



Corporate

NO: R091

Report

COUNCIL DATE: April 19, 2004

REGULAR COUNCIL

TO: Mayor and Council **DATE: April 2nd 2004**

FROM: Fire Chief **FILE: 1360-20**

**SUBJECT: Award Contract to FDM Software Ltd. for a
Computer Aided Fire Dispatch (CAD) and Integrated
Fire Records Management System (RMS)**

RECOMMENDATION

Council award a contract for the acquisition and implementation of a Computer Aided Fire Dispatch (CAD) and Integrated Fire Records Management System (RMS) from FDM Software Ltd for \$1,253,558.

BACKGROUND

Current Situation/ Business Problem

In 1990, the Surrey Fire Department purchased and implemented its first Computer Assisted Dispatch (CAD) and Records Management System (RMS). At that time, the projected service life was 7 years. The department has been able to extend its projected service life with in house expertise; however, the hardware platform is well past its expected use life. It is wholly dependent on a diminishing supply of used parts and specialized support while exposing the Fire Department and its clients to an ever-increasing risk of system failure.

With the retirement of the Wang Computer System, where fire inspection records reside, and the urgent need to maintain the current dispatch customer base and to attract new business, it is time to proceed with the replacement of the Geac Fire CAD system with new software and hardware.

Future Vision

The selected CAD/RMS system from FDM Software, unlike most systems which use proprietary computer programming, is an open architecture system which allows much easier integration with current or future software. FDM's open architecture design allows alignment of the Fire Department's IT architecture with the City's IT architecture and will offer opportunities to leverage the City's current investment in the computing infrastructure including its ERSI based Geographical Information System (GIS). In addition, the newer technology platform will enable the Department to take advantage of technologies such as the Internet, graphical user interface (GUI) and Windows.

DISCUSSION

CAD/RMS Replacement Options Analysis

Three options were considered and evaluated for the replacement of the current Fire Dispatch/RMS computer system.

1.0 OPTION A: Partner with the RCMP

Under this option, the hardware and software (Xwave) currently in use by RCMP would be modified to meet requirements for Fire Dispatch. This option analysis was part of the study initiated in February 2001 by the City Manager's office to determine the feasibility of a joint services operational communications center and common technologies platform with the RCMP.

1.1 Analysis and Evaluation

- The RCMP use Xwave Software for their CAD and RMS and it was specifically developed for police dispatch and records management. It does not address the Fire CAD and Records management requirements
- A software development partnership was proposed by Xwave to develop the fire CAD component. This would require the Fire Department to develop specifications for the fire CAD component and for Xwave to customize the existing software or create new software modules.
- Extensive testing would be necessary prior implementing the newly created software.
- High cost for software development/customization

- No Fire Records Management Component – A partnership with a third party was proposed at extra cost
- High risk as no proven fire capability
- High overall cost
- Unable to establish product completion and implementation time frame
- Union and infrastructure issues
- Physical constraints of the RCMP building

1.2 Cost

Capital (CAD): \$1,200,001

On-going: Not available as product is in development

RMS: Must use FDM at \$459,600 per year plus interface costs

1.3 Conclusion

Based on the amount of software customization and the risk of not having a proven fire capability, this option is considered not viable. In addition, the Records Management component would be an extra cost.

2.0 OPTION B: A Joint ECOMM/Surrey Fire Dispatch

Under this option, Surrey would join ECOMM for the delivery of dispatch services to Surrey and its customers. This option came about as a result of a proposal ECOMM presented to Surrey in December of 2001 to have the City of Surrey act as a backup site to their operation. A project team consisting of IT technical and Fire management staff was established to evaluate the suitability of the dispatch software and to assess the on-going cost of data communications.

2.1 Analyses and Evaluation

ECOMM does not support alternate communication methods such as virtual private networks via the Internet or Citrix to deliver data communications or dispatch information to the various Surrey and Surrey customer fire halls. A separate costly network would be required.

- ECOMM was unable to provide a reliable cost estimate for the on-going data communications
- ECOMM recommended FDM to provide an RMS system but could not offer any connectivity costs and provided a \$500,000 procurement cost figure
- ECOMM uses proprietary software for their dispatch. Costly to maintain, to receive enhancements and to configure to fit Surrey's business needs.

2.2 Cost

Capital(CAD): \$36,000 implementation cost
On going: \$147,000 per year for use of the software– levy option
 \$70,000 for fiber optic redundant connection
 Unable to provide station connectivity solution
RMS: ECOMM estimate of \$500,000 for FDM RMS system

2.3 Conclusion

The failure of ECOMM to provide a solution to the technical issues and a firm cost estimate on a records management system has eliminated them from further consideration.

3.0 OPTION C: Replace current hardware and software with new software and hardware

Under this option the current CAD/RMS computer system would be replaced with a new, packaged application software operating on a new hardware platform. Dispatch services would continue to be delivered following current business practices.

3.1 Analysis and Evaluation

- A Request for Information was issued to the marketplace in 2001.
- Ten vendors responded to the RFI and submitted proposals.
- A three-step evaluation process consisting of a high level assessment, followed by a detailed evaluation of the products that met the initial assessment criteria, which was then followed by product demonstrations and feedback from vendor clients.
- In addition to the product evaluation, the short listed vendors were evaluated based on a matrix of the following criteria:
 - vendor qualifications
 - implementation effort
 - timelines
 - support capabilities
 - dispatch client's requirements
 - customer feedback
- Process and information detail are attached as an Appendix

3.2 Conclusion

FDM is the preferred product on the basis of system integration, CAD and RMS integration, GIS integration, pricing, functionality, and compatibility with our dispatch clients.

CONCLUSION

It is recommended that Council authorize the expenditure of \$1,253,558 from the 2004 Capital Program to execute a purchase agreement for the acquisition and implementation of a Computer Aided Fire Dispatch (CAD) and Integrated Fire Records Management System (RMS) from FDM Software Ltd. The expenditure includes: hardware, software and implementation services to replace current McDonnell Douglas (GEAC) CAD and RMS system. Detailed proposal information is contained in Appendix I.

The Information Technology Investment Committee (ITIC) has approved this investment in technology and the GM of Finance confirms funds are available.

Len Garis
Fire Chief

cc: Umendra Mital, City Manager

Vivienne Wilke, G.M. Finance, Technology & HR
Geoff Samson, ITIC Chair

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APPENDIX I

The following table provides a summary of the 10 proposals evaluated. All figures are in Canadian Dollars and where US dollar figures were quoted the amounts have been converted to Canadian amounts using a conversion factor of 1.33.

Vendor	CAD Capital	RMS Capital	Hardware	Total Cost	Operating	Conclusion of Analysis and Evaluation
Short Listed						
FDM						<ul style="list-style-type: none"> Fully integrated

Software	\$556,500*	\$459,600	\$92,300	\$1,253,558	\$113,600	<p>CAD/RMS system. The product met all of the functional, technical and implementation requirements</p> <ul style="list-style-type: none"> • Number of large and small installations in BC, across Canada and USA • Local Vendor • Current dispatch customers use RMS • Compatible with ESRI and aligned to city's architecture • Cost effective data communications • Multi-agency software • Opportunities to sell RMS services and also market CAD services • Best package – business functionality, integration, cost, business risk
GEAC (new hardware and software – Enroute Fire CAD upgrade)	\$613,635	\$459,600*	\$92,300	\$1,354,122	\$151,800	<ul style="list-style-type: none"> • No RMS – cost to partner with FDM plus integration complexity • Higher cost compared to FDM • Higher Operating Costs
		* FDM				

		RMS				
Xwave	\$1,200,000	\$459,600* *FDM RMS	\$92,300	\$1,981,533	Not Available – product in development	<ul style="list-style-type: none"> Partnership to develop fire CAD component Product still in development – no proven capability No RMS High risk No timeline available

Product Evaluation Summary con't

Vendor	CAD Capital	RMS Capital	Hardware	Total Cost	Operating	Conclusion of Analysis and Evaluation
Unable to Meet the Initial Assessment Criteria						
GEAC (text Fire re-host upgrade)	\$573,000	\$459,600* *FDM RMS	\$92,300	\$1,310,643	\$77,200	<ul style="list-style-type: none"> No RMS – cost to partner with FDM plus integration complexity Text version does not provide new technology functionality. No AVL capability
ECOMM (PRC Altaris CAD)	\$36,000 implement	\$500,000*	\$39,000	\$722,250	\$217,000	<ul style="list-style-type: none"> No reliable cost estimate and technical

Remote		*FDM RMS			without connectivity to Surrey or Client fire halls	<p>solution to connecting Surrey and client fire halls without developing a separate costly network.</p> <ul style="list-style-type: none"> • No RMS • No interfaces developed
Intergraph						<ul style="list-style-type: none"> • Did not respond to the RFI • Map based CAD product – currently in use at City of Burnaby
Crysis	\$1,000,000 to \$1,230,000	Included in CAD	\$92,300	\$1,468,361	\$135,000 to \$145,000	<ul style="list-style-type: none"> • Posix technology platform • Incompatible technology • Concern re: delivery based on user comments
Tritech	\$1,130,000	\$459,600* *FDM RMS	\$92,300	\$1,966,600	\$153,890	<ul style="list-style-type: none"> • NT4 platform • GIS based on MapInfo • Complexity of FDM link
ESC Electronic Surveillance Corporation						<ul style="list-style-type: none"> • Not responded to the RFI • Brochure included • Brief presentation at Canadian Fire Chief Conference
PRC – independent submission	\$1,220,000	\$690,000	\$92,300	\$2,242,461	Not provided	<ul style="list-style-type: none"> • Unix or NT4 • Pricing based on an Ecomm golden

						licensing provision
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Estimated FDM Project Cost

Capital Costs	
Cost Item	Current CAD System - Surrey and Clients Annual
CAD Software	\$ 407,400
RMS Software	\$ 509,600
Hardware	\$ 92,300
Implementation Services	\$ 156,800
PST	\$ 87,458
Total	\$ 1,253,558

Operating Costs			

Cost Item	Current Geac CAD System - Surrey and Clients Annual	FDM System Annual	Savings/yr
Hardware Maintenance	\$ 40,000	\$ 8,500	
Support	\$ 22,000	\$ 113,600	
Data Communications	\$ 96,000	\$ 30,000	
Total	\$ 158,000	\$ 152,100	\$ 5900