

CITY OF OAKLAND

AGENDA REPORT

FILED
OFFICE OF THE CITY CLERK
OAKLAND

To: 2009 JUL 16 PM 5:35
Office of the City Administrator
Attn: Dan Lindheim
From: Department of Information Technology and Police Department
Date: July 21, 2009

Re: Supplemental Information to the Report And Resolution Authorizing The City Administrator, Without Further Council Action, To Negotiate And Enter Into A Contracts: 1) With Digital Safety Technology (DST), Inc. In An Amount Not-To-Exceed Three Hundred Fifty Thousand Dollars (\$350,000) to Complete The Installation, Integration and Training of the In-Car Video Management System ("ICVMS"), 2) For The Purchase of A Backup System to Archive the Tagged Video for Three Years As Required by the Negotiated Settlement Agreement (NSA) In An Amount Not-To-Exceed Ninety Thousand Dollars (\$90,000), 3) For The Purchase of Maintenance Services For The Video Network And Security Infrastructure To Support Secure Video Transmission And Related Support Services In An Amount Not-To-Exceed One Hundred Fifty-Three Thousand Five Hundred Dollars (\$153,500); 4) Waive The City Of Oakland's Competitive Request For Proposal and Advertising and Bid Processes For The Above Described Contract With Digital Safety Technology, Inc; And 5) Enter Into Additional, Competitively Bid Maintenance Contracts With Other Vendors For Two Years of Annual Maintenance, Without Returning To Council, In An Amount Not-To-Exceed One Hundred Twenty-Six Thousand Five Hundred Dollars (\$126,500)

SUMMARY

As requested by the Public Safety Committee on July 14, 2009, staff has prepared supplemental information in response to questions concerning the ability to fully deploy the built-in Global Position System (GPS) devices in the 101 vehicles equipped with the In-Car Video system. It is the intention of staff to provide a clear picture of what is required to effectively and fully deploy technology in police vehicles by detailing the options for location based services.

KEY ISSUES AND IMPACTS

Minimally, there are three possible scenarios available for deploying the location based services:

Scenario 1: Identify the location of vehicles using the GPS as a sensor installed in the police vehicles (ICVMS), and use a cellular carrier type of service to transmit the vehicle location back to the command center to be integrated with the Computer Aided Dispatch (CAD) and similar applications.

Item: _____
City Council:
July 21, 2009

Scenario 2: Identify the location of officers using the GPS as a sensor embedded in cell phone or cellular air-card (laptop computer) and use cellular carrier type of service to transmit the officer's location back to the command center to be integrated with the CAD system and similar applications.

Scenario 3: Identify the location of officers using the GPS as a sensor embedded in radio unit and use 800 MHz Voice Network Service to transmit the officer's location back to the command center to be integrated with the CAD system and similar applications.

There are a number of factors that must be considered to successfully deploy a location based service in Oakland (for any scenario), which includes policy, training, upfront costs for hardware, software, professional services, maintenance costs, and monthly recurring charges. Based on the recent inquiries with various vendors, it is projected that the cost to implement *Scenario 1* (vehicle sensor) is estimated at \$750,000 including GPS devices (ICVMS), Automated Vehicle License (AVL) software, radio interface, and integration with the CAD software. The annual maintenance cost is estimated at approximately \$45,000 for the AVL hardware and software. *Scenarios 1 and 2* would incur monthly recurring charges, ranging from \$12 - \$15 per month, per device. *Scenario 3* would not require any monthly recurring costs; however, it may severely impact the critical voice communication network as the GPS function would use the same channel to transmit data which could critically interfere with voice communications (this option is not recommended as a viable GPS option).

As of the date of this report, staff was unable to obtain approximate costs to fully implement *Scenarios 2 and 3*; however, the costs to implement either of these options would be significantly higher due to the number of individual devices required to implement the technology Department-wide. Staff is waiting for cost estimates from vendors and will present the results to Council upon receipt.

The Automatic Vehicle Location system is proven technology and has been effectively used for efficient resource deployment, asset tracking, quick response, and tactical crime fighting. There are three different ways the technology could be deployed in Oakland. The following table depicts these options with the pros and cons associated with each.

Item: _____
City Council:
July 21, 2009

Scenarios	Technology	Pros	Cons
1. Vehicle Tracking	GPS based with cellular system	<ul style="list-style-type: none"> • Vehicles are tracked • Personnel Location Services • Precise response with better field coordination • Better reports for Area Cross Dispatch 	<ul style="list-style-type: none"> • Could be expensive if used with the Cellular System • Possible backlash due to “Big Brother” watching • Could be used with the Radio system with substantial overhead
2. Officer Tracking using Cellular Carrier services	GPS embedded in Cell phone or using the cellular towers triangulation	<ul style="list-style-type: none"> • Individual Officer’s Safety • Personnel Location Services • Precise response • Higher Accountability 	<ul style="list-style-type: none"> • Impact on Data loading • Could be expensive if used with the Cellular System • Possible backlash due to “Big Brother” watching • Privacy Issues • Poor inside building coverage
3. Officer Tracking using 800 MHz Voice network	GPS embedded in the Radios	<ul style="list-style-type: none"> • Vehicles are tracked • No communication overhead • Better reports for Area Cross Dispatch 	<ul style="list-style-type: none"> • No real-time information • Could be laborious to develop reports and analysis

Research, as well as discussion with agencies currently deploying GPS and AVL, revealed the following issues and impacts:

- Smart dispatching decreases response times.
- Officer safety and accuracy is enhanced by having precise location information available.
- Turn-by-turn navigation reduces guesswork, fuel costs, and response times.
- Location information coupled with date and time stamps may assist in complaint investigations/redactions.
- Officers may believe the functionality will be used in unfair performance analysis. (One agency implemented policy that supervisors could not initiate investigations based solely on GPS data.)
- Additional hardware will be required as the current OPD CAD system does not support GPS or AVL.

Item: _____
 City Council:
 July 21, 2009

- Wireless network coverage can affect performance.
- GPS hardware and software would need to be purchased.
- Systems integration and installations issues will need to be identified and addressed.

GPS/AVL technology will enable the Department to further both its community policing strategies and crime prevention efforts by having both real-time and historical information to deploy and track police resources. A GPS/AVL system is a proven technology that can be effectively used by the Oakland Police Department for efficient resources deployment, asset tracking, quick response, and tactical crime fighting.

RECOMMENDATION

Staff recommends acceptance of this supplemental report.

Respectfully submitted,



Bob Glaze, Director
Department of Information Technology

Respectfully submitted,



Howard Jordan
Acting Chief of Police

Prepared by:
Mr. Ahsan Baig,
IS Manager, Public Safety
Department of Information Technology

APPROVED AND FORWARDED TO
THE CITY COUNCIL:



Office of the City Administrator

Ms. Cynthia Perkins
Legislative Analyst
Oakland Police Department

Item: _____
City Council:
July 21, 2009