



Rough Order Magnitude
(ROM) Estimate for
METCOM 911/Marion
County WA

Overview

Harris Corporation is pleased to provide a Rough Order of Magnitude (ROM) estimate to Metcom 911 for 2 (two) 700MHz P25 trunked radio multicast sites that will enable operation on the state radio system and provide public safety communications throughout Marion County.

Harris has assumed the existing antenna towers, facilities and equipment shelters may be reused for this project. This ROM provides budgeting information to assist in procuring a state of the art P25 phase II public safety radio communications network.

The Harris system solution leverages the power of Internet Protocol (IP) with the area wide coverage available only with a multicast radio system. The system is based on the latest Harris P25 technology and products. Harris P25 radio systems are compatible with ISSI/CSSI standards

Harris P25 radio systems comply with APCO P25 standards and have the capability to interface to other vendors P25 compliant radio systems. Harris is aware that Metcom 911 has recently updated the radio dispatch console system with a Mindshare radio dispatch system. For the purposes of this ROM Harris has assumed that the new dispatch console system is P25 CSSI compatible or has the capability to be upgraded with the CSSI (console sub-system interface) so that it may interface with the Harris state radio system which is already ISSI/CSSI ready. Harris would require an opportunity to test and verify the Mindshare CSSI interface and has included this testing in the cost estimate.

This estimate is provided with the standard state discount, including an estimate of services based on a high level understanding of the project. As more details are identified, Harris can provide further information and update this estimate with firm service quotes and discounts associated with this system. Harris looks forward to working collaboratively with Metcom 911 to determine further details for a more accurate quote.

The purpose of this ROM is to assist the customer in their effort to address the financial impact of upgrading the existing system with a new P25 radio system.

Project Description

Upgrade with New P25 System

This estimate includes a stand alone radio system to replace the current radio system. It gives Metcom 911 complete operational autonomy from other systems in the area while retaining interoperability capabilities. This estimate includes the following:

- CSSI interface to the State Network Management Subsystem (CORE)
- Two (2) five channel 700MHz Multisite Radio sites
- New Antenna system at each of two (2) sites
- Qty (5) interoperability talkpaths for connection to adjacent conventional radio users
- Mindshare console compatibility testing

Pricing Summary

The equipment and services listed in Figure 1 make up the bulk of the actual radio system proposed

Figure 1: Radio System Pricing

System Component	Estimated Price
Two (2) Five Channel P25 phase 2 multisite electronics sites	\$550,000
Antenna System (700MHz) at each of two sites	\$53,160
Five Interoperability Ports	\$32,148
Lab Testing of Mindshare Consoles	\$37,500
radio system subtotal	\$672,808
Project Management, Systems Engineering and Installation Services Estimate	\$275,000
Two (2) site radio system total	\$947,808

The equipment and services listed in Figure 2 make up those required to install 12 Harris Symphony radio dispatch consoles

Figure 2: Optional Harris Symphony Console System Pricing

System Component	Estimated Price
Console Dispatch Equipment (Qty_ 12)	\$320,000
PSAP Networking Equipment	\$45,000
Symphony console licenses	\$28,000
Optional console system materials subtotal	\$393,000
Project Management, Systems Engineering, Installation & Training Estimate	\$125,000
console system total	\$518,000

Assumptions

The pricing provided is based on the following assumptions.

- This estimate is a Rough Order of Magnitude estimate only. It is a non-executable document. A system of this magnitude may receive further system discounts.

System

- It is assumed that Metcom 911 has mutually exclusive use of their radio frequencies that may be effectively used in a 700MHz multicast trunking environment. It is further assumed the channels are without interference
- It is assumed that adequate spacing between frequencies is provided. Harris cannot be responsible of actual FCC licensing. Harris can provide technical support in accordance with a scope mutually agreed by Harris and Metcom 911
- This system is configured for multicast P25 phase 2 operation.
- Encryption features have been included on the console system
- The system has been configured to be added into the state radio system
- Standard features have been configured for the components that make up the system
- All connectivity (data backhaul) to the existing State Harris core will be provided by Metcom 911

Site development

- METCOM 911 will accept the responsibility for obtaining all licenses and permits required
- It has been assumed that each transmit/receive site and dispatch centers have available space including tower and shelter space
- It is assumed that each existing equipment location site will have appropriate grounding and a HVAC system in place to provide temperature control
- It is assumed that some electrical upgrades will be required at existing sites
- some civils work may be required at sites and PSAPS but has not been included in this ROM
- For any shared system resources, Harris assumes Inter-Governmental Agreements (IGA's) will be in place between and agency 1 and agency 2
- No backup power equipment has been provided in this estimate
- In general, it is assumed that no civils work will be needed to prepare the site for installation of the LMR equipment. Estimates of civils are provided as information to the customer

Services

- One year warranty for infrastructure
- Two year warranty for radios
- Harris has not included any optional features in this quotation, such as: extended warranty, telephone or on-site technical support, software support or software upgrade programs

Testing/Coverage

- While detailed indoor testing can be provided, only outdoor testing of proposed coverage will be included in this estimate
- No inbuilding enhancements are included in the ROM/Budgetary Estimate

Summary

Harris is a leader in providing secure, mission-critical public safety voice and data networks. We look forward to an opportunity to collaborate with Metcom 911 to provide the most suitable and highly reliable communications solution.



