



MEMORANDUM

TO: HONORABLE MAYOR &
CITY COUNCIL

FROM: Ken Gordon

**SUBJECT: P25 PUBLIC SAFETY RADIO
SYSTEM**

DATE: August 2, 2012

City Administrator

Date

Approval /s/ Deanna J. Santana

8/2/12

INFORMATION

The purpose of this memorandum is to provide an update about recent efforts made to identify and resolve recurring, intermittent issues with the City's P25 radio system. The Department of Information Technology (DIT) and its vendor partners—Daily Wells Communications Inc. and Harris Corporation—fully acknowledge that the City's public safety staff have experienced many frustrations with the P25 technology; we are working quickly and applying every available resource to close this critical performance gap and bring the communications system to a fully functional standard that meets the needs of our first responders. The team has initiated a thorough process to identify and validate every complaint and concern raised by our first responders to ensure that every reported problem has been addressed to their satisfaction.

Appointment of a P25 Public Safety Systems Advisor

As a starting point towards ensuring system performance, the City Administrator has appointed David Cruise as the P25 Public Safety Systems Advisor accountable to the City Administrator. His key responsibilities will be to provide focused oversight to examine the findings and recommendations presented in the independent radio system evaluation report and advise the Administrator's Office on alternatives available to the City. Mr. Cruise will also work with the Department of Information Technology to develop a comprehensive program for managing radio operations to meet the mission-critical needs of our first responders.

Mr. Cruise brings 12 years of radio communications and broadband/wireless technology experience to the City, which will allow him to have an immediate impact on the City's efforts to improve the performance of the radio system.

Mr. Cruise served as the Communication Systems Project Manager for the Golden Gate Bridge, Highway & Transportation District. In this capacity, he managed the design and deployment of the first multi-county trunked P25 radio communications system in California utilizing 700 MHz public safety spectrum. This was a \$22.5 million project for the three operating divisions of the Bridge District and its public safety partners.

His other related work experience includes:

- Serving SBC – Pacific Bell, FiberTower, and the Golden Gate Bridge, Highway & Transportation District
- Serving as Principal Technology Advisor to a member of the California State Senate where he worked on public safety technology issues, as well as advancing the Open Data technology standard for state and local agencies.

Mr. Cruise will join the City effective Monday, August 6, however, he has already voluntarily participated in key meetings. His relevant experience in radio communications technology and related policy-making are expected to greatly benefit the City's efforts to deliver the best public safety grade performance to the Police and Fire first responders that rely on our critical communication systems to support their operations.

Communication with and Commitment from Vendor Team Harris/Daily Wells

To address the urgency of resolving radio system issues, the City Administrator has had two briefings in recent days with the Chief Executive Officers of both vendor partners—Daily Wells Communications Inc. (Daily Wells) and Harris Corporation (Harris). These two companies manufactured and constructed the P25 radio system.

In these briefings, the two company representatives are providing the City Administrator and key staff with a status of their work and presenting a daily work plan to fully address the findings and recommendations of the RCC Consultants' independent radio system performance evaluation report, as well as those issues raised by our first responders.

DIT, Daily Wells and Harris have fully acknowledged the concerns raised and have committed to identify and resolve these issues, and validate with first responders that their concerns have been addressed to their satisfaction.

Daily Wells and Harris have deployed a team of more than 20 top-notch system and software engineers with nationally recognized expertise who are working around the clock to thoroughly examine every component of the radio system, validate all the first responder complaints and reported problems, identify the cause(s), and implement corrective action to resolve recurrent issues with the system. The Harris Corporation's Director of Technical and Engineering support is working in the field in Oakland to personally direct the engineering team's efforts.

The objectives of the P-25 radio system team are to:

- Examine each reported problem with active/real-time trouble shooting
- Develop contingency plans as needed
- Leave no stone unturned in examining and resolving the radio issues

Key Radio Issues and Findings

The Harris/Dailey Wells (HDW) team has uncovered significant radio interference issues which are likely related to the “CC SCAN” occurrences which the team believes to be causing a significant amount of the audio problems that are being reported by our first responders. Finding and eliminating sources of radio interference is critical to improving the performance of the radio system.

The HDW team, working with DIT staff, is closely examining the root cause of this interference and notifying the necessary entities, including the Public Safety Bureau of the Federal Communications Commission (FCC), and other entities responsible for the public safety radio spectrum in our region.

The HDW team has identified and witnessed two causes of the occasional/intermittent “CC SCAN” in Oakland users’ radios. Both causes involve outside interference which was validated by the team when they compared the actual “CC SCAN” complaints with the system logs.

The two causes have been identified as:

- GPS satellite signal interference
- Radio channel interference

Most P25 simulcast systems synchronize all their sites using GPS as a common reference. Now that the HDW team has identified the two causes referenced above, the team has immediately begun to look for potential options and solutions to address these causes and rectify the radio interference issues.

72-hour Plan

Over the next 72 hours, DIT staff and the technical team will:

1. Provide the City Administrator and key staff with potential options regarding the mitigation and/or correction of the “CC SCAN” issues related to the two causes. The recommendations will allow the City to make sound decisions about the appropriate and most effective correction actions.
2. Contact the FCC for their assistance in identifying and correcting interference problems.
3. Begin a single point of failure analysis to identify all potential components or issues that could lead to system failure and outline a strategy to mitigate potential problems.
4. Contact EBMUD to expedite their approval of plans to install a back-up power generator at one of the three radio sites.

In addition, the vendor team has been looking at:

- Field equipment
- System performance
- Interference (multiple interference incidents identified)
- Coverage
- Environmental concerns
- System maintenance

Over the next week, additional progress will be made in several areas:

- Continue to fix problems as the sources of the problems are identified.
- Complete the installation of a back-up power generator at a second radio site.
- Review coverage maps to develop additional solutions to enhance radio coverage.
- Present a detailed plan to fully address the findings and recommendations of the RCC Consultants' independent radio system performance evaluation report.
- Continue to brief the City Administrator on a regular basis until all problems are identified and resolved.

Status of Evaluating East Bay Regional Communications System Authority (EBRCSA)

Today the City Administrator received preliminary information that begins to address issues related to the option to join the regional public safety interoperable communications system (EBRCSA), including governance and cost. We will continue to work on a detailed cost/benefit analysis to thoroughly assess other issues related to migration to the new system, including the required change management process, training, operations, and maintenance.

Updates regarding progress made on resolving radio system issues will be forthcoming on a regular basis until the problems are resolved.

Respectfully submitted,

/s/

KEN GORDON

Interim Director

Department of Information Technology