

PSAP Grant Program Grant Ranker

View Application--87--EMMA

Grant Period: 2009

Tier: Broaden or increase the delivery of wireless E-911 equipment or services beyond established minimum functional standards (**BROADEN**)

Grant Program: Enhancement **Grant Type:** Individual PSAP

Priority: Other (**OTHER**)

Primary PSAP Applicants: Stafford County Sheriff's Communications

Jurisdictions Served: Stafford

Project Director:

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Director

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Project Description:

The Emergency Management Mapping Application (EMMA©) is a secure, content-and tool-rich Web-based mapping application that would enable the display and an analysis of information relevant to all stages of an emergency incident. Built using ESRI's ArcIMS web-based mapping software currently in use by Stafford County's GIS Department which supports the 9-1-1 Center with all of its mapping needs, the application would assist in managing operations and emergency responses.

Total Project Cost \$60,000.00

Amount Requested: \$48,000.00

Matching Funds: \$12,000.00

Additional Local Funds: \$0.00

Statement of Need:

Stafford County's Emergency Communications Center currently has no ability to manage additional mapping data in support of emergency responses generated through 9-1-1 calls. This application would allow staff to: Identify & visualize incidents via a map, which can include real-time vehicle location as they move, or the availability of hospital beds as hospital status changes ultimately providing essential support of the initial caller and/or incident generated by the 9-1-1 call. Generate location-specific reports, such as a summary of the location's key geographic features, its nearest critical infrastructure features (e.g. police stations, schools, hospital, fire departments), its location reference (e.g., ADC map grid), and real-time data (e.g., weather conditions, traffic).

Project Impact:

This project would provide Stafford's ECC with real-time operational awareness in the coordination of its

response to 9-1-1 wireless emergency calls. The impact would be in utilizing the enhanced location technology in providing distribution to the entire staff in "real time" through an audio-visual system in the ECC.

Consequence of Not Receiving:

The ability to take advantage of EMMA would be prohibitive without the funding.

Part of Long Term or Strategic Plan?: No

Likelihood of Completion Unfunded?: 100%

Other Available Funding Sources?: No

Percent of Grant Funding Requested To Total Funding Cost?: 80%

Is Project Locally Sustainable?: Yes

Comprehensive Project Description:

Goals Provide enhanced capabilities in providing for the delivery of services requested by the wireless 9-1-1 caller Extend the technology capability of the EMMA program Provide real-time, live-video and information systems to the entire PSAP at one central point Implementation Strategy & Work Plan / Activities to be accomplished Acquire funding Assign project manager within Stafford County to coordinate efforts between GIS and the PSAP Review design & coordination with other technologies Purchase & install infrastructure Provide training Implement technology Timeline July – Sept. '08 Review Design & prepare purchase order Oct. – Dec. 08 Installation Jan. – Feb. 09 Training March 09 Implementation Longevity / Sustainability of Project Stafford would have no difficult sustaining this project. The GIS department for Stafford has been a participant in the planning and coordination of this Grant process and are a full partner in working with the PSAP to implement and maintain this technology as GIS and funding partner. Stafford will maintain any subscriptions and/or user fees it has with other agencies and entities in providing data to the PSAP.

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

Existing dispatch-mapping software uses the same base layers that EMMA, all derived from the same source, which is the county GIS system. Those base layers are: buildings, streets, parcels, and orthophotography. EMMA will allow for a regional display of these layers (surrounding counties), that are not accessible from the existing dispatch-mapping software, plus all the other public-safety related GIS layers. The application will be available to be shown on the large LCD screens in the dispatch center, providing additional overall resources to the primary PSAP. Scenario: In a scenario such as a traffic accident on I95 in which a chemical spill results, numerous calls will be received from wireless 9-1-1 callers. This project will assist in facilitating the expedient resource of data to first responders in aiding the incident. For example, VDOT cameras populated along I95 can be seen in real-time within dispatch where, in many cases, the view of the accident can be first-hand. In addition, this project would provide access to real-time technologies to provide weather information (i.e. wind direction) and coordination of resources with the State EOC and/or Stafford EOC for short and/or long-term events.

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

This project will provide real-time data to dispatch staff. As the facility provides a central point of visual data to staff in the form of a audio-visual focus wall comprised of multiple monitors, the data supports the PSAP's long-range plan of integrating real-time data with current technologies and applications accessible to it in providing these invaluable resources to staff in one central location. Some of the "real-time" data it will provide to the PSAP are: 1. the integration of real-time data 2. situational awareness through the integration of traffic cameras; hospital status; NOAA plume model, weather stations, etc. 3. real-time status of power outages 4. mapping of storm surge inundation; 5. coordination of responses with AVL

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

As identified above, Stafford County's PSAP currently has no ability to manage additional mapping data in support of its emergency responses. As Stafford County will be implementing a visual resource within its PSAP in a central location utilizing future technologies, EMMA will provide a much needed resource,

providing a conduit for many future applications and technologies to insure PSAP readiness, redundancy, and recovery. It will provide a conduit for current and future traffic cameras and technologies in assisting and managing resources for emergencies.

Budget and Budget Narrative:

\$40,000 – EMMA purchase and installation \$20,000 – EMMA Hardware – See System Requirements Below
 Narrative: Server(s) needs to house the application and all its components including the disk-space intensive GIS data such as orthophotography and any oblique images. EMMA System Requirements
 **Source – Sam Hall Geospatial Projects Manager Virginia Geographic Information Network 11751 Meadowville Lane Chester, VA 23836 Phone: (804) 416-6207 samuel.hall@vita.virginia.gov The following table describes a list of recommended hardware requirements for EMMA©. These requirements were developed by Towson University (the EMMA creators) based on information contained in ESRI technical documentation and have been successfully tested under anticipated emergency conditions. Estimated Server Cost: \$20,000 1 Web Server (2 CPUs) Dual 3.0 GHz processors or better (can be dual core) (2 socket) 4 GB RAM Minimal internal storage – 2, 15,000 RPM, SCSI 36 GB Drives (Ultra 320) configured in RAID 1/0 Gigabit network capacity - 2 NIC (4 NIC for failover) 1 Spatial Server (2 CPUs) Dual 3.0 GHz processors or fastest available (can be dual core) (2 socket) 4 GB RAM Minimal internal storage – 2, 10,000 RPM, SCSI 36 GB Drives (Ultra 320) configured in RAID 1/0 Gigabit network capacity – 2 NIC (4 NIC for failover) 1 Database Server (2 CPUs) Dual 2.8 GHZ processors or better (can be dual core) (4 socket to allow for future scalability) 4 GB RAM or more (AMD Opteron best for SQL Transactions) Minimum internal storage – 5, – 15,000 RPM, SCSI 36 GB Drives (Ultra 320) configured in RAID 1/0 (OS drives can be RAID 1, 10,000 RPM) Gigabit network capacity – 2 NIC (4 NIC for failover) 1) Additional Spatial Servers can be added to the configuration to increase capacity and performance; 2) EMMA© is licensed by the number of (core) CPUs in Spatial Servers; and 3) The Database Server must be upgraded after several Spatial Servers are added. • Software to support the EMMA© installation, including the following Product ESRI® ArcIMS® 9.1 Product ESRI® ArcSDE® 9.1 Software (optional) ESRI® ArcGIS® 9.1 Operating System Microsoft® Windows® 2000 or 2003 Server Database Microsoft® SQL Server™ 2000 Web Browser Internet Explorer 5.5 recommended This software already is owned by the county, no costs will be incurred.

Ongoing Expenses:

All on-going expenses will be facilitated by Stafford County. These would include any subscriptions to data being utilized through EMMA. All GIS updates are provided during the normal course of business in Stafford County.

Evaluation:

The evaluation plan for this project would be measured: 1. By the successful procurement of EMMA; 2. By the successful installation of EMMA; 3. By the successful training of EMMA; 4. By the successful day-to-day use of EMMA and its functionality.

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

Real-time access to EMMA and the functionality, information and technology that she brings to the PSAP. EMMA would provide this information the PSAP in the short-term and the foreseeable future.

What measures will be used to determine outcomes?:

Long-term performance improvements by measuring the response times of public safety responders based upon the improved location information available to all dispatchers at one time rather than on an individual work station and incident-by-incident basis; Result of improved information technology advantages through funding availability; The positive affect on policy & funding decisions and the projects impact on call processing times;

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

EMMA has the ability to archive incident GIS data which then can be compared to the the wireless calls related to the incident, such as the chemical spill scenario explained above to see if the PSAP dispatcher was able to relay information to the caller more quickly (total call time) than before EMMA was implemented.

How will data be presented?:

Thru a map, incident location & lat/long estimation of wireless call(s) and also in spreadsheet form.

Attachments