PSAP Grant Program Grant Ranker

View Application--49--Pictometry

Grant Period: 2009

Tier: Strengthen current equipment and service delivery capability by upgrading existing wireless E-911 related equipment or services (**STRENGTHEN**)
Grant Program: Enhancement **Grant Type:** Regional Initiative
Priority: Other (**OTHER**)

Primary PSAP Applicants:	Blacksburg Police Communications Christiansburg Police Communications Montgomery County Roanoke Communications Dept. Roanoke County Police Communications Salem Police Communications Vinton 9-1-1 Communications
Jurisdictions Served:	Town of Blacksburg Town of Christiansburg Town of Vinton Montgomery Roanoke Roanoke City Salem

Project Director:
Pat Shumate
Chief Communications Officer
5925 Cove Road, Roanoke VA 24019
540-777-8656 (phone)
540-777-9769 (fax)
PSHUMATE@roanokecountyva.gov

Project Description:
The greater Roanoke and New River Valleys have initiated a regional effort to bring Pictometry to our mutual aid area. We believe that Pictometry combined with accurate address points can best resolve a number of issues unique to the physical and political geography of the area. Although Pictometry is often considered an urban resource, we believe that it also provides significant public safety benefits for rural location-based challenges, especially given the varied dynamic of our region as we outline further on.

Total Project Cost	$300,000.00
Amount Requested:	$300,000.00
Matching Funds:	$0.00
Additional Local Funds:	$0.00

Statement of Need:
The area is faced with numerous public safety dispatch challenges in serving its residents. All call data is based on Roanoke County Dispatch numbers and all other data is based on Census and county data. - The entire area is facing an aging population. Increased age leads to more calls for assistance and more false

reported locations. Roanoke County growth in the 55+ population is estimated to be 18% and the county has at least 25 elder care facilities. Additionally, Roanoke County has 10%+ of its population living alone and over the age of 65 and approximately 25% of our calls to dispatch come from the elderly or nursing homes. Approximately 13 percent of the New River Valley's population is over the age of 65. In 2002, Money Magazine named the Roanoke region one of the nation's "Best Places to Retire." - Additionally, in 2006, it was estimated that 34% of county households are individuals living alone and are therefore more likely to need outside assistance. This number is up from 25% in 2000. - Our terrain is extremely varied. There are many deep valleys and high peaks, numerous water ways, and large tracts of parkland. In Roanoke County alone, there are over 1146 acres of locally owned parklands. Additionally, our borders contain 7 private, state or federal natural areas including the Appalachian Trail. Approximately 3% of all calls come from parklands. Our rural residents typically traverse county and private roads with steep terrain. Many of our roads are unpaved and unimproved. - The region has unique challenges not only due to the parkland, but to the rural areas in which people are building. Much of our "prime" developable land has been built out, and building has shifted to terrain that was once not considered attractive for development. Many of those places are extremely rural and far from emergency services; the steep slopes can make access challenging or impossible. - Our region is very susceptible to wild fires, often close to populated areas. Our risk is high enough to have been identified by the Department of Homeland Security for a special grant to fund a specialized wild fire vehicle. 2006- 112 reported incidents and in 2007 - 138 reported in the first 11 months. - We see large numbers of visitors that often do not know their locations when calling for aid. This is especially true when calling from parklands. With several major colleges and universities in the area, we also have a large draw of temporary residents from outside the region. 33% of calls are from visitors/tourists. - There are a large number of Mutual Aid calls and this number is only expected to increase. We handle approximately 300 mutual aid calls a month, representing 8% of our total call volume. - Due to increasing county and regional population in the area covered by the grant request and shifting demographics and needs, the area in which job recruiting occurs has expanded. This leads to a workforce less familiar with the region and its colloquial references. Again, this is exacerbated by the large kernel of local elderly who only communicate location by antiquated colloquial reference. - The Montgomery Sheriff's Office PSAP typically handles in excess of 7500 landline E911 calls and over 12,000 cellular 911 calls each year. Our proposed solution is to take advantage of a new technology called Oblique Photography offered by Pictometry, Inc. We will pair that with address points for Roanoke County which we are seeking funding for in an individual grant. This new photography can be taken from the air and provides a side view of all terrain and buildings from each side. This technology has already been used in a number of well-known cases. It was used during the California wildfires to predict the next fire lines and forecast evacuations. It was also used in the Georgia court shootings case. Officials did not want to alert the hostage taker that any plans were underway. By studying these oblique photos they were able to plan the entire building assault. They knew where all egress points and windows were, and could even estimate the height of any part of the building. Some potential uses and advantages to using oblique photography are: • Optimize 9-1-1 operations by minimizing misroutes resulting in reduction of risk to personnel and property. Nearly 15% of calls are currently misrouted. Examples are in attachments. • Decrease response times and increase service to citizens. Dispatchers will be able to describe the location to responders in great detail. Eventually we will be able to push images to responders. It will also help us verify address information with callers, especially those who do not know or cannot remember where they are. Examples are in attachments. • Oblique Photography can be used in conjunction with GPS technologies to more accurately locate cellular callers. Examples are in attachments. • Height of buildings and sizes of windows can be determined to speed rescues and evacuations. Height measurement can also be used on natural features like ravines and waterways. Examples are in attachments. • Oblique Photography allows for clear and accurate descriptions of buildings and locations. • Oblique Photography allows responders and dispatchers to see clear photos of buildings even if obscured by smoke or snow at the time of the call. It assists dispatchers in guiding firefighters to hydrants that are buried under snow or debris. • Oblique Photography also allows responders to have a clear image of what they are walking into and the layout of the surrounding area • Oblique photography allows users to distinguish parking lots from parking garages and other ambiguous structures when responding to unfamiliar areas, something that cannot be done with traditional ortho photos. • Oblique Photography may be fully integrated with CAD systems. • The oblique photography could also assist with Montgomery's highly successful Project Lifesaver program.

Project Impact:

As with any dispatching initiative, we hope to greatly improve the number of successful calls, whether in

terms of lives saved and improved or structure and property protected. We also hope to decrease the number of misdirected calls, which have been increasing due to an aging population and influx of visitors and temporary residents, like college students. We also believe that Pictometry can be especially useful for our varied, often arduous terrain types. Examples are included in a separate attachment. As discussed previously, we are seeking to resolve Roanoke County's address points issues in an individual grant application. We strongly believe that Pictometry is the next puzzle piece necessary to solve the issues we have raised throughout this proposal that address points and building footprints cannot resolve.

Consequence of Not Receiving:
This project can ONLY be accomplished with grant funds. If this grant is not received we will continue pursuing grants.

Part of Long Term or Strategic Plan?: Yes
Likelihood of Completion Unfunded?: 0%
Other Available Funding Sources?: No
Percent of Grant Funding Requested To Total Funding Cost?: 100%
Is Project Locally Sustainable?: Yes

Comprehensive Project Description:
Participating localities will be contracting with Pictometry to provide oblique photography of the area and integration with existing CAD systems. Pictometry, Inc is a well reputed company that provides a complete package. They will handle the photography, processing, distribution, implementation and training. They also include support in the contract. A previously proposed Roanoke County contract is attached as a sample. Very little effort or time will be required by the participating localities. The overall process will take several months to complete as the photography must be flown over the winter when tree cover is at a minimum. Since Pictometry includes training and deployment in their contracts, the only issue for localities to overcome is hardware to store the data and information. Pictometry offers one possible solution, but we would like to allow the localities to choose for themselves, especially for the use of SAN technologies. We believe that it is sustainable for a number of reasons. The largest cost is the cost of entry, which this grant will cover. Localities will have time before the second year payments to add this to their budgets. Cost savings will naturally occur over time due to the decrease in misdirected responders. Additionally, this product is usable for a wide range of county businesses. Once in place it will be easier to get multiple departments to split the cost. We will also be participating in a special program offered by Pictometry that will help to offset future costs.

What type of interface or compatibility solution will be used between existing equipment and/or software and that which you intend to purchase?:
Pictometry automatically interfaces to most CAD systems. Although Montgomery County is currently looking to replace their CAD, all of the current included locality CAD vendors do support Pictometry. All of the localities will be able to take advantage of this new technology with little time lost to training or system issues.

What is the overall relationship of your project to your PSAP or locality's established long-range future plans?:
As with any dispatching initiative, we hope to greatly improve the number of successful calls, whether in terms of lives saved and improved or structure and property protected. We also hope to decrease the number of misdirected calls, which have been increasing due to an aging population and influx of visitors and temporary residents, like college students. We also believe that Pictometry can be especially useful for our varied, often arduous terrain types. Examples are included in a separate attachment. As discussed previously, we are seeking to resolve Roanoke County's address points issues in an individual grant application. We strongly believe that Pictometry is the next puzzle piece necessary to solve the issues we have raised throughout this proposal that address points and building footprints cannot resolve.

How will the equipment purchased will support future technologies for PSAP readiness?:
Pictometry provides a full interface to each localities' CAD system. Dispatchers will require less then 30 minutes training in order to begin using this additional information. Pictometry provides an extremely easy and intuitive interface. The nature of the photography makes it much easier to understand, than traditional

ortho images and provides additional necessary information. Additionally, localities will be utilizing SAN technologies allowing them to gradually add storage space in the future if the need arises. Every effort is being exerted to make sure the solutions are affordable and have longevity.

Budget and Budget Narrative:

Representatives from the PSAPs that serve the counties of Roanoke and Montgomery and the City of Roanoke, Christiansburg and Blacksburg as well as the Town of Vinton upon notice of a grant award, will assume responsibility for this cooperative effort and will determine an appropriate procurement methodology for the project. Since an acceptable contractor has already been located, the project will begin immediately as it will take several months to photograph and process the images. This will allow the localities time to determine the best storage methods within their own organizations. We have made arrangements to allow participating localities to share data and updates with those localities not applying for this grant that can fund the storage and licensing through their general funding processes. Once the project reaches the maintenance stage, the participating PSAPs will be responsible for continuing the project to its conclusion and to fulfill the reporting requirements of the PSAP Grant Funding Guidelines. All localities acknowledge that they will be responsible for any year maintenance funding after this initial contract period. A preliminary budget is outlined below. The following listed budget items are a based on good faith estimates provided by Pictometry, Inc and average storage cost per locality. This budget will continue to be refined as the participating PSAPs move through the procurement process. A finalized cost proposal and technological solution will be presented to the PSAP Grant Coordinator before any approved funding is requested. Roanoke County Pictometry, Inc. $ 43,795.00 Additional SAN storage space (approx) 37,834.00 Yearly Recurring maintenance Fees (approx $33795.00) N/A Total Cost $81,629.00 Montgomery County Pictometry, Inc. $ 28,152.50 Additional SAN storage space (approx) 21,750.00 Yearly Recurring maintenance Fees (approx $23152.50) N/A Total Cost $49,902.50 Christiansburg Pictometry, Inc. $ 3,465.00 Additional SAN storage space (approx) 19,750.00 Yearly Recurring maintenance Fees (approx $23152.50) N/A Total Cost $23,215.00 Blacksburg Pictometry, Inc. $ 4,567.00 Additional SAN storage space (approx) 19,750.00 Yearly Recurring maintenance Fees (approx $23152.50) N/A Total Cost $24,317.00 Town of Vinton Pictometry, Inc. $ 1,890.00 Additional SAN storage space (approx) 19,750.00 Yearly Recurring maintenance Fees (approx $23152.50) N/A Total Cost $21,550.00 City of Salem Pictometry, Inc. $ 3,622.50 Additional SAN storage space (approx) 19,750.00 Yearly Recurring maintenance Fees (approx $23152.50) N/A Total Cost $23,372.50 Roanoke City Pictometry, Inc. $ 22,264.00 Additional SAN storage space (approx) 53,750.00 Yearly Recurring maintenance Fees (approx) N/A Total Cost $76,014.00 Regional Total Cost $300,000.00 We believe that it is sustainable for a number of reasons. The largest cost is the cost of entry, which this grant will cover. Localities will have time before the second year payments to add this to their budgets. Cost savings will naturally occur over time due to the decrease in misdirected responders. Additionally, this product is usable for a wide range of county businesses. Once in place it will be easier to get multiple departments to split the cost. We will also be participating in a special program offered by Pictometry that will help to offset future costs.

Ongoing Expenses:

There are yearly maintenance fees associated with Pictometry. All participating localities are aware of the cost involved and have agreed to meet those costs. In many cases, these costs can be shared across all of a given locality's departments since the uses of Pictometry are so vast. There should also be some cost savings to each locality through the decreases in misdirected calls. This amount would be difficult to assume or measure. Additionally, all localities are participating in Pictometry's cost sharing programs which will also help to offset cost. Finally, we will be able to continue negotiating for better prices through a continued regional effort that we hope will extend beyond this grant cycle and these particular localities. The timing of the grant will allow localities to properly plan and allocate for future costs.

Evaluation:

Pictometry, Inc is a world class company that provides a complete package. They will handle the photography, processing, distribution, implementation and training. They also include support in the contract. The Roanoke County contract is attached as a sample. Statistics on use will be gathered in order to determine its impact on PSAP operations. We will interview lead dispatchers on a quarterly basis for updates to the questions asked in gathering research for this grant. Those questions included (but not limited to) the following: 1.) What percentage of calls are from elderly or nursing homes? 2.) What percentage of calls are from parks or national parklands? 3.) What is the number and percentage of mutual

aid calls? 4.) What is the percentage of calls from tourist/visitors? 5.) What is the percentage of calls that are misdirected for any reason? 6.) Case examples of incidents that would have been aided by the availability of Pictometry.

What are the short term, intermediate, and/or long-term outcomes desired for this project?:
As with any dispatching initiative, we hope to greatly improve the number of successful calls, whether in terms of lives saved and improved or structure and property protected. We also hope to decrease the number of misdirected calls, which have been increasing due to an aging population and influx of visitors and temporary residents, like college students. We also believe that Pictometry can be especially useful for our varied, often arduous terrain types. Examples are included in a separate attachment. As discussed previously, we are seeking to resolve Roanoke County's address points issues in an individual grant application. We strongly believe that Pictometry is the next puzzle piece necessary to solve the issues we have raised throughout this proposal that address points and building footprints cannot resolve.

What measures will be used to determine outcomes?:
As discussed in the evaluation section, we will use interviews with lead dispatchers and statistics to determine the success of the project.

How will data be collected and how will evaluations be conducted?:
As discussed in the evaluation section, we will use interviews with lead dispatchers and statistics to determine the success of the project.

How will data be presented?:
This data is already part of our overall metrics for the dispatching software. We will adjust any other measures that seem appropriate or are recommended by the board.

Attachments