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## **SOUTH EAST TEXAS REGIONAL RADIO SYSTEM** **Report August 8, 2011**

**OVERVIEW:** The South East Texas Regional Radio System (SETRRS) in Jefferson, Hardin, and soon to be in the City of Orange in Orange County is a SmartZone 4.1 800 MHz Radio System that is in the process of upgrading to a SmartZone 7.X (P25) system with a Smart X switch. In addition, Orange County is seeking to add a 700 MHz simulcast system in Orange County operating through the new regional 7.X switch. The recent Mid/South County Port Security Grant 2006 along with a Hardin County grant merged all of Jefferson County Public Safety onto one radio system with Hardin County Public Safety. Hardin County will expand use of the system to all other Public Safety (Fire, EMS, etc.) in the future. The City of Beaumont monitors and maintains the main site of the SETRRS. A Stakeholders Committee has oversight of the System's progress and issues related to the SETRRS.

Future Expansions/Grants – involves three tentatively awarded grants (waiting on release of funds).

- 1) Port Security Grant 2007 w/waiver to the City of Orange to replace the obsolete infrastructure of their current tower site to 7.X and locate a 7.X switch in the Beaumont main site. NOTE: this first step does not completely merge the City of Orange with the SETRRS to the City of Orange. It places the 7.X switch in Beaumont only. Step 3 merges the systems requiring only one 7.X controller for the SETRRS including Industry.
- 2) Port Security Grant 2009 to the City of Beaumont for construction of a new larger, elevated, CAT 5 storm rated radio control building with heavy security to relocate main site hardware.
- 3) Port Security Grant 2011 to the City of Beaumont for the 7.X & Smart X switch, which will then merge Jefferson County, Hardin County, and Orange together. This is expected to take place within the next three years – approximately by 2014. If #1 occurs as outlined, this Grant will build upon the switch initially purchased by the City of Orange. If for some reason #1 fails to occur, then this Grant will fund the purchase of the 7.X switch.
- 4) Region will make future Port Security, Assistance to Fire Fighters, and SHSP/LEAP Grant applications depending on Federal Allocations to finish upgrading the entire SETRRS, including radios as it grows to reach the P25 capability by 2015.

Industry Radio Systems – are now looking at their SmartNet 800/900MHz or conventional UHF/VHF Radio Systems to be obsolete by 2015 and are now having to plan to buy, build, share radio systems for

2015 and beyond. Industry is looking at standalone P25 systems and/or other non-public safety endorsed digital radio system (i.e. MOTOTRBO™) among other options.

Public Safety Systems – are looking at a mandate that requires all Public Safety Radio Systems to be P25 compliant by 2015. SETRRS has been working toward this requirement for several years and has incorporated the Regional Interoperable Communication Plans (RICP) for the State of Texas through the South East Texas Regional Planning Commission (SETRPC) and the Area Maritime Security (AMS) Committee.

Shared Motorola Maintenance Costs/Grants – Currently an Interlocal Agreement exists between Stakeholders (7 entities – Jefferson County, Hardin County, Cities of Beaumont, Port Arthur, Nederland, Groves, and Port Neches), Government Entities with large investment into the SETRRS, which share annual Motorola maintenance fees each year. NOTE 1: When the City of Orange officially joins the system it will become the 8<sup>th</sup> Stakeholder entity. Fees are based on subscriber unit counts from each Stakeholder entity and User entity. User entities do not have large investments into the system and have a small amount of subscriber units on the system. NOTE 2: Grant purchased equipment is eligible for grant funded annual maintenance cost, which will reduce future annual local budgeted funds.

SETRRS Guidance and Management – The direction of the Regional Radio System is steered by representatives of the current 7 Stakeholders (owners). The primary steering group represents Jefferson County, Hardin County, Beaumont, and Mid/South County (sometimes called the G4). They meet on an as needed basis, which ranges from once a month to several times a month. This is to stay informed and on top of the issues related to the System. When the City of Orange joins the system, they will become a primary steering member and probably will be referred to as one of the G5. NOTE: The City of Beaumont has a full time Radio Shop under the oversight of an IT Director, a Communications Systems Manager, and three full time technicians.

## **REGIONAL INTEROPERABILITY CONCEPT**

The South East Texas Regional Planning Commission Interoperability Committee, at the direction of the State of Texas, has developed the Regional Interoperability Communications Plan (RICP) for its area of responsibility. The plan describes the region’s current communication capabilities, standard operating procedures, and future plans. The RICP has been adopted by all Public Safety entities in the three county region. Currently the SETRRS is considered to be an Interoperability Level 4 Radio System (see Table 1 - Definitions next page).

The Region has attained Level 5 in three (Governance, Training & Exercise, Usage) of the five categories and since the last Interoperability Exercise the region has upgraded to Level 5 in “Standard Operating Procedures”. The last step is to bring the SETRRS to Level 5 in “Technology”. This will happen when the Smart X project is completed with PSG10 funds in 2013-14.

As part of the SETRRS reaching Interoperability Level 5, it should include Public Safety (Fire, Police, EMS) and Private Sector Safety (Industry).

Another benefit is that once the SETRRS reaches the P25 capability, it can then be tied to other radio systems across the State and even to Louisiana (estimated in 2013-14). The SETRPC Interoperability



- Industry move to the SETRRS to maintain current interoperability capabilities with Public Safety and Industry Safety Departments.
- Industry can take advantage of using the new SETRRS 7.X switch and receive a cost savings by using the SETRRS switch. (\$200,000+) while upgrading their radio systems.
- Industry purchases Motorola MOTOTRBO™ Radios system at a reduced cost. These systems are digital, cheaper, and not P25 capable. **NOTE:** Purchase of this system “eliminates” the current interoperability capability in the region between Public Safety Departments and Industrial Safety Departments and will be a major step backwards for inter-operability.

## REGIONAL INTEROPERABILITY TIMELINES

- Federal mandate of regional radio equipment to be P25 compliant by 2015.
- Current Motorola radio system equipment currently in use by industry becoming obsolete by 2015
- NOTE: Public Safety and Industry are working with similar timelines and should take advantage of moving together on the SETRRS.

YEAR            GRANT/ENTITY/PROJECT (Estimated)

### SETRRS Infrastructure

- 2011-12    PSG07 - City of Orange funding approved and construction started – City of Orange Tower upgrade & 7.X switch to be located in Beaumont.
- 2012                    PSG09 - City of Beaumont funding approved and construction started – New Communications Building
- 2012-13    PSG11 - City of Beaumont funding approved and construction started – Smart X upgrade to Regional System (connects Orange to Jefferson and Hardin Counties).
- 2011-15    Future Grant opportunities.

### Subscriber Units

- 2011-13            SHSP/LEAP Grant funds to be used regionally to upgrade subscriber units to P25 level and reprogram if needed.

- 2011-13 AFG Grant funds to be used when possible to replace subscriber units with P25 radios.
- 2011 on Region to move to next generation of radios using the APX P25 models as the XTS models are reaching the end of service life.
- 2011-15 Future Grant opportunities.

### Maintenance Fees

2011-15 And further, make application for SETRRS Motorola maintenance costs on Grant Purchased Equipment using Port Security Grant funds. By 2014, more than half of the SETRRS will have been purchased by grant funds. This will decrease annual maintenance costs by over half.

### **REGIONAL INTEROPERABILITY RECOMMENDATIONS**

- The SNCA recommends that all able entities (Industry & Government):
- Work toward building the SETRRS to meet the Regional Interoperable Communications Plan recognized by the State of Texas through the SETRPC.
- Program all subscriber units with the 8CALL/7CALL talk groups and all regional interop & com talk groups.
- Take advantage of the savings on the 7.X Switch that will soon be located in Beaumont when upgrading or replacing radio equipment infrastructure.
- Take advantage of the Port Security Grant program to fund new or upgraded radio system infrastructure to gain advantage on future maintenance costs.
- Take advantage of the savings on annual maintenance costs by applying for Port Security Grant funds on grant purchased equipment.
- Take advantage of the Communications on Wheels (COW) available to SETRRS stakeholders/users on the system.
- Remain autonomous on the SETRRS with remote control consoles when needed.
- Begin to move to the next generation of subscriber units by purchasing the Motorola APX P25 capable radios.