COUNTY OF SONOMA
AGENDA ITEM
SUMMARY REPORT

Clerk of the Board Use Only
Meeting Date / / **Held Until** / /
Agenda Item No: _____ **Agenda Item No:** _____

Department: Information Systems ( ) **4/5 Vote Required**

Contact:	**Phone:**	**Board Date:**	**Deadline for Board Action:**
Cristine Alilovich	(707) 565-2676	9/29/09	9/29/09

AGENDA SHORT TITLE:

Public Safety Voice Radio Communication System Update

REQUESTED BOARD ACTION:

Direct the Information Systems Department, Sheriff's Department and the Department of Emergency Services to collaboratively continue planning for the future needs of the County's public safety voice communications systems and return to your Board with a Voice Radio System Business Plan, which will include a specific funding proposal for your input and consideration.

CURRENT FISCAL YEAR FINANCIAL IMPACT

EXPENDITURES		**ADD'L FUNDS REQUIRING BOARD APPROVAL**	
Estimated Cost	**$** 0	**Contingencies** **(Fund Name:)**	**$**
Amount Budgeted	**$** 0	**Unanticipated Revenue** **(Source:)**	**$**
Other Avail Approp. **(Explain below)**	**$ 0**	**Other Transfer(s)** **(Source:)**	**$**
Additional Requested:	**$** 0	**Add'l Funds Requested:**	**$**

Explanation (if required):

Prior Board Action(s): 3.03.09 Amendment to the Memorandum of Understanding with the City and County of San Francisco for distribution of federal grant funding via the Bay Area Super Urban Security Initiative.

Alternatives - Results of Non-Approval:

Background: (CTA Communications Needs Analysis & Design Alternatives Report on file with Clerk)

On March 3, 2009, your Board authorized the receipt of $250,000 of federal grant funding from the Bay Area Super Urban Area Security Initiative (SUASI) to provide the County of Sonoma the opportunity to conduct a two-phased public safety communications project; 1) Needs Analysis, and 2) Design Alternatives. The Information Systems Department (ISD) released a RFP and selected CTA Communications (CTA) to conduct the project. CTA has twenty five years of providing consulting services in all aspects of communications engineering for public safety agencies. In particular, CTA has a significant presence in the Bay Area, with consulting projects ongoing in Contra Costa County, Alameda County, Solano County, and the City of Oakland.

The purpose of this item is to provide your Board with an introduction to the issues identified through this effort. With your Board's direction, ISD will move forward in developing a specific plan to address the needs of the public safety voice radio system. ISD, in collaboration with the Sheriff's Department and the Department of Emergency Services, will come back to your Board at a later date to present this plan and receive input and direction.

The County's radio and wireless data systems play a critical role in providing public safety communications used by Sonoma County's law enforcement agencies, fire agencies, and emergency medical response agencies. There are approximately 80 public safety agencies and approximately 2,000 field personnel relying on these County's systems for public safety communications.

There are several voice radio systems in place in Sonoma County. The largest two radio systems in the County are the County's Sheriff's UHF (Ultra High Frequency) system and the Redwood Empire Dispatch Communications Authority's (REDCOM) VHF (Very High Frequency) system, which supports a majority of the fire agencies and emergency medical services (e.g., ambulance providers) in Sonoma County. The infrastructure for both of these systems is maintained and installed by ISD.

In developing the Needs Analysis and Design Alternative reports (both are on file with clerk and their executive summaries are attached), CTA met frequently with local law enforcement, emergency services, and fire services subject matter experts, holding numerous focus group meetings. Based on the input of these stakeholders, CTA developed an assessment of the County's current system, current needs, likely future needs, along with the direction of radio technology going forward.

Attachments: CTA Communications Needs Analysis Report &Design Alternatives Report Executive Summaries

On File With Clerk: CTA Communications Needs Analysis Report & Design Alternatives Report

CLERK OF THE BOARD USE ONLY

Board Action **(If other than "Requested")**	**Vote:**

Background: (Continued)

CTA's primary recommendations focus on moving to a digital countywide 700 MHz P25 Phase 2 system. This recommended system would have all county public safety responders on one system, instead of three, which would significantly increase local and regional interoperability and potentially decrease future ongoing costs. This type of system would also allow REDCOM, fire, and emergency services agencies to maintain their existing VHF portable and mobile radios for fire ground and interoperability situations with CALFIRE and other fire jurisdictions while moving their dispatch channels to a modernized 700 MHz System. The fire and emergency medical service agencies would also continue to use VHF for paging. This design addresses the concern that firefighters have with the use of digital communication on the fire ground and continues to use existing VHF analog channels.

There are three primary issues driving CTA's system design recommendation: 1) the county's current channels are at/or nearing capacity, 2) insufficient frequencies are available to expand current systems in the UHF and VHF bands of spectrum, and 3) requirements established by the state and SUASI only allow Project 25 (P25) digital systems to be eligible for grant funding in an effort to encourage interoperability. 700 MHz is the only frequency band that allows the County to develop a system large enough to expand current capacity and allows room for future long term growth, and the only technologies available to operate a system in the 700 MHz spectrum are the P25 digital radios.

Because the County's current radio systems are at, or nearing capacity, there is an increased risk while responding to a large scale incident that the system will become overloaded, thus hampering local response. In addition, there is an inability to expand the current system to accommodate the growth needs of local police, fire, and emergency services agencies, due to the unavailability of frequencies in UHF and VHF.

The Federal Communications Commission (FCC) has prioritized allocations of the 700 MHz band of spectrum for public safety use, specifically for enhancing interoperability. Interoperability is recognized as a critical component of public safety radio systems, particularly in a catastrophic incident; interoperable systems can help prevent on-the-ground miscommunications, inefficiencies, and tragedies exemplified in the disaster response after Hurricane Katrina. The allocation of the 700 MHz spectrum for public safety will provide much needed additional frequencies to help many public safety agencies in dealing with daily radio traffic congestion and the need for growth in their systems.

There is a potential heavy cost to pay in not moving forward to develop a business plan for upgrading the County's radio system. There is the potential that if the County does not move swiftly, we will risk losing the thirty-four channel allocation of 700 MHz public safety spectrum. Counties throughout the Bay Area are aggressively searching for additional 700 MHz frequencies, especially those with larger population centers. Failing to act soon will also put the County at risk of losing federal funding because we would not be in alignment with California Statewide Communication Interoperability Plan (CalSCIP) and Bay Area Regional SUASI interoperability objectives. The CalSCIP outlines the statewide interoperability goals, including governance, standard operating procedures, technology, training and exercises, and usage and the SUASI grants funding requests for projects that can be directly mapped back to CalSCIP objectives.

CTA's opinion of probable cost for the preliminary countywide system design is approximately $26 million. The cost estimates were derived from historical CTA cost data and vendor pricing of recent comparable projects. In addition to the cost of a new system, ongoing annual costs for maintenance are estimated at $600,000 and annual replacement costs, based on fifteen year life cycle, are approximately $3.3 million.

Background: (Continued)

Because the General Fund would be unable to bear such a high cost, ISD requested that CTA include in its Design Alternatives Report numerous funding alternatives and case studies describing how other jurisdictions have funded their systems (e.g., bonds, grants, lease purchase agreements, targeted taxes, 911 surcharges, and user fees). In addition to these options, the County has significantly increased the its presence and engagement with the Bay Area SUASI and statewide efforts in an effort to optimize the County's ability to receive future grant monies for public safety communications and interoperability. While the move to a 700 MHz radio system is the best suited and most desirable direction for the County in terms of functionality, as previously stated, it also moves the County in line with the CalSCIP and Bay Area Regional SUASI interoperability objectives, which will open up State and Federal emergency response grants.

Next Steps

ISD has identified the following next steps to the planning process for future public safety communication voice systems:

1. Continue feedback process with public safety agency stakeholders, including public safety city radio users, regarding their interests and concerns.
2. Begin the licensing process for the thirty-four channels of 700 MHz spectrum currently allocated to the County. These licenses will not be able to be fully secured until the County has a governing body approved plan on how we specifically plan to implement the use of the channels; however ISD staff can initiate the process to protect these assets for the near term.
3. Engage our public safety partners in other jurisdictions that have made the transition from analog to digital radio systems and obtain best practices and lessons learned.
4. Begin educating public safety radio system users about how digital voice radio technology is used, specifically by their discipline (e.g., law, fire, emergency services).
5. Develop a County Voice Radio System Business Plan that includes a funding proposal, governance structure, system implementation plan, training strategy, and sustainability methodology. The funding proposal will specifically identify potential grants and other alternative funding mechanisms. With your Board's adoption of this plan, the County will be able to fully secure the 700 MHz channels.

REQUESTED BOARD ACTION:

Direct the Information Systems Department, Sheriff's Department and the Department of Emergency Services to collaboratively continue planning for the future needs of the County's public safety voice communications systems and return to our Board with a Voice Radio System Business Plan, which will include a specific funding proposal for your input and consideration.