

PSAP Grant Program Grant Ranker

View Application--31--Roanoke CPE

Grant Period: 2009

Tier: Replacement of out of service wireless E-911 equipment to enable primary PSAP to maintain current service levels to the general public (**OUT OF SERVICE**)

Grant Program: Continuity and Consolidation **Grant Type:** Individual PSAP

Priority: Integrated CPE (**CPEI**)

Primary PSAP Applicants: Roanoke Communications Dept.

Jurisdictions Served: Roanoke City

Project Director:

Mike Crockett
Manager E-911
215 Church Ave SW Roanoke VA 24011
540-853-2945 (phone)
540-853-1599 (fax)
michael.crockett@roanokeva.gov

Project Description:

The City of Roanoke desires to replace out-dated and soon to be non supported CPE equipment. Roanoke desires to secure an IP based CPE system which will enable us to position ourselves for NG 911 services and improve service to the public. A newer system will also improve mapping/location of wireless callers. We currently have Plant-CML MARRS CPE equipment.

Total Project Cost \$425,000.00

Amount Requested: \$150,000.00

Matching Funds: \$30,000.00

Additional Local Funds:

Statement of Need:

Roanoke City currently operates a Plant MAARS (Modular ANI-ALI Retrieval System) for our 911 phone system, the system has been in service since 1997. The system is no longer under research and development by Plant-CML and will become unsupported in the near future. The City desires to be proactive and upgrade to a modern, serviceable, supported system to ensure the highest level of service is available to the public accessing E-911.

Project Impact:

By upgrading to an IP (Internet Protocol) 911 phone system the City will be in position to take advantage of NG 911 (next generation) technology. Both the back room and the 911 center will move to a client-server based operation which will allow functionality we do not currently possess. We will also be able to have a VOIP (voice over Internet) system which can process digital or analog data. We will be able to take advantage of pre ALI information to assist with answering emergency calls, including wireless calls. We will

also be able to have SIP phones (session initiated protocol) to expand our ability to answer 911 calls in an overflow capacity. We are all aware of the tremendous advances in technology over the past ten years that has taken place since the MAARS system was acquired, by upgrading to a new 911 phone system we will be able to provide better and quicker service to callers.

Consequence of Not Receiving:

Delaying the upgrade for an unknown length of time, with the potential for declining service levels to the public.

Part of Long Term or Strategic Plan?: Yes

Likelihood of Completion Unfunded?: 25%

Other Available Funding Sources?: Yes

Percent of Grant Funding Requested To Total Funding Cost?: 35%

Is Project Locally Sustainable?: Yes

Comprehensive Project Description:

The goal is to upgrade to a computer integrated phone system which is capable of processing analog and digital calls for service. We will use the resources of the Department of Technology, E-911 Department, and the selected vendor to develop an implementation strategy. The city has the required level of support to ensure sustainability of the project.

What type of interface or compatibility solution will be used between existing equipment and/or software and that which you intend to purchase?:

We will work with our CAD vendor and CPE vendor to ensure we have the required interfaces to support each system.

What is the overall relationship of your project to your PSAP or locality's established long-range future plans?:

We desire to position ourselves for NG-911 but acquiring an IP enable solution system that can process analog and digital data. This is a goal directly related to our strategic department plan.

How will the equipment purchased will support future technologies for PSAP readiness?:

By allowing us to receive and process analog or digital calls for service.

Budget and Budget Narrative:

Apply for a receive grant for 150,000 dollars. Provide twenty percent match, the remainder will be funded by the City.

Ongoing Expenses:

The Department of Management and Budget will assist in developing a budget to support required maintenance of the equipment. The city currently supports the same requirement for current CPE equipment.

Evaluation:

The department and vendor will develop a project plan, the plan will include milestones.

What are the short term, intermediate, and/or long-term outcomes desired for this project?:

The long term outcome is to have a system that will support our needs for the next ten years.

What measures will be used to determine outcomes?:

Ultimately the success will be determined when the system is cut over.

How will data be collected and how will evaluations be conducted?:

Data will be collected electronically; evaluations will be based on the project plan.

How will data be presented?:

N/A

Attachments

E911Business case 2007 2008 Phones 911.doc
E-911 Phones Rating Sheet.doc
Q67471- Direct- City of Roanoke Communications Center - VIPER-P911-PMIS-PMAP.pdf

ITC Project Review – Rating Sheet

Project Title: 911 Phone System

Category	Criteria	High – Low	Description	Score
Strategic Alignment	Business Model	0	Does not support strategic objectives of organization and department’s business plan.	7
		7	Actually mentioned in the business plan or performance measures, and supports organization’s strategic objectives	7
	Level of Interest	0	No expressed support by administration or Council	Unknown
		6	Strong support from City Manager, administration, Council	Unknown
	Process Improvements	0	Very little improvement to business processes (i.e., helps to do the same thing faster)	0
		7	Significant improvements in the way business is conducted	7
Effectiveness	Internal	0	Does not appear to meet a problem defined by an internal customer or not addressed in business case	0
		7	Significant improvement expected in areas such as timeliness, quality, or availability	7
	External	0	Little or not direct improvement in service to the public	0
		7	Significantly improves service and accessibility to public	6
	Innovation	0	Not addressed as part of this project	0
		6	Project represents an improved way of completing the business process	6
Organizational Impact	Training & Skills	0	Project will require significant new skills to operate and the system does not address the appropriate training or change management	3
		4	Project is an improvement to an existing system and requires little new skills –or– training and new skills impact is addressed as part of the project	3
	Scope	0	Used by one department – no cross-functional benefit	0
		6	Serves a number of departments or used by the public	0
	Quality	0	Little or no impact on quality of work life... may even increase work load of staff	1
		4	Improvements to quality of work life (job done faster, more satisfaction of staff)	3

ITC Project Review – Rating Sheet

Project Title: 911 Phone System

	Mandates	0	No mandate/law is driving this request	0
		6	Mandate or new law is driving this request	0
Risk Avoidance	Readiness	0	No business process reviews have been conducted; stakeholders are not involved in the project –or- Organizational readiness is not addressed.	0
		5	Resources are available to complete the project and stakeholders strongly support the project; organization has the skills and the staffing to complete the project	5
	Technical	0	Risky – does not conform to DoT’s software/hardware standards or there is little or no technical experience with this technology	0
		5	Low risk – conforms to standards and there is successful experience in using the technology	5
	Costs	0	Very risky – complex project and cost estimates need additional refinement.	0
		5	Low risk – cost estimates are well supported	4
	Not Doing	0	Low risk – the impact of the system can be achieved by other means	0
		5	Very risky – system is important to provide future opportunities for cost savings and/or customer service improvements	5
Cost Benefits	Revenue	0	No impact on revenue or negative impact on revenue	3
		7	Increase in revenue generated (including grants and other funding sources)	0
	Annual Costs	0	Not identified or has high dollar maintenance (recurring)	5
		6	No additional maintenance cost incurred (or cost savings if replacing an existing system)	0
	FTEs	0	Increases or no impact on staff levels	0
		7	Reduction in staff	0
			TOTAL SCORE:	77



ITC Project Review - Business Case

Title:	Upgrade of Customer Premise Equipment (CPE)
Brief Description:	Upgrade to 911 phone system to IP based system
Department:	E911
Dept Representatives:	Mike Crockett
DoT Representative:	Jack Ferguson
Estimated Hours:	DoT: _____ Dept: _____
Proposed Budget:	One-time costs: \$397,198.00 Maintenance: \$ 185, 697.00 for 5 years for on site \$ 76,000.00 for software upgrades for 5 years Source of Funding: \$ 150,000.00 state wireless grant \$ 130,000,00 from E911 Budget Identify: 1) Services, Software, Hardware and other project costs 2) Additional sources of funding for this project (grants, state, etc.):

1. Strategic Alignment

Describe how the project aligns with the strategic objectives of the organization and your department's business plan and/or performance indicators?

Will allow for the ability to receive analog, digital, and VOIP call for service

2. Effectiveness

How will the business process be improved in terms of gains in efficiency, accessibility, innovation, and convenience for both internal and external customers?

The phone system for the dispatchers will be computerized to allow for storage of data and quicker access to calls. The system will deliver pre ANL/ALI data, provide auto rebidding of wireless 911 calls.

3. Organizational Impact

Will the project have an impact on organizational personnel (improve skills, quality of work life, impact to other departments, etc.)

Yes, system is scalable and flexible for staff and center. 911 SIP phone can be located in administrative offices to assist when needed.

Are there any mandates/laws (federal, state, local, etc..) driving this request?

Virginia Wireless Board

4. Risk Avoidance

What is the organizational or departmental readiness for implementing the project? Has it been implemented in other organizations... if so, was it successful?



ITC Project Review - Business Case

Yes the system is active nationwide. We have made site visit to Guildford County NC

Is this a necessary technical upgrade? If so, what are the consequences of not doing it?

Yes, current MARRS 911 system no longer has R and D being done. The system is a non IP network and has reached end of life. Parts are becoming difficult to obtain.

How was cost estimates formulated?

Vender Quote

What is the impact of not doing the project to the organization?

Risk of unsupported 911 phone system, inability to deal with data over system.

Will the project require organizational changes? Have process redesign and staff training been accounted for in the project?

No organizational change. Training provided by vendor.

5. Cost Benefits

What is the cost/benefit and potential return on investment for this project?

Ability to replace servers and upgrade software rather than entire systems.

Staff reductions (how many FTE's and when)?

No



ITC Project Review - Business Case

Signature Page

I have reviewed the information contained in the ITC Project Review Business Case document, including all cost estimates and hereby approve this project for submission to the ITC.

Signature: Mike Crockett

Date: 6-29-2007



Positron VIPER with
Power 911 and Power MIS
with Option for Power MAP
for
City of Roanoke Communications Center, VA

Summary

Item	Cost
Positron VIPER	\$ 88,308.75
Power 911 Software	\$ 132,977.75
Power MIS	\$ 14,680.24
IWS Hardware	\$ 49,237.00
Peripherals	\$ 12,900.00
On Site Spares	\$ 11,392.50
Site Survey	\$ 3,350.00
Installation	\$ 17,550.00
Training	\$ 10,150.00
Cutover Assitance	\$ 3,350.00
Project Management Services	\$ 6,877.92
On Site Maintenance Year 1	\$ 46,424.44
Total	\$ 397,198.60

Annual Maintenance Services

Item	Cost
On-Site Maintenance - Years 2-5	\$ 185,697.74
Prepaid Software Evergreen - Warranty + 4 Years	\$ 76,094.40
Total	\$ 261,792.14

Optional Items

Item	Cost
ePrinter	\$ 5,445.75

Configuration Parameters

VIPER Controller

Total Number of E9-1-1 Trunks	12
Number of Administrative Lines (All)	15
E9-1-1 Voice Transfer to other agencies	Via Tandem Transfer
Remote Diagnostics	Included
Transfer of ANI/ALI data via modem to remote printer	Included
Demand ALI Print	Provided via Power 911
CAD Interface (RS232 dump to CAD of ANI/ALI + Position	Included
Netclock Interface	Included

Answering Positions

Power 911 Workstations with built-in IAP/PC Cards (no physical phone set at the positions).

Number of Power 911 Intelligent Workstations	12
Number of Buttons per Position	1,280 on-screen.

Call Taking Solution

Location Module (ANI/ALI)	Included
Computer Telephony Module (on-screen telephony)	Included
Contact Module (Call & Transfer - Voice and/or Data)	Included
On-line Message Board (a.k.a. Flash Bulletin Module)	Included
Lists Module (Call Lists and Queries)	Included
Toolbar (a.k.a. Call Detail Tool)	Included
Incident Manager Software (Incident Detailing + Premise + SOP)	Not Included
Integrated Call Recorder	Not Included
Integrated Telephone & Radio Recorder	Included
Integrated TDD	Included
AgentToolkit	Included
Tape Backup System	Included
Data Transfer to Remote FAX Machines or via E-Mail	Included
UPS on Workstation PCs (30 minutes)	Included
UPS on Server	Included
RAID Disk Array (data redundancy)	Included

MIS Solution

Power MIS	Included
ePrinter	Optional

Power MAP (OPTIONAL)

Number of Power MAP Positions	12
Power MAP Viewing Software	Included
Power MAP Editing Software	Included
GIS MAP Data Validation & Testing	Included

Miscellaneous

Screens per Position	1
Screen Type	19 Inch LCD

Model #	Description	Qty	Unit Cost	Total
¹ Positron VIPER				
912800	Positron CAMA Gateway Shelf	2		
912801	Positron CAMA Interface Module	6		
912802	Positron Primary Backroom Server	1		
912803	Positron Primary VoIP Soft Switch	1		
912805	VoIP FXO Gateway - 8 Ports for Admin Line	2		
912806	24 Port Switch with QoS	2		
912807	IT Cabinet 4 ft	1		
912810	IP Phone - Snom 320	2		
912811	Backroom Position Access License	13		
912812	PBX Access License - Per Workstation	12		
912813	Power Supply (-48V DC)	2		
912822	Positron Secondary Backroom Server	1		
912823	Positron Secondary VoIP Soft Switch	1		
913850	Positron VIPER Enabling Kit	12		
			Subtotal \$	88,308.75

Power 911 Software

913100/425	Power 911 Workstation Base Software	12		
913200/425	Power 911 Server Software	1		
913225	Power 911 Redundant Server Software	1		
913160	Power 911 Integrated TDD Software (IAPPC)	12		
913112	Power 911 Agent Tool Kit (per position)	12		
913650/110	Integrated Telephone & Radio Recorder (per I	12		
913353/200	XDC Software License - Workstation	12		
913351/200	XDC Software License - Server	1		
914120/1	IWS G2 Workstation - Configuration and Sof	12		
914120/2	IWS G2 Server - Configuration and Software	1		
914120/3	IWS G2 Object Server - Configuration and So	1		
			Subtotal \$	132,977.75

Power MIS

920000	Power MIS 3.0 Software & Documentation	1		
920002/A	Power MIS 3.0 Data License	12		
914421	Additional Backup EXEC Server Agent	1		
914422	Additional Backup EXEC SQL Agent	1		
914120/2	IWS G2 Server - Configuration and Software	1		
920023/B	Power MIS 3.0 - Server (5-15 positions)	1		
			Subtotal \$	14,680.24

Model #	Description	Qty	Unit Cost	Total
² IWS Hardware				
914101/NS	IWS G2 Workstation Computer (No Screen)	12		
914704	19 Inch LCD Monitor	12		
914410	IWS Workstation UPS	15		
914202	IWS Object Server	1		
914226	IWS G2 Server (5-15 positions)	1		
914301	IWS Communications Server	1		
914431	IWS G2 Server Tape Backup System	1		
914451	IWS G2 Server Redundant Disk Array	1		
914511	IWS Serial Port Expansion - 8 Port	1		
914520	IWS External Modem	8		
			Subtotal \$	49,237.00
Peripherals				
915109	Alarm Panel	1		
914840	ALI Modem	2		
912645	Serial Printer	1		
914513	Laser Printer	1		
600150	50 Pin Punch Blocks	12		
207-990000-	25 Pair Amphenol Cable	12		
960103	Network Cabling	32		
			Subtotal \$	12,900.00
On Site Spares				
912800	Positron CAMA Gateway Shelf	1		
912801	Positron CAMA Interface Module	1		
912802	Positron Primary Backroom Server	1		
912805	VoIP FXO Gateway - 8 Ports for Admin Line:	1		
912806	24 Port Switch with QoS	1		
912813	Power Supply (-48V DC)	1		
913850	Positron VIPER Enabling Kit	1		
			Subtotal \$	11,392.50
³ Site Survey				
950100	Site Survey (<i>per site</i>)	1		
			Subtotal \$	3,350.00

Model #	Description	Qty	Unit Cost	Total
Installation				
950856	Backroom Staging - up to 8 positions	1		
950857	Backroom Staging - each additional pos.	4		
950104	Professional Services - Price Per Day	7		
			Subtotal	\$ 17,550.00
Training				
960801	Power 911 Administrator Training (per day)	2		
960801	Power 911 Call Taker Training (per day)	3		
			Subtotal	\$ 10,150.00
Cutover Assistance				
950500	Cutover Assistance - Price Per Day	1		
			Subtotal	\$ 3,350.00
Project Management Services				
950510	Project Management	1		
			Subtotal	\$ 6,877.92
⁴ On-Site Maintenance				
	On-Site Maintenance - Year 1 starting at cut over	1		
			Subtotal	\$ 46,424.44
			Total	\$ 397,198.60

Model #	Description	Qty	Unit Cost	Total
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Annual Maintenance Services

⁴ On-Site Maintenance - Years 2-5

	On-Site Maintenance - Year 2	1	\$	46,424.44
	On-Site Maintenance - Year 3	1	\$	46,424.44
	On-Site Maintenance - Year 4	1	\$	46,424.44
	On-Site Maintenance - Year 5	1	\$	46,424.44
			Subtotal	\$ 185,697.74

⁵ Prepaid Software Evergreen - Warranty + 4 Years

	Positron VIPER Software Evergreen			
912800/SE5	Warranty Plus Four (4) Years Pre-Paid	1	\$	22,632.00
	Power 911 Software Evergreen Warranty			
913100/SE5	Plus Four (4) Years Pre-Paid	1	\$	50,135.10
	Power MIS Software Evergreen Warranty			
920000/SE5	Plus Four (4) Years Pre-Paid	1	\$	3,327.30
			Subtotal	\$ 76,094.40

Model #	Description	Qty	Unit Cost	Total
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Optional Items

⁶ ePrinter

Software				
917310	ePrinter Software and Documentation	1		
914120/1	IWS Underlying System Software - Workstati	1		
Hardware				
914101	IWS Workstation Computer w/17" CRT Moni	1		
914430/B	IWS DVD Backup System	1		
Installation				
950104	Professional Services Per Day	1		
Training				
917311	ePrinter - Self Tutorial CD	1		
			Subtotal \$	5,445.75

^{6,7} Power MAP

Software				
919100/300	Power MAP Software	12		
919300	ESRI ArcGIS 9.x for editing ESRI Shape files	1		
919500	GIS MAP Data Validation & Testing	1		
Hardware				
914704	19 Inch LCD Monitor	12		
914800	Dual Video Card	12		
Installation				
950104	Professional Services - Price Per Day	2		
Training				
960801	Power MAP Administrator Training - Price Pe	1		
960801	Power MAP Call Taker Training - Price Per D	2		
			Subtotal \$	62,417.50

Notes

- 1 Shipping costs have not been included in the quote. The shipping costs are to be prepaid by Positron and charged to the customer.
Note: FOB Positron, Montreal.

- 2 Customer will be responsible for ensuring XDC server has a suitable number of dedicated phone lines available. Customer will also be responsible for receiving media (Fax/Printer/e-mail) at remote sites.

- 3 The Site Survey is intended to identify any additional miscellaneous equipment or services required to ensure smooth installation and operation of the quoted system. Additional costs may be incurred upon completion of the Site Survey.

- 4 In the event that a problem cannot be corrected remotely, a Positron technician will be dispatched to the site in order to remedy any critical service affecting issues. A mutually agreed upon response time will be negotiated between Positron and the customer upon award of contract. 7x24 call center support is included as part of on site maintenance services.
Extended hardware warranty is not included with this service.

- 5 This service is designed to protect the customer's initial Software investment by maintaining optimized system performance and functionality. The most recent versions of the purchased software product will be available during the contract period to the customer's designated maintenance personnel who will be responsible for its deployment at the site.
The Software Evergreen Program includes shipment of new software versions, minor and major releases, and problem workarounds to be deployed by the customer's designated maintenance personnel.
The entire amount of the software evergreen service must be prepaid at the time that the purchase order is issued.
This service covers Positron developed software only, and does not include coverage for third party software such as the Windows Operating System, SQL, etc..

- 6 All optional modules in this quote have been priced under the assumption that they will be purchased and installed concurrently with the base system. If these modules are to be installed at a later date, additional travel & living expenses will apply.

Software Evergreen and on site maintenance services have not been included for optional modules. Once the customer has finalized their configuration, a revised quotation will be provided with equipment and services costs revised as necessary.

- 7 Power MAP is a viewing software. Customer must supply and maintain GIS data. GIS Data must be ESRI .shp format, or capable of being converted to ESRI .shp format. Original

The Positron Power IWS GIS Data validation service examines the suitability of end user supplied GIS data and readies it for use by Power IWS products. Any potential problems identified during the GIS data review are reported to the customer, including problems descriptions and recommended corrective action.

The GIS data is then configured to work with Power IWS. Part of the preparation includes sample testing to ensure that the desired operational results can be achieved.

Corrections to the GIS data are not performed and this service does not validate the positional accuracy of the data. If the customer wants corrections to be completed to the GIS data by POSITRON, a price quotation can be provided upon request.

In order to ensure timely delivery of the customer order, GIS data is required to be delivered to Positron for validation as soon as possible after the order is placed.

Terms

- PRICING** All prices are in U.S. Funds.
Taxes, if applicable, are extra.
FOB Positron, Montreal. Shipping costs are prepaid and charged.
- PAYMENT** Net 30 Days from Invoice
- DELIVERY** TBD.
- VALIDITY** 60 days.