

BayRICS Authority
STAFF REPORT

DATE: Thursday, April 11, 2019
TO: BayRICS Board of Directors
FROM: Corey Reynolds, General Manager
SUBJECT: Item 8 – Regional Radio Programming Status

I. Background

At the October 11, 2018, Board meeting, the Board directed staff to conduct an assessment of the status of regional radio programming across the region’s five digital land mobile radio systems.

Previous third-party analysis has noted that though “the BayRICS JPA has developed a comprehensive governance framework to address the problems related to effective interoperability,...coordination and communication among jurisdictions for the purpose of provisioning radios to function region-wide was identified as a problem.”¹

To begin addressing these issues, BayRICS developed the “Bay Area Regional Project 25 Public Safety Radio Systems Model Programming Guidelines: System Key Exchange Guidelines” and has hosted two annual “System Key Exchanges”, which facilitate mutual aid response by ensuring that the programming of each Participating Agency’s 700/800 MHz P25 trunked radio systems allows rapid and seamless activation of interoperability talkgroups for mutual aid communications.

This assessment provides a snapshot of two key interoperability issues: 1) the number of outside agency radio IDs programmed on each system across the region, and 2) how many radios in each home system have the BayRICS interoperability talkgroups pre-programmed.

II. Methodology

This assessment uses data provided by San Francisco, San Mateo County, Silicon Valley Regional Communications System (SVRCS), and Marin County. Data was gathered via surveys and interviews. Importantly:

- BayRICS is still awaiting data from the East Bay Regional Communications System Authority (EBCRSA) in order to complete this assessment.
- Marin County (MERA) is in the process of building out its digital radio system, and thus will share updated regional programming information as the buildout progresses.
- BayRICS member Sonoma County operates an analog radio system and thus is not included in this assessment.

¹ Horrisberger, Jay. “A Survey of Bay Area Interoperable Public Safety Land Mobile Radio Systems,” San Jose State University, Department of Aviation and Technology. December 2016.

III. Assessment:

With the goals of understanding the numbers of outside radios activated on each system, numbers of radios across the region programmed with BayRICS interoperability zones, and the dispatch centers across the region with BayRICS talkgroups programmed and available for use, this assessment finds:

- More than 40,000 digital radios are operating across the region (not including EBRCSA radios).
- Nearly 20,000 of these radios are programmed with the BayRICS regional interoperability zones, though some systems have only programmed their own interoperability groups, and not the full set of regional talkgroups.

The following table shows the number of regional partner system radios programmed on each system across the region, as well as the number of radios programmed with at least one BayRICS interoperability zone.

Total Number of Radios Activated and Programmed Across Systems and with BayRICS Zones, by Home System									
		Partner Systems						Home System	
		System Total	SF 700 Interop	San Mateo	SVRCS	MERA	EBRCSA	Home System Total	Programmed w/ BayRICS zones
Home System	SF 700 Interop	11432	8760	242	2380	0	50	8760	6500
	San Mateo	9609	5551	2309	198	0	0	2309	2309
	SVRCS	16934	5990	94	10834	0	16	10834	10834
	MERA	3000	0	0	0	3000	0	3000	0
	EBRCSA	TBD	TBD	TBD	TBD	TBD	TBD	TBD	

IV. Recommendations:

BayRICS also requested system operators provide insight into their programming challenges and how BayRICS can help support regional interoperability. The following recommendations are gleaned from survey data and interviews with system operators.

- 1.) Establish a regular rhythm (frequency and methods) for sharing and programming partner radio IDs, which could include:
 - A shared repository of up-to-date radio IDs across the region²
 - A monthly import schedule to keep repository up-to-date
 - An accountability system to ensure updated imports are programmed across the region
- 2.) Continue annual system key exchange, while considering:
 - BayRICS holding spare iButtons (advanced system keys) in case some fail
 - Giving keys 10-year expiration dates (rather than 18 months)

² "This problem could be mitigated with a centralized cloud-based application with access to all participating agencies. The process would alert an agency when an ID entry request is made, as well as when the request has been addressed. The cloud based forum can also be used to communicate issues and problems in a real time environment via message boards that are viewable by all participating agencies." (Horrisberger, 2016)

3.) Regularly update this analysis to ensure the current status of radio programming across the region is understood. Consider:

- Ensuring EBRCSA data is included
- Ensuring that, as Marin County continues system buildout, data on regional interoperability programming is reflected
- Expanding to include the BART system and radio programming
- Using this assessment as a baseline, track progress made toward more mature regional interoperability