

Implementing Tablet Computers for Investigators at the Pinellas County Sheriff's Office

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Abstract

With the exception of a few specialized fields, like cybercrimes, most law enforcement investigators do the majority of their crime solving in the field. Research was conducted to see what other government agencies are doing to make their investigators more efficient in the field. Surveys were conducted with the detectives with the Pinellas County Sheriff's Office to see what their views are in using tablet computers in the field. The findings of this research show that tablet computers should be implemented in several of the sections for use by the detectives in the field.

Introduction

Over the past several years, tablet computers have become very prevalent in society. With entry models priced in the range of just a couple hundred of dollars, they have become very affordable to the average person. In 2012, more tablets were sold than laptop computers and by 2014, one in five United States consumers will own a tablet (Horton, 2011).

Like civilians, many law enforcement employees have acquired tablet computers. Because tablets can be used for much more than just checking email or browsing the web, law enforcement employees are starting to consider ways that tablets can be used for improving their performance at work. Detectives in the Knox County (Tennessee) Sheriff's Office Major Crimes and Family Crisis units began using tablets after a detective bought one for personal use and found it useful on the job. One example of how a tablet is useful in law enforcement is when interviewing a witness to a crime involving a car, the tablet has been used to show photos of particular cars to the witness to more accurately report the correct information (Nadeau, 2001). The next generation of employee is living in a world where the swipe of a tablet will be more natural for them than the click of a mouse; therefore, law enforcement agencies need to be proactive in establishing the most effective and efficient use and management of tablets in the work environment.

Literature Review

Law Enforcement Jumps on Board

In 2008, the Stockton (California) Police Department began using tablet computers in its patrol cars. The benefits were quickly realized by the members using

the equipment. Some of the benefits were: battery life that lasted six hours, small size and light weight. This was quite a difference from their larger, heavier laptops which couldn't run as long on battery power. Another benefit officers mentioned was the feeling of being more mobile with the tablet instead of having to return to the patrol car to use their laptop. Officers could easily use the camera features in the field. The small size also meant that it freed up room in their patrol car (Perin & Schreiber, 2010). The Knox County (Tennessee) Sheriff's Office reported that moving to tablet computers saved them some money since tablets cost less than when the agency paid for new laptops. The data connection for the internet also cost less for the tablet than it did for the laptop (Nadeau, 2011). Officers in the Elsmere (Delaware) Police Department began using tablet computers in place of pen and paper. With the tablets, officers can take notes, take pictures, record interviews and have everything synch back to their servers in the police department (Beeler, 2011).

Infrastructure Needs

Virtually all technology used by law enforcement is dependent upon a good, solid infrastructure and trained staff to make it work. Radio systems in cars have limited use if the radio towers aren't working across the service area. The radios themselves can become of little value if not properly maintained. The same goes with tablet computers. While information can be stored on their internal drives, the real value comes with connected, real-time information which is usually too large for any single device. The use of public 3G networks (with appropriate security) to support the officer's need is possible only if coverage and reliability goals are met (Sawyer, et al, 2004). The introduction of 4G and public and private Long Term Evolution (LTE) networks will increase the amount of data that can be easily transmitted and will increase the delivery as well.

Bring Your Own Device vs. Agency Supplied

Many corporations still supply all of the technological tool for their employees and for the most part, so do many law enforcement agencies. If a member needs a laptop or a cell phone for their job, the agency buys it, pays any monthly charges and eventually plans for the replacement. But an ever increasing option is to allow an employee to use their own device at work. Usually this plan provides a stipend, or monthly allowance that helps the employee offset their monthly cost to provide a data connection for the device. The benefit for the employer is that it does not have to buy a device for the member. The money that the employer spends on the stipend is typically offset by what the agency would have paid for the data connection and possibly some overhead for eventually replacing the device. While the idea of a "Bring Your Own Device" policy may sound like a winning solution for everyone, a few factors need to be considered:

- Backing up the device is a must. The member should do this for their personal data and the employer should do this for any sensitive information that may be on the device.

- Next, a strong password policy has to be mandatory. This would include the use of numbers, letters and symbols in the password.
- A good antivirus program should be installed to protect the device from malicious attacks (Angeles, 2012).
- Written policies and agreements should be in place to make it clear what the device can be used for on duty and what programs or applications can be loaded onto the device.

For some larger organizations, managing a large number of devices, whether employee or employer owned, can be intensive. Vendors are addressing this issue with software management tools called Mobile Device Management. These tools allow technology managers to easily control mobile devices that are connected to an agency's network. Mobile Device Management tools can remotely wipe, or erase all data from a device that is reported as lost or stolen. They can also be configured to allow only certain applications or more importantly, not allow certain applications that are known to have security weaknesses such as games or file sharing applications (Weiss, 2012).

Policies and agreements with employees that clearly explain what is to be adhered to are a must. These agreements will be different for personally owned devices than for devices owned by the agency. Typically, agreements for personally owned devices spell out the rules for using the device at work and away from work, spell out privacy expectations for sensitive data and explain that the employer may control the device to some extent, up to and including erasing all data on the device. Agreements for employer owned devices are typically concerned with what the employees can do with the device and what can be loaded on it (Lipowicz, 2012).

Applications

Tablet computers are typically used to access email and the internet. But there are seemingly an unlimited amount of applications, or apps, that have been created for tablet computers. The two most popular operating systems for tablets, Apple and Android, have hundreds of thousands of apps available for download. Almost any category can be searched. Searching in Apples' App store iTunes and Android's Marketplace for the word "Police" will bring up numerous options for police scanner apps. Other popular apps include, Miranda Warnings, implied consent by state, statute books, foreign language translators, report writers, traffic accident diagrams and offender locations.

Method

The purpose of this research is to determine the needs of the 69 Pinellas County Sheriff's Office detectives assigned to the Investigative Operations Bureau when they are in the field conducting investigations and how tablet computers could make them more efficient. The method used for gathering this information was a telephone survey. The survey consisted of ten multiple choice questions. Questions one through three gathered information related to the respondent's current district assignment, length with

the Pinellas County Sheriff's Office, and length in the current assignment. The fourth question was added due to a weakness that was discovered after interviewing four detectives from different sections and determining that the research would benefit from identifying the current unit or section that they are assigned to. The four detectives were then interviewed again to gather this additional information. Questions five and six asked how often and what types of applications would they use in the field. Questions seven and eight asked which tablet computer they were most familiar with and to identify personal computer and mobile devices that they own. The last two questions were geared towards their age and education.

Additional research was conducted to include other law enforcement agencies around the United States that have implemented tablet computers at their agencies and how the implementation has worked. In addition, research was conducted for other public safety implementations of tablet computers. Finally, research was conducted, looking into private sector implementation of tablet computers in private businesses to see if lessons learned in the private sector could transfer over into a law enforcement implementation.

Results

There are 69 detectives assigned to the Pinellas County Sheriff's Office Investigative Operations Bureau. Sixty-four of the 69 members participated in this survey for a return rate of 93%.

Question 1 had a return rate of 98% and shows that 89% percent are assigned to the Central District and 11% are assigned to the North District.

Question 2 had a return rate of 100% and shows that 83% of the detectives surveyed have more than 10 years with the Sheriff's Office, 17% have between one and ten years with the Sheriff's Office and none have less than 5 years.

2. How long have you worked for the Pinellas County Sheriff's Office?

		Response Total	Response Percent
Less than 5 years		0	0%
5 to 10 years		11	17%
More than 10 years		53	83%
Total Respondents		64	

Question 3 had a return rate of 97% and shows that 60% of the detectives responding have been assigned to the Investigative Operations Bureau for more than 5 years, 27% have been assigned there between 1 and 5 years and 13% have less than 1 year with the Investigative Operations Bureau.

3. How long have you worked in the Investigative Operations Bureau?			
		Response Total	Response Percent
Less than 1 year		8	13%
1 to 5 years		17	27%
More than 5 years		37	60%
		Total Respondents	62
		(skipped this question)	2

Question 4 had a return rate of 100% and shows a breakdown of where the detectives are currently assigned.

Question 5 had a return rate of 100% and shows that 67% of those responding believe that they would use a tablet computer daily, 20% believe that they would use it 3-5 times a week, 11% believed they would use it 1-2 times a week, and 2% believed that they would use it more than 5 times a week.

5. If you had a tablet computer assigned to you at work, how often would you use it, for investigative purposes, away from the office?			
		Response Total	Response Percent
Daily		43	67%
1-2 Times a week		7	11%
3-5 times a week		13	20%
More than 5 times a week		1	2%
Never		0	0%
		Total Respondents	64

Further analysis of question 5, correlated to show which units or sections believe that they would use a tablet computer in the field daily, 3-5 times a week or more than 5 times a week shows the following:

Arson/Auto Theft	100%
Burglary	84%
Crimes Against Persons	100%
Crimes Against Children	100%
Criminal Investigations	75%
Economic Crimes	75%
Property Crimes	50%
Robbery/Homicide	80%
Sexual Offender	100%
Tactical Surveillance Unit	100%

Question 6 had a return rate of 100% and asked about the types of features that they believe would be helpful in the field. Access to their Report Management System was a feature that everyone would use. Access to the internet and email were also very high.

6. If you had a tablet computer assigned to you for investigative use, what features would be most helpful to you in the field? Please choose all that apply.

		Response Total	Response Percent
Camera		59	92%
Current calls for service		49	77%
Email		63	98%
GPS		58	91%
Inquiring access to ACISS (on line Report Management System)		64	100%
Internet		63	98%
Note taking		49	77%
Other, please specify view		23	36%
Total Respondents		64	

Question 7 asked which brands of tablet they were more familiar with and had a return rate of 100%. Sixty-two percent reported being more familiar with Apple tablets, 28% were more familiar with Android tablets, 8% were not familiar with any tablet and 2% were more familiar with another type of tablet.

7. What type of tablet computer are you most familiar with?

		Response Total	Response Percent
Android		18	28%
Apple		40	62%
Other		1	2%
None		5	8%
Total Respondents		64	

Question 8 asked participants about the types of personal computers and phones that they owned and had a 100% return rate. Participants could have more than one device. 92% of participants own a smart phone, 66% of participants own a laptop computer, 61% own a desktop computer and 59% own a tablet computer.

Question 9 asked for the participant's age and had a return rate of 100%. The majority fell between 36 and 50 years old.

9. Age

		Response Total	Response Percent
20-25		0	0%
26-30		0	0%
31-35		8	12%
36-40		14	22%
41-45		13	20%
46-50		18	28%
51-55		9	14%
56-60		2	3%
61-65		0	0%
Total Respondents		64	

Question 10 asked for the member's highest education completed and had a return rate of 100%. Ninety-four percent of participants have between some college or a four year degree.

10. Highest education completed

		Response Total	Response Percent
High School		2	3%
Some College		22	34%
Two Year College Degree		17	27%
Four Year College Degree		21	33%
Master's Degree		2	3%
Ph.D		0	0%
Total Respondents		64	

Ocala (Florida) Police Department

A telephone interview was conducted with Jamie Buchbinder with the Ocala (Florida) Police Department. Ocala Police Department has implemented tablet computers for some of their investigators and command staff. Their tablets use a wireless cellular data connection and a secure virtual private network (VPN) to connect to the department's network. The tablets are configured to run a remote viewer that mirrors what is being displayed on their desktop computer in the office. This configuration is cumbersome and is not recommended compared to being able to simply click an icon directly on the tablet to launch an application. The tablets are primarily used for email, web access, live video feeds from crime scenes, and anything that can be accessed through their remote viewer on their desktop. (J. Buchbinder, Personal Communication, May 29, 2013)

Discussion

The data shows that there is some correlation between the unit or section assigned to and how often detectives believed they would use it in the field. Eighty-seven percent of them would see themselves using an assigned tablet 3-5 times a week or more in the field during investigations. Half of the units or sections (Arson/Auto Theft, Crimes Against Children, Crimes Against Persons, Sex Offender and Tactical Surveillance), reported that 100% of them would use the table 3-5 times a week or more, while the other half (Burglary, Criminal Investigations, Economic Crimes, Property Crimes and Burglary/Homicide) reported that only between 50-84% of them would use the tablet 3-5 times a week or more.

The biggest application that members want access to overwhelming is the Report Management System. One hundred percent of members surveyed reported they would use that in the field.

By a little bit more than 2 to 1, members were more familiar with Apple tablets (62%) over any Android tablet (28%).

The survey also shows that while most of the detectives own smart phones (92%) only a little more than half (59%) own a tablet. This would indicate that if tablets were implemented into the Investigative Operations Bureau, there would have to be some significant training for members on how to use them.

The Pinellas County Sheriff's Office has always been a leader in technology implementation and should take steps towards introducing tablets into the Investigative Operations Bureau. One reason for selecting a telephone survey was to gauge the level of enthusiasm in the voice of the detectives as they responded to the questions. This is something that could not have been gathered during a written survey. Virtually all members felt that tablet computers would make them more efficient in their investigations.

Recommendation

Based on the research and the information gathered during the survey, I recommend the following:

1. Implement tablet computers into the Arson/Auto Theft, Crimes Against Children, Crimes Against Persons, Sex Offender and Tactical Surveillance units. Based on the success of these units, consider implementing more tablets in the other units.
2. The Apple iPad should be the standard tablet. Most members are familiar with it and some command staff currently have them assigned. Several applications have been developed in house which offers additional tools for the detectives that wouldn't be available if another type of tablet was chosen.
3. The highest focus for development for additional apps should focus on access to our Report Management System (RMS). Every member survey mentioned wanting to have access to this critical database.
4. Use the tablet to its fullest capacity. Create applications that provide easy access to agency databases. The agency should not rely on using the tablet only to create a remote access to another computer.
5. Consider a Bring Your Own Device policy with a stipend.
6. Implement a Mobile Device Management system to manage mobile devices and to protect the Sheriff's Office due to lost devices.
7. Create a policy on the use of tablet computers that covers both agency own tablets as well as personal tablet used for work.

Captain Jim Main started his law enforcement career in 1982 with his enlistment in the United States Air Force as a Security Policeman. After serving overseas tours in Japan and the Netherlands, Jim returned home to Seminole and joined the Pinellas County Sheriff's Office as a Detention Deputy in 1988. Jim served many positions within the Pinellas County Sheriff's Office including Deputy, Corporal, Sergeant and Lieutenant before being promoted to Captain in 2007. Jim commanded the Central Division which includes 12 Direct Supervision housing units and the Intake/Booking area until his retirement in 2014. Jim obtained a Bachelor of Arts in Business Administration, Magna Cum Laude Honors, Specializing in Computer Information Systems from Saint Leo University.

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Appendix A

Survey For Implementing Tablet Computers for Investigators at the Pinellas County Sheriff's Office Senior Leadership Program 2013

Purpose: I am conducting this survey as part of a research project while enrolled in the Florida Department of Law Enforcement's Senior Leadership Class. This survey is being conducted to study the effectiveness of issuing tablet computers to detectives assigned to the Investigative Operations Bureau of the Pinellas County Sheriff's Office. Only members of the Investigative Operations Bureau will be participating in this survey.

Survey Questions

1. Which district station are you currently assigned to?
 - A. Central District
 - B. North District

2. How long have you worked for the Pinellas County Sheriff's Office?
 - A. Less than 5 years
 - B. 5 to 10 years
 - C. More than 10 years

3. How long have you worked in the Investigative Operations Bureau?
 - A. Less than 1 year
 - B. 1 to 5 Years
 - C. More than 5 years

4. Which Unit or Section of the Investigative Operations Bureau are you assigned to?
 - A. Arson/Auto Theft
 - B. Burglary
 - C. Crimes Against Persons
 - D. Crimes Against Children
 - E. Criminal Investigations
 - F. Economic Crimes
 - G. Property Crimes
 - H. Robbery/Homicide
 - I. Sexual Offender
 - J. Tactical Surveillance Unit

5. If you had a tablet computer assigned to you at work, how often would use it, for investigative purposes, away from the office?
 - A. Daily
 - B. 1-2 times a week
 - C. 3-5 times a week
 - D. More than 5 times a week
 - E. Never

6. If you had a tablet computer assigned to you for investigative use, what features would be most helpful to you in the field? Please choose all that apply.
- A. Camera
 - B. Current calls for service
 - C. Email
 - D. GPS
 - E. Inquiring access to ACISS (on line Report Management System)
 - F. Internet
 - G. Note taking
 - H. Other: _____
7. What type of tablet computer are you most familiar with?
- A. Android
 - B. Apple
 - C. Other
 - D. None
8. Do you own a personal computer or mobile device? Check all that apply.
- A. Smart Phone
 - B. Desktop Computer
 - C. Laptop Computer
 - D. Tablet
 - E. None
9. Age
- A. 20-25
 - B. 26-30
 - C. 31-35
 - D. 36-40
 - E. 41-45
 - F. 46-50
 - G. 51-55
 - H. 56-60
 - I. 61-65
10. Highest Education Completed
- A. High School
 - B. Some College
 - C. Two Year College Degree
 - D. Four Year College Degree
 - E. Master's Degree
 - F. PH.D