

Council Technology Application Committee Meeting

Wednesday, June 10, 2009

4:00 P.M. to 5:30 P.M.

Hayward City Hall

777 B St. Hayward

Conference Room 4A

Hayward, CA 94541

AGENDA

Public Comments: (Note: For matters not otherwise listed on the agenda. The Committee welcomes your comments under this section but is prohibited by State Law from discussing items not listed on the agenda. Your item will be taken under consideration and referred to staff.)

1. Minutes of Wednesday, February 18, 2009 (Attached)
2. Review and comment on the submitted CAD/RMS Report
3. Member Comments

Distribution:

Mayor and City Council

City Manager

Assistant City Manager

Assistant to the City Manager

Community & Economic Development Director

City Attorney

City Clerk

Finance Director

Fire Chief

Human Resources Director

Library Director

Police Chief

Public Works Director

Technology Services Manager

Daily Review

Post

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CITY OF
HAYWARD
HEART OF THE BAY

Council Technology Application Committee (CTAC)

Meeting Minutes of February 18, 2009

Members Present: Michael Sweeney, Olden Henson and Bill Quirk

Staff: Greg Jones, Fran David, Clancy Priest, Ron Ace, Desi Calzada

Guest: Andy Wilson, Kevin McGary, Chuck Horner

Public Comments:

Andy Wilson resides at 31438 Greenbriar Lane, Hayward/Fairway Park neighborhood – Due to layoffs, it may be a good time to negotiate with City’s vendors. Mr. Wilson spoke with Council on posting real time usage for water and electricity usage. Councilmember Quirk suggested that Mr. Wilson bring up the usage item again after the June ballot issue and send a copy to the committee to discuss again at later date.

Kevin McGary is a business owner and suggests that the City partner with his company and other technology corporations. By using some collaborative tools designed for businesses, the City can generate significant revenues to handle some of the current budget shortfalls through his social networking program.

1. Approval of Minutes: Approved

2. Review of draft Technology Strategic Plan:

Technology Services Director, Clancy Priest read the Technology Services Department Mission Statement and explained the functions and responsibilities of their department. Also, sustainability

3. Member Comments:

Councilmember Bill Quirk commented that it’s great that they’re up front with security with little or no interference to the user, sustainability has the next generation of computers using less energy and with a more recycled compound. As far as priorities go, they may know more after June if they can replace all of the hardware.

Technology Services Director, Clancy Priest commented that he is very proud of his Department and Staff in stretching what they do have and making it work as best as possible for the organization.

Councilmember Bill Quirk stated there will be two budgets this year and hopes that we plan for this long term. He said that if we end up with the lowest possible budget, he would still like a plan. He is

particularly concerned about the City's System Financial Services and Police CAD system and finding the funding for this, the City really needs to plan their budget around this.

The Technology Services Director, Clancy Priest said they received some funds to start replacing desktops, approximately one third of them have been replaced so far. Technology Services has stretched the dollars to the max and all new systems are "Green" Technology. They are looking at implementing the first Constituent Managing System and are negotiating it through.

Mayor Michael Sweeney commented on the Strategic Plan. He would like to see if it can be broken down into bullet points to prioritize and make it easier to understand. There has been a CAD issue in the past and there have been problems. He would like to see this one done right, the City has gone through too many versions. He would like to see a better job on community outreach and how we can do a better job.

Councilmember Olden Henson said that short and long term plans are good. He said that the CAD system was not fully implemented and would agree with the Mayor that it needs to be done right. He would like to see the entire City go wireless someday.

The Technology Services Director, Clancy Priest explained that the ERP System is a larger concept where all of your business cases within the system come together under an umbrella as an Enterprise Program. This can include very diverse things such as CAD/RMS and Building Permitting. Data can flow back and forth, but, right now it's problematic for us to transfer data back and forth between the two systems.

The Technology Services Director, Clancy Priest stated that in his next report that will be presented in March, he will begin the report with an Executive Summary. At the next meeting, he would like to bring back a completed plan and possibly a presentation on social networking.

Chuck Horner asked if the current changes are "Cost Efficient". The Technology Services Director, Clancy Priest indicated that the units are 75% more efficient. Chuck Horner requested that the information be available to the public and that he would like it presented at Rotary.

Councilmember's Bill Quirk and Olden Henson commented on the great job that the Technology Services Director, Clancy Priest and Assistant City Manager, Fran David are doing.

Next Meeting: April 15th @ 4:00pm

Meeting adjourned at 5:03pm



DATE: June 10, 2009

TO: Council Technology Application Committee

FROM: Clancy Priest, Technology Services Director
Desi Calzada, Communications Manager

SUBJECT: Public Safety Computer Aided Dispatch/Records Management System
(CAD/RMS) Replacement

RECOMMENDATION

That the Committee reviews and comments on the proposed replacement of the City's CAD/RMS, an identified priority in the City's Technology Strategic Plan and directly supportive of the Councils priorities related to Crime and Public Safety.

BACKGROUND

In 1989, the City of Hayward purchased a new Computer Aided Dispatch System (CAD) and Records Management System (RMS). This system was purchased to provide support for public safety dispatch and the management of the related records and reports that resulted from police and fire responses. The system went live in 1991.

In most agencies prior to the 1990's, CAD systems were used to manage the location of resources, but did not make response recommendations. Dispatching fire and police officers was done by memory and paper dispatch cards.

In 1991, the new Public Resources Corporation (PRC) CAD/RMS system offered predefined unit assignments and recommendations based on the location of an incident. This allowed for more reliable and consistent unit assignments while leveraging the speed and accuracy of computer technology. This system included a unified Records Management System (RMS) providing for more efficient data sharing. The PRC system managed all the requirements of Police and Fire CAD/RMS at the time of implementation.

By 2000, the Police Department was being hampered by a lack of access to the kinds of data available in newer records management systems. Beyond managing and archiving police and fire reports, the information contained in CAD/RMS databases had become the basis for responding to crime analysis needs, follow-up criminal investigations, resource management, and demands from the community. The existing system did not allow for this kind of access or data compilation, and

PRC had no plans to enhance the system as it was. Therefore, the Police Department began to investigate replacing the PRC RMS.

The Police Department contracted with Orion Scientific Systems of Newport Beach (ORION) to provide a new RMS through an internal application development process. While they had developed significant systems for the California Department of Justice, they had never built or deployed a field-level police report management system. With little understanding of the business processes of a police department, the resulting system did not achieve the Police Department's expectations.

In 2004, the Fire Department recognized shortfalls in their report writing capabilities. Like the Police Department, outside forces were requiring new report writing functionality. One of the critical components was paramedic patient reporting. As a result of their specific needs, the Fire Department decided to purchase and use a new report writing system called FireRMS from Zoll Data Systems, a subsidiary of Zoll Medical Corporation (ZOLL).

At this point the RMS function of the PRC CAD/RMS was no longer used by either the Police or Fire Departments. The essential transfer of CAD information to the two unrelated RMS computer systems was accomplished through proprietary interfaces written by PRC.

DISCUSSION

Currently, the City uses three different systems to perform mission critical Public Safety tasks: the PRC system for CAD and the ORION (Police) and ZOLL (Fire) systems for records management. With the advance of technology, there are significant support and performance benefits to utilizing an integrated system designed by a single vendor to support public safety technology needs.

The following key functions need to be considered in this discussion: accurate and timely dispatching of public safety resources to incidents; records management for both Fire and Police; medical records management and information for patients responded to in the field and/or transported to facilities; field reporting and mobile connectivity; evidence tracking, security and management; corrections (jail) management, and Animal Services. In addition, modern public safety management requires easy access to complex data and event statistics for City personnel and the community; as well as the ability for Police personnel to compile and analyze multi-layered crime scene data to actively support investigations.

System Features

Computer Aided Dispatch (CAD) – The City of Hayward uses the CAD system to manage, track, and deploy emergency response personnel for the entire City. A byproduct of this process is the collection of the data from the 911 calls from the community, the telephone company's automated (telephone) number and location (address) databases (ANI/ALI), information manually entered by dispatchers, communications between dispatchers, Mobile Data Terminal (MDC) communications from the field officers, original and final call types, and date and time information on all facets of the response including time of dispatch, identification of all field

units dispatched, time of arrival, and time the incident was “cleared.” In 2008, the system managed 144,157 police and 15,836 fire incidents.

As previously noted the current system was purchased in 1989 and went live in 1991. This system was written in COBOL, a computer language developed for the Department of Defense to provide a common business language for computers. At the time, COBOL was heavily used in military and intensive use systems, but time has passed it by. Its use today is extremely limited and essential support and upgrades are becoming prohibitively expensive and complicated.

Initially CAD systems were used to input, manage, and track calls for service from the community. However, with advances in software and data transmission capabilities, modern dispatch centers and CAD systems have evolved into a clearinghouse for data mining and resource management. Specifically if it’s accessible, the data automatically compiled as a result of day-to-day public safety responses can be invaluable in command management decisions such as geographically creating and refining police beats, assigning officers, and locating fire stations; identifying trends for crime analysis; and in responding to requests for information from the community. State of the art CAD systems include mapping, automatic vehicle tracking, improved reporting, and dynamic unit assignments. The only way to take full advantage of this is to purchase a single, integrated solution from a single vendor.

Our current CAD system does not have mapping support. Dispatchers and field personnel still rely on printed and Internet maps. Modern systems integrate with our up-to-date internal Geographic Information System (GIS) mapping capabilities. They provide instant visual indicators of all crime and fire/paramedic incident activity. Vehicle tracking allows dispatchers more flexibility to identify the closest field unit to emergency calls, resulting in improved efficiencies.

Fire RMS – The Alameda County Emergency Medical Services Agency (EMSA) is responsible for compiling and reporting mandated patient information. The system currently being used by Hayward Fire, the ZOLL Fire RMS system, is the standard for the County. There are indications that EMSA may further reinforce this standard by mandating its use in the near future. There will be an interface implemented between any new system and the existing FireRMS to enable communication between the two systems. Therefore, while we are recommending that the Fire Department continue using ZOLL at this point, it is important that a new CAD/RMS system have the capability of being upgraded with an integrated, single vendor developed Fire RMS module.

Police RMS – The current ORION system does not support mission-critical functions including property reporting, integration with federal, State, and county computer systems, or the ability to efficiently write reports in the field. Other shortfalls include Case Management, Property Room Bar Coding, Alarm Tracking and Billing, and integrated Federal Uniform Crime Reporting (UCR) functionality. All this would be required in a new system.

Examples of real, operational advantages of a new CAD/RMS system include:

- Eliminating time consuming and error inducing evidence management tasks, (eg: documenting a gun collected as evidence will automatically query the Stolen Firearms Database and create a bar coded property tag for use indexing it's evidence storage location),
- Automating the production of Uniform Crime Reporting (UCR) which is currently an extremely labor intensive manual monthly mandate.
- Automating and streamlining the management of the False Alarm Program to the point where it will replace one Police Records Clerk position.

Field Reporting – The ORION system does not provide for the efficient writing of reports in the field. Officers cannot enter information remotely and as a result end up returning to the Station to write and print reports. The new systems provide efficient remote report writing, which keeps our officers in the community and available to address public safety issues, which is advantageous from a risk management perspective.

Mobile Computing – Beyond improved field reporting, police and fire field units need access to mapping and GIS data. New CAD products allow instant access to the Pictometry and IStreetView data as well as automated GPS directions to provide the field units with the fastest route to calls. Modern CAD systems also allow for the storage of floor plans and hydrant information making them available to each user in the field.

Evidence Tracking – Currently, there is no integration between the ORION RMS system and the property/evidence tracking program. As a result, this requires redundant data entry by officers, crime scene technicians, and the evidence management staff. Given that Hayward Police Department has an evidence inventory numbering in the millions of items, the amount of wasted effort and the inevitable human errors that are introduced are unacceptable. New systems include integrated property and evidence modules that allow officers to print out bar codes to tag evidence and streamline the inventory and essential “chain-of-custody” processes.

Corrections – New systems also include jail booking and management modules, allowing for a more streamlined booking process. They afford a more automated tracking system to ensure that the most effective methods of segregating and housing corrections residents are employed.

Animal Control – Currently the Animal Control systems are not integrated with any of the Police Department software. Animal Control reports are often criminal in nature and sometimes related to police incident reports creating manual case management issues. A new integrated system will provide a solution for Animal Control, allowing for seamless access and data exchange with the rest of the Department.

CALEA Accreditation – The new CAD/RMS should assist our Police Department with their ongoing efforts to be Commission on Accreditation for Law Enforcement Agencies, Inc., (CALEA®) accredited. The CALEA certification was created in 1979 as a credentialing authority through the joint efforts of law enforcement's major executive associations:

- International Association of Chiefs of Police (IACP);
- National Organization of Black Law Enforcement Executives (NOBLE);
- National Sheriffs' Association (NSA); and the
- Police Executive Research Forum (PERF).

The purpose of CALEA's Accreditation Programs is to improve the delivery of public safety services, primarily by: maintaining a body of standards, developed by public safety practitioners, covering a wide range of up-to-date public safety initiatives; establishing and administering an accreditation process; and recognizing professional excellence.

Specifically, CALEA's goals are to:

- Strengthen crime prevention and control capabilities;
- Formalize essential management procedures;
- Establish fair and nondiscriminatory personnel practices;
- Improve service delivery;
- Solidify interagency cooperation and coordination; and
- Increase community and staff confidence in the agency.

System Selection

In 2008, Ron Ace, newly appointed Chief of Police, became very concerned about the lack of analytical resources available to assist the Police Department in the apprehension of criminals and for the overall safety of our community. Understanding the limited existing technology available to the Police Department, the Chief directed his department to investigate the feasibility of upgrading our public safety systems. With the assistance of the Fire, Technology Services and City Manager Departments, the Police Department began the process of performing due diligence to find a solution to address the CAD/RMS situation.

Hayward's Communication Center is different than most cities because it supports both police and fire services, and any new system has to support the entire public safety response capability.

Neighboring agencies were contacted to determine what systems were in use locally. It became quickly apparent that there were two leaders in Alameda County: Intergraph Corporation and New World Systems. Both vendors were contacted to discuss the City's needs and their ability to provide CAD/RMS services for our public safety network. Discussion points included their current system's functionality and how upgrading could provide efficiencies to Hayward. They understood that the City's intent was to achieve maximum integration of police and fire operations. Both Intergraph and New World Systems agreed to make a presentation to staff.

Intergraph Corporation – Intergraph Corporation provides CAD services for the Alameda County Sheriff, Alameda County Fire, and the City of Newark. The two County agencies were consulted regarding their experience with the system. The Sheriff's Department is satisfied with their selection of Intergraph Corporation. They are also utilizing Intergraph's report writing system. Both the dispatch center and patrol officers felt the system was working adequately and would perform well for Hayward.

The Alameda County Fire's Dispatch Center is using Intergraph to dispatch all the fire departments under contract with them. However, Intergraph is not providing any records management capabilities. The Alameda County Fire Department, like the Sheriff's Department, was very satisfied with the dispatch product. The Alameda County Fire Department has standardized on the use of the ZOLL FireRMS product for records management and retention mainly for its capabilities concerning EMS reporting.

A select group of Hayward Police Department employees attended an Intergraph presentation. Intergraph proved to be a very thorough and professional organization. Employees were pleased with the level of attention and knowledge exhibited by Intergraph's staff. Intergraph's product provided many of the features that they believed needed to be upgraded, including a comprehensive computer aided dispatch system, field reporting, mobile computing, evidence tracking, and corrections. While these modules appear to perform adequately, there were several items that were of concern. Most importantly, the fact that the Intergraph solution was not a single system, but instead used separate CAD, RMS, and Mobile Systems with multiple interfaces to work together as a pseudo single system package. This does not meet our goal of a single, heterogeneous system and is outside what is generally considered "industry best practices."

New World Systems – The following agencies within Alameda County use New World Systems: San Leandro Police Department, Pleasanton Police Department, and Berkeley Police and Fire Departments. All three agencies were contacted. All are very pleased with the level of service they are receiving from the product. The detailed analysis performed by each agency, individually, before selecting New World was discussed with the appropriate staff members. All three agencies described how laborious their selection process was. All three cities are pleased with the high level of integration, continuity, and overall functionality the system provided. There were special commendations for the mapping abilities of the system.

The same group of Hayward Police and Fire Department staff attended a New World Systems presentation. Hayward employees were pleased with the level of attention and knowledge exhibited by New World Systems. While New World Systems also provided the same core modules as Intergraph, New World provided a much higher level of integration. Instead of one core product with interfaces to several disparate systems, New World provided a single integrated database with a complete enterprise suite of public safety modules. New World did an impressive job of explaining how an integrated system could streamline public safety processes. Although having one integrated database may seem insignificant, during the demonstration New World was able to show how quickly they could share data among different public safety functions.

After seeing both products, interviewing several agencies, and consulting the core user groups of staff members, it has been determined by the Police, Fire, and Technology Services Departments that New World Systems is best positioned to provide the most complete and integrated solution available in the market today. New World Systems will be able to provide a completely integrated public safety solution. Although the Fire Department will continue to use their current RMS provider for the short term, the long term solution allows them to adopt New World Fire RMS in the future when it is determined to be appropriate.

The New World system is built using modern industry standards including Microsoft Windows Server and SQL database software and is based on industry standard best practices. Users and support staff will realize greater efficiency through streamlined support and elimination of redundant data entry, which will reduce the effort now needed to perform these duties.

Furthermore, the Police Department will be able to utilize this system to more effectively and strategically plan and forecast future crime trends. These positive improvements will bolster efforts to increase the level and quality of service we provide to our community in direct support of Council's priority related to Crime/Public Safety.

FISCAL IMPACT

After identifying the New World Systems CAD/RMS as the best solution to meet public safety dispatch and records management needs, we explored how to get the best value for the City's dollar. The City's policies allow us to utilize the procurement process followed by another comparable public agency in certain circumstances. This is referred to as a "piggyback" bid. In the case of the CAD/RMS project, the competitive process for which New World Systems was the selected bidder by City of Berkeley has been determined to be the best fit and appropriate basis for procuring the CAD/RMS system. The City Attorney's Office and the Finance-Purchasing Division have reviewed the City of Berkeley Request for Proposal (RFP) process, and the procurement process of other agencies that selected New World Systems. Both departments have determined that piggy-backing on the Berkeley contract is legally allowable and advantageous to the City.

Once New World Systems was identified as our preferred solution, a preliminary budget estimate, which is presented below, was obtained. This estimate is not a quote, but rather a basis upon which we will begin to negotiate a final contract.

TABLE 1: Estimated Project Cost:

	<u>Action/Service/Component</u>	<u>Sub-Unit Amount</u>	<u>Totals</u>
System Acquisition Costs	Application Software	\$ 939,766	
	Hardware	\$ 257,913	
	Installation Services	\$ 671,237	
	Data Conversion	\$ 88,513	
	User Training	<u>\$ 291,496</u>	\$ 2,248,925
10% Contingency			\$ 224,893
Implementation Consultant			\$ 150,000
Five Years Pre-paid Maintenance			<u>\$ 1,000,000</u>
TOTAL ESTIMATED PROJECT COST:			<u>\$ 3,623,818</u>

Software, Hardware and Five-years Pre-paid Maintenance – One-time system acquisition costs are estimated to be \$2.25 million. Staff recommends taking advantage of the option to pay five years of maintenance in advance, in order to take advantage of a 20% discount. Staff will also negotiate cost ceilings for maintenance starting in year six.

Implementation Consultant/Project Management – System implementation is significant and technically complex, estimated to take 12 to 18 months. It requires broad interdepartmental cooperation, and an experienced implementation consultant will be critical to the overall projects success.

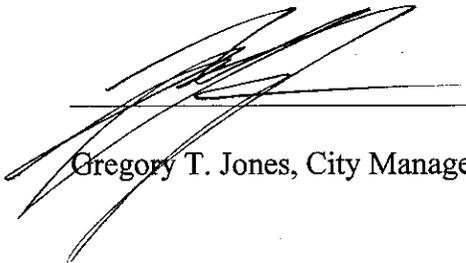
Funding – It is recommended to fund the project using internal borrowing from the City Sewer Fund reserves. The City Manager, Finance and Public Works departments have reviewed the proposed loan terms, which include: a) a seven-year loan from the Sewer Capital Fund to the General Fund; b) interest paid to the Sewer Fund will equal the City's monthly investment portfolio rate (currently 2.05%); c) deferral of the first payment due date to FY 2011; and d) the loan may be paid-off in advance if the City obtains alternative funding, such as grants. The debt service payments will be offset by grant funding, the reduction of existing maintenance costs, and salary savings achieved through the elimination of one Police Records Clerk position. The City will continue to seek grant funding for this project.

Prepared by:



Clancy Priest, Technology Services Director

Approved by:



Gregory T. Jones, City Manager