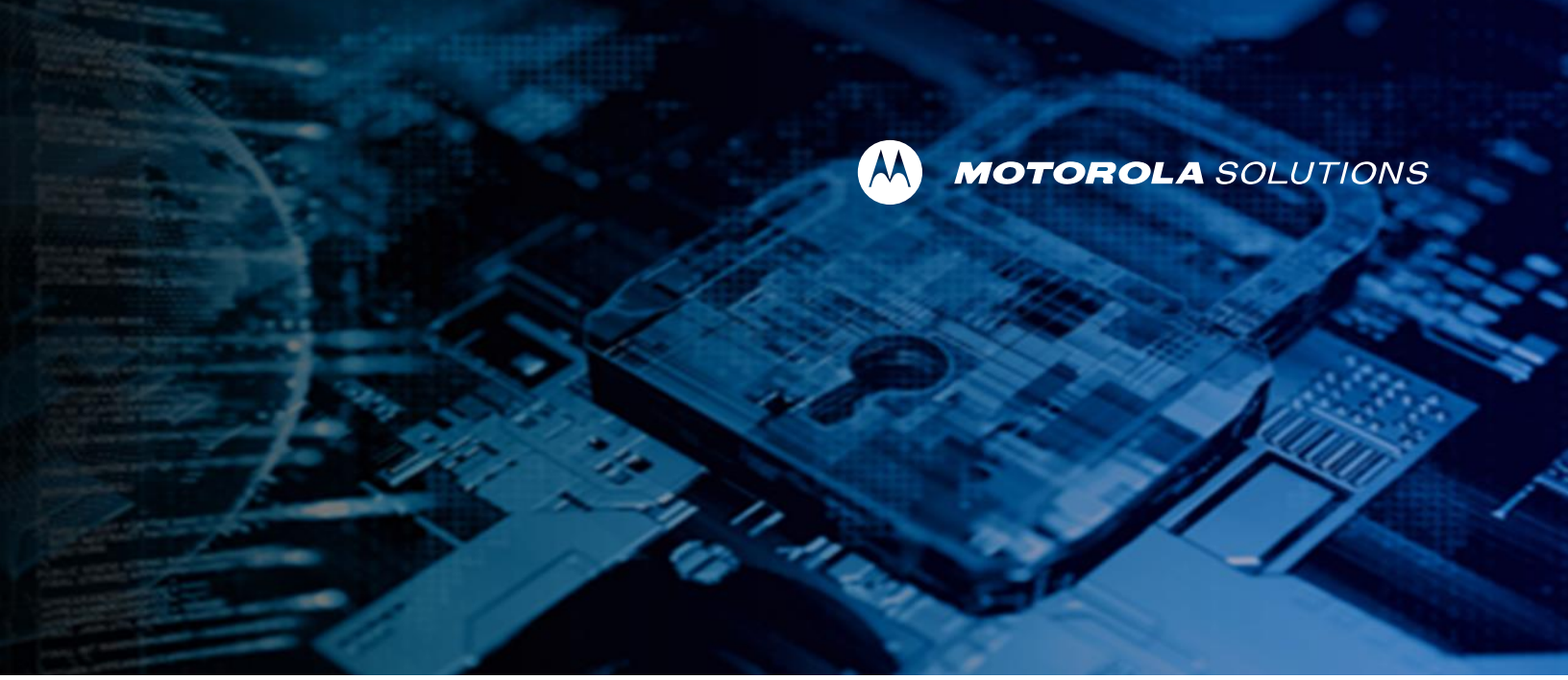


Attachment A

Orange County Harbor Patrol

MCC7500 E Console Upgrade

Replacement of Gold Elites

May 9, 2023

MOTOROLA SOLUTIONS

Motorola Solutions, Inc.
500 W Monroe Street, Ste 4400
Chicago, IL 60661-3781
USA

May 9, 2023

Captain Gary Lewellyn
Orange County Harbor Patrol
25005 Dana Drive
Dana Point, CA 92629

Subject: MCC7500 E Console Upgrade

Dear Captain Lewellyn,

Motorola Solutions, Inc. (“Motorola”) is pleased to have the opportunity to provide Orange County Harbor Patrol with quality communications equipment and services. The Motorola project team has taken great care to propose a solution that will meet your needs and provide unsurpassed value.

To best meet the functional and operational specifications of this solicitation, our solution includes a combination of hardware, software, and services. Specifically, this solution provides:

- (2) MCC7500E dispatch consoles
- (2) MPLS Routers ACX7024
- (1) MC-EDGE AUX (I/O)
- (1) MCC7500E dispatch Laptop

The proposed solution is subject to the terms and conditions of the Agreement between the County of Orange and Motorola Solutions, Inc., for the Orange County Equipment and Services Price Book Agreement # MA-060-21010004, executed December 15, 2020. This proposal shall remain valid for a period of 90 days from the date of this cover letter. Orange County Harbor Patrol may accept the proposal by issuing a purchase order that specifically references Motorola's May 9, 2023, proposal and OC Agreement # MA-060-21010004. Alternatively, Motorola would be pleased to address any concerns Customer may have regarding the proposal. Any questions can be directed to your Motorola Account Executive, Daniel Ramsden, our Account Executive, at (949) 898-1455.

We thank you for the opportunity to furnish Orange County Harbor Patrol with “best in class” solutions and we hope to strengthen our relationship by implementing this project. Our goal is to provide you with the best products and services available in the communications industry.

Sincerely,

Motorola Solutions, Inc.

Jerry Burch
MSSSI Vice President

Table of Contents

Section 1

System Description

Motorola Solutions, Inc. (Motorola) is pleased to provide Orange County Harbor Patrol with a proposal to upgrade their existing dispatch console system. The proposed design provides Harbor Patrol with the confidence of state-of-the-art secure communications, seamless IP-based connectivity, flexible system architecture with scalable components, and centralized console management.

To best meet the functional and operational specifications our solution includes a combination of hardware, software, licenses, and services to upgrade the current Gold Elite consoles and provides:

- (2) MCC7500E dispatch consoles
- (2) MPLS Routers ACX7024
- (1) MC-EDGE AUX (I/O)
- (1) MCC7500E dispatch Laptop

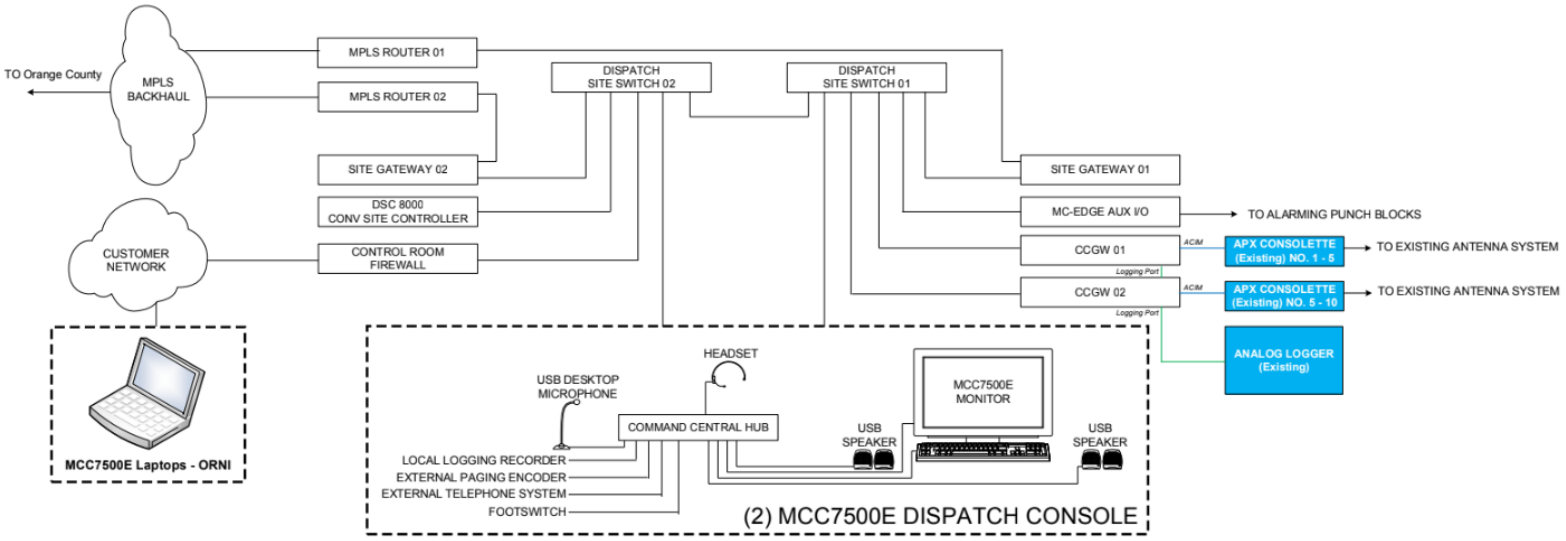
The Proposed system for (2) MCC7500E dispatch consoles to be located at the Harbor Patrol building and the dispatch location will be networked to the Orange County system core via (2) customer provided Ethernet connections, and Motorola included (2) MPLS router in order to support layer 3 routing necessary to integrate into Orange County system.

The Dispatch system include the following:

- Two (2) MCC7500E dispatch positions, each consisting of:
  - Command Central HUB
  - 19” Non-Touchscreen Monitor
  - (4) Speakers
  - (2) Headset Jacks
  - Headset with PTT
  - Over the Head, Monaural, Noise cancelling
  - Microphone
  - Dual Pedal Footswitch
  - Keyboard and Mouse
  - Enhanced Instant Recall Recorder
  - OTEK Operation
  - AES/ADP/DES-OFB Encryption
- Two (2) Conventional Channel Gateway (CCGW), to provide a connection to the Existing Consolette via (ACIM) for conventional fallback logging to the existing analog recording.
- One (1) Conventional Site Controller (CSC) for conventional fallback
- Two (2) Site LAN Switches
- Two (2) Site Gateways
- Two (2) Juniper ACX7024 MPLS Routers
- One (1) MC-EDGE AUX (I/O)
- One (1) MCC7500E dispatch Laptop consisting of:
  - ZBOOK 15 G7 Laptop
  - Firewall
  - PRX 7000 Proxy SW license.
  - Two (2) Speakers
  - Headset

- Microphone
- Enhanced Instant Recall Recorder (IRR)
- OTEK
- AES/ADP/DES – OFB Encryption.

Figure 1: System Block Diagram



1.1 Dispatch Console Configuration

The proposed solution offers Orange County Harbor Patrol PD of (3) MCC7500E. Dispatch positions which interface and managed by the ICI system core. The figure titled “MCC7500E Dispatch Position” shows an MCC7500E operator position.

Figure 1-2 The MCC7500E Dispatch Position with CommandCenteral HUB

Motorola Solutions is an active participant in establishing P25 standards for interoperability. The proposed console is a key component for the interoperability of the ASTRO 25 system. When a situation requires coordination between multiple agencies, the proposed dispatcher can patch together mutual aid radios and required subscribers on the ASTRO 25 system (see the figure titled “Mutual Aid Components”)

Incident conversations are seamless from the moment of the patch initiation, the dispatcher can also take part in and monitor conversations for the duration of the incident, as necessary

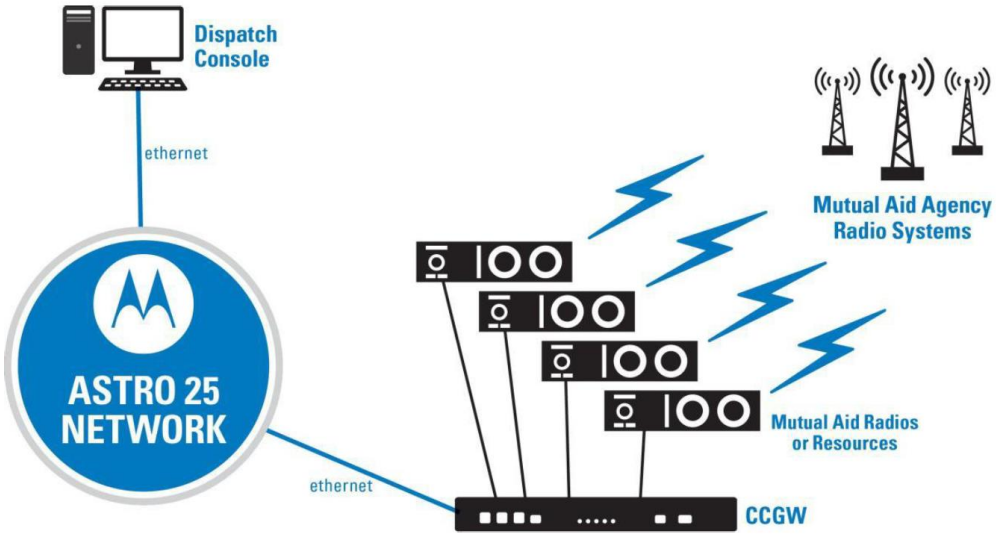


Figure 1-3 Mutual Aid Components – Mutual Aid agency radio systems connect to the ASTRO25 network through a CCGW

1.1.1 Convectional Base Station Interfaces

The proposed consoles will have the ability to access and control Harbor Patrol Existing APX Consolette through the use of Enhanced Conventional Channel Gateways (ECCGW), The MCC7500E console Process audio received from the stations and controls various features on the stations, such as frequency selection and Private line selection, also to interface with the existing analog logger via (Logging Port). The existing analog logger will source audio off the back-output port of the consolette.

1.1.2 MC-EDGE Intelligent gateway and Remote Terminal Unit

Originally designed for SCADA applications, the MC-EDGE has expanded to allow monitoring of digital and analog inputs at remote sites. This modular device is rack mounted and may be expanded with additional optional modules

One (1) MC-EDGE is included with the following features:

- One (1) 8DO EE 16DI 5-18 V /DRY

- One (1) Terminal Blocks
- AC Power supply Unit

Figure 1-6 MC-EDGE Base Unit

1.2 Making Consoles Easy to Operate

Motorola Solutions designs its proposed console to provide mission-critical audio between the dispatcher and users in the field.

1.2.1 Customizable Dispatch Interface

The proposed MCC 7500E console provides dispatchers with a graphical user interface (GUI) that can be customized by agency or by individual users to optimize user efficiency. Based on dispatcher preference, the proposed GUI can be customized to show details conventional RF channels on a per-channel basis. Busy dispatchers can respond to a missed call by simply clicking on an entry in the Activity Log. The number of calls and call information displayed in the Activity Log is customizable to suit the needs of the user.

Elite Dispatch Graphical User Interface

The proposed Elite Dispatch GUI is an enhanced version of Motorola Solutions' Gold Elite Dispatch GUI. For existing Gold Elite users, the GUI allows a smooth transition and minimal training for dispatchers. For new users, the graphical icons and customization options make the proposed console GUI easy to learn and operate.

1.2.2 Standard Radio Transmission and Reception

The proposed dispatch position has a microphone and two speakers. One speaker is for selected audio and the second speaker is for all remaining unselected audio. Additional speakers can be added to a console allowing dispatchers to configure a specific speaker for a set of designated audio sources. This simplifies multitasking between multiple audio sources and allows flexibility in the way the audio is presented to the dispatcher.

Receiving Calls from the Field and Other Dispatchers

The proposed console provides dispatchers with greater flexibility for how to hear calls from field radio users and other dispatchers. Each dispatcher can define his or her own audio reception profile by selecting a single audio source, to be heard on a selected speaker or headset (Single Select). The dispatcher can also define groups of radio resources that can all be heard on a selected speaker or headset (Multi- Select).

Initiating Calls to the Field and Other Dispatchers

The dispatcher has several different ways of initiating a call. In most circumstances, a General Transmit is appropriate. With the General Transmit, the dispatcher selects a resource on the console and activates the transmission through a footswitch, headset transmit button, or a microphone transmit button. If the dispatcher needs to quickly transmit on a resource that is not selected, the dispatcher uses the Instant Transmit function.

Audio Communication to the Field and Other Dispatchers

The dispatcher can transmit audio in different ways. They can make calls to all users listening to a specific conventional radio resource. When multiple resources are required the dispatcher can select additional conventional channels, as needed using the Multi-Select feature.

Controlling Console Audio

The proposed console offers dispatchers several different ways of controlling or muting the audio on their consoles, such as the following:

- Audio volume can be changed for any specific resource.
- All non-selected resources on the console can be muted for 30 seconds (All Mute) or unmuted, if already muted.
- A dispatcher can transmit on a resource while receiving audio from the same resource or other resources.
- A dispatch position can be configured to automatically mute the other dispatch audio on a shared resource to prevent acoustic feedback when a co-located dispatch position transmits.
- RF Cross Mute automatically mutes the receive audio from a specified channel when the dispatcher transmits on another specified channel to prevent acoustic feedback.

1.2.3 Radio Patch Control

The dispatcher can patch communication between conventional radios that are normally unable to communicate with each other due to different features, programming, or even different frequency bands. A patch group is a group of linked resources that can both receive messages from a console and transmit to all other members of the patch group.

Setting up a Standard Patch

Patches are supported between conventional resources. After the patch is created, the dispatch position transmits all audio on one resource to all other resources in the patch group. Patches are automatically reestablished, if interrupted, so the dispatcher can concentrate on continuing operations.

Predefined Patches

Patches can be predefined and automatically reinitiated each time a dispatch position computer is restarted (Patch Auto-Start).

1.2.4 Call Management Control

The dispatcher can use the following functionality to manage and control audio for different types of calls between the dispatch position and radio users or other dispatchers.

Standard Call Indications

The dispatch position indicates the availability of any given resource, regardless of whether the resource is involved in a transmission. An inbound call indication provides the dispatcher with a visual cue of audio activity on a radio resource and allows a dispatcher to see at a glance what the status of a resource is at any moment.

1.3 Protecting Consoles and Communications

The console enables end-to-end encryption from the dispatcher to the ASTRO 25 network, so that Orange County Harbor Patrol PD communications will not be undermined by unencrypted transmissions. Each dispatcher is able to fully participate in secure communications while being confident that sensitive, vital information is not heard by unauthorized individuals.

1.3.1 Secure Access to the Console

To use the dispatch position, a dispatcher must enter a valid radio system user account name and password. The dispatch position validates that information with the radio system’s network manager and allows the dispatcher to access only the resources for which the user has access rights. This also applies to third-party applications that use the dispatch console's API.

1.3.2 Secure Communications at the Console

The proposed console has the ability to encrypt and decrypt radio voice messages. Radio voice messages are encrypted from end-to-end between the radio users to the dispatch position. If configured to do so and the consoles are loaded with the appropriate keys, the dispatcher can choose whether to encrypt their transmissions on a particular resource.

1.4 Dispatch Console Solution Components

The proposed components are connected together and to the Orange County System Core on an IP network through console site routers and switches. The console connects directly to the radio system’s IP transport network without gateways or interface boxes. Audio processing, encryption, and switching intelligence for dispatch are performed within each software- based dispatch position without additional centralized electronics. Since the network is IP-based, the system interfaces and components can be

distributed physically throughout the network. Some of the available console components are identified below.

1.4.1 MCC7500E CONSOLE OPERATOR POSITION

The dispatch position supports commercially available accessories, including a USB microphone, USB headset, and USB footswitch, as shown in the figure titled “MCC 7500E Dispatch Position.” The following list describes the components included in the proposed configuration.

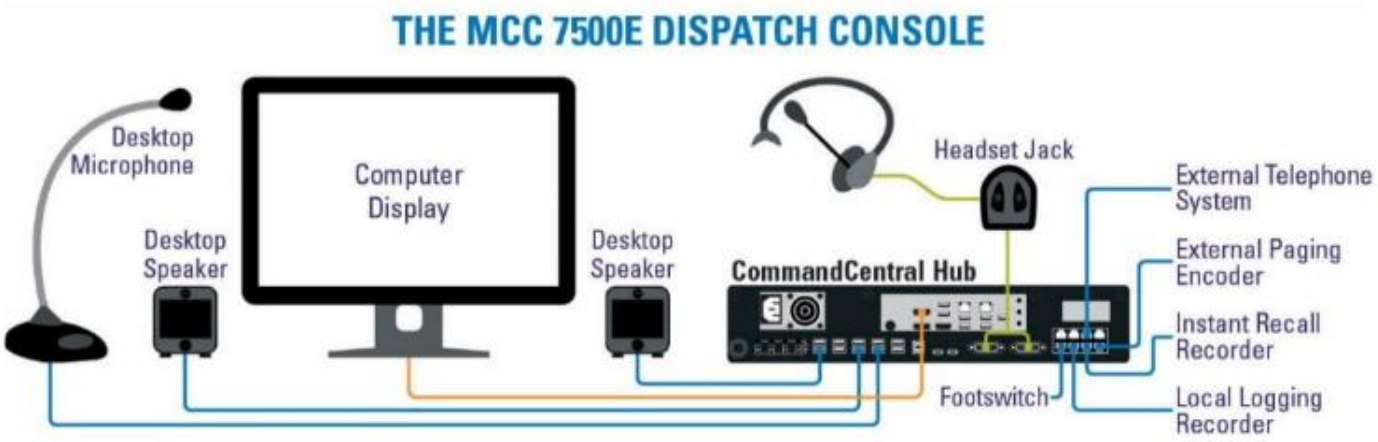


Figure 1-7 MCC7500E Dispatch Position

CommandCentral Hub

The CommandCentral Hub allows you to easily connect all your audio and computer peripherals, better manage the flow of critical voice streams and information and be the pipeline of intelligence to those who need it most with the MCC 7500E Voice Dispatch Console. With the CommandCentral Hub, deployment is simple and easy across dispatch centers where space is at a premium.

Computer Display

The dispatch position will require use of a Computer Display. This proposal includes 19” inch Non touch screen.

Desktop Speakers

FOUR (4) audio speakers have been included with each dispatch position and for laptop and can be configured to transmit audio from a specific channel. Each speaker is a self-contained unit, with individual volume controls, and can be placed on a desktop or mounted on a rack or computer display.

Headset Jack

The dispatch position supports up to two headset jacks, both push-to-talk (PTT) and non-PTT- enabled, for simultaneous use by the dispatcher and a supervisor. The headset jack contains two volume controls for the separate adjustment of received radio and telephone audio.

Gooseneck Microphone

The microphone controls the dispatch position's general transmit and monitor features through two buttons on its base. The microphone can be fastened down or left loose. It can be used alone or in conjunction with a headset.

Footswitch

Each dispatch position includes a dual pedal footswitch that controls general transmit and monitor functions.

Switches 2930F-24 port

The dispatch site equipment includes Redundant 24 port LAN switches. The switches are connected via Ethernet trunks. They aggregate all the Ethernet interfaces for all servers, clients, and routers at the core.

Routers SRX345

This provides a site routers (SRX345) including generic operating system as well as an internal -48 Volt DC power supply. The routers connect to the Master site via Ethernet.

Backhaul Connections

The redundant Backhaul connections increase MCC 7500E console availability by protecting against the loss of multiple dispatch positions. In the event of a LAN switch failure, the system will automatically detect and switchover with no manual intervention required. Dispatching operations will not be interrupted. The dual site switches and dual site routers will be connected to the customer provided dual Ethernet links back to the Orange County System Core.

DSC 8000 CONVENTIONAL SITE CONTROLLER

The DSC 8000 Site Conventional Controller provides mission–critical call processing and mobility management throughout the ASTRO 25 conventional system. The DSC 8000 interfaces through the Ethernet LAN switch, providing access to the packet switched network through the Core Gateway. The DSC 8000 can support the full set of dispatch consoles, archiving interface servers, and conventional gateways.

1.4.2 Optional Spares

Additional hardware spares for the site router, site LAN Switches and console positions and FRU’s for the other proposed equipment are induced in Motorola Solutions, Inc. proposed offer.

1.5 Backhaul Design

Motorola Solutions is proposing MPLS WAN Backhaul Network using the Juniper ACX7024 Routers. These routers would be deployed at the Million Air building and the tower backup dispatch locations to transport ASTRO network to and from ICI’s Primary and DSR Master Sites.

ACX7024, from the ACX7000 line, is an industrial-rated (I-temp), compact, fixed, 1 U (24cm) deep, high-performance multiservice router. Next-generation silicon delivers 360 Gbps of throughput, a comprehensive feature set, and the scale needed to support the performance and bandwidth requirements of today and tomorrow. ACX7024 fixed ports include 24 multi-rate (SFP28) ports, each

configurable as 1GbE, 10GbE, and 25GbE, enabling operators to perform today's most common upgrades on a port-by-port basis. An additional 4 fixed (QSFP-28) 100GbE uplinks are available to support scale.

The ACX7024 incorporates 6 integrated fans (5+1 redundancy) for front-to-back and side-to-side (with baffle) airflow. It comes with 2x field replaceable AC (as included in this proposal to Orange County Harbor Patrol PD) or DC power supplies (1+1 redundancy). Cost-effective and efficient thermal design enables unrestricted high-power 100GbE ZR transceiver use across all supporting ports. It supports next-generation protocols, including segment routing, SRv6, MPLS, and Ethernet VPN (EVPN)–Virtual Extensible LAN (VXLAN), and any overlay, underlay, or service. It delivers service-assured network slicing, network intelligence, and juniper Paragon Automation for network efficiency and operational simplicity.

1.5.1 Ethernet Site Link Service Level Agreement and Test

Before cutting over the new MCC 7500E Orange County Harbor Patrol PD dispatch positions, Motorola will test Orange County Harbor Patrol provided Ethernet Site Links utilizing the ITU-T Y.1564 testing method to ensure proper operation based on ASTRO design specifications.

If the Y.1564 test does not pass over Orange County Harbor Patrol provided Ethernet Site Link, Motorola will provide the Service Level Agreement specifications and resulting test report to the Orange County Harbor Patrol PD.

Since Motorola does not manage Orange County Harbor Patrol leased Ethernet/Fiber, Orange County Harbor Patrol will lead the resolution of failed Ethernet site links for Motorola to re-test up to one ITU-T Y.1564 re-test is included in this proposal.

While the actual Ethernet Site Link Service Level Agreement specifications depend on Orange County Harbor Patrol PD fleetmap and number of trunking and conventional resources, the backhaul is expected to support the following parameters between ICI and Orange County Harbor Patrol PD Dispatch Site.

- Support end-to-end Layer 3 Quality of Service, using a minimum of 2 QoS levels.
- At least 3Mbps Committed Information Rate (CIR) or bandwidth
- Less than 40ms of end-to-end latency
- Less than 20ms of end-to-end jitter
- Less than 0.01% of packet loss

Motorola can be contracted by Orange County Harbor Patrol PD to help trouble shoot, root cause, and rectify Orange County Harbor Patrol PD provided Ethernet Site Links to meet ASTRO links specifications in a separate proposal or Change Order.

1.6 Design Exclusions

Please take the following design exclusions into consideration.

- Logging recorder has not been included. Existing analog recorder will be connected (to the customer) to the logging ports on the CCGW to record audio.
- Consolettes have not been included. Existing APX consolettes will be used.
- Furniture for the dispatch operators will be reused.

- Backhaul or Network links.
- Subscriber Radios.
- RF Distribution and Antenna systems.
- Coax and Cables.

Section 2

Statement of Work

Motorola Solutions will install and configure the proposed equipment. The following table describes the tasks involved with installation and configuration.

Tasks	Motorola Solutions	Harbor Patrol
PROJECT INITIATION		
Contract Finalization and Team Creation		
Execute contract and distribute contract documents.	X	X
Assign a Project Manager as a single point of contact.	X	X
Assign resources.	X	X
Schedule project kickoff meeting.	X	X
Deliverable: Signed contract, defined project team, and scheduled project kickoff meeting.		
Project Administration		
Ensure that project team members attend all meetings relevant to their role on the project.	X	X
Set up the project in the Motorola Solutions information system.	X	
Record and distribute project status meeting minutes.	X	
Maintain responsibility for third-party services contracted by Motorola Solutions.	X	
Complete assigned project tasks according to the project schedule.	X	X
Submit project milestone completion documents.	X	
Upon completion of tasks, approve project milestone completion documents.		X
Conduct all project work Monday thru Friday, 7:30 a.m. to 5:00 p.m.).	X	
Deliverable: Completed and approved project milestones throughout the project.		
Project Kickoff		
Introduce team, review roles, and decision authority.	X	X

Tasks	Motorola Solutions	Harbor Patrol
Present project scope and objectives.	X	
Review SOW responsibilities and project schedule.	X	X
Schedule Design Review.	X	X
Deliverable: Completed project kickoff and scheduled Design Review.		
Design Review		
Review the Customer's operational requirements.	X	X
Present the system design and operational requirements for the solution.	X	
Present installation plan.	X	
Present preliminary cutover plan and methods to document final cutover process.	X	
Present configuration and details of sites required by system design.	X	
Validate that Customer sites can accommodate proposed equipment.	X	X
Provide approvals required to add equipment to proposed existing sites.		X
Review safety, security, and site access procedures.	X	
Present equipment layout plans and system design drawings.	X	
Provide information on existing system interfaces.		X
Review and update design documents, including System Description, Statement of Work, Project Schedule, and Acceptance Test Plan, based on Design Review agreements.	X	
Provide minimum acceptable performance specifications for customer provided hardware, software, LAN, WAN and internet connectivity.	X	
Execute Change Order in accordance with all material changes to the Contract resulting from the Design Review.	X	
Deliverable: The default views based on workflow requirements will be defined, presented, and approved.		
Deliverable: Finalized design documentation based upon "frozen" design, along with any relevant Change Order documentation.		
SITE PREPARATION AND DEVELOPMENT		
Site Access		

Tasks	Motorola Solutions	Harbor Patrol
Provide site owners/managers with written notice to provide entry to sites identified in the project design documentation.		X
Obtain site licensing and permitting, including site lease/ownership, zoning, permits, regulatory approvals, easements, power, and telco connections.		X
Deliverable: Access, permitting, and licensing necessary to install system equipment at each site.		
Site Planning		
Provide necessary buildings, equipment shelters, and towers for installation of system equipment.		X
Provide the R56 requirements for space, power, grounding, HVAC, and connectivity requirements at each site.	X	
Provide adequate electrical power in proper phase and voltage at sites.		X
Conduct site walks to collect pertinent information (e.g. location of telco, power, structures, etc.)	X	
Ensure that each site meets the R56 standards for space, grounding, power, HVAC, and connectivity requirements.		X
Ensure that required rack space is available for installation of the new equipment.	X	X
Deliverable: Information and permitting requirements completed at each site.		
General Facility Improvements		
Provide adequate HVAC, grounding, lighting, cable routing, and surge protection based upon Motorola Solutions' Standards and Guidelines for Communication Sites (R56)		X
Ensure that electrical service will accommodate installation of system equipment, including isolation transformers, circuit breakers, surge protectors, and cabling.		X
Provide obstruction-free area for the cable run between the demarcation point and system equipment.		X
Provide backup power for the proposed equipment at all sites.		X
Supply interior building cable trays, raceways, conduits, and wire supports.		X
Deliverable: Sites meet physical requirements for equipment installation.		
SYSTEM INSTALLATION		
Equipment Order and Manufacturing		
Create equipment order and reconcile to contract.	X	

Tasks	Motorola Solutions	Harbor Patrol
Manufacture Motorola Solutions-provided equipment necessary for system based on equipment order.	X	
Deliverable: Equipment procured and ready for shipment.		
Equipment Shipment and Storage		
Provide secure location for solution equipment.		X
Pack and ship solution equipment to the identified, or site locations.	X	
Receive solution equipment.		X
Inventory solution equipment.	X	
Deliverable: Solution equipment received and ready for installation		
General Installation		
Deliver solution equipment to installation location.	X	
Coordinate receipt of and inventory solution equipment with designated contact.	X	
Install all proposed fixed equipment as outlined in the System Description based upon the agreed-upon floor plans, connecting audio, control, and radio transmission cables to connect equipment to the power panels or receptacles, and audio/control line connection points. Installation performed in accordance with R56 standards and state/local codes.	X	
Provide system interconnections that are not specifically outlined in the system design, including dedicated phone circuits, microwave links, or other types of connectivity.		X
Connect installed equipment to the provided ground system.	X	
Label equipment, racks, and cables.	X	
Perform preliminary audit of installed equipment to ensure compliance with requirements and R56 standards.	X	
Note any required changes to the installation for inclusion in the “as-built” system documentation.	X	
Remove, transport, and dispose of old equipment including thee 2 existing Gold Elite console system.		X
Deliverable: Equipment installed.		
System Staging		
Ship all equipment needed for staging to Motorola Solutions’ Customer Center for Solutions Integration (CCSI).	X	

Tasks	Motorola Solutions	Harbor Patrol
Provide information on existing system interfaces, room layouts, or other information necessary for the assembly to meet field conditions.		X
Set up and rack the solution equipment on a site-by-site basis, as it will be configured in the field at each of the sites.	X	
Cut and label the cables with to/from information to specify interconnection for field installation and future servicing needs.	X	
Complete the cabling/connecting of the subsystems to each other (“connectorization” of the subsystems).	X	
Assemble required subsystems to assure system functionality.	X	
Power up, load application parameters, program, and test all staged equipment.	X	
Confirm system configuration and software compatibility with the existing system.	X	
Inventory the equipment with serial numbers and installation references.	X	
Review and approve proposed Factory Acceptance Test Plan.		X
Pay for travel, lodging, meals, and all incidental expenses for Customer personnel and representatives to witness the Factory Acceptance Testing.		X
Perform factory functional acceptance tests of system features	X	
Conduct site and system level testing.	X	
Perform system burn-in 24 hours a day during staging to isolate and capture any defects.	X	
Console Installation and Configuration		
Identify circuits for connection to console and a demarcation point located within 25 feet of the console interface.		X
Connect console to circuit demarcation points.	X	
Install PC workstation w/ keyboard and mouse, and monitor.	X	
Develop templates for console programming.	X	
Perform console programming and configuration.	X	
Deliverable: Console equipment installation completed.		
Deliverable: Control station equipment installation completed.		
Functional Acceptance Testing		

Tasks	Motorola Solutions	Harbor Patrol
Verify the operational functionality and features of the solution supplied by Motorola Solutions, as contracted.	X	
Ethernet Site Link Service Level Agreement and Test.	X	
Witness the functional testing.		X
Document all issues that arise during the acceptance tests.	X	
If any major task for the system as contractually described fails during the Customer acceptance testing or beneficial use, repeat that particular task after Motorola Solutions determines that corrective action has been taken.	X	
Resolve any minor task failures before Final System Acceptance.	X	
Document the results of the acceptance tests and present for review.	X	
Review and approve final acceptance test results.		X
Evaluate wear-ability of Si device. Provide Feedback to customer on options	X	
If any major task as contractually described fails, repeat that particular task after Motorola Solutions determines that corrective action has been taken.	X	
Document all issues that arise during the acceptance tests.	X	
Document the results of the acceptance tests and present to the Customer for review.	X	
Resolve any minor task failures before Final System Acceptance.	X	
Deliverable: Completion of functional testing and approval by Customer.		
PROJECT TRANSITION		
Cutover		
Finalize Cutover Plan.	X	X
Conduct cutover meeting with relevant personnel to address both how to mitigate technical and communication problem impacts to the users during cutover and during the general operation of the system.	X	
Notify the personnel affected by the cutover of the date and time planned for cutover.		X
Provide ongoing communication with users regarding the project and schedule.	X	X

Tasks	Motorola Solutions	Harbor Patrol
Cut over and ensure that user are operating on system.	X	X
Resolve punchlist items, documented during the Acceptance Testing phase, in order to meet all the criteria for final system acceptance.	X	
Assist Motorola Solutions with resolution of identified punchlist items by providing support, such as access to the sites, equipment and system, and approval of the resolved punchlist items.		X
Deliverable: Migration to new system completed, and punchlist items resolved.		
Transition to Warranty		
Review the items necessary for transitioning the project to warranty support and service.	X	
Motorola Solutions to provide services during year 1 warranty which align with the proposed services.	X	
Participate in the Transition Service/Project Transition Certificate (PTC) process.		X
Deliverable: Service information delivered and approved by Customer		
Finalize Documentation and System Acceptance		
Provide manufacturer's installation material, part list and other related material to Customer upon project completion.	X	
Provide an electronic as-built system manual. The documentation will include the following: - Site Block Diagrams. - Site Floor Plans. - Site Equipment Rack Configurations. - Antenna Network Drawings for RF Sites (where applicable). - ATP Test Checklists. - Functional Acceptance Test Plan Test Sheets and Results. - Equipment Inventory List. - Console Programming Template (where applicable). - Maintenance Manuals (where applicable). - Technical Service Manuals (where applicable). Drawings will be delivered in Adobe PDF format.	X	
Receive and approve documentation.		X
Execute Final Project Acceptance.	X	X
Deliverable: All required documents are provided and approved. Final Project Acceptance.		

2.1 Assumptions

Motorola has made several assumptions in preparing this proposal, which are noted below. In order to provide a firm quote, Motorola will need to verify all assumptions or seek alternate solutions in the case of invalid assumptions.

- All existing sites or equipment locations will have sufficient space available for the system described as required/specified by R56.
- All existing sites or equipment locations will have adequate electrical power in the proper phase and voltage, and site grounding to support the requirements of the system described.
- Any site/location upgrades or modifications are the responsibility of Harbor Patrol.
- Approved FCC licensing provided by Harbor Patrol.
- Approved local, State, or Federal permits as may be required for the installation and operation of the proposed equipment are the responsibility of Harbor Patrol.
- Any required system interconnections not specifically outlined here will be provided by Harbor Patrol. These may include dedicated phone circuits, microwave links, or other types of connectivity.
- Customer is responsible for all Ethernet connections between the Harbor Patrol Console equipment and Orange County system. Motorola will only provide, install, and test MPLS equipment at each access point.
- No coverage guarantee is included in this proposal.
- Motorola is not responsible for interference caused or received by the Motorola-provided equipment except for interference that is directly caused by the Motorola-provided transmitter(s) to the Motorola-provided receiver(s). Should the Harbor Patrol system experience interference, Motorola can be contracted to investigate the source and recommend solutions to mitigate the issue.

Section 3

Acceptance Test Plan

System Acceptance of the proposed solution will occur upon successful completion of a Functional Acceptance Test Plan (FATP), which will test the features and functions for the installed new equipment in order to verify that the solution operates according to its design.

3.1 MCC 7100/7500 Trunked Resources

3.1.1 Talkgroup Selection and Call

1. DESCRIPTION

The Talkgroup Call is the primary level of organization for communications on a trunked radio system. Dispatchers with Talkgroup Call capability will be able to communicate with other members of the same talkgroup. This provides the effect of an assigned channel down to the talkgroup level. When a Talkgroup Call is initiated from a subscriber unit, the call is indicated on each dispatch operator position that has a channel control resource associated with the unit's channel/talkgroup.

SETUP

RADIO-1 - TALKGROUP 1
RADIO-2 - TALKGROUP 2
RADIO-3 - TALKGROUP 1
RADIO-4 - TALKGROUP 2
CONSOLE-1 - TALKGROUP 1
CONSOLE-2 - TALKGROUP 2

VERSION #1.010

2. TEST

Step 1. Initiate a wide area call from CONSOLE-1 on TALKGROUP 1.

Step 2. Observe that RADIO-1 and RADIO-3 will be able to monitor the call. Dekey the console and have either radio respond to the call.

Step 3. Observe that all consoles with TALKGROUP 1 can monitor both sides of the conversation.

Step 4. Initiate a wide area call from CONSOLE-2 on TALKGROUP 2.

Step 5. Observe that RADIO-2 and RADIO-4 will be able to monitor the call. Dekey the console and have either radio respond to the call.

Step 6. Observe that all consoles with TALKGROUP 2 can monitor both sides of the conversation.

Pass____ Fail____

MCC 7100/7500 Trunked Resources

3.1.2 Talkgroup Selection and Call - Secure

1. DESCRIPTION

The Talkgroup Call is the primary level of organization for communications on a trunked radio system. Dispatchers with Talkgroup Call capability will be able to communicate with other members of the same talkgroup. This provides the effect of an assigned channel down to the talkgroup level. When a Talkgroup Call is initiated from a subscriber unit, the call is indicated on each dispatch operator position that has a channel control resource associated with the unit's channel/talkgroup. Digital encryption is used so only properly equipped and configured subscribers can monitor the conversation. A "Key" is used to encrypt the transmit audio. Only radios and Consoles with the same "Key" can decrypt the audio and listen to it.

SETUP

RADIO-1 - TALKGROUP 1 (Secure TX Mode)
RADIO-2 - TALKGROUP 2 (Secure TX Mode)
RADIO-3 - TALKGROUP 2 (No Keys)
RADIO-4 - TALKGROUP 1 (Clear TX Mode with Keys loaded)
CONSOLE-1 - TALKGROUP 1 and TALKGROUP 2 (Secure TX Mode)

VERSION #1.040

2. TEST

Step 1. Initiate a wide area secure call from CONSOLE-1 on TALKGROUP 1.

Step 2. Verify RADIO-1 can monitor and respond to the secure call.

Step 3. Verify RADIO-4 can monitor and respond to the secure call because even though it is in clear mode the correct encryption keys are loaded for the secure call.

Step 4. Initiate a wide area secure call from CONSOLE-1 on TALKGROUP 2.

Step 5. Verify that RADIO-2 can monitor and respond to the secure call. Note that RADIO-3 cannot monitor the call.

Pass____ Fail____

MCC 7100/7500 Trunked Resources

3.1.3 Emergency Alarm and Call Display Description

1. DESCRIPTION

Users in life threatening situations can use the emergency button on the radio to send an audible alarm and a visual alarm signal to a console operator in order to request immediate system access to a voice channel for an emergency call. An emergency alarm begins after the radio user presses the radio's emergency button. Pressing the emergency button places the radio in "emergency mode". To begin an emergency call, the radio user must press the radio's PTT button while in "emergency mode." The assigned voice channel will be dedicated to the emergency caller's talkgroup for an extended period of time, equal to the Message Hang Time plus the Emergency Hang Time. As with other call types, emergency calls can operate across sites as well as within the same site.

SETUP

RADIO-1 - TALKGROUP 1
CONSOLE-1 - TALKGROUP 1
CONSOLE-2 - TALKGROUP 1

VERSION #1.020

2. TEST

Step 1. Initiate an Emergency Alarm from RADIO-1.

Step 2. Observe the Emergency from RADIO-1 is received at CONSOLE-1 for TALKGROUP 1 and the text in the talkgroup resource indicates the trigger condition for the emergency when applicable (mandown condition, vehicle crash or vest pierce).

Step 3. Acknowledge the Emergency at the operator position. Verify CONSOLE-2 receives notification that the call has been acknowledged.

Step 4. Initiate a call with RADIO-1 to initiate an Emergency call.

Step 5. Observe CONSOLE-1 and CONSOLE-2 can monitor RADIO-1

Step 6. Clear the Emergency from CONSOLE-1 on TALKGROUP 1.

Step 7. End the Emergency Alarm from RADIO-1.

Pass____ Fail____

MCC 7100/7500 Trunked Resources

3.1.4 Multi-Select Operation

1. DESCRIPTION

Multi-Select (Msel) allows the console operator to group a number of channels/talkgroups together such that when the general transmit bar is depressed, all of the multi-selected channels/talkgroups will transmit at the same time with the same information. Multi-Select is one way communication call. If a radio user responds to a Multi-Select call the talkgroup the user is affiliated to will be the only one to hear the call. There is no super-group formed, so radio communication is still at the single talkgroup level. Multi-Select is utilized to send an APB to several channels/talkgroups. A Multi-Select has a limit of twenty (20) trunking/conventional resources

SETUP

RADIO-1 - TALKGROUP 1
RADIO-2 - TALKGROUP 2
CONSOLE-1 - TALKGROUP 1, TALKGROUP 2

VERSION #1.010

2. TEST

Step 1. From CONSOLE-1, create an Msel group with TALKGROUP 1 and TALKGROUP 2.

Step 2. Transmit on the Msel using the Msel instant transmit button.

Step 3. Verify that RADIO-1 and RADIO-2 hear the call.

Step 4. Initiate a call with RADIO-1.

Step 5. Verify the call is heard on CONSOLE-1 but not on RADIO-2.

Step 6. Initiate a call with RADIO-2.

Step 7. Verify the call is heard on CONSOLE-1 but not on RADIO-1.

Step 8. On CONSOLE-1 dissolve the Msel.

Pass____ Fail____

MCC 7100/7500 Trunked Resources

3.1.5 Talkgroup Patch

1. DESCRIPTION

Talkgroup Patch allows a dispatcher to merge several talkgroups together on one voice channel to participate in a single conversation. This can be used for situations involving two or more talkgroups that need to communicate with each other.
Using the Patch feature, the console operator can talk and listen to all of the selected talkgroups grouped; in addition, the members of the individual talkgroups can also talk or listen to members of other talkgroups. Patched talkgroups can communicate with the console dispatcher and other members of different talkgroups because of the "supergroup" nature of the Patch feature.

NOTE : If "secure" and "clear" resources are patched together, one repeater for each mode may be assigned per site.

SETUP

RADIO-1 - TALKGROUP 1
RADIO-2 - TALKGROUP 2
RADIO-3 - TALKGROUP 1
RADIO-4 - TALKGROUP 2
CONSOLE-1 - TALKGROUP 1 and TALKGROUP 2

Note: All 4 Radios must have the same home zone.

VERSION #1.010

2. TEST

Step 1. Using CONSOLE-1 create a patch between TALKGROUP 1 and TALKGROUP 2.

Step 2. Initiate a patch call from CONSOLE-1.

Step 3. Verify RADIO-1, RADIO-2, RADIO-3, and RADIO-4 can monitor the call.

Step 4. Initiate several calls between the radios and verify successful communication.

Step 5. Dissolve the patch created in step 1.

Pass____ Fail____

MCC 7100/7500 Trunked Resources

3.1.6 Talkgroup Patch - Secure

1. DESCRIPTION

Talkgroup Patch allows a dispatcher to merge several talkgroups together on one voice channel to participate in a single conversation. This can be used for situations involving two or more talkgroups that need to communicate with each other. Using the Patch feature, the console operator can talk and listen to all of the selected talkgroups grouped; in addition, the members of the individual talkgroups can also talk or listen to members of other talkgroups. Patched talkgroups can communicate with the console dispatcher and other members of different talkgroups because of the "supergroup" nature of the Patch feature.

SETUP

RADIO-1 - TALKGROUP 1 (Secure TX Mode)
RADIO-2 - TALKGROUP 2 (Secure TX Mode)
RADIO-3 - TALKGROUP 1 (No secure keys loaded)
RADIO-4 - TALKGROUP 2 (Clear TX Mode with keys loaded)
CONSOLE-1 - TALKGROUP 1 and TALKGROUP 2 (Secure TX Mode)

Note: All 4 Radios must have the same home zone.

VERSION #1.010

2. TEST

Step 1. Using CONSOLE-1 create a secure patch between TALKGROUP 1 and TALKGROUP 2.

Step 2. Initiate a patch call from CONSOLE-1.

Step 3. Verify RADIO-1, RADIO-2 and RADIO-4 can monitor the call.

Step 4. Initiate a talkgroup call on TALKGROUP 1 from RADIO-1.

Step 5. Observe that all radios are able to hear RADIO-1 except RADIO-3.

Step 6. Dissolve the patch.

Pass____ Fail____

MCC 7100/7500 Trunked Resources

3.1.7 Alert Tones - Talkgroup

1. DESCRIPTION

Pre-defined alert tones can be transmitted on the selected Radio Resource to subscribers which can alert members of a channel / talkgroup to a particular event or signify to radio users special instructions are to follow. The Console has the ability to send an Alert-Tone signal on selected conventional or talkgroup resources.

SETUP

RADIO-1 - TALKGROUP 1
RADIO-2 - TALKGROUP 1
CONSOLE-1 - TALKGROUP 1

VERSION #1.040

2. TEST

Step 1. Select TALKGROUP 1 on CONSOLE-1.

Step 2. Select Alert Tone 1 and depress the Alert Tone button.

Step 3. Verify that RADIO-1 and RADIO-2 hear Alert Tone 1.

Step 4. Repeat Steps 2-3 for Alert Tone 2 and 3.

Pass____ Fail____

MCC 7100/7500 Trunked Resources

3.1.8 15 Default Alert Tones available for transmission

1. DESCRIPTION

This test demonstrates momentary transmission of the alert tones. It also demonstrates the availability of 15 default tones for transmission

SETUP

RADIO-1 – TALKGROUP 1
CONSOLE-1 – TALKGROUP 1
CONSOLE-2 – TALKGROUP 1

VERSION #1.070

2. TEST

Step 1. Configure CONSOLE-1 for default alert tone transmission.

Step 2. Observe that 15 default alert tones are present.

Step 3. Observe that the alert tones can be selected from the alert tone pull down.

Step 4. Observe that the alert tones can be selected from the alert tone buttons.

Step 5. Observe that the tool tip pops up when the mouse is place over an alert tone button.

Step 6. Transmit from any alert tone from 1 to 15 for alert tone transmission.

Step 7. Observe the alert tone can be heard both by RADIO-1 and CONSOLE-2.

Pass____ Fail____

MCC 7100/7500 Trunked Resources

3.1.9 Console Priority

1. DESCRIPTION

Console Operator Positions have ultimate control of transmitted audio on an assigned voice channel resource. The Console Position has the capability to take control of an assigned voice channel for a talkgroup call so that the operator's audio overrides any subscriber audio. Console priority is a feature that enables dispatchers to gain immediate access to an assigned voice channel so that a central point of audio control exists.

SETUP

RADIO-1 - TALKGROUP 1
RADIO-2 - TALKGROUP 1
CONSOLE-1 - TALKGROUP 1

VERSION #1.020

2. TEST

Step 1. Initiate a Talkgroup call from RADIO-1 on TALKGROUP 1. Keep this call in progress until the test has completed.

Step 2. Observe that RADIO-2 receives the call.

Step 3. While the call is in progress, key up CONSOLE-1 on TALKGROUP 1.

Step 4. Observe that RADIO-2 is now receiving audio from CONSOLE-1 on TALKGROUP 1.

Step 5. De-key CONSOLE-1.

Step 6. Verify RADIO-2 now receives RADIO-1 audio.

Step 7. End the TALKGROUP 1 call from RADIO-1.

Pass____ Fail____

MCC 7100/7500 Trunked Resources

3.1.10 Alarm Input / Outputs - Aux I/O Option

1. DESCRIPTION

A dispatch console user can simultaneously view the status of all Aux I/O instances pertaining to the AUX I/O object. Change to one AUX I/O instance is simultaneously viewable by all other instances.

SETUP

CONSOLE-1 - TALKGROUP 1
CONSOLE-1 - SITE - CONSITE-1
CONSOLE-2 - TALKGROUP 1
CONSOLE-2 - SITE - CONSITE-1
For this test-
An instance of AUXIO_1 has been created and is assigned as a standalone tile on CONSOLE-1 and CONSOLE-2.

VERSION #1.020

2. TEST

Step 1. Assign an instance of AUXIO_1 to CONSOLE-1 to a talk resource tile on TALKGROUP 1

Step 2. Assign instance of AUXIO_1 to CONSOLE-2 to a talk resource tile on TALKGROUP 1.

Step 3. Change the status of AUXIO_1 on CONSOLE-1.

Step 4. Verify the standalone tile as well as the talk resource instance on CONSOLE-1 and CONSOLE-2 change and display the same state for AUXIO_1.

Step 5. Change the status of AUXIO_1 on CONSOLE-2.

Step 6. Verify the standalone tile as well as the talk resource instance on CONSOLE-1 and CONSOLE-2 change and display the same state for AUXIO_1.

Pass____ Fail____

MCC 7100/7500 Trunked Resources

3.1.11 Activity Log

1. DESCRIPTION

The Console activity log will show all traffic for the resource assigned to that console to include the time, radio alias, TG, PTT ID and Emergency Call.

The dispatcher has the capability of selecting a logged call within in the "Activity Log Window" for instant transmit on the corresponding logged resource.

This activity log can be logged to a text file for archival purposes.

Note: The log file in the ops will only be seen if you first check Log Activity in Elite Admin application then in folder options uncheck hide hidden system files. The location will be c:\Program Data\MCC7500\MessageMonitorLogs.

SETUP

RADIO-1 – TALKGROUP 1
RADIO-2 – TALKGROUP 2
RADIO-3 – TALKGROUP 3
RADIO-4 – TALKGROUP 4
CONSOLE-1 – TALKGROUP 1, TALKGROUP 2, TALKGROUP 3, TALKGROUP 4

VERSION #1.020

2. TEST

Step 1. On CONSOLE-1 select the "Show Activity Log" button on the tool bar to open the Activity Log Window.

Step 2. Initiate calls on RADIO-1, RADIO-2, RADIO-3 and RADIO-4 to log call information and verify calls are displayed in the activity log window.

Step 3. Select a logged call in the Activity Log Window and verify that the Channel Control Window (CCW) at the top of the Activity log window changes to the corresponding resource. Verify the dispatcher is capable of responding via the instant transmit button.

Step 4. Open the text file created by the Activity Log and verify call traffic has been archived to the document file.

Pass____ Fail____

MCC 7100/7500 Trunked Resources

3.1.12 Instant Recall Recorder (IRR) Operation

1. DESCRIPTION

The Instant Recall Recorder (IRR) allows for audio from a phone call or a radio call to be played back at the MCC 7500 or MCC 7100 Console position. Thirty minutes of audio is saved for radio and an additional thirty minutes for telephone. The audio is saved on the positions hard disk in the form of a .wav file.

SETUP

RADIO-1 - TALKGROUP 1
RADIO-2 - TALKGROUP 1

CONSOLE-1 - TALKGROUP 1 running IRR application.

VERSION #1.020

2. TEST

Step 1. Select a radio channel on the CONSOLE-1 application window.

Step 2. Select IRR from the CONSOLE-1 toolbar.

Step 3. Initiate radio communication between RADIO-1 and RADIO-2.

Step 4. Verify a new entry appears in the IRR log window.

Step 5. Select the new entry from the list.

Step 6. Press play and verify conversation replay.

Pass____ Fail____

3.2 System Reliability Features

3.2.1 Redundant Console Site Link Failure

1. DESCRIPTION

Communication between the Master Site and a Remote Console Site can take place over dedicated redundant links. The two links between the Master Site and the Remote Console Site operate in a redundant mode. The system will switch to the backup link if the main LAN or WAN link fails.

Note: The Primary Site Router, if functional, will always be the active router. The Secondary Site Router will only take over when the Primary Site Router is malfunctioning.

SETUP

RADIO-1 - TALKGROUP 1
RADIO-1 - SITE - SITE 1
CONSOLE-1 - TALKGROUP 1
A radio and a Console are required to perform this test (RADIO-1 and CONSOLE-1). Select a Console site with redundant links to the Master Site.

VERSION #1.010

2. TEST

Step 1. CONSOLE-1 initiates a Talkgroup call on TALKGROUP 1.

Step 2. Observe that RADIO-1 is able to receive and respond to the call.

Step 3. Remove the WAN link from the active router (Primary Site Router) at the Remote Console Site.

Step 4. Initiate a Talkgroup Call with RADIO-1 in TALKGROUP 1.

Step 5. Observe that CONSOLE-1 is able to receive and respond to the call.

Step 6. Replace the WAN link connection that was removed in step 4.

Pass____ Fail____

3.3 Signoff Certificate

By their signatures below, the following witnesses certify they have observed the system Acceptance Test Procedures.

Signatures

WITNESS: _____Date: _____

Please Print Name: _____ _____

Initials:

Please Print Title: _____

WITNESS: _____Date: _____

Please Print Name: _____ _____

Initials:

Please Print Title: _____

WITNESS: _____Date: _____

Please Print Name: _____ _____

Initials:

Please Print Title: _____

Section 4

Service/Warranty

Motorola will provide warranty services per our standard warranty terms and conditions as outlined within the Orange County Equipment and Services Price Book Agreement # MA-060-21010004. In addition to the Standard Commercial Warranty, Motorola has included an Essential Services Package. **The SUA II and Outyears of Maintenance that are in line with the Orange County Master Agreement will be covered separately and are not a part of this proposal.**

4.1 Infrastructure Repair

Infrastructure Repair service provides for the repair of all Motorola-manufactured equipment, as well as equipment from third-party infrastructure vendors. All repair management is handled through a central location eliminating your need to send equipment to multiple locations. Comprehensive test labs replicate your network in order to reproduce and analyze the issue. State-of-the-art, industry-standard repair tools enable our technicians to troubleshoot, analyze, test, and repair your equipment. Our ISO 9001 and TL9000-certified processes and methodologies ensure that your equipment is quickly returned maintaining the highest quality standards.

4.2 Technical Support Service

Motorola Technical Support service provides an additional layer of support through centralized, telephone consultation for issues that require a high level of communications network expertise and troubleshooting capabilities. Technical Support is delivered by the SSC. The SSC is staffed with trained, skilled technologists specializing in the diagnosis and swift resolution of network performance issues. These technologists have access to a solutions database as well as in house test labs and development engineers. Technical Support cases are continuously monitored against stringent inbound call management and case management standards to ensure rapid and consistent issue resolution. Technical Support service translates into measurable, customer-specific metrics for assured network performance and system availability.

4.3 Security Update Service (SUS)

Commercial security software updates are often designed without RF systems in mind and could cause inadvertent harm to your radio network, disrupting mission-critical communications and putting your first responders and citizens at risk. The Motorola Self-Installed Security Update Service assures that commercial anti-virus definitions, operating system software patches, and Intrusion Detection Sensor signature files are compatible with your ASTRO 25 network and do not interfere with network functionality. Our expert network security technologists analyze, perform testing, and validate the latest security software updates in a dedicated test lab and provide continuous monitoring of updates to provide you regular electronic updates upon completion of successful testing. Once tested, Motorola Solutions will post the updates to a secured extranet website and send an email notification to Harbor Patrol. If there are any recommended configuration changes, warnings, or workarounds, Motorola will

provide detailed documentation along with the updates on the website. Harbor Patrol will be responsible for the download and deployment of these updates to the Harbor Patrol Dispatch Center operator positions

4.4 System Upgrade Agreement II

The System Upgrade Agreement II (SUA II) service provides public safety radio system release updates on a consistent, budgeted plan. These updates maintain reliable network operations and cybersecurity protection. In addition, SUA II keeps Harbor Patrol's ASTRO 25 network compatible with expansion elements, as well as new products or features. With SUA II, Harbor Patrol's network will remain on a release that qualifies for support services.

Motorola Solutions will deliver SUA II in two-year periods, with up to one update in each period. The SUA II service includes the following:

•Software Release Updates - Motorola Solutions-certified software that improves network functions over previous releases. This also includes commercial operating system and application software updates.

•Hardware Update – When needed to support a software release update, Motorola Solutions provides new hardware. New hardware will both support the new software update, as well as maintain existing functions and features.

•Professional Implementation Services – Motorola Solutions will plan and implement updates at Harbor Patrol's site. This includes factory integration, testing, and supply chain management for new software and hardware.

Section 5

Project Schedule

Motorola estimates the project implementation to be approximately 4-6 months from Contract Execution to Final Acceptance. As part of the Design Review and Implementation Planning, the implementation project schedule will be fine-tuned by Motorola's Project Manager with the Harbor Patrol project team.

Section 6

Equipment List

This section lists the equipment necessary for the proposed solution.

QTY	NOMENCLATURE	DESCRIPTION
1	TRN7343	SEVEN AND A HALF FOOT RACK
1	DS11011188	PDU, 120/240 SPLIT PH OR N+1 REDUNDANT, 60A MAX PER PHASE, SIX DEDICAT
6	DS3750296	BREAKER, 10 AMP, CB UL 489 LISTED FOR AC EDGE II (1101-1188)
6	DS3750295	BREAKER, 5 AMP, CB UL 489 LISTED FOR AC EDGE II (1101-1188)
1	SQM01SUM0323	ASTRO MASTER SITE
1	CA03517AC	ADD: CORE EXPANSION
1	UA00156AA	ADD: MCC7500 CONSOLE LICENSES (QTY 5)
1	B1949	MCC 7500E SOFTWARE DVD
1	B1948	MCC 7500E DISPATCH POSITION LICENSES
2	UA00652AA	ADD: 160 RADIO RESOURCES LICENSE
2	UA00653AA	ADD: BASIC CONSOLE OPERATION
2	UA00654AA	ADD: ASTRO 25 TRUNKING OPERATION
2	UA00655AA	ADD: ADVANCED CONVENTIONAL OPERATION
2	UA00658AA	ADD: SECURE OPERATION
2	UA00659AA	ADD: ADP/AES/DES-OFB ENCRYPTION
2	UA00660AA	ADD: OTEK OPERATION
2	UA00661AA	ADD: ENHANCED IRR
2	B1956	COMMANDCENTRAL HUB, W/CLIENT PC
2	CA03553AA	ADD: AC LINE CORD, NORTH AMERICA
2	CA03547AA	ADD: BRACKET, MOUNTING 2RU
2	CA03572AA	ADD: CABLE RETENTION BRACKET
2	L3225A	CERTIFIED KEYBOARD FOR RSD SERVERS AND WORKSTATIONS
2	L3226A	CERTIFIED OPTICAL WHEEL MOUSE FOR RSD SERVERS AND WORKSTATIONS
2	DSTG191B	TECH GLOBAL EVOLUTION SERIES 19INCH NON TOUCH

2	B1951	MICROPHONE, DESKTOP, USB
2	CA03412AA	ADD: USB CABLE, TYPE C TO TYPE C, 4.5M
8	B1952	SPEAKER, DESKTOP, USB
8	CA03405AA	ADD: POWER SUPPLY WITH DC CORD
8	CA03406AA	ADD: AC LINE CORD, NORTH AMERICA
8	CA03413AA	ADD: USB CABLE, TYPE A TO TYPE C, 4.5M
4	B1913	MCC SERIES HEADSET JACK
2	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH
2	RLN6098	HDST MODULE BASE W/PTT, 15 FT CBL
2	RMN5150A	OVER-THE-HEAD, MONAURAL, NOISE-CANCELING HEADSET
2	T8742	MCAFEE FOR WINDOWS CLIENT, A2019.2
1	DSF2B56AA	USB EXTERNAL DVD DRIVE
2	T8806A	WINDOWS SUPP TRANS CONFIG, A2020.1/A2021.1
2	DSJACX7024AC1Y	ACX7024 AC 1 YEAR CORE + BUNDLE
1	DSJJNP100GDAC1M	QSFP28 100G DAC 1M
6	DSJSFP1GET	SFP 1GE BASE-T TRANSCEIVER, ROUTING
2	DSIGSFP1GELX	SFP OPTIC MODULE - 1G LX
2	CLN1868	2930F 24-PORT SWITCH
2	CLN1866	FRU: 1M DAC CABLE
2	T8492	SITE ROUTER & FIREWALL- AC
2	CA03445AA	ADD: MISSION CRITICAL HARDENING
2	CA03448AA	ADD: STATEFUL FIREWALL
1	T8810	STANDALONE DSC 8000 CONTROLLER
1	CA03677AA	ADD: ASTRO SYSTEM RELEASE 2020.1
1	CA03801AA	ADD: DSC 8000 CONVENTIONAL SITE CONTROLLER
1	CA03832AA	ADD: NM/DISPATCH CONVENTIONAL SITE
1	UA00787AA	ADD: DSC 8000 CONVENTIONAL SITE CONTROLLER SW
1	T8811	DSC AC POWER SUPPLY CHASSIS
1	CA03534AA	ADD: DSC AC POWER CABLE - US, 6 FT.
1	CA03800AA	ADD: SINGLE POWER SUPPLY FOR DSC
1	SQM01SUM0333	MCG 8000 CONVENTIONAL GATEWAY
1	CA03714AA	ADD: AC POWER
8	CA03717AA	ADD: ACIM INTERFACE
8	CA03719AA	ADD: DIGITAL IP INTERFACE

1	SQM01SUM0333	MCG 8000 CONVENTIONAL GATEWAY
1	CA03714AA	ADD: AC POWER
8	CA03717AA	ADD: ACIM INTERFACE
8	CA03719AA	ADD: DIGITAL IP INTERFACE
1	F0016A	MC IOT MAIN MODEL
1	VA00989AA	ADD: 8DO EE 16DI 5-18 V /DRY
1	VA00147	ADD: FRONT CABLE COVERS
1	VA01370AA	ADD: MC-EDGE
1	VA01945AA	ADD: MC EDGE AS AUX I/O SERVER
1	VA00985AA	ADD: NO PIGGY_ MC-EDGE
1	VA00148	ADD: WALL MOUNT INSTALLATION KIT
1	VA00009	ADD: AC POWER SUPPLY UNIT 12V / 5A DC OUTPUT
1	VA00155	ADD:DC POWER CABLE
1	DSIABDIN4	PANDUIT IABDIN4 4 RACK UNIT DIN RAIL FOR EIA 19" MOUNT
1	FHN1668	TERM BLOCK & CONN WIRED M25T68
4	FKN0044A	MC_EDGE AUX IO MIGRATION CABLE
1	FHN0057	DIN RAIL STOPPER
1	CDN6135	CABLE ASSY 25 PR M-NONE 25FT
1	T8639	JUNIPER FIREWALL APPLIANCE
1	CLN1868	2930F 24-PORT SWITCH
1	TT3904A	ZBOOK 15 G7 NON RETURNABLE
1	B1949	MCC 7500E SOFTWARE DVD
1	B1948	MCC 7500E DISPATCH POSITION LICENSES
1	UA00652AA	ADD: 160 RADIO RESOURCES LICENSE
1	UA00653AA	ADD: BASIC CONSOLE OPERATION
1	UA00654AA	ADD: ASTRO 25 TRUNKING OPERATION
1	UA00655AA	ADD: ADVANCED CONVENTIONAL OPERATION
1	UA00658AA	ADD: SECURE OPERATION
1	UA00659AA	ADD: ADP/AES/DES-OFB ENCRYPTION
1	UA00660AA	ADD: OTEK OPERATION
1	UA00661AA	ADD: ENHANCED IRR
1	UA00254AA	ADD: PRX 7000 PROXY SW LICENSE (1-10 CONNECTIONS)
1	BVN6079	PRX 7000 Proxy Application SW DVD
1	DSST7300U3M	STARTECH 7 PORT USB 3.0 HUB

1	DSUSB31000S	STARTECH USB 3.0 TO GIGABIT ETHERNET ADAPTER
2	B1952	SPEAKER, DESKTOP, USB
2	CA03405AA	ADD: POWER SUPPLY WITH DC CORD
2	CA03406AA	ADD: AC LINE CORD, NORTH AMERICA
2	CA03413AA	ADD: USB CABLE, TYPE A TO TYPE C, 4.5M
1	B1951	MICROPHONE, DESKTOP, USB
1	DDN2825	USB HEADSET BASE WITH PTT
1	T8742	MCAFEE FOR WINDOWS CLIENT, A2019.2
1	DSF2B56AA	USB EXTERNAL DVD DRIVE
1	T8806A	WINDOWS SUPP TRANS CONFIG, A2020.1/A2021.1

6.1 Optional Spare Equipment

QTY	Nomenclature	Description
1	B1956	COMMANDCENTRAL HUB, W/CLIENT PC
1	CA03850AA	ADD: WINDOWS OS FOR MCC7500E CONSOLE
1	CA03553AA	ADD: AC LINE CORD, NORTH AMERICA
1	B1952	SPEAKER, DESKTOP, USB
1	CA03405AA	ADD: POWER SUPPLY WITH DC CORD
1	CA03406AA	ADD: AC LINE CORD, NORTH AMERICA
1	CA03413AA	ADD: USB CABLE, TYPE A TO TYPE C, 4.5M
1	B1951	MICROPHONE, DESKTOP, USB
1	CA03413AA	ADD: USB CABLE, TYPE A TO TYPE C, 4.5M
1	B1913	MCC SERIES HEADSET JACK
1	DLN8037	FRU: MCG 8000 AC POWER MODULE
1	DLN8039	FRU: MCG 8000 HD ENH CONV GATEWAY MODULE
1	T8492	SITE ROUTER & FIREWALL- AC
1	CA03445AA	ADD: MISSION CRITICAL HARDENING
1	CA03448AA	ADD: STATEFUL FIREWALL
1	CLN1868	2930F 24-PORT SWITCH

Section 7

Pricing Summary

Motorola is pleased to provide the following equipment and services to Orange County Harbor Patrol.

Equipment and Installation

Description	Price ($)
Equipment	$301,920
Contract Discount	($14,352)
Equipment Total	**$287,568**
Installation and Configuration	**$217,284**
Additional Discount if purchased by August 7th, 2023	($92,800)
Project Total	**$412,052**
Estimated Tax on Equipment 7.75%	$22,287
Grand Total	**$434,338**
Optional Spare Equipment	$19,771

7.1 Payment Terms

Contract Price. The Contract Price in U.S. dollars is $ 454,109 .

Except for a payment that is due on the Effective Date, Orange County Harbor Patrol will make payments to Motorola within thirty (30) days after the date of each invoice. Orange County Harbor Patrol will make payments when due in the form of a check, cashier's check, or wire transfer drawn on a U.S. financial institution and in accordance with the following milestones.

1. 50% of the Contract Price due upon Contract Execution; and
2. 50% of the Contract Price due upon Final Acceptance of Project.

Motorola reserves the right to make partial shipments of equipment and to request payment upon shipment of such equipment. In addition, Motorola reserves the right to invoice for installations or civil work completed on a site-by-site basis, when applicable.

Section 8

Contractual Documentation

The proposed solution is subject to the terms and conditions of the Agreement between the County of Orange and Motorola Solutions, Inc., for the Orange County Equipment and Services Price Book Agreement # MA-060-21010004, executed December 15, 2020. Both Motorola and County of Orange agree and acknowledge that, to the extent that County purchases any or all of the services described in this proposal during the term of the Motorola / County of Orange Agreement # MA-060-21010004 (Contract), purchases will be made using a Purchase Order issued against the Contract and the terms and conditions within the Contract, including any amendments and the Orange County Equipment and Services Price Book, will apply to the procurement.

Subject to the Agreement between the County of Orange and Motorola Solutions, Inc., for the Orange County Equipment and Services Price Book Agreement # MA-060-21010004, executed December 15, 2020, the Parties hereby enter into this Agreement as of the later date of execution below.

Motorola Solutions, Inc.

By: Lauren Kirkland

Name: Lauren Kirkland

Title: Area Sales Manager

Date: 6/28/2023

Customer: Orange County Harbor Patrol

By: _____

Name: _____

Title: _____

Date: _____

Approved to form: 07/03/2023

Ray Diaz
Deputy County Counsel