

## **REGIONAL EMERGENCY COMMUNICATIONS**

The 2010-2011 Grand Jury investigated the interoperability of the emergency communication systems in Alameda County in response to previous Grand Jury reports and on-going communication problems in emergencies. Most jurisdictions in Alameda and Contra Costa counties have joined an organization called East Bay Regional Communications Systems Authority (EBRCSA), but four have not: Berkeley, Oakland, Piedmont and Orinda.

The 2005-2006 Alameda County Grand Jury had written that there is a need for a multi-county radio communication system that would allow first responders in all jurisdictions in Alameda and Contra Costa counties to communicate with one another when responding to major disasters or terrorist attacks. They supported a proposal for a joint powers authority (JPA) composed of representatives from the two counties, all the cities within the two counties, and other emergency responders including those within university police and fire departments, and park and transit districts. In order to succeed, the proposal would require the political and financial commitment of all the jurisdictions. The 2006-2007 Alameda County Grand Jury went on to re-affirm that cooperation among the various jurisdictions in Alameda and Contra Costa counties is paramount in order for EBRCSA to achieve interoperability, and urged EBRCSA to promote wide membership.

Focusing on the question of why the city of Oakland has not joined EBRCSA, the current Grand Jury interviewed public safety officials from Oakland and EBRCSA. In addition, we reviewed the following documents: Alameda County Grand Jury final reports for 2005-2006 and 2006-2007; City of Oakland's California Interoperability Study Public Report (11/6/09) and an internal staff report (11/10/09), both by CTA Communications (CTA study); Final EBRCSA Design Evaluation Report for Contra Costa County (4/19/07); Interoperability

Assessment & Gap Analysis for the Bay Area Super Urban Area Security Initiative (SUASI) Interoperable Communication Project (1/4/08); and correspondence between various officials.

Unfortunately, based on our research, the current Grand Jury concludes that the goals of cooperation and interoperability are far from being achieved, and progress towards regional interoperability between the city of Oakland and EBRCSA is at a standstill. The delay in finding a joint solution for this issue leaves the lives of officers and the public in continued jeopardy.

## **Background**

The East Bay Regional Communications System Authority is a joint powers authority that was formed in 2007. Thirty-six member agencies belong to EBRCSA including:

- Alameda and Contra Costa counties;
- 18 of the 19 cities in Contra Costa County (all except Orinda);
- 11 of the 14 cities in Alameda County (all except Berkeley, Oakland, and Piedmont);
- four Special Districts (excluding BART); and
- the University of California.

The goal of EBRCSA is to provide interoperability for the radio systems in Alameda and Contra Costa counties. Interoperability allows multiple parties to communicate when and where necessary, even when different systems are involved. Lack of interoperability can severely hinder coordinated responses to natural disasters, catastrophic accidents, civil unrest, and criminal actions. Examples include the 1979 BART tube fire, the 1982 Caldecott Tunnel fire, the 1989 Loma Prieta earthquake, the 1991 Oakland Hills fire, and public protests connected to the Mehserle/BART shooting case. In addition, police officers from one jurisdiction frequently pursue suspects across city and county lines. In those

situations, first responders from different jurisdictions need to communicate seamlessly and in real time to prevent the loss of life and property.

EBRCSA is supported by grant funds and bonds issued by the two counties. Starting in 2012 user fees will be used to service the debt. User fees will be based on the number of users in the system. Member agencies are currently paying to operate and maintain existing systems; the user fee will replace those costs. Agencies that join EBRCSA will also pay an upfront, one-time \$200 per radio fee.

### **Investigation**

The Grand Jury learned that the city of Oakland uses a radio system from Harris Communications that it has operated for many years. In June 1992, Oakland voters passed Bond Measure I to enhance emergency preparedness. In 2010, the city initiated plans to upgrade its radios and communication system, fully funded by grant money. The grant funds would not cover on-going operations and maintenance.

Oakland has not joined the JPA because it has heavily invested in its own system and wants to avoid the additional costs. The city says that it moved ahead, stimulated by the 1991 Oakland Hills fire response problems, whereas the regional effort was slower to develop.

The Grand Jury learned that EBRCSA selected a P25-compliant Motorola system. P25 refers to a federally funded set of standards to be used by federal, state and local public agencies in North America to allow communication with one another and with mutual aid response teams in times of emergency.

The city of Oakland, in consultation with EBRCSA, commissioned a study by CTA, an independent consulting firm, to evaluate how it should proceed with interoperability. The CTA study for Oakland provided important information on the advantages and disadvantages of their options (CTA Communications,

“Interoperability Study,” November 8, 2009). According to this study, Oakland faced a choice of whether to build out its own Harris simulcast system at a cost in excess of \$5 million to become compliant with the new P25 interoperability standards, or to join EBRCSA’s simulcast system which would also be P25-compliant. Oakland used the complex recommendations in the CTA study to justify remaining separate. The Grand Jury does not find such a definitive conclusion in the CTA study.

Oakland claims it is being penalized for having taken the initiative in improving radio communications. The city’s position is that it would not be cost-effective and there would be no technological advantage for it to join EBRCSA. The city also claims it will be P25-compliant by late 2011, well before EBRCSA is P-25 compliant. However, regardless of when either becomes P25 compliant, interoperability fails unless both systems are able to be linked together.

A letter from Oakland’s fire chief to the chair of EBRCSA stated: “The city of Oakland has invested considerable funds and more than 13 years in upgrading our wireless system and finds it unacceptable to dismantle or surrender its operation.” He goes on to write that it is estimated that the city would incur an additional debt of more than \$1.2 million per year for the next ten years if it joined EBRCSA, based on a projected system cost of \$50 million. (February 14, 2008).

In contrast, the CTA study outlined several ways Oakland could reduce the additional costs of joining EBRCSA. One opportunity includes a memorandum of understanding with EBRCSA to contract with the Oakland Department of Information Technology radio shop to provide maintenance and subscriber support for the entire system. This would be financially beneficial to Oakland because all other jurisdictions through EBRCSA would pay for the maintenance. The CTA study noted that such an agreement would provide the city with “an opportunity to defer most of the costs of using EBRCSA.” The CTA study stated “coordination is required as soon as possible with EBRCSA to ensure that the

leveraging opportunities that exist today are not missed as the project moves forward.” Unfortunately, that cooperation has not occurred.

If Oakland does not participate in EBRCSA, easy communication between the Harris and Motorola systems would require establishing communication interface protocols. One way to accomplish this is via an infrastructure called Inter SubSystem Interface (ISSI). This, in turn, requires a memorandum of understanding that establishes communication protocols and specifies how to share the costs. Without these steps, seamless communication between safety personnel will not be built in, will not be automatic, and will be subject to unnecessary human error.

The Grand Jury heard a specific example where top officials in two different Texas jurisdictions, one using a Harris system and one using Motorola, worked with two vendors to create seamless communication using ISSI. As one witness told the Grand Jury, “It is a multi-vendor world and it always will be.” This suggests that vendors can create the necessary technology when they have the motivation to do so. The testimony indicated that the success of the Texas project resulted from the pressure applied by top elected leaders across jurisdictional boundaries.

Unfortunately, communication between the city of Oakland and EBRCSA broke down years ago and has not been repaired, to the detriment of the community’s public safety. The Grand Jury concludes that accommodations must be made both by EBRCSA and by Oakland. It does not seem reasonable to expect Oakland to change its vendor or completely abandon the new system they are building. The funding formula for Oakland may need to be different than that for other cities in order to motivate Oakland’s full participation. Lack of participation by a city the size of Oakland seems to be the major obstacle to a well-functioning multi-county radio communication system.

However, it does not seem reasonable for Oakland to expect to benefit from EBRCSA's efforts without paying its fair share. To determine reasonable compromises, the elected officials in all the jurisdictions should provide leadership to resolve the logjams, which are not only counterproductive but a significant danger to everyone living and working in the two counties. The Grand Jury was heartened to learn that in February 2011 a meeting of representatives from EBRCSA and the city of Oakland took place, but disappointed to learn that no framework for compromise appears to have resulted.

### **Radio Communications – Oakland Police Department**

While investigating interoperability, the Grand Jury became aware of persistent radio communication problems within the city of Oakland (internal operability problems). The Grand Jury requested and received copies of reports of radio problems submitted by police personnel over the past year including reports of dead spots and radio failures. The sheer volume of reported problems from these reports, the CTA study, and from witness testimony can only be described as shocking.

Examples include:

- Dead spots regularly occur, particularly between dispatchers and users in many highly sensitive locations.
- During a lengthy high-speed chase and crash, the radio system failed. Officers had intermittent radio coverage during the deadly confrontation, which hampered efforts to secure an immediate medical response.
- A lone police officer recognized a dangerous suspect with warrants relating to an armed robbery. The officer attempted to contact dispatch while confronting the suspect but a radio malfunction precluded the dispatcher and the officer from communicating with each other. Fortunately another officer was able to hear the attempted transmission over the radio and self-dispatched other

officers to the scene. The confrontation quickly escalated to a near deadly struggle because the suspect was armed with a firearm. Up until back-up arrived, the officer had no idea whether dispatch even knew about the situation.

- Officers responded to a potential hostage situation inside a public building in East Oakland. While confronting the suspect inside the building, officers were unable to use their radios. An officer had to use a phone inside the building to contact dispatch while another officer ran out to the street to use the radio.
- While responding to a burglary call, an officer was provided with the incorrect address. As the officer arrived at the scene, dispatch could not contact him to correct the mistake. The suspect saw the officer approach the wrong house and fled. Other officers joined in the pursuit of the fleeing suspect but radio “dead spots” hampered the chase.
- The red emergency button on police radios has resulted in multiple communications failures. When pushed, a channel is reserved for that specific officer. In certain areas of the city, when multiple red buttons are pressed at the same time, other officers cannot use the system.

The current radio system does not work for Oakland and sufficient resources have not been applied to fixing the system. The Grand Jury heard testimony that TV satellite trucks show up when a news story breaks about Oakland police communication problems, but when they depart, attention to the problems end. Oakland officials claim that the upgrade underway will eliminate the internal operational problems.

In early 2011, the city of Oakland’s Department of Information Technology, along with an independent engineering firm, completed a three-week inspection of their radio system as a result of the numerous radio failures reported by Oakland police. The inspection validated all of the problems reported by Oakland police

officers. The report resulted in modification and/or recommendations to replace a number of the 17-year old components to the system until the new radio system could be operational, which is expected to be running sometime in late 2011. The Grand Jury is troubled that it took repeated system failures over a lengthy period of time to address the issues and bring in independent experts to evaluate the problems. The Grand Jury is more troubled that the system has continued to malfunction even after many of these modifications have been made. The Grand Jury also questions whether the city of Oakland has the capacity to sustain and maintain a stand-alone radio system without the long-term interface with EBRCSA.

During the writing of this report, the Grand Jury learned that the Oakland police radio system failed due to a malfunction on April 7, 2011. Officers were requested not to make high-risk stops during that period. Patrol officers were relegated to using their cell phones to communicate with the police department. The department was forced to limit police response to only the highest priority calls. If an earthquake hit Oakland during a radio shutdown, a coordinated emergency response would be next to impossible.

The Grand Jury heard testimony that monthly meetings of a radio working group have recently been initiated between Oakland's Information Technology Department and the Police Department, including field commanders. We are disheartened that this working group has not been used throughout the upgrade process to ensure user input for solutions to current problems. This lack of interaction between these two organizations has led to the officers being inappropriately blamed for user error. Additionally, training on the system is insufficient. Memos are not a substitute for hands-on training.

## **Conclusion**

The Grand Jury recognizes that interoperability and internal operability are complex problems. However, the persistent problems and the breakdown in relationships necessary to resolving the issues are of the utmost seriousness. They merit pro-active intervention by elected officials and top administrators in all the jurisdictions of both counties.

Although the Grand Jury realizes all radio communication is important, internal operability among police emergency personnel is of the highest immediate concern. It is unacceptable that a police radio communication system should ever fail, risking the lives of police and citizens of Oakland. The Grand Jury is very concerned about Oakland's radio communication system and the potential for life-threatening problems when it fails.

The city of Oakland should reconsider its "go it alone" mentality. Oakland and EBRCSA must work together to agree on a mechanism for mediation to determine reasonable compromises. The process requires top-down leadership. This means getting the vendors in the same room and telling them, "You will make this work." Compliance with P-25 standards is just the first step. In practice, regional emergency communication also requires effective governance, standardized operating procedures, effective training and exercises, and inter-jurisdictional coordination.

## **RECOMMENDATIONS**

### *Recommendation 11-1:*

The city of Oakland and the East Bay Regional Communications Systems Authority (EBRCSA) must comply with P25 specifications and ensure interoperability of radio communications immediately in order to achieve seamless automatic roaming.

### *Recommendation 11-2:*

The city of Oakland and the East Bay Regional Communications Systems Authority (EBRCSA) must have regularly scheduled meetings to end the impasse.

### *Recommendation 11-3:*

The city of Oakland and the East Bay Regional Communications Systems Authority (EBRCSA) must negotiate with both Motorola and Harris vendors to achieve interoperability.

### *Recommendation 11-4:*

The city of Oakland's Information Technology Department in conjunction with the mayor's office must report quarterly to the Oakland City Council on radio communication failures, the status of the new system, and its upgrades.

### *Recommendation 11-5:*

The city of Oakland's Information Technology Department and the Oakland Police Department must bridge the communication gap between front-line public safety personnel and information technology staff to ensure that problems are quickly and satisfactorily addressed.

**RESPONSES REQUIRED**

Mayor, City of Oakland *Recommendations 11-1 through 11-5*

Interim City Administrator, City of Oakland

*Recommendations 11-1 through 11-5*

Executive Director, East Bay Regional Communications Systems Authority

*Recommendations 11-1 through 11-3*

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