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2010 Innovations Awards Application

Deadline: March 1, 2010

ID # (assigned by CSG): **10-W-08CA**

Please provide the following information, adding space as necessary:

State: California

Assign Program Category (applicant): Public Safety / Corrections – Emergency Management
(Could also fit under Government Operations and Technology – Telecommunications)

1. Program Name

California Emergency Management Agency Statewide Video Teleconferencing (VTC) Project

2. Administering Agency

California Emergency Management Agency (Cal EMA)

3. Contact Person (Name and Title)

Sue Plantz, Chief Information Officer
CalEMA, Technology Operations Division

4. Address

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8. Web site Address

www.calema.ca.gov/vtc

9. Please provide a two-sentence description of the program.

The Video Teleconferencing (VTC) project has provided video teleconferencing capabilities statewide, linking together each of California's 58 counties, Regional Terrorism Threat Assessment Centers (RTTAC), the State Terrorism Threat Assessment Center (STTAC) as well as mobile field units. At its pinnacle of use, all endpoints are connected to a single conference, regional, or point to point video conference call allowing Cal EMA, the Governor, or any other appropriate presenter to communicate with the entire state simultaneously via voice, video and visual aids.

10. How long has this program been operational (month and year)? Note: the program must be between 9 months and 5 years old on March 1, 2010 to be considered.

Project start date: 12/2007
Project completion date: 12/2009

11. Why was the program created? What problem[s] or issue[s] was it designed to address?

One of the most prominent issues facing the public safety community today is the lack of communications interoperability, which is commonly defined by many as "the ability of public safety emergency responders to communicate with whom they need to, when they need to, as authorized." The California Emergency Management Agency (Cal EMA) coordinates overall state agency response to major disasters in support of local government. Incidents include earthquakes, floods, fires, hazardous material incidents, nuclear power plant emergencies, and dam breaks. Cal EMA is responsible for assuring the state's readiness to respond to and recover from natural, manmade, and war-caused emergencies, and for assisting local governments in their emergency preparedness, response and recovery efforts. During an emergency it is essential for Cal EMA staff and first responders to communicate, regardless of distance and without interference.

Video teleconferencing enables real-time collaboration between decision makers in the office and personnel at the scene of a disaster/incident, like never before. Effective disaster management requires an immediate, accurate assessment of the situation and continuous monitoring of events during response. Video teleconferencing bridging will give visual communication for first responders to deliver concise visual information anywhere on the scene and in the Emergency Operations Center (EOC)—anytime and enables more effective management of resources. This enables an imperative team oriented approach in a much faster timeframe, saving countless more lives and property.

In addition to real time video connectivity, the VTC system addresses many other concerns. One such concern is travel costs. In these tight budget times, it is increasingly difficult to send people

to training sessions, planning sessions and other emergency management related activities. The VTC gives CalEMA and the State's public safety community a resource to be able to have the subject matter experts at a meeting without having to pay for travel.
Another issue that Emergency Management is constantly trying to address is survivability of communications and redundancy of communications. The VTC system is operated in two of CalEMA's redundant communications sites and runs on a fiber network that is monitored by the carrier as an essential services network. Should our primary means of communications be disrupted, the VTC system allows for another means for command, control and coordination.

12. Describe the specific activities and operations of the program in chronological order.

9/2007 – CalEMA brought on AT&T to manage the VTC engineering and project management.

Installation of routers, switches, bridges and VTC units:

Phase I: 3/2008 – 4/2008: 9 state agency devices procured including regional centers and fusion centers. Exploration of existing systems and system needs for the County level systems was also accomplished during this phase).

Phase II: 5/2008 – 9/2008: This Phase included the 59 EOC Assessments and adding State Terrorism Threat Assessment Center and CalEMA K St facilities. The assessment discovered that 19 additional units needed to be ordered.

Phase III: 9/2008-10/2009: Procurement and installation of 58 County systems including the City of Los Angeles making the total 59. Installation of the STTAC, and other CalEMA facilities was also completed during this phase.

Phase IV: 10/2009-12/2009: Testing and deployment of complete VTC system.

13. Why is the program a new and creative approach or method?

The VTC technology is more than just a few VTC end points. It is an entire network throughout the state that allows us to conduct both small and large scale meetings, with visuals for sharing documents and training, without having to actually be in the same room.

Although VTC technology has been utilized on a limited and isolated basis throughout different segments of the public safety community, this, to our knowledge is the first time it has been used to coordinate emergency management efforts throughout an entire state.

At its pinnacle of use, all endpoints are connected to a single conference, allowing Cal EMA, the Governor, or any other appropriate presenter to communicate with the entire state simultaneously or in smaller groups via voice and video.

Another innovation is in the way the system has been engineered. Many VTC systems are too complex for the average user to utilize on their own without significant coordination on either end point with technology staff prior to a call. This system is user friendly to provide the average user with the ability to conduct a video teleconference call without having to involve technical staff. The infrastructure provides a useful tool for emergency managers throughout the state to speak to one another point to point with the click of a remote on their system thus enhancing

regional collaboration. Larger bridge calls are coordinated with CalEMA staff via a web portal leaving the customer with little to do but actually turning the unit on.

Another innovation of the system is that it allows for EOC to EOC connectivity statewide. California has many jurisdictions to coordinate with in a regional catastrophe. It is imperative that our Emergency Operations Centers remain connected to one another for briefings and other ICS related collaboration meetings. Connecting via video allows for the sharing of presentations, maps, other types of real time video from the incident command via our mobile units to the Operational Area EOC to the Regional CalEMA EOC all the way to the State Operations Center.

14. What were the program's start-up costs? (Provide details about specific purchases for this program, staffing needs and other financial expenditures, as well as existing materials, technology and staff already in place.)

Equipment: $1,338,560.85

Sales Tax (7.75%): $103,738.47

Maintenance: $ 339,763.56

Services: $ 457,455.70

Staffing/Personnel: Project was managed by existing staff

Total: $2,239,518.58

15. What are the program's annual operational costs?

Annual operational costs are estimated at about $30,000.

16. How is the program funded?

This project is fully funded by the Homeland Security Grant Program (HSGP) and CalEMA staff time.

17. Did this program require the passage of legislation, executive order or regulations? If YES, please indicate the citation number.

No, this project did not require a passage of legislation, executive order or regulations.

18. What equipment, technology and software are used to operate and administer this program?

Video teleconferencing requires an array of components which makes this process a reality. The components include: video input and output, audio input and output, data transfer source for transmitting information. Video cameras and webcams are used for video input, large screen t.v.'s, projectors, and monitors are used for video output. Microphones supply the audio input and loudspeakers are used to present audio output. Multiple ISDN lines are used to transmit data, voice, and video. The software used for conducting a video teleconference is called 'Meeting Place'. All endpoints are connected via IP connection through a single VTC bridge located at Cal EMA's Headquarters. There are redundant bridges installed at Cal EMA's regional centers.

A cart, complete with a flat screen television, a high definition camera, modems and routers were delivered to each of California's Counties and fusion centers. The Counties that already had updated VTC systems were simply connected to our network.

Each county was then added to a universal phone book that is loaded to each of their VTC units enabling the users to call each-other with relative ease.

(More technical details can be provided if desired).

19. To the best of your knowledge, did this program originate in your state? If YES, please indicate the innovator's name, present address, telephone number and e-mail address.

Yes, this project initiated in California. While other states use VTC for various reasons, California is the first to implement such an extensive network for public safety emergency management purposes.

This project was envisioned by CalEMA Secretary Matthew Bettenhausen. His present address is CalEMA 3650 Schriever Ave, Rancho Cordova, CA, 95670. His email address is matthew.bettenhausen@calema.ca.gov and his phone number is (916)-324-8908.

20. Are you aware of similar programs in other states? If YES, which ones and how does this program differ?

The Cal EMA VTC program differs from what we have found in other states in that it will use the technology in the emergency disaster context, not only saving dollars, but also saving lives.

Yes, there are several states that have implemented VTC systems for various reasons. For example, states such as Arizona, Pennsylvania, and New Jersey use VTC solutions in court proceedings, judicial officer meetings, prisoner civil rights hearings, etc. Texas, Tennessee, and Alabama have adopted VTC solutions as an alternative to transporting inmates to make courts safer and as a way to save tax payer dollars.

Colleges and universities in the state of New York offer VTC as a means of allowing students to access classes on other campuses and for schools to share the best teachers and offer subjects that may have been cut from other schools due to budget issues.

21. Has the program been fully implemented? If NO, what actions remain to be taken?

Yes, this project is fully up and running with the exception of a few counties that have run into some minor issues with coordinating installation.

22. Briefly evaluate (pro and con) the program's effectiveness in addressing the defined problem[s] or issue[s]. Provide tangible examples.

PROS:

Video teleconferencing has many advantages, including but not limited to:

1) Increases the productivity and effectiveness between decision makers at Cal EMA and public safety first responders at the scene of an incident. Cutting out travel time and being able to communicate real-time is a huge advantage.

2) Saves an agency time and travel costs.
   As a state agency, Cal EMA reimburses employees for travel costs (mileage, airfare, parking, etc.), per diem, overtime, etc. Having VTC capability, the agency is able to save money on the number of travel expense claims to pay out.

3) Saves time by reaching more people with fewer meetings.
   California is such a large state covering approximately 160,000 square miles. Having meetings throughout the state is taxing on the limited numbers of staff that we do have. Subject matter experts are spread thin trying to attend multiple meetings throughout the state. Through the VTC system we are able to save the travel time of many officials including all of the State and Local Emergency Managers.

4) Reaches large or sparsely-populated areas.
   Cal EMA has regional offices located throughout the state and they are run by a small number of staff. Staff can attend the same meeting as the rest of the agency without the inconvenience of driving several hours to attend in person. If an incident occurs while staff is out of the office there won't be anyone there to respond and coordinate recovery efforts. The local Emergency Managers in more rural areas of the State often have difficulty getting to other parts of the state for Emergency Management related meetings. The system allows them to participate in their own facilities.

5) Is useful when responding to a statewide or region wide incident.
   During an emergency, Cal EMA may activate the State Operations Center (SOC) and communicating with our regional offices and first responders is essential in our efforts to respond to emergencies and begin coordinating resources.

6) Helps increase the number of participants.
   Staff may be reluctant to travel for a meeting because of weather conditions, poor highway or transit access, neighborhood safety concerns, or other issues. Too often, a 2 hour meeting in another part of the state will take an entire day of traveling to and from the site. A participant is able to keep a full day schedule without having to travel.

7) Is used for training.
   State employees are required to complete certain training classes (defensive driver training program, sexual harassment training, etc.) and these courses along with others can be conducted via VTC.

   The CalEMA Training and Exercise Division will now be able to conduct statewide trainings without having to reserve classrooms throughout the state or pay to have people travel to training locations.

8) It opens up training hours and availability of courses for people.
   By cutting down on associated travel costs, employees have more options available to them which increase the number of participants' in any given training and has an overall increase in employee productivity.

CONS:

As for the disadvantages of VTC, the threat of technical failure always remains a concern. There are also interpersonal and socialization concerns, such as losing the personal effect of face-to-face contact. In addition, the initial cost of implementing such a system can be high; however, it has definitely been worth the time and money Cal EMA has spent to adopt such a project as the potentiality of saving lives is innumerable.

23. How has the program grown and/or changed since its inception?

Since the start of the project, Cal EMA has expanded VTC capabilities to implement Cal EMA's Operational Area Satellite Information System (OASIS) as its backhaul and has added security enhancements to allow parts of the system to operate at the SECRET level.

Upon implementation of the system other users were identified and other enhancements to include the deployment of the system to other state agencies and the implementation of a video server to expand the ability of CalEMA to broadcast conferences to a wider audience. These additions are currently underway.

24. What limitations or obstacles might other states expect to encounter if they attempt to adopt this program?

Funding and installation coordination

CSG reserves the right to use or publish in other CSG products the information provided in this application. If your agency objects to this policy, please advise us in a separate attachment.

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