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October 2011

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September Progress Review

- **Patterson Pass-** Monopole tower installed.
- **Warm Springs BART-** Monopole tower installed.
- **Warm Springs BART-** P25 equipment installed.
- **CTA/AECOM** – Submitted FCC updates to Regional Planning Committee.
- **MCC 7500 Consoles-** Equipment has shipped to staging.
- **651 Pine Street-** P25 equipment installed.
- **ASTRO 7.9 Upgrade** – Upgrade has been initiated.

About the System

EBRCSA, Motorola Solutions, and AECOM have finalized the site selection and coverage design for the two-county EBRCSA P25 trunked radio system. The EBRCSA 36 site system once completed in June 2012 will provide coverage and interoperability to all agencies operating on the EBRCSA system. This system will improve safety, eliminate duplication of overlapping independent systems, and provide effective interoperable voice communications. This will enable EBRCSA to provide improved public safety services.

The EBRCSA P25 System consists of an IP-based P25 Phase I simulcast subsystem and ASTRO 25 standalone repeater sites. The Motorola ASTRO 25 trunked system incorporates the latest technology, delivering the flexibility of an IP transport, FDMA operation and simulcast frequency efficiency. The site and channel count information for each simulcast cell has been identified below.

For site locations please use this link:
http://www.ebrcsa.org/site_maps.aspx

Phase 1- FDMA vs. Phase 2 - TDMA

Improving spectrum efficiency is a critical issue facing government organizations. Agencies want to do more with the spectrum that they have assigned and government spectrum bodies are mandating that equipment become more spectrum efficient. Project 25 has addressed this new requirement with the Phase 2 TDMA standard.

With P25 TDMA, organizations can double their voice capacity within their fixed allocation of frequencies. For example, they can go from having 5 simultaneous voice calls using P25 FDMA trunked operation to the ability to have up to 10 simultaneous voice calls using P25 TDMA trunked operation. ASTRO 25 TDMA provides the additional advantage of increasing the potential voice path capacity of your system by offering up to 30 voice paths at a site.



700 MHz -Phase2 -TDMA and the EBRCS

The EBRCS was built primarily utilizing the channels in the 700 MHz band. The 700-MHz Public Safety Band was allocated by the FCC in response to the Balanced Budget Act of 1997 (BBA 97). The BBA 97 mandated that, as part of the digital television (DTV) transition, TV broadcasting cease on Channels 60-69, and 24 MHz of the recovered spectrum be allocated to public safety communications.

In Region 6 (Northern California), the regional planning committee elected to allot channels in groups of two 6.25 kHz slots to make a single 12.5 kHz channel. This assumes that the dominant technology to be used in the band will be a two-slot TDMA solution (such as Project 25 Phase 2). A licensee is allowed to operate at 12.5-kHz efficiency, but only until 2017. By 2017, all systems in the band must operate at 6.25-kHz efficiency.

In order for the EBRCS to comply with the FCC mandate in 2017, the system will be upgraded to Phase 2 TDMA prior to January 2017. The current system hardware is capable of Phase 2 Operation. On January 15th, 2010, the EBRCSA Board adopted a Policy Requiring Agencies in the EBRCSA to Purchase Phase 2 and/or Phase 2 Upgradeable Radios after January 1, 2010 as Recommended by the Operations Committee.

EBRCS Participant Implementation Plan

Complete Fleetmap Process

Subscriber Implementation

- Complete subscriber inventory for each agency
- Verify which subscribers are P25 capable
- Procure subscribers if necessary
- Develop programming templates
- Have user representatives test radios based on templates and approve
- Train the Trainer training
- Actual subscriber programming/testing/FCC check and alignment
- User Subscriber training
- Activate subscriber IDs in Master Site DB
- Develop template mobile installations per agency
- Develop mobile installation plan and schedule

Dispatch

- All console installations complete
- Dispatch Console Training Room Complete
- Console Configuration - Screen Layout
- Backup Control Station templates
- Backup Control Station Testing
- Console Testing
- Dispatcher Training

Logging

- Identify Logging Solution
- Procure Logging Solution if necessary
- Configure/Test Solution
- Training

Cutover

- Develop cutover plan
- Testing
- Agency Prep
- Cutover

Mobile Installations

Police Mobiles

- Trunk-mount Installs
- Dash Mount Installs
- Motorcycle Installs
- Control Station Installs

Fire Mobiles

- Dual-head Installs
- Dash Mount Installs
- Control Station Installs

Transition Complete

Transition team meetings will be scheduled with all areas over the next several weeks. Meeting time and location will be announced shortly. The teams will be assigned by cell. ALCO North West, ALCO South West, ALCO East, Contra Costa West, Contra Costa Central, and Contra Costa East. If you wish to be involved in transition team, please send an email to Bob Simmons [bob.simmons@cdxwireless.com] and indicate your agency and your cell.

ALCO East Simulcast Cell – 700 MHz- 10 Channel

The Alameda County East simulcast cell (ALCO East) has four sites and ten channels per site configured for 700MHz operation. The four radio sites are the Doolan Prime Site, Sunol Ridge, Patterson Pass and East Dublin BART station. The ALCO East cell provides coverage in the Dublin, Livermore, and Pleasanton region.

Doolan – Completed

Sunol Ridge- Completed

East Dublin Bart- Completed

Patterson Pass – Punchlist resolution



PATTERSON PASS MONOPOLE TOWER



PATTERSON PASS MONOPOLE TOWER COMPLETE

ALCO Northwest Simulcast Cell – 700 MHz- 16 CHANNEL

The Alameda County Northwest simulcast system (ALCO Northwest) has four sites and sixteen channels per site configured for 700 MHz operation. The four radio sites in the ALCO Northwest are Glenn Dyer Prime Site, Seneca Reservoir, U.C.-Berkeley and Skyline Reservoir sites. The Northwest simulcast cell has been designed to provide coverage in Albany, Berkeley, Emeryville, Oakland, and Piedmont.

GLENN DYER JAIL – COMPLETED

U.C. BERKELEY – UNDER CONSTRUCTION

SKYLINE – UNDER CONSTRUCTION

SENECA – PLANNING / PERMITTING



UC BERKELEY SHELTER



UC BERKELEY SHELTER- PROGRESS

ALCO Southwest Simulcast Cell – 700 MHz – 12 Channel

The Alameda County Southwest simulcast system (ALCO Southwest) has seven sites and twelve channels per site configured for 700MHz operation. The seven sites are San Leandro Hills Prime Site, Coyote Hills, Garin water tank, Fremont Police Department, Warm Springs BART station, Walpert Ridge and Hayward Police Department. The Southwest simulcast cell has been designed to provide coverage in Fremont, Hayward, Newark, San Leandro, and Union City.

San Leandro Hills – Completed

Coyote Hills – Completed

Walpert Ridge – Completed

Fremont PD- Floor / Power Upgrade

Garin Water Tank- Upgrade PG&E/ Tower Extension

ALCO PW Annex Site – Planning

Warm Springs Bart- Punchlist resolution



Warm Springs Mono Pole



Warm Springs Mono Pole

CoCo West Simulcast Cell – 800 MHz- 10 Channel

The Contra Costa West simulcast cell (CCCO West) has four sites and ten channels per site configured for 800 MHz operation. The four radio sites are Turquoise Prime Site, El Cerrito Police Department, Pearl Ridge Reservoir and Nichol Knob (Point Richmond). The CCCO West Cell provides coverage in El Cerrito, Hercules, Kensington, Pinole, Richmond, and San Pablo areas.

This cell has been completed.

CoCo Central Simulcast Cell- 700 MHz- 10 Channel

The Contra Costa Central simulcast cell (CCCO Central) has eight sites and ten channels per site configured for 700 MHz. The eight radio sites are Cummings Peak Prime Site, 651 Pine Street in Martinez, Bald Peak, Highland Peak, Peter's Ranch Road / Apollo, Sydney Drive, Kregor Peak and Alta Mesa Moraga. (Note that Kregor Peak is a shared site with the CCCO East simulcast cell.) The CCCO Central cell will provide coverage in the areas of Walnut Creek, Clayton, Concord, Danville, Lafayette, Martinez, Moraga, Orinda, San Ramon and Pleasant Hill.

Cummings Peak – Completed

Kregor Peak – Completed

Bald Peak – Completed

Highland Peak – Completed

651 Pine St. –Completed

Sydney - Planning

Peter's Ranch – Approval Process

Alta Mesa – Approval Process

CoCo East Simulcast System- 700 MHz- 7 Channel

The Contra Costa East simulcast cell (CCCO East) has three sites and seven channels per site configured for 700MHz operation. The three radio sites are Kregor Peak Prime Site, Shadybrook and Los Vaqueros. The CCCO East Cell will provide coverage in the east county areas of Antioch, Pittsburg, Brentwood, and Oakley/Knightsen.

Kregor Peak – Completed

Shadybrook- Installed

Los Vaqueros – Planning

Stand Alone Repeater Sites

Motorola has included six Astro 25 stand-alone repeater sites to provide fill-in coverage in rural areas in both Alameda and Contra Costa Counties. Many of these sites provide seamless coverage in canyons and rural areas not covered by the EBRCSA simulcast cells identified above.

These stand alone repeater sites in Alameda County are:

- ◆ **EB Parks (Gwin)- 4 Channel-800 MHz - Planning**
- ◆ **Crane Ridge- 4 Channel-800 MHz - Installed**
- ◆ **Niles Canyon- 5 Channel - 800 MHz - Planning**

In Contra Costa the stand alone repeater sites are:

- ◆ **Marsh Creek Detention Facility- 4 Channel-800 MHz - Site improvements**
- ◆ **Old Fire Station 53- 3 Channel-800 MHz - TBD**
- ◆ **Crockett - 6 Channel-800 MHz - Site improvements**

Dispatch Console System

The EBRCSA is using a combination of upgraded Motorola Gold Elite and the IP based MCC 7500 consoles. Both consoles feature an easy to use Graphical User Interface (GUI). The seamless integration of the dispatch console into the radio system gives dispatchers full access to system functionality, allowing access and control of the Project 25 trunked resources, as well as superior audio quality.

MCC7500 Console Sites and positions:

- ◆ 5 Livermore dispatch center
- ◆ 5 Pleasanton dispatch center
- ◆ 27 Contra Costa Sheriff
- ◆ 9 Contra Costa Fire
- ◆ 6 Richmond dispatch center
- ◆ 3 Pinole dispatch center
- ◆ 2 Martinez Police
- ◆ 3 Pleasant Hill Police
- ◆ 6 Walnut Creek Police
- ◆ 8 Concord Police
- ◆ 4 San Ramon Valley Fire
- ◆ 2 Albany Police
- ◆ 8 Berkeley Police
- ◆ 2 Emeryville Police
- ◆ 4 East Bay Parks
- ◆ 2 UC Berkeley (Lakeside)

Status:

The equipment has shipped to staging. The team will begin to rack and program the equipment. The consoles will be staged in October. Testing and shipment will happen in November 2011.

Gold Elite Consoles to be migrated to the P25 System:

- ◆ 3 Newark Police
- ◆ 9 Fremont Police
- ◆ 4 Union City Police
- ◆ 6 Alameda County Sheriff
- ◆ 3 San Leandro Police
- ◆ 5 Alameda City Police
- ◆ 2 ALCO EOC
- ◆ 9 ALCO Fire Lawrence Livermore Labs

Status:

The Alameda County Radio shop is completing the cable runs at the final dispatch center. The new switches and routers have shipped and will be installed. The members of the Motorola project team attended the 911 Meeting on September 15th. We discussed the current status of preparation and reviewed the plan for the cutover. A summary of the Plan is below.

Target Cutover date: **Sunday, December 11th, 2011 at 6AM**

- A Motorola Technician will be at each existing Alameda County dispatch center.
- The dispatcher center will utilize portables or local control stations during the cutover period.
- Cutover duration is expected to take 4-12 hours depending on size and complexity. We anticipate improving on the duration. 12 would be the extreme case.

Working Groups

EBRCS Technical Advisory Committee (TAG) will address issues that have the possibility of affecting EBRCS users by developing system-level policy recommendations for the EBRCSA Operations Committee

- Alameda County Law Representative – Tom McCarthy, Dublin Police Chief
- Contra Costa County Law Representative – Tim Schultz, Captain Walnut Creek Police
- Alameda County Fire Representative – Andy Smith, Asst. Chief Alameda County Fire
- Contra Costa County Fire Representative – Kody Kerwin, Contra Costa Fire Protection District
- Public Services/Special District Representative – Lynette Journey, EBRPD Communications MGR
- Alameda County Technical Representative – Ed Valenzuela/ Manny Suarez, Alameda County GSA
- Contra Costa County Technical Representative – Randy Demerse/ Mike Wright, Contra Costa DOIT
- Combined Dispatch Representative – Margaret-Mary Goulart [Pleasanton PD], Glenn Jackson [ACSO Mg], Gerard Heidekamp [CCSO Technical Services]
- EBRCSA Executive Director – Bill McCammon, EBRCSA Executive Director

Bob Simmons

CDX Wireless, Inc.

Technology Consultants

Phone: 925-218-4213

Fax: 925-397-6799

West County Transition Team will plan, prepare, and coordinate the agencies that will cutover / transition to the Contra Costa West Cell in Q1 2012.

- Byron Baptiste – Richmond – Team Leader- bbaptiste@richmondpd.net
- Charles Durley – Hercules
- Chysandra Nair – Richmond
- Erik Newman – Richmond
- Kevin Hui – Kensington
- Kevin Janes – El Cerrito
- Larry Johnson – San Pablo
- Matt Avery – Pinole
- Matt Messier - Pinole
- Robert De La Campa – El Cerrito
- Tim Stratmeyer – Hercules
- Tom Hughes – San Pablo
- Kody Kerwin – Contra Costa Fire Protection District
- Mike Regan – El Cerrito

Bob Simmons

CDX Wireless, Inc.

Technology Consultants

Phone: 925-218-4213

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Scheduled Events

Subscriber Vendor Fair- Completed

On September 13th the EBRCSA hosted a Vendor Fair at the Alameda County EOC. The purpose of the fair was to bring all of the 7/800 MHz Project 25 Trunking Vendors together into one venue so that users could see, touch, and hear the various mobiles and portables currently available in the marketplace. Subscribers purchased for use on the EBRCS should meet the following criteria:

- Mobiles and Portables must operate on both the 700 and 800 MHz bands
- Mobiles and Portables should have the capability of programming conventional and trunked talkgroups within the same zone
- To minimize the risk of any incompatibilities Mobiles and Portable must have a P25 Suppliers Declaration of Conformance (SDoC) under the P25 Compliance Assessment Program (CAP).
 - Agencies can check on the Responder's Knowledge Base website (<https://www.rkb.us/ProductsMain.cfm>) to see if their units have SDoCs completed. Users can click on Communications>Land Mobile>700/800 MHz Dual-Band, radios listed with the "P25CAP" meet the minimum test requirements for P25 operation.
- Units should be software upgradable to P25 Phase II operation.
 - It is important to note that many manufacturers are still developing their Phase II offerings, it is suggested that purchasing agencies get written confirmation from the manufacturer on price, availability, and method of upgrade prior to the purchase of any non-Phase II radio.

The major vendors that had products that met the above criteria were contacted for participation. The participating vendors included:

- **EF Johnson** - <http://www.efjohnson.com/>
- **Harris** - <http://pspc.harris.com/Products/Search.asp>
- **Kenwood** - http://www.kenwoodusa.com/Communications/Land_Mobile_Radio/
- **Motorola Solutions** - <http://www.motorola.com/Business/US-EN/Business+Product+and+Services/Two-Way+Radios+-+Public+Safety>
- **Relm (BK)** - <http://www.relm.com/Products/Allportables/APCOP25/myscroller/KNGT3.asp>
- **Tait** - <http://www.taitradio.com/products-and-services/technologies-products/p25>
- **Thales** - http://www.thalescomminc.com/homeland.asp?cart_id=

With local EBRCS sites up and running in test mode, users could key up radios to hear how they sounded on the actual EBRCS infrastructure. Vendors had demo units available so users could hold the units in their hand to get a feel for weight and ergonomics with vendor representatives available to ask questions on battery life, accessories, upgrades, or pricing. The event was very well attended with over 100 participants attending including attendees from neighboring counties as well as State of CA representation.

NICE Logging Presentation and Discussion

Forum: C2R2TAG Meeting

When: 9:00AM, Wednesday, October 19th, 2011

Where: Costa County Sheriff's office, located @ 50 Glacier in Martinez

MAJOR MILESTONE EVENTS

- Centralized Nice Logger Integration – October 2011
- Master Site Functional Testing – October 2011
- Contra Costa West Cell Functional Testing – October 2011
- Alameda East Cell Functional Testing – October 2011
- Alameda East Cell Coverage Testing by Motorola Solutions – November 2011
- MCC 7500 Console System Staging – November 2011
- Contra Costa West Cell & Alameda East Cell On Line – Q1 2012
- EBRCS RF Infrastructure System Complete – June 2012

Upcoming Articles

Please tell us what you are most interested in. Use the link below for your suggestions:

http://www.ebrcsa.org/Lists/ContactUs/NewForm_ContactUs.aspx

FAQ's

Question: When will the system be completed?

Answer: July 1, 2012

Question: Where do I go to find more information and status of the project?

Answer: www.EBRCSA.org

Question: The radio system is live next June 2012. Does that mean all the radios have to be purchased and operational by that time? Or is there a time when CCC dispatch will continue to broadcast on the old system until all installations are complete for the new radio?

Answer: The plan is to start migrations onto the system starting in that timeframe. One of the drivers for this is narrow banding which will be required for VHF and UHF users and would need to be completed by January 1, 2013. By migrating onto the EBRCS system before January 1, 2013 UHF and VHF system owners avoid the cost of reprogramming their conventional systems for narrowband operation.

Question: What about Training? We have made it through the hard part of getting the infrastructure in place to support a regional radio system between 2 counties. Now it is time to start working on developing a good training package that all agencies can provide to their end users. We have a unique opportunity to develop a fundamental training package that will address the following areas:

- Standardized Interoperability Radio Training so everyone is being trained the same way with the same information based upon a common set of goals.
- What a P25 Digital Radio System is and what it means to the end user.
- Common and Consistent radio terminology between disciplines
- Identify and develop SOP's for Interoperability between disciplines and agencies.

Answer: With the implementation schedule of putting agencies on the new EBRCS first quarter of 2012, it is time to start working on a regional training package. Please contact Kody Kerwin with Contra Costa Fire at 925-941-3553 or email at KKerw@cccfd.org if you have questions, suggestions, or would like to be part of the team.

Please submit your questions using the link below:

http://www.ebrcsa.org/Lists/ContactUs/NewForm_ContactUs.aspx

Please visit the www.EBRCSA.org for all FAQ's.

If you have suggestions for the EBRCSA Newsletter, please submit them via the link below:

http://www.ebrcsa.org/Lists/ContactUs/NewForm_ContactUs.aspx

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