, or what needs to be done to find this officer immediately and probably save this officer's life. This scenario is one that is possible at every law enforcement agency, making it a scenario that all law enforcement agencies need to anticipate and plan for before it becomes a reality.

The issue to be researched in this paper considers if Automatic Vehicle Location (AVL) systems can help prevent this scenario and, either in reality or in theory, positively affect officer safety. Part of this issue is the possibility of additional positive effects, some being better supervisory oversight, better dispatching techniques, and better response times. Another part of this issue is the possibility of reciprocal negative effects, one being an initial decrease in officer morale due to perceived increased and unwarranted supervisory regulation. Other parts may be the possibility of other effects, both positive and negative, that may be discovered during the research.

The relevance of AVL systems and their positive and negative effects on law enforcement agencies is because AVL systems are increasing in popularity and deployments. Due to this increasing popularity and deployment, it is relevant to examine what AVL's effects, both positive and negative, have been on law enforcement agencies that have deployed them. This is also relevant to law enforcement agencies that have

yet to deploy AVL systems because it may influence them to deploy, or not to deploy, an AVL system after studying both the positive and negative effects.

Thus, the purposes of this research are broken into three main areas. First, this research is meant to ascertain what AVL is and what its functions are, specifically in a law enforcement capacity. Second, this research attempts to discover both the positive and negative effects of AVL on law enforcement agencies and their personnel. Finally, this research is meant to draw recommendations for all law enforcement agencies regarding these discoveries and make conclusions that are based on this research. Overall, these purposes should lead to a better picture of AVL and its effects on law enforcement agencies. Specifically, the main research question to be examined focuses on whether or not the main possible positive effects of AVL (officer safety, supervisory oversight, dispatching techniques, and response times) eventually overcome the main possible negative effect of AVL (an initial decrease in officer morale due to officer perception of increased supervisory regulation). This research question will also examine if the reciprocal effect is eventual acceptance of AVL by officers that may or may not have displayed initial resistance to the system.

The intended methods of inquiry include several resource materials, which are comprised of reviews of books, articles, reports, Internet sites, and journals. The intended methods are to use a survey for 50 law enforcement agencies, asking about departmental issues, attitudes, and feelings on AVL for both the agency as a whole and their officers. The intended methods also involve personal interviews of persons with direct knowledge of, or specific instances involving, AVL systems and their functioning. The anticipated findings of the research are that law enforcement agencies that have

deployed AVL systems find these systems positively affect officer safety, supervisory oversight, dispatching techniques, and officer response times. In addition, despite an initial resistance by officers and negative effect on morale, it is anticipated that officers in these law enforcement agencies eventually accept the AVL system and its positive effects. It is also anticipated that this eventual officer acceptance will be furthered by the effects of time, policy, and perceived appropriate supervisory use. Other anticipated findings are additional positive and negative effects of AVL, perceived positive and negative effects by law enforcement agencies that have not deployed an AVL system, and reasons why some law enforcement agencies have not yet implemented AVL. Finally, it is anticipated that law enforcement agencies without an AVL system view them as overall positive and anticipate deploying an AVL system at some point.

This researcher believes the field of law enforcement will benefit from the research because those departments with AVL systems will have reassurance that they have deployed a beneficial system that has a positive effect on officer safety, supervisory oversight, dispatching techniques, and response times. In addition, those departments without AVL systems will have reassurance that if they do deploy an AVL system, any misgivings by their officers of a “Big Brother” effect will eventually be overcome by the positive effects of AVL.

## **REVIEW OF LITERATURE**

Wikipedia (n.d.) gives a widely accepted definition of Automatic Vehicle Location or AVL as “a means for determining the geographic location of a vehicle and transmitting this information to a point where it can be used.” The term “AVL” refers to the overall system, and has two main parts: the location method and the central point of

collection. The location method is typically using Global Positioning Systems (GPS). The encyclopedia of geographic information science (2008) defined GPS as “a military system run by the U.S. Department of Defense, which maintains a constellation of 24 satellites...at an altitude of about 20,000 km” (Global Positioning System (GPS), p. 215). Vehicles outfitted with GPS antennae communicate with these satellites to determine the vehicle’s latitude and longitude by combining satellite positions and receiver ranges compared to the antennae location. The GPS antennae then transmit the vehicle’s latitude and longitude to the AVL system’s central point of collection. Typically, this central point of collection is a computer server with a geographic information system (GIS) on it. This server converts the GPS data via its GIS system for the purposes of AVL use, typically in the form of mapping the vehicles (National Law Enforcement and Corrections Technology Ctr., 2001). After this initial conversion, vehicle locations are updated on the map when refreshed GPS data is transmitted into the AVL system. This refresh rate is typically 5 seconds as an industry standard and gives the end user, typically a dispatch center, a “real-time” look at where their vehicles are located at any given time. Most modern law enforcement technology incorporate some form of GPS-based solutions such as AVL systems, the obvious result being displaying for dispatchers a vehicle’s precise location (Pilant, 1999).

The AVL system can also display and log other data, such as vehicle speed, siren activation, fastest or shortest route to a location, and unit status. In fact, onboard GPS-systems have long been credited with calculating the most direct and fastest routes to locations (Mabrey, 2003). This is a benefit not only to the officers but the community as well. Fey (1974) summarized AVL systems by stating that an AVL system

could save an agency time, improve police activity coordination, and improve dispatch tactics by allowing a dispatcher to continuously monitor the fleet of cars currently in use. Unmistakably, even in the early 1970s, AVL systems were being viewed as having possible far-reaching benefits, which shows this citation is relevant even today.

AVL systems are not new to law enforcement. Research has shown that the first AVL systems were designed and used as early as the mid-1950s by the military, using land-based transmitters (Hughes, 1999). While these land-based transmitters far predated GPS technology, the military found a way to use radio-type transmissions to accomplish the same task. Larson, Colton, and Larson (1977) noted that these systems were first outlined by the President's Commission on Law Enforcement and Administration of Justice in 1967, and systems had been prototyped as early as 1976. It appears that government agencies were beginning to look at advancing technologies such as AVL long before such technologies were in full development. While use was sparse, agencies deploying AVL systems had to use the radio-styled transmission systems until GPS technologies came into fruition in the late 1980s. Hughes (1999) found that the first GPS-based AVL system was deployed by the Schaumburg, Illinois police department in January 1992. Since that time, AVL systems have largely abandoned radio-styled transmission systems for the more reliable and faster GPS-based AVL systems in use today.

In the short history of AVL systems, they have begun to gain in popularity with law enforcement agencies and administrators. In addition, Sharp (2005) found that no agencies deploying an AVL system have deactivated or uninstalled it. Evidently, law enforcement agencies have seen positive effects on their agencies after installing them.

Sharp (2005) also noted that, since GPS-based AVL has become the industry standard, several agencies outside of Texas have deployed AVL systems and have had them in for quite some time. Sharp identified some of these agencies as Glens Falls New York Police Department, Baton Rouge Louisiana Police Department, Altamonte Springs Florida Police Department, the Louisiana State Police, Alameda County California Sheriff's Department, Arvada Colorado Police Department, and Birmingham Alabama Police Department. Several Texas law enforcement agencies have deployed AVL systems, including the Dallas Police Department, Houston Police Department, Harris County METRO Police Department, Richardson Police Department, Harris County Constable Precinct 4, Freeport Police Department, and Arlington Police Department.

The main uses of AVL in law enforcement are to track vehicle locations, log vehicle histories, and provide officer safety, most notably in an officer-called emergency. Other uses of AVL are to create faster police response times, calculate routing based on current geographical and mapping data, ensure better officer efficiency on the job, and to track officer activities by supervisors and administrators (Sharp, 2005). Noticeably, this is an exhaustive and extensive list of positive effects of AVL that any law enforcement agency would view as beneficial.

Several agencies and studies have praised AVL systems and the positive effects they have had on law enforcement agencies, most notably on officer safety. The Dallas Police Department had a recent incident where an officer, in need of immediate help, was located at a residence trying to arrest an extremely combative subject. The officer's vehicle was quickly located at a main intersection, but it took a bit more to find the officer as the residence in question was several yards away. Overall, though, the Dallas

Police Department showed it to be a positive effect as the AVL was accurate and allowed them to find the officer's vehicle quickly (V. Hale, personal communication, June 11, 2008). Some research showed that a modification to AVL, known as a Collar Locator/Personal Locator Transmitter actually worn on the officer's person, can act the same as AVL but give the officer's location as opposed to the vehicle's location (National Law Enforcement and Corrections Technology Ctr., 1995). This modification may be an answer to the situation created above by an officer being separated from the vehicle.

The Schaumburg Police Department has documented anecdotal positive effects, like the Dallas Police Department. Pilant (1995) noted an instance where an officer requested a back-up unit but failed to give a location. In a separate instance, an officer activated an emergency button. In both instances, AVL was able to find the officers' locations, and dispatchers were able to send immediate assistance. Instances like these show just how AVL can have a positive effect on officer safety and agrees with Schaumburg's stated objectives for AVL: improved response times and increased officer safety (Pilant, 1995).

Other positive effects of AVL are also documented. In addition to the positive effects of calculated routing based on current geographical and mapping data, better officer efficiency on the job, and tracking officer activities by supervisors and administrators, Latshaw (2008) noted that about 10% of police cars nationwide are outfitted with AVL systems, which allows these agencies to find the closest vehicle to a call for service. For law enforcement agencies, entrusted with life-saving tools and training, seconds may count and sending the closest vehicle may save a life. In fact, due

to this positive effect of sending the closest vehicle, some claim that AVL may usher in an era of policing absent the well-known beat system, which could, in turn, affect community policing (Pilant, 1995). While this notion has yet to gain serious traction in law enforcement circles, AVL does open this possibility.

Yet, as AVL systems have advanced in technology and grown into the law enforcement profession and culture, they have not been as readily accepted as one would think. According to Pilant (1995), law enforcement has been one of the slowest professions to bring this technology on board, largely because of the possible stigma of “Big Brother” that such technology may bring to an agency’s officers. He further pointed out that, while officers are conducting legitimate police business, having to explain their actions would be a hassle. Obviously, AVL systems, despite the early praise received, can bring some morale issues and negative effects to bear. In addition, Sharp (2005) pointed out that tracking officer activity is often the least-mentioned reason for implementing an AVL system, but it creates the most controversy in and amongst the agency itself, particularly with the officers.

Sharp (2005) documented several agencies showing reluctance to implementing an AVL system because they are leery of the “Big Brother” effect. They simply do not believe closely monitoring officer activity fits with their style of management. Yet, Sharp (2005) also documented cases where corrupt officers were found out and dismissed due to AVL, which shows its effectiveness in ferreting out corrupt officers and proving to the public that the agency in question is capable of policing their own.

Forelle and Begley (2004) noted that as employers increasingly implement GPS technologies to track their fleets and employees, more employees are displaying morale

problems and resistive measures. They also noted that unions are becoming increasingly aware of AVL systems, documenting they are making their use and regulation part of collective bargaining and contract negotiations. Research done by Rohde (2001) documented officers wanting AVL to be used for officer safety purposes, but they were very concerned that AVL would be used for disciplinary purposes either instead of, or in congruence with, officer safety purposes. This type of mistrust and commonality in a “Big Brother” mentality among those resisting AVL is prevalent in many other agencies.

One last negative effect can be cost. The most frequently documented reason for agencies not implementing AVL systems is cost (Sharp, 2005). The costs of these systems can be tremendous, especially considering the added cost of having to outfit an entire fleet of vehicles with the proper equipment. With the vast majority of Texas police departments being considered as small agencies, cost is a great deterrent as they already have limited resources. AVL can be seen as more of a luxury than an officer safety or fleet benefit. The U.S. Department of Justice (2004) found that smaller agencies are underutilizing more modern technologies like GPS and AVL, showing that 97.4% of small agencies nationwide do not have an AVL system. Clearly, cost can be a negative to agencies with limited resources that would otherwise implement an AVL system.

With the possible negative effects of AVL, there is a cloud of controversy that can accompany implementing the system at a law enforcement agency. Yet, with all the documented and proven positive effects of AVL, agencies that either have implemented or are looking to implement this system have an opportunity to address any possible

negative effects. It would be wise to do so from the onset of the planning stages of an AVL implementation. Research seemed to indicate open, two-way communication with the officers, along with a six-month planning period, would be one of the best ways to teach the positive effects of AVL to officers and allow them to prepare for the system (Hughes, 1999). Undoubtedly, it takes effective, strong, good communication styled leadership to correctly implement AVL to reduce or eliminate any officer morale problems or resistance to the pending system. Research by Nanny (2006) found that the positives of AVL far outweigh any negatives. This should arm law enforcement administrators with some needed tools to help combat negative effects, both in agencies with AVL and in those looking to implement AVL.

Pilant (1995) summarized it best by noting that law enforcement agencies that implement AVL are very soon sold on its benefits, and personnel "...should be thoroughly versed in the abilities of an AVL system and completely sold on its benefits – better service to the public and increased officer safety" (p. 46).

## **METHODOLOGY**

The research question to be examined considers whether or not AVL systems are viewed by law enforcement agencies as a benefit. Specifically, the research question will determine what the benefits are viewed to be, what the negative effects are viewed to be, and how to overcome any perceived negative effects of an AVL system. The research question will also attempt to discover, for those agencies without an AVL system, what their perceptions of such systems tend to be.

The researcher hypothesizes that agencies will initially have a mixture of both positive and negative views of the AVL system when implemented. Some agency

members will see the benefits (officer safety, increased supervisory oversight, better dispatching techniques, better response times), while some agency members will see the negative effects (decreased morale of officers, misuse or overly-strict regulation by supervisors), resulting in a mixed-bag of agency reactions. The researcher also hypothesizes that, over time, the negative effects eventually wear away and the AVL system is eventually accepted as part of the agency's equipment and operations.

The method of inquiry will include a review of articles, Internet sites, periodicals, and journals. The instrument that will be used to measure the researcher's findings regarding the subject of AVL systems and their perceived effects will include a survey distributed to 50 law enforcement agencies chosen at random throughout the United States, some known to have AVL systems and some known not to have AVL systems, to try and draw responses from agencies representing both groups. The researcher believes that there are not yet enough agencies in the state of Texas utilizing AVL systems to gain a true representative sample, so surveying agencies nationwide and purposefully including agencies deploying AVL is needed. As a result, it will not be possible to know in advance if an overrepresentation based on geography will occur. The size of the survey will consist of twelve multiple-choice questions and will allow also for additional comments as the respondent feels is necessary. The response rate to the survey instrument resulted in 96% participation.

The information obtained from the survey will be analyzed by determining how many agencies have AVL systems, what those agencies view as the positive and negative effects, and if the negative effects were eventually overcome and how. The

information will also determine how many agencies surveyed do not have AVL systems and what their perceptions of such systems are.

## **FINDINGS**

The researcher found that, of the 48 responding participants, 52% are utilizing some form of AVL system, while 48% are not. Due to low numbers of respondents in the state of Texas utilizing an AVL system, the researcher found it necessary to get responses from agencies throughout the United States. For the purposes of these findings, the researcher categorized the results in two sub-areas, being those who are utilizing an AVL system and those that are not.

For those agencies utilizing an AVL system, the researcher found that the benefits of AVL were widely known and acknowledged. Ninety-six percent identified better officer safety, 68% identified increased supervisory oversight, 72% identified better dispatching techniques, 48% identified better response times, and 8% identified other. In this same sub-group, the researcher found that, while the negative effects were concerning to some agencies, they were not identified as often as the positive effects of AVL. Thirty-six percent named decreased morale of officers, 24% named misuse or overly-strict regulation by supervisors, and 20% named other reasons. The researcher also found that 52% of agencies with AVL noted no negative effects of AVL.

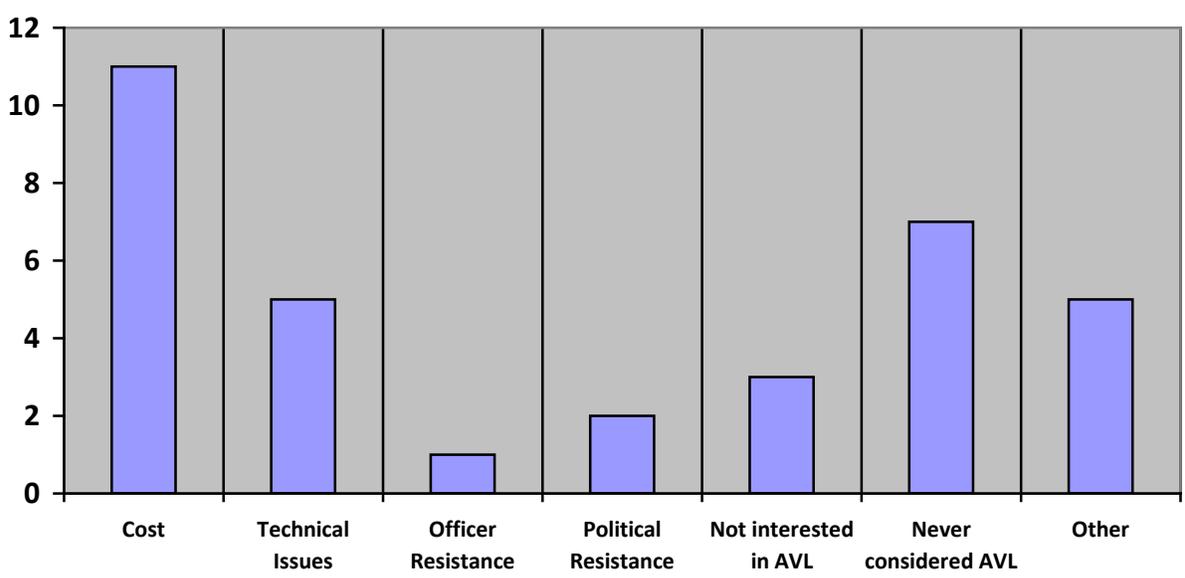
Of the agencies utilizing an AVL system, the researcher found that 72% of the agencies' officers had an initial resistance to AVL. Of that 72%, the researcher found that, when asked for one of the reasons for their initial resistance to AVL, 100% of those officers cited the main intention of AVL was actually supervisory regulation, not officer safety. Other reasons named were anticipated unclear policy on AVL use (32%),

unwarranted stricter regulation by supervisors (28%), and other reasons (12%). Of these same agencies, the researcher also found that only 16% of the agencies' officers currently resist AVL, while 68% reported no current resistance to AVL. Of the few that reported current resistance to AVL, 100% cited the officers' belief that the intended use is supervisory regulation, 50% cited unclear policy on AVL use, and 75% cited unwarranted stricter regulation by supervisors. Finally, of these same agencies, for those that had an initial resistance to AVL but currently do not, the main reasons cited were time (71%), appropriate supervisory use (59%), and a specific AVL/officer safety incident (41%).

Of the agencies that are not utilizing an AVL system, the researcher found that 43% had considered implementing an AVL system, while 52% had not considered it. In this same sub-group, when asked if they anticipated their agencies implementing an AVL system at some point, 52% answered yes while 48% answered no. When asked what their agency would view to be the positive effects of AVL, the researcher found that the positive effects were also readily identified, with 86% of this sub-group identifying better officer safety, 76% identifying increased supervisory oversight, 57% identifying better dispatching techniques, and 52% identifying better response times. The researcher found only 9% of the respondents in this sub-group did not see any potentially positive effects of AVL.

Also in this sub-group, the researcher found that, while the negative effects of AVL were named, they were not as prevalent as the positive effects of AVL, as 52% answered decreased morale of officers and 43% answered misuse or overly-strict regulation by supervisors, while another 43% did not see any negative effects to AVL.

The researcher also found that 52% believed their agencies' officers would have an initial resistance to AVL or an initial decrease in morale due to AVL, and of that 52% that responded in the affirmative, 91% identified the reasoning would be the main intention would be perceived by officers as supervisory regulation, not officer safety. Remaining in this sub-group, when asked if their officers would either immediately or eventually accept AVL, 90% responded yes, with 33% stating it would be an immediate acceptance and 57% stating it would eventually be accepted. Finally, when asked what had prevented their agency from implementing an AVL system, cost was cited as the most prevalent factor preventing an AVL system implementation. In addition, on that same question, no respondents chose two of the possible selections. One of the answers never selected was a concern for possible effect on morale or other negative effects and the other was being unsure of positive effects.



**Figure 1.** Of agencies without an AVL system, reasons that have prevented them from implementation.

## **DISCUSSION/CONCLUSIONS**

The purpose of this research had several intentions. First, it was to examine what AVL is and how it functions, focusing largely on how it functions in a law enforcement capacity. Next, it was meant to discover what the positive effects and the negative effects of AVL are as viewed by the agencies and their officers. The final purpose was to draw recommendations and conclusions based on the totality of this research, focusing on how these recommendations and conclusions were relevant to law enforcement agencies that both have and do not have AVL systems. The main issue examined by the researcher was meant to find if AVL systems are an overall positive for law enforcement agencies. In addition, if there are also negative effects as expressed by the agencies' officers, this main issue was also to identify these negative effects. The main issue was then to find what, if anything, has helped agencies overcome these negative effects and allow them to enjoy the positive effects of AVL.

The research question that was examined focused on whether or not the main possible negative effect of AVL (an initial decrease in officer morale due to officer perception of increased supervisory regulation) are eventually overcome by the possible positive effects of AVL (officer safety, supervisory oversight, dispatching techniques, and response times). This main research question also examined if the eventual effect is acceptance of AVL by officers, whether or not they had an initial resistance to the AVL system. The researcher hypothesized that law enforcement agencies that have deployed AVL systems find that they have had a positive effect on officer safety, supervisory oversight, dispatching techniques, and officer response times. In addition, despite an initial resistance by officers and a possible initial depression of officer

morale, it was anticipated that officers eventually accept the AVL system and identified more closely with its positive effects rather than its negative effects. It was also anticipated that this eventual officer acceptance would be advanced most because of time, policy, and perceived appropriate supervisory use. In addition, it was anticipated that other anticipated findings, both positive and negative, would be discovered. For those law enforcement agencies that had yet to deploy an AVL system, it was predicted the research would identify both positive and negative perceptions by law enforcement agencies, and reasons why these law enforcement agencies have not implemented an AVL system. Finally, it was believed that law enforcement agencies without an AVL system would see them as an overall positive for their agency and would anticipate deploying an AVL system in the future.

The researcher concluded from the findings that, in agencies with an AVL system, the positive effects of AVL were more readily identified with than the negative effects, and the most readily identified positive effect was on officer safety. In addition, most agencies did see an initial resistance by their officers, all of which identified their main concern being that the main intention was believed by officers to be supervisory regulation, not officer safety. Also, for those agencies that saw an initial resistance, most of them did not see any more officer resistance to AVL, largely due to the effects of time and appropriate supervisory use. The researcher also concluded from the findings that, in agencies without an AVL system, the positive effects of AVL were also more readily identified with than the negative effects. In addition, there were close to the same number of these agencies that anticipated initial officer resistance and did not anticipate initial officer resistance. Also, for the agencies that anticipated an initial

resistance, they had a very similar result as the agencies with an AVL system in that nearly all cited the anticipated main intention would be perceived by officers as supervisory regulation, not officer safety. Finally, in agencies without AVL, almost all believed their officers would either immediately or eventually accept AVL, and the overriding factor preventing AVL implementation was cost.

The findings of the research did support the hypothesis. The reasons why the findings did support the hypotheses are probably due to an overall separation of duties between supervisors and officers in law enforcement. It is common knowledge in law enforcement that officers have an inherent distrust of supervisory tools that have even the slightest potential of overuse, micromanagement, or “Big Brothering” the officers. In addition, it is also common knowledge that officers tend to be more resistant to change. However, once they can see the positive effects of the change and see that supervisors’ intentions are true to their word, eventually accept such change. It is believed to be the same with AVL implementation.

Limitations that might have hindered this study resulted because AVL implementation in the state of Texas is still very limited and it was difficult to find agencies that have AVL. This prompted the need to find agencies with AVL nationwide. The researcher believes the study would have been more pertinent to Texas law enforcement agencies if more Texas agencies with AVL could have been found and surveyed.

The study of AVL is relevant to contemporary law enforcement because AVL is a fast-growing technology that more and more agencies are implementing on a yearly basis. It is still relatively unknown if the officers that it affects on a daily basis see the

systems as a boost to their officer safety, or as just another tool to overly supervise them and their activities. Since the research on the actual effects of AVL is just beginning, as AVL is still an emerging technology with GPS aide, it is important to examine these effects so that agencies looking to implement AVL systems know how it has affected agencies and officers with AVL, and they can implement effective leadership techniques (active listening, officer involvement in implementation, active communication skills, etc.) to quell any negative effects from the beginning. They can also use this information to best inform their officers of the results of other agencies, and that coupled with effective policy, can help for more instances of immediate acceptance of the AVL implementation.

Both agencies with and without AVL stand to be benefited by the results of this research because the findings are relevant to both. Agencies with AVL can take these findings and reexamine their agencies' use of AVL. They also have the opportunity to use effective leadership techniques and see if their officers truly see the boost to their officer safety from AVL use, and if they find some lingering resistance or actual supervisory overregulation that is not needed, they can take appropriate steps to overcome these findings. Agencies without AVL can take these findings and use them to help head off any initial resistance by their officers. By using effective leadership techniques that work best for their agency, such as advanced information to their officers and taking officer input to include them in the process, they can hope for more readily acceptance of the system when it comes on-line. Overall, hopefully all agencies can identify that AVL systems really are for the positive effects and benefits to their officers, most notably of which is officer safety.

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## APPENDIX

### Automatic Vehicle Location Survey

Please complete the following survey and return to Lieutenant Jon Caspell, Lubbock Police Department; fax to (806) 775-2662 or email to [jcaspell@mylubbock.us](mailto:jcaspell@mylubbock.us). If you are not the person best to complete this survey, please forward this to the person best to answer for your agency. If you have any questions, or you would like to see the results of this survey, contact Lieutenant Caspell at (806) 548-4141 or the email above.

Agency Name: \_\_\_\_\_

Rank/Name of Person Completing Survey: \_\_\_\_\_

Phone Number: \_\_\_\_\_

**Does your agency use an Automatic Vehicle Location (AVL) system on your police vehicles?**

**YES**

**NO**

**If YES, complete questions 1-5 on Page 1**

**If NO, complete questions 6-12 on Page 2**

**YES, MY AGENCY HAS AVL:**

1. What does your agency view are the positive effects of AVL, if any (check all that apply)?

Better officer safety

Better dispatching techniques

Increased supervisory oversight

Better response times

Other: \_\_\_\_\_

None

2. What does your agency view are the negative effects of AVL, if any (check all that apply)?

Decreased morale of officers

Misuse or overly-strict regulation by supervisors

Other: \_\_\_\_\_

None

3. Did your officers initially resist or have an initial decrease in morale due to AVL?

Yes  No  Unknown

3a. If YES, why (check all that apply)?

Main intention believed by officers to be supervisory regulation, not officer safety

Anticipated unclear policy on AVL use

Unwarranted stricter regulation by supervisors

Other: \_\_\_\_\_

4. Do your officers currently have a resistance or decreased morale due to AVL?

Yes  No  Unknown

4a. If YES, why (check all that apply)?

Main use believed by officers to be supervisory regulation, not officer safety

Unclear policy on AVL use

Unwarranted stricter regulation by supervisors

Other: \_\_\_\_\_

5. If your officers initially resisted or had an initial decrease in morale due to AVL, and no longer do, to what do you credit this change (check all that apply)?  Specific AVL/officer safety incident

Time  Policy  Appropriate supervisor use  Other: \_\_\_\_\_

N/A: No initial resistance or decreased morale occurred  N/A: Officers still resist AVL

**NOTE: If you can recall any specific incidents where AVL showed to be a positive or a negative at your agency, please log those in the Comments section on Page 2 (TURN OVER).**

**NO, MY AGENCY DOES NOT HAVE AVL:**

6. Has your agency considered implementing AVL?

- Yes  No  Unknown

7. Do you anticipate your agency implementing AVL at some point?

- Yes  No  Unknown

8. What would your agency view would be the positive effects of AVL, if any (check all that apply)?

- Better officer safety  Better dispatching techniques  
 Increased supervisory oversight  Better response times  
 Other: \_\_\_\_\_  
 None

9. What would your agency view would be the negative effects of AVL, if any (check all that apply)?

- Decreased morale of officers  Misuse or overly-strict regulation by supervisors  
 Other: \_\_\_\_\_  
 None

10. Would your agency be concerned your officers would initially resist or have an initial decrease in morale due to AVL?

- Yes  No  Unknown

10a. If YES, why (check all that apply)?

- Main intention would be perceived by officers as supervisory regulation, not officer safety  
 Anticipated unclear policy on AVL use  
 Unwarranted stricter regulation by supervisors  
 Other: \_\_\_\_\_

11. Do you believe your officers would accept AVL, either immediately or eventually?

- Yes, immediately  Yes, eventually  No  Unknown

12. What has prevented your agency from implementing AVL (check all that apply)?

- Cost  
 Technical issues / difficulty in implementing  
 Officer resistance  
 Political resistance  
 Concern for possible effect on morale or other negative effects  
 Unsure of positive effects  
 Agency not interested in AVL  
 Agency has never considered AVL  
 Other: \_\_\_\_\_

Comments: \_\_\_\_\_