

Memorandum

TO: HONORABLE MAYOR AND
CITY COUNCIL

FROM: Larry Esquivel

SUBJECT: Police Mobile Data Computers

DATE: April 22, 2015

Approved

D. D. SyL

Date

4/24/15

INFORMATION

At the Rules and Open Government Committee meeting of April 8, 2015, a request to provide an informational memorandum regarding the Police Department's use of Mobile Data Computers was approved and information is being provided in this report.

BACKGROUND

The Police Department's Systems Development Division within the Bureau of Technical Services has a mission to maximize the Department's operational efficiency through the use of technology. One of its primary programs is to support Field Patrol and their Mobile Data Computers (MDC), which are mounted within the fleet of patrol vehicles. These units can also be referred to as Mobile Data Terminals, or MDTs. The MDCs are ruggedized laptops that enable officers to secure quick and reliable access to the Department's computer aided dispatch (CAD) data, automated field reporting/records management system (AFR/RMS) data, third-party interfaced justice system, intranet access for Timecard Front End, and to provide a basis for inter-unit and interoperable communications for both day-to-day operations and major/catastrophic events. The current MDCs and connectivity hardware (modem and antennas) were last replaced in 2009 and are starting to enter the end of their lifecycle.

The current system and configuration consists of a Getac B300 Windows XP ruggedized laptop, a trunk mounted router and antennae that connects back to the Police and Communications building using a Sprint 3G connection, which transmits the data through a private network. The configuration also provides officers with the option of removing the MDC from the patrol car while staying connected using WIFI within a reasonable distance of the patrol vehicle. There are approximately 360 Getac B300 MDCs currently deployed in the patrol fleet.

The deployment of a new AFR/RMS system in July 2012, provided officers the ability to complete police reports in the field utilizing the MDC but it increased the Department's dependence on a reliable cellular connection. At the time, the Department had a fail-over data transfer system, Motorola RD Lap. This RD Lap system was the backup if the primary cellular carrier was down. Prior to the upgrade of the new AFR/RMS system, the RD Lap system was sufficient. However, with the implementation of the new AFR/RMS system, the MDC's redundancy technology was not able to handle the extra data being used and the Department

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relied on a single cellular connection. Officers routinely send in "help desk" tickets and document issues with the MDC's with dispatchers to be entered into the Watch Commander Log. Anecdotally, Officers have been filling out an average of two "help desk" tickets per day for the past year, and document problems multiple times per day on the Watch Commander Logs.

Issues with the data connection for MDC's began to grow, as the City's cellular carrier updated their infrastructure throughout the area. Communication with staff regarding the MDC issues during this time was critical and continues to be important to the Department. On November 26, 2013, a memo was issued to all patrol personnel outlined the MDC issues with the network and providing direction to staff on what to do in the event connectivity is interrupted. On April 4, 2014, another memo was sent to all Department staff recognizing the connectivity issues. The information memo explained the Sprint issues as well as outlining what steps the Department was taking at the time to rectify the issues given the limited functionality of the MDCs. On December 12, 2014, the Department issued to all staff a communication memo noting that the MDC issues are known and are being aggressively examined. Discussions with staff to communicate issues and solve problems on a short-term basis are ongoing, while staff continues to work on a long-term solution.

ANALYSIS

In 2014, the Department began the process for equipment replacement, looking for cost effective technology solutions that are low maintenance and highly reliable. Staff reviewed the various options in the marketplace and evaluated all of the hardware components required to ensure the MDC operates efficiently to meet the Department's growing technology needs. Another aspect of the MDC replacement project is how the patrol cars connect back to Police and Communications building while ensuring the connection adheres to the Department of Justice (DOJ) security protocols. The evaluations included: the functionality of the MDC laptop, router, antennae (3G antennae to 4G LTE antennae), and wireless carrier (3G to 4G LTE).

As a result of an internal study, the four primary issues staff is focusing on is as follows: upgrade the aging MDCs and associated hardware (antennae and router); change the current data connection from the Sprint Datalink to Virtual Private Network (VPN); upgrade the cellular carrier connectivity from 3G to 4G LTE; and provide a backup cellular carrier. The redundant cellular carrier will allow for continued connection when the primary carrier is performing maintenance, is overloaded, or has poor cellular coverage.

In January 2015, the Department worked on a pilot for two new Getac V110 rugged hybrid laptops to further narrow down the project scope and configuration issues. This new MDC performed very well; however, the screen size was not traditional and would have required substantial re-programming of existing software in order to render correctly on the screen. Because of this, the Getac V110 was deemed not cost effective. Shortly thereafter, the Department tested a new Getac B300 ruggedized laptop, which has performed well. The new configuration included: new Getac B300 with the primary cellular 4G LTE connection inside the laptop (Gobi chip), Windows 7 operating system upgrade, new 4G LTE antenna and router that

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provides a backup cellular connection, web portal that provides a connection to timesheets and other law enforcement applications, access to Internet for Office 365 email, and a VPN connection back to the Department, all of which meets the security requirements set forth by DOJ. The new configuration has been well received by the field patrol officers who have tested it in the field.

In early January 2015, the Department began to work with Finance/Purchasing for the replacement project procurement, as initial cost estimates put the project in the \$2.5 million range. At this magnitude, the procurement would require a formal bid process. In early February 2015, the Police Department and Purchasing Division held a kickoff meeting to begin the bid preparations. This bid is currently open on the City's e-procurement system, www.BidSync.com, and is set to close on Tuesday, April 28, 2015. Purchasing is currently targeting June 2015, for City Council bid award approval.

On March 16, 2015, the Mayor's March Budget Message was released with the recognition to provide better tools for the Police Department staff to do their jobs more effectively. On March 24, 2015, the Mayor's March Budget Message was approved by City Council with the direction to fund new MDCs as part of the budget development process. The Police Department has been working closely with the City Manager's Budget Office to formulate a funding plan and a proposal will be brought forward as part of the 2015-2016 Proposed Operating Budget process. The Department and the City Manager's Budget Office are also proposing to allocate grant funding from the Supplemental Law Enforcement Services Fund for a portion of the MDC purchase; this plan is agendaized for the April 28, 2015, City Council Meeting.

COORDINATION

This memorandum has been coordinated with the City Manager's Budget Office and the Finance Department.

COST SUMMARY/IMPLICATIONS

The MDCs will require a large one-time investment that is currently estimated at approximately \$2.8 million. Additional ongoing funding for dual coverage to address connectivity issues is also needed. A proposal will be brought forward in the 2015-2016 Proposed Operating Budget set to be released on May 1, 2015. It is anticipated that a combination of funds from grants and the General Fund will support this project as well as the ongoing needs.

/s/
LARRY ESQUIVEL
Chief of Police

For further questions, please contact Deputy Chief of Police Jeff Marozick at (408) 277-5176.