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MOTOROLA MCC 7500 COMMUNICATIONS SYSTEM
CONTRACT #2016.282
(Title of Document)

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DOUGLAS COUNTY, NV | OCTOBER 26, 2016

MCC7500 CONSOLE PROJECT

MOTOROLA SOLUTIONS

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Section 4

SECTION 1

SYSTEM DESCRIPTION

1.1 INTRODUCTION

In response to Douglas County's request, to upgrade existing Motorola CENTRACOM Gold Elite Console operations to the latest generation dispatch solution, Motorola chose MCC 7500 dispatch to meet their communication needs.

Motorola's proposed solution is designed based on our discussions with Douglas County. Motorola is offering MCC7500 Dispatch Subsystem with a standalone P25 Conventional K Core. At a high level, the following items are included in the proposed scope:

- Replace existing Six (6) CENTRACOM Gold Elite Console operator workstations with new MCC7500 Operator workstations.
- Add Three (3) new Operator positions.
- Provide capability to interface up to Forty (40) Analog conventional resources.

Additional details about the proposed solutions are included in remaining sections of this proposal. Proposed solution will offer IP-based seamless connectivity between Douglas County's dispatch operators and the existing analog conventional channel resources. The MCC7500 Dispatch Console will provide Douglas County with scalable and flexible system architecture, sophisticated network management and security, and an easy migration to future capabilities. A description of the console features and benefits, system architecture, and hardware components follow.

1.2 SOLUTION OVERVIEW

1.2.1 Master site

Motorola has included One (1) ASTRO 25 K2 Conventional Master site which will be co-located at the dispatch center.

The following features/items are **not** included in the proposed offering:

- Unified Event Manager Lite (UEM)
- Email Alerting
- Firewall and Terminal Server for remote access
- Backup power -- UPS/Generator

These features can be purchased by Douglas County outside this contract. Please contact your Account Manager for a quote.

1.2.2 MCC 7500 Primary Dispatch Center

Motorola has included seven (7) operator positions designated for in the main dispatch room and one (1) designated for the Director's office. Additionally, Motorola has included one (1) Service operator

position and Console Alias Manager (CAM) workstation for installation in the dispatch equipment room.

The proposed solution does not include an archiving interface server (AIS) or a logging recorder. Douglas County intends to use its existing analog logger for long term audio logging.

The proposed design supports interface for up to Forty (40) analog conventional channels. This will not only provide adequate ports for existing conventional resources but also provide capacity for future expansion. Motorola's proposed consoles can be used to control ASTRO 25 conventional channels using Tone Remote Control (TRC).

Motorola has not identified the list of conventional resources at this time. Once awarded Motorola's project implementation team will work with Douglas County on identifying the available resources at the dispatch center.

Major components in MCC 7500 dispatch sub system are:

- Two (2) Ethernet LAN Switches
- Two (2) GGM 8000 Routers.
- One (1) SDM 3000 AUX IO Server with Expansion Unit.
- Two (2) Conventional Site Controllers
- Ten (10) Low Density Enhanced Conventional Channel Gateway units.
- Eight (8) MCC 7500 Dispatch positions each with:
  - One (1) Voice processing module.
  - One (1) Z440 Console workstation
  - Two (2) Speakers.
  - Two (2) Headset Jacks.
  - One (1) Gooseneck Microphone
  - One (1) Footswitch
  - MCC7500 Application with ADP Encryption capability.
  - Dual Instant Recall Recorder application
- One (1) MCC 7500 Service Dispatch position with:
  - One (1) Voice processing module.
  - One (1) Z440 Console workstation
  - Two (2) Speakers.
  - Two (2) Headset Jacks.
  - One (1) Gooseneck Microphone
  - MCC7500 Application with ADP Encryption capability.
  - Dual Instant Recall Recorder application
- Eighteen (18) Headsets
- Eighteen (18) Headset Bases with PTT Switch

Motorola understands that Douglas County will supply the monitors for the operator positions.

1.3 DESIGN ASSUMPTIONS

Motorola has based the equipment list on the information provided by Douglas County. All assumptions have been listed below for review. Should Motorola's assumptions be deemed incorrect or not agreeable to Douglas County, a revised proposal with the necessary changes and adjusted costs may be required. Changes to the equipment or scope of the project after contract may require a change order.

- 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 AC electrical power in the proper phase and voltage and site grounding to support the requirements of the system described.
- All sites have back up power provided by a generator.
- Any site/location upgrades or modifications are the responsibility of the customer.
- Approved local, State or Federal permits as may be required for the installation and operation of the proposed equipment are the responsibility of the customer.
- Any required system interconnections not specifically outlined here will be provided by the Customer. These may include dedicated phone circuits, microwave links or other types of connectivity.
- No RF coverage guarantee is included in this proposal.
- Motorola is not responsible for interference caused or received by the existing radio equipment. Motorola can be contracted to investigate the source and recommend solutions to mitigate the issue.
- No box level or performance spec testing will be conducted.
- Douglas County is responsible for obtaining new licenses for existing logger or upgrade it to interface existing/new conventional audio resources.
- Motorola has not included UPS and batteries in the proposed offering.
- Motorola will not provide any interface to or from existing JPS Comparators.

1.4 MCC7500 DISPATCH CONSOLE

The following is general product information and may include references or descriptions of features and options that have not been included in proposed design and Equipment List.

1.4.1 MCC7500 Overview

The Motorola MCC 7500 Dispatch Console is Motorola's mission critical IP high-tier radio dispatch console system. The MCC 7500 dispatch Console features an intuitive, easy-to-use Graphical User Interface (GUI) that runs under a Microsoft Windows® operating system, utilizing the industry standard PC platform. MCC 7500's highly recognizable icons are designed to reduce user training time, and allow dispatchers to manage information more productively.

1.4.2 MCC7500 System Benefits and Features

The MCC 7500 is designed to help reduce the total cost of owning an IP-based, feature-rich dispatch system without compromising quality and reliability. Specific benefits of the MCC 7500 include the following:

- The intuitive, easy to use Graphical User Interface (GUI) ***enhances dispatchers' efficiency and accuracy***.
- Robust API ***allows CAD systems to have complete access to console status and features*** for further improvements in efficiency and accuracy.
- ***Software-based upgrades*** facilitate system and feature expansion.
- Installation is simplified and site costs are reduced because ***console positions function without backroom electronics.***
- Console ***configuration is performed at centralized Network Management clients***, and ***changes are automatically distributed***, which saves valuable technician and administrator time.
- Offers ***robust service logs that contain real-time information*** to facilitate maintenance activities.

- ***Conventional audio can be transported over the IP network***, which eliminates the need for channel banks or a separate circuit-switched network.

1.4.3 Architecture

Motorola's MCC 7500 Console Subsystem consists of the following components:

- MCC 7500 Dispatch Console Positions
- Conventional Redundant K2-Core
- Conventional Channel Gateways

In addition, there are two software programs that comprise the MCC 7500 dispatch position– the Elite Dispatch graphical user interface (the dispatching software used to operate the dispatch position) and the Elite Admin application (the administrative software used to define the layout of the Elite dispatch screens).

Various combinations of these components are connected together and to the rest of the ASTRO 25 system via console site routers and switches on an IP network (Figure 1-1).

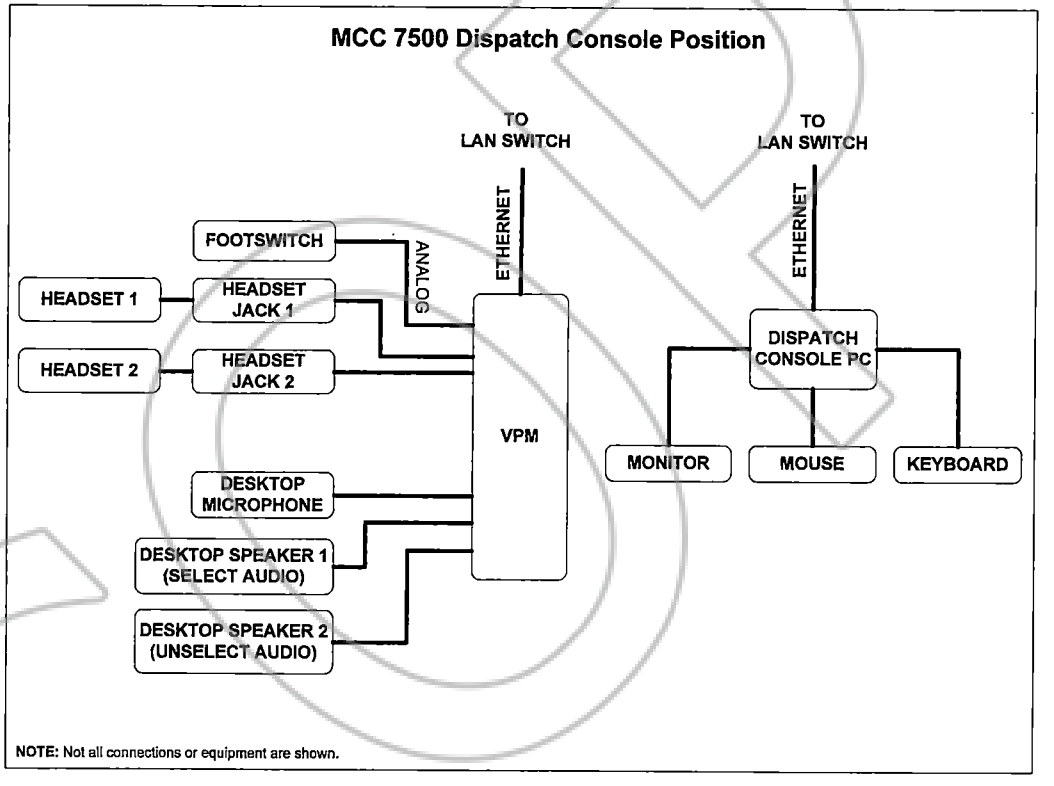


Figure 1-1: Motorola MCC 7500 Dispatch Console Hardware Architecture

The following section of the system description contains descriptions of the above components.

1.4.4 MCC7500 Dispatch Console Position

This section of the system description contains descriptions of the above components.

The dispatch positions will be loaded with software certified with the ASTRO 25 System Release. Figure 1-2 shows a typical operator position.

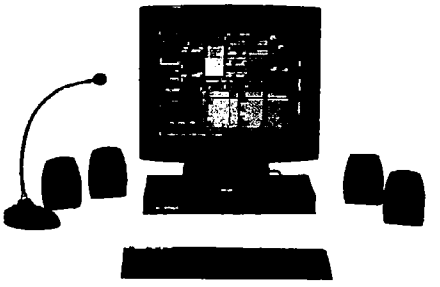


Figure 1-2: MCC 7500 Typical Operator Position

1.4.4.1 Personal Computer (PC)

The VPM-based dispatch console uses an off-the-shelf personal computer running the Microsoft Windows operating system. The PCs used in ASTRO 25 systems have a minitower form factor and come with a keyboard and mouse. A variety of monitors are supported, including both touch and non-touch operation.

1.4.4.2 Voice Processing Module (VPM)

The VPM connects to the console site LAN switch and communicates with the dispatch console PC via Ethernet. The VPM performs the digital-to-analog and analog-to-digital conversions for all analog audio flowing into or out of the dispatch console. The VPM provides all the audio processing services for the VPM-based dispatch console. The VPM is capable of providing encryption/decryption services. The voice card within the VPM provides the vocoding and audio processing services for the dispatch console. It is capable of supporting IMBE vocoder algorithms for ASTRO 25 operation, as well as supporting audio level adjustments, summing, and filtering, and can support multiple simultaneous streams of audio.

The VPM is designed so it can be mounted in furniture, placed on top of a writing surface, or mounted in an EIA 19 inch rack. It is also capable of supporting monitors weighing up to 80 pounds (36 kg) standing on top of it. The VPM uses an external power supply (similar to the power supplies used with laptop computers) which must be connected to an AC power source.

The VPM provides the connections for the following items:

- One desktop microphone
- Two headset jacks
- Eight desktop speakers (four speakers max supported in 7.8 and earlier releases, eight speakers max supports in 7.9 and later releases)
- One logging recorder port
- One radio instant recall recorder
- One telephone instant recall recorder (supported in a future release)
- One external telephone set
- One external paging encoder (for analog resources only
- One footswitch
- One generic transmit audio input

The VPM uses an external power supply (similar to the power supplies used with laptop computers) which must be connected to an AC power source.

Figure 1-3 shows the hardware architecture of the Motorola MCC 7500 Dispatch Console.

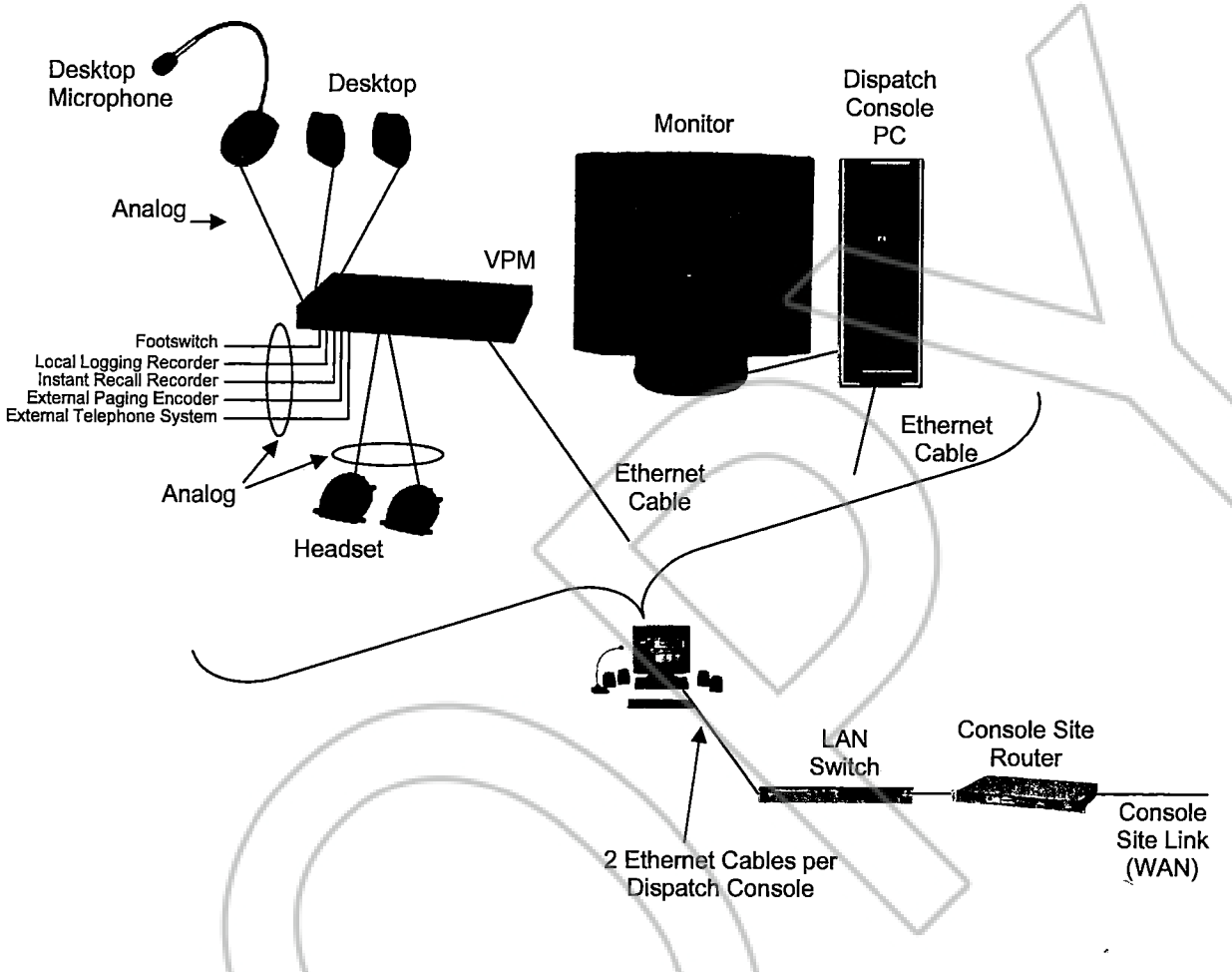


Figure 1-3 Motorola MCC7500 IP Dispatch Console hardware Architecture (with VPM)

Further details on the various dispatch equipment are provided below.

1.4.4.3 Desktop Microphone

The MCC 7500 Dispatch Console is capable of supporting a single Desktop Gooseneck Microphone. The Desktop Gooseneck Microphone contains a microphone cartridge on a flexible shaft and two buttons in its base. One button controls the General Transmit feature and the other controls the Monitor feature.

1.4.4.4 Headset Jack

A dispatch console is capable of supporting up to two headset jacks. A headset jack allows a dispatcher to use a headset while operating the dispatch console. The headset jack contains two volume controls; one for adjusting the level of received radio audio and one for adjusting the level of received telephone audio.

The headset jack allows customers to use headsets which both decrease the ambient noise in a control room and reduce the effect of any ambient noise on console transmissions. This improves the quality

of the audio being transmitted from the control room and allows the dispatchers to hear received audio more clearly.

1.4.4.5 Desktop Speaker

A dispatch console is capable of supporting up to Desktop Speakers through which audio is presented to a dispatcher. Each speaker on a dispatch console contains unique audio; that is an audio source cannot appear in multiple speakers at a single dispatch console.

The speaker is a self-contained unit which may be placed on a desktop, mounted in a rack/furniture, mounted on a wall or mounted on a computer monitor. It contains an amplifier which provides 2 Watts of power maximum. Power for the speaker is obtained from the VPM via it's interconnect cable. A mounting bracket is included with the speaker.

The speaker provides the user with a continuous volume control knob. This serves as a master volume control for all the audio which appears in the speaker. When the user adjusts this volume control, all the audio in the speaker is increased or decreased by the same amount.

1.4.4.6 Footswitch

The dispatch console is capable of supporting a single footswitch. The footswitch allows a dispatcher to access the General Transmit feature or Monitor feature without using his/her hands. This is useful in situations where the dispatch console user's hands are not free for activating those features. The footswitch can contain either one of two pedals. If a footswitch with one pedal is used, the pedal controls the General Transmit feature. If a footswitch with two pedals is used, one pedal controls the General Transmit feature and the other controls the Monitor feature.

A description of the additional ports available on the VPM is provided below.

Telephone/Headset Port

The Telephone/Headset Port allows an external telephone set to be connected to the dispatch console. The dispatch console's headset can then be used to communicate on both the radio system and the telephone set. The port provides the following inputs and outputs:

- A balanced 600 Ohm analog audio output containing the headset's microphone audio.
- A balanced 600 Ohm analog audio input for the external telephone's received audio.
- An input buffer for the Off Hook signal from the external telephone.
- An input buffer for an Auxiliary Jack Sense signal from the external telephone.

When the dispatch console senses a dry closure on the Off Hook input buffer, it removes the selected radio audio from the headset earpiece and puts it back in the appropriate speaker(s). It then routes any audio appearing at the Telephone/Headset Port's audio input to the headset earpiece. It also routes headset microphone audio to the Telephone/Headset Port's audio output. This allows the dispatch console user to communicate hands-free on the telephone set.

When the dispatch console senses a dry closure on the Auxiliary Jack Sense input buffer, it ignores any closures on the Off Hook input buffer. This causes the headset to work with the radio system instead of the external telephone system. This allows the dispatch console headset to be used for radio operations when another person is staffing the telephone set.

If the dispatch console user transmits on any radio resources while the Off Hook signal is active, the headset microphone is re-routed to the radio system for the duration of the transmission. When the transmission is ended, the headset microphone is routed back to the Telephone Headset Port's audio

output. The headset earpiece audio routing is not changed during the transmission, so the dispatch console user can still hear the telephone's received audio.

The Telephone/Headset Port allows a dispatch console user to use a single headset to communicate on both the radio system and a telephone system (e.g., a 911 system).

External Paging Encoder Input

The MCC7500 VPM at each operator position features an input for an external paging encoder. This port is used in cases where a Customer desires to implement a third-party paging encoder to be used in conjunction with or alternate to the integrated paging encoder.

Instant Recall Recorder Port (for Radio)

The Instant Recall Recorder Port (for Radio) allows an instant recall recorder to be connected to a dispatch console. The port provides an RJ45 connector with a balanced, 600 Ohm analog audio output containing the receive radio audio on the selected channels. Transmit audio of any type (from either this dispatch console or a parallel dispatch console) as well as tones generated by the dispatch console (emergency tones, callback tones, busy tones) are not included in the audio output.

If transmit audio is desired for the instant recall recorder, the Long Term Logging Port may be used instead of the Instant Recall Recorder Port. Both outputs have the same electrical characteristics; only the content of the audio is different. No playback speaker input or recording control line output are provided on the port.

Dispatch console generated tones (e.g., emergency alarm tones, trunking busy tones, error tones, etc.) are not included in the audio appearing at the analog audio output. This is done so that they do not interfere with the dispatch console user's ability to understand the voice audio that was recorded.

Short-term, console-specific audio recording is a mechanism used to record a portion of the inbound audio present on a specific dispatch console and make it readily available to the dispatch console user. This recorded audio is retained by the recording system for a short period (typically about 60 minutes) and is easily played back by the dispatch console user. This allows the dispatch console user to replay received audio, which the user may have missed.

Long Term Logging Port

Long term, console-specific audio recording is a mechanism used to record a portion of the inbound and outbound audio present on a specific dispatch console. This is historically done by providing a logging port at the dispatch console, and wiring that port to a track of an audio recording device. The recordings are then archived for long-term storage, and provide a historical record of the radio communications made at a given dispatch console.

The Long Term Logging Port allows an external logging recorder (customer provided) to be connected to a dispatch console. The port provides an RJ45 connector with a 600 Ohm balanced analog output. The audio that appears on this output is configurable, but is typically the audio that was transmitted and/or received at that dispatch console.

The configuration of audio to be presented at this port is tied to the physical dispatch console, so that no matter what user is logged into the console, the same type of audio is logged. This configuration is done as part of configuring the dispatch console at the radio system's network manager. The long term logging port can be configured to log any combination of these audio sources:

- Audio received from the currently selected radio resources (note that the level of this audio is not affected by either the individual volume setting of the radio resource or the master volume control on the speaker or headset jack).

- Microphone audio being transmitted to the currently selected radio resources by this dispatch console user.
- Microphone audio being transmitted to unselected radio resources by this dispatch console user.
- Any tones generated by the dispatch console that appear in its speakers (trunking tones, emergency tones, etc.).
- Tones generated by an external paging encoder.

Please note that this output may be used with an instant recall recorder as well as a long term logging recorder.

1.4.4.7 Software Based Dual Instant Recall Recorder

The Dual Instant Recall Recorder (IRR) software (CD format) allows users to record the audio from two different sources (e.g., radio and telephone), digitally on a personal computer (the software can also be configured to operate as a single channel IRR). The system uses an individual PC where the recording files are stored on the PC's hard drive. The Instant Recall Recorder keeps a database of all recordings, which allows for convenient "point and click" search and playback of any recordings. Once the software is installed on your PC, the functions are controlled through a Graphical User Interface (GUI) icon.

In addition, the Instant Retrieval Recorder has numerous special features; such as the ability to attach text documents to recordings, a security system, multiple playback (which allows the user to playback more than one recording at the same time), and real time audio monitor (which allows the user to listen to the last ten minutes of a recording in progress without being required to stop recording to be able to listen).

The Instant Retrieval window allows the user to immediately access the recordings. The Instant Retrieval window initially opens on the newest recordings, but allows access to any recordings on the system. The recording can also be saved to the .WAV file that the user specifies. This is useful if the user wants to save a specific recording to a CD or hard disk.

1.4.4.8 Elite Dispatch Graphical User Interface

The Motorola MCC 7500 dispatch console uses the Elite Dispatch graphical user interface (GUI) for displaying information to and accepting commands from the dispatch console user. The Elite Dispatch GUI is efficient, easy to use and intuitive, having been refined and proven through years of use in public safety dispatch centers around the world.

An example of the Elite Dispatch GUI is shown in Figure 1-4.

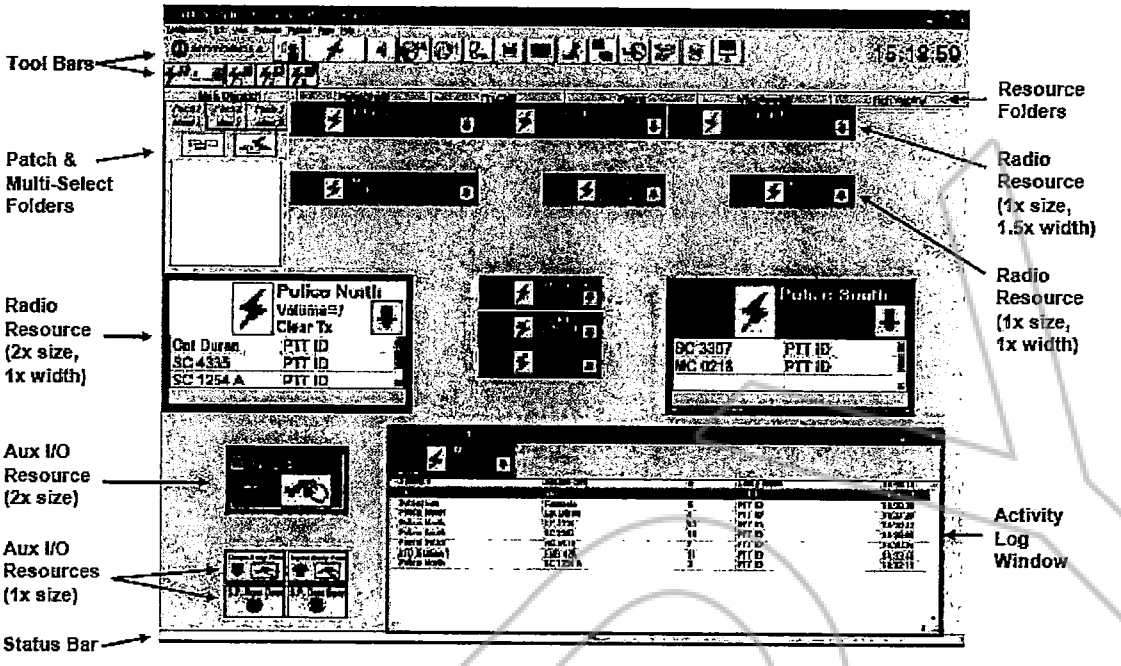


Figure 1-4: Elite Dispatch GUI

The Elite Dispatch GUI is based on Microsoft Windows GUI programming standards and contains many controls, displays and features which are familiar to anyone who has caused Windows-based applications. These features are described in greater detail in the following sections.

Pull-Down Menus

The dispatcher is able to access features and functions through the pull-down menus. The Elite Dispatch GUI provides the following pull-down menus on a menu bar across the top of the dispatch window.

- **Configuration** – Provides access to the configuration files used by the Elite Dispatch GUI. Also allows the dispatch application to be exited.
- **Edit** – Allows various aspects of how audio, resources and features are presented to the user on the Elite Dispatch GUI to be edited. Changes made using this menu are not permanent and are lost when the dispatch application is exited. Also provides access to an on-screen keyboard for use when a hardware keyboard is not available.
- **View** – Allows the dispatcher to control whether or not the Activity Log, Auxiliary I/O and Inbound Event Display Windows are shown.
- **Features** – Provide access to various features of the dispatch console. Note that some of these features may also be available via buttons on the GUI if so configured. Also allows the System Status Window to be viewed, Tool Tips to be hidden and/or the Status Line to be cleared.
- **Folders** – Allows the dispatcher to switch between folders, add folders and delete folders. Changes made using this menu are not permanent and are lost when the dispatch application is exited.
- **Help** – Provides access to detailed online help for using the Elite Dispatch GUI and information about the Motorola MCC7500 application software.

The user may customize which menus are displayed and what they contain via the Elite Admin application.

Tool Bars

Up to two tool bars may be present across the top of the dispatch window and may be used to provide quick access to frequently used features. The following are examples of the items which may be placed in the tool bars:

- Clock
- General Transmit Button
- Monitor Button
- All Mute Button

There are many other items which may be placed in the tool bars. The Elite Admin application is used to define how many tool bars are displayed and what they contain.

Status Bar

A status bar is provided across the bottom of the dispatch window for viewing the status of the dispatch console, as well as various error messages. The most current status or error message is displayed in the status bar until cleared by the dispatch console user. The dispatch console user may scroll through the last ten statuses and error messages to view them and may clear them by using the Features menu on the menu bar.

Resource Folders

The Elite Dispatch GUI provides up to twenty resource folders for organizing the various resources (radio resources, auxiliary input/output resources, etc.) which are assigned to the dispatch console. These folders may be given descriptive names to simplify the organization of the resources.

The resources on a folder are displayed when the dispatch console user clicks on the folder tab. Resources on folders which are hidden behind the one being displayed continue to operate in a normal manner. Radio resource audio on a hidden folder appears in the appropriate speakers/headsets along with a visual call indication on the folder tab. If an emergency alarm or call is received on a radio resource which is located on a hidden folder, a visual emergency indication is displayed on the folder tab along with the normal emergency audible indication. If both emergencies and calls are being received on resources on a hidden folder, both icons will be displayed on the folder tab.

A resource may be placed on more than one folder at the same time. This allows a user to create folders for special situations without having to move resources back and forth between folders. A resource may be displayed in different ways (compressed or expanded) or in different widths or sizes on different folders.

The Elite Admin application is used to configure how many folders appear on the Elite Dispatch GUI and which resources appear on each folder. It is also used to put descriptive names on the folder tabs.

During dispatch operations the dispatch console user may, if so configured by the Elite Admin application, be able to add, remove or move resources on the folders. If this is done, these changes are not saved if the user logs out of or changes configuration files for the dispatch application.

Radio Resources

Voice communication paths in the radio system are represented as radio resources – also referred to as tiles – on the Elite Dispatch GUI. These radio resources are used by the dispatch console user to communicate on and control the radio system.

The following radio resources are supported:

- Trunked Talk groups
- Trunked Announcement Groups
- Trunked Private Calls
- Analog Conventional Channels
- ASTRO 25 Conventional Channels
- MDC 1200 Conventional Channels
- ACIM Link Based Consolette Channels

Radio resource tiles are highly configurable and can be customized to meet customer needs. The following aspects of a radio resource tile can be configured:

- Form factor (compressed, larger compressed or expanded)
- Width and Height
- Magnification (1x, 2x or 3x)
- Background color
- Border color
- Which controls and indicators are displayed on the tile
- Location of controls and indicators on the tile
- Which icons are displayed on the controls and indicators

Indicators and Controls

A radio resource contains indicators and controls that allow the dispatch console user to monitor and control various aspects of the radio channel. Examples of the indicators and controls which may appear on a radio resource include:

- Instant Transmit Button
- Transmit Active/Transmit Busy Indications
- Patch Active/Patch Busy Indications
- Received Call Indication
- Received Call Stack
- Individual Volume Control

The types of indicators and controls which appear on the radio resource depend on the type of radio channel it represents, and how it has been configured in the Elite Admin application. The radio resource may be configured to always show the indicators and controls or to allow the dispatch console user to hide them when not in user to save space on the screen. The icons used on the indicators and controls can be configured in the Elite Admin application to suite the customer's needs.

- **Compressed Resource** – Allows the dispatcher to hide the indicators and controls (Figure 1-5). Notice the small arrow button which allows the resource to be opened and closed to show the controls and indicators. This saves a tremendous amount of space on the screen by allowing the dispatcher to view only the most critical information for any given channel. This type of display is ideal for dispatchers monitoring several different channels where space in the resource folder is at a premium.

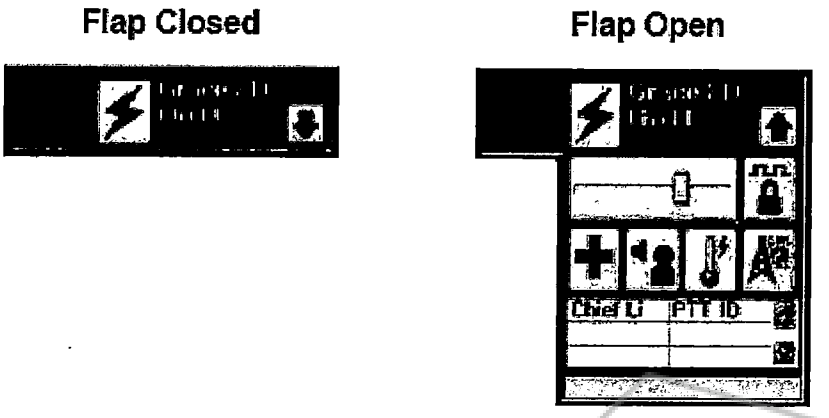


Figure 1-5: Compressed Radio Resource

- **Larger Compressed Resource** – Allows the dispatcher to always show some of the indicators and controls, and hide some of the others (Figure 1-6).

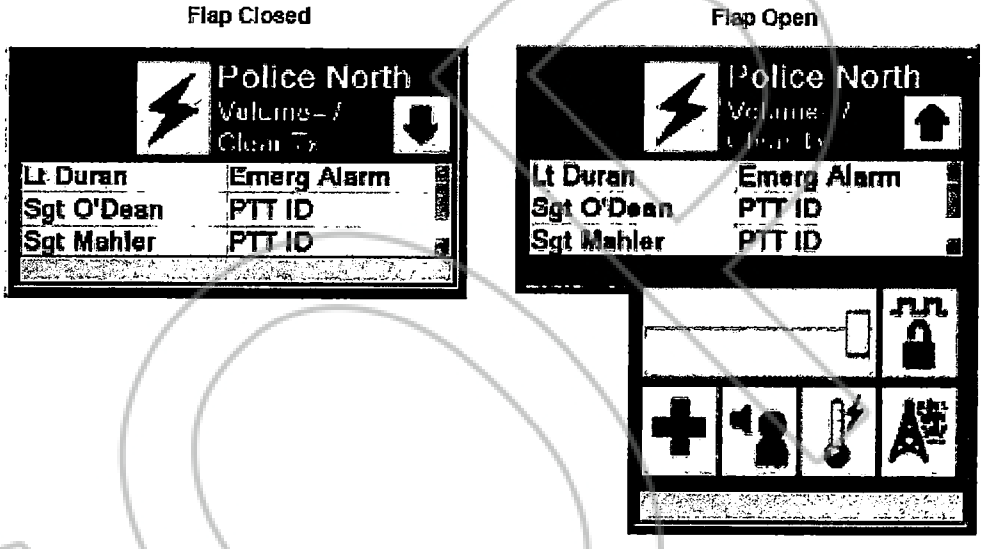


Figure 1-6: Larger Compressed Radio Resource

- **Expanded Resource** – Allows the dispatcher to always shows the indicators and controls (Figure 1-7) and cannot be compressed. Note there is no arrow button on the resource. The expanded version provides the advantage of a single-button press for any function. It is ideal for dispatchers who are only monitoring a few channels/talk groups and where space in the resource folder is not at a premium.

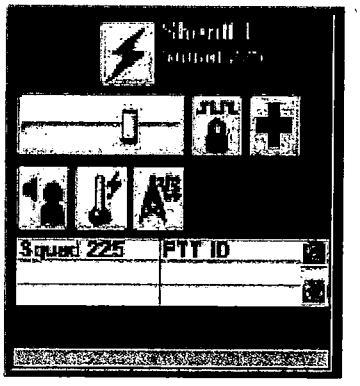


Figure 1-7: Expanded Radio Resource

Full parallel status for radio resources is reflected across all the dispatch consoles which have these radio resources assigned on them regardless of how they are displayed (compressed, larger compressed or expanded). That is, any activity or change on a radio resource appears on all dispatch consoles which have that resource assigned to them.

Received Call Stack

The received call stack provides the dispatcher with a visual record of the most recent inbound calls on radio resources. This allows the dispatcher to keep track of calls during busy traffic periods.

Outbound calls on radio resources from dispatch consoles (both the dispatch console containing the received call stack or parallel dispatch consoles) are not shown in the received call stack.

The calls are displayed in list format on a radio resource, with the most recent calls at the top of the list. Unacknowledged emergency alarms are kept at the top of the stack until they are acknowledged. Once they are acknowledged, they will scroll down the stack as new entries come in.

The number of calls displayed in the list is configurable, as is the type of information displayed. The types of information that can be displayed are: unit ID, unit ID alias, site ID, zone ID, type of call and time. If an alias is available for a piece of information, it is displayed; otherwise the raw information is displayed. Figure 1-8 shows a radio resource containing a received call stack.

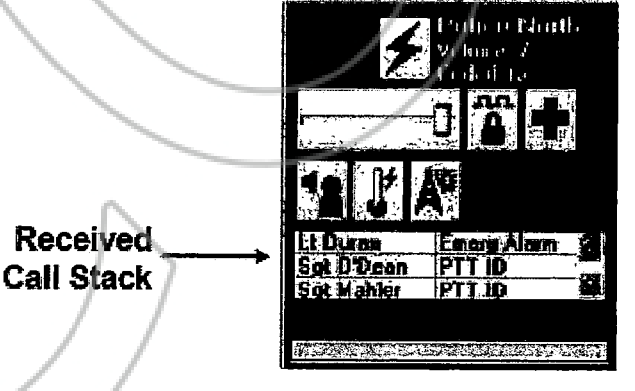


Figure 1-8: Received Call Stack on a Radio Resource

The received call stack provides a quick way for a dispatch console user to respond to calls in the stack. A right mouse click on an entry in the stack will display a submenu of actions that can be

taken, such as Send Call Alert or Acknowledge Emergency Alarm. A left mouse click on the right hand column of the stack will toggle the information displayed between the type of call, time of the call, zone ID and site ID. Hovering the cursor over an entry in the stack will pop up a small window with a summary of the information for that entry. The received call stack is configurable on a per-resource per-console basis, so a resource on one dispatch console can have it while the same resource on another dispatch console does not have it.

The received call stack has a fixed memory of 25 calls, but the number of calls which are displayed is configurable via the Elite Admin application. The number displayed may be set anywhere from 3 to 24 calls in increments of 3. Regardless of how many calls are actually displayed, the dispatcher can always scroll through all 25 calls in the stack's memory.

Stack display size is configured on a per radio resource per dispatch console basis. That is, each resource on a dispatch console may have different sized stack displays and the same resource on different dispatch consoles may have different sized stack displays.

The dispatcher can delete individual calls from the received call stack. All of the calls listed in a received call stack can also be deleted with a single action.

Three Line Display

The three line display can be placed on a radio resource to provide three lines in which information can be displayed. These lines are in addition to the two lines that come standard on the resource tile. Multiple instances of the three line display can be placed on a resource tile to provide even more lines if needed. They may be placed in different locations on the resource tile to meet the needs of different customers.

Each line can be individually configured to display one of the following.

- Blank
- Channel Marker
- Priority Select
- Site
- Status/Message
- Transmit Mode
- Unit ID
- Unit ID Alias
- Volume
- Zone
- Customer-defined fixed text

Figure 1-9 shows an example of a three line display.

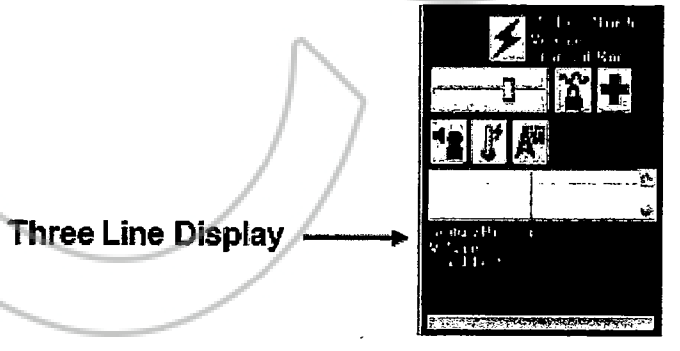


Figure 1-9: Three Line Display on a Radio Resource

Auxiliary Input and Output Resources

Control relays and input buffers are represented as auxiliary input and output resources on the Elite Dispatch GUI. These auxiliary input and output resources are used by the dispatch console user to monitor the state of input buffers and monitor/control the state of control relays. Auxiliary inputs and outputs (Aux I/Os) allow a user to control external devices via relay closures and sense the state of external devices via input buffers from the MCC 7500 Dispatch Console.

The auxiliary input and output resources are represented by various graphical icons which change their appearance based on the state of the resource. The particular icon which is associated with an input or output is configured by the Elite Admin application. The background color of auxiliary input and output resources can also be configured in the Elite Admin application.

Examples of some of the icons and background colors which may be used are shown in

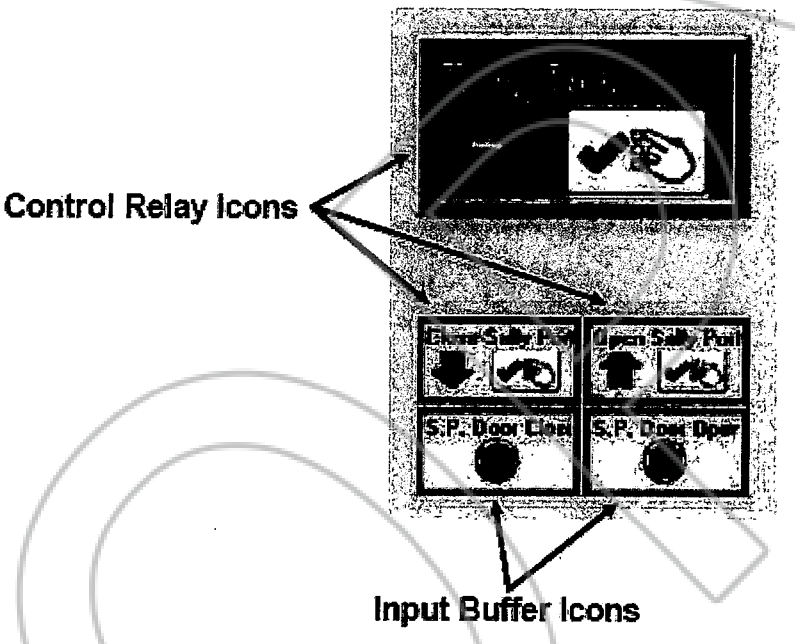


Figure 1-10: Auxiliary Input/Output Resource Icons

Auxiliary input and output resources may be grouped together so that they can be moved or assigned/de-assigned as a group. This is useful for situations where the auxiliary input output resources are being used to interface to comparators or other devices which require multiple control relays or input buffers.

Full parallel status for auxiliary inputs and outputs is reflected across all the dispatch consoles which have the auxiliary inputs and output resources assigned on them. That is, if an auxiliary input or output changes state, the change of state is reflected on all the other dispatch consoles which have that auxiliary input or output assigned on them.

Patch and Multi-Select Folders

The patch and multi-select features are accessed via a set of dedicated folders on the Elite Dispatch GUI. These folders are smaller than the resource folders, and may be placed on the screen to suit the dispatcher's preferences. The placement is done in the Elite Admin application. There can be up to sixteen patch folders and three multi-select folders.

Patch Folders

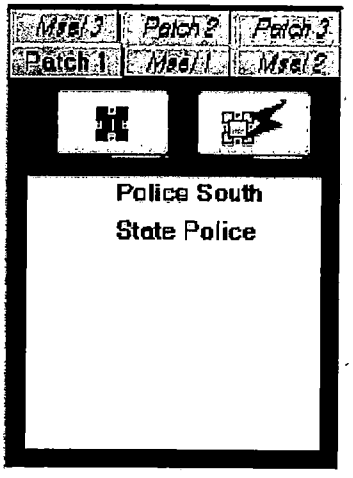


Figure 1-11: Patch Folder

Clicking on one of the patch folder tabs brings it into view. The patch group is then opened by clicking on the left-most button on the folder. Once the patch group is open, the patch group is editable and members may be added or removed from the patch group by clicking on the desired radio resources. Note that patch groups are active whenever there are members assigned to them. This is true even if the patch group is not open.

The members of the patch group are shown on the patch folder along with the status of each member (patched or pending). The resources in the patch also show an indication that they are in a patch group.

Some patch groups contain members which were pre-assigned by the Elite Admin application. These patch groups become active as soon as possible after the dispatch console begins using the configuration file which contains the pre-assigned patch groups. The dispatcher can add/remove members from the pre-assigned patch group, but these additions/removals are lost when the dispatch console either re-loads the configuration file or changes to a different configuration file.

A patch transmit button is provided on the patch folder to allow the dispatcher to easily transmit on all members of the patch group with a single button press. Figure 1-11 shows an example of a patch folder containing some radio resources.

Multi-Select Folder

Clicking on one of the multi-select folder tabs brings it into view. The multi-select group is then opened by clicking on the left-most button on the folder. Once the multi-select group is open, the multi-select group becomes active, and members can be added or removed from the group by clicking on the desired radio resources. Closing the multi-select folder (by clicking on the left-most button a second time) deactivates the multi-select group.

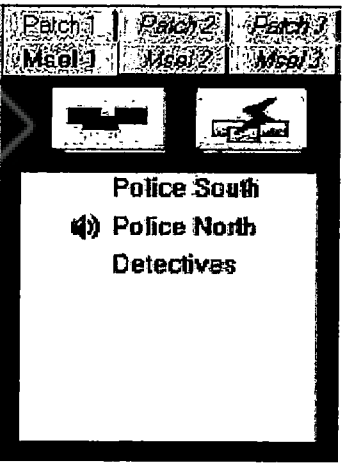


Figure 1-12: Multi-Select Folder

Note: This operation is different than that of the patch folders. A dispatch console can only have one multi-select group active at a time, but it can have multiple patch groups simultaneously active.

The members of the multi-select group are shown on the multi-select folder.

Some multi-select groups contain members which were pre-assigned by the Elite Admin application. The dispatcher can add/remove members from the pre-assigned multi-select group, but these additions/removals are lost when the dispatch console either re-loads the configuration file or changes to a different configuration file. Pre-assigned multi-select groups can also be configured via the Elite Admin application to be "locked". When configured this way, the dispatch console user cannot edit the multi-select group.

Figure 1-12 shows an example of a multi-select folder containing some radio resources.

Activity Log Window

The dispatcher can use the activity log window as a point of reference for all calls coming into the dispatch console. The activity log shows call information associated with all incoming radio calls such as the name of the radio resource and the time of the call. Incoming calls from all radio resources assigned to the dispatch console are displayed in the activity log.

Figure 1-13shows an example of an activity log window.

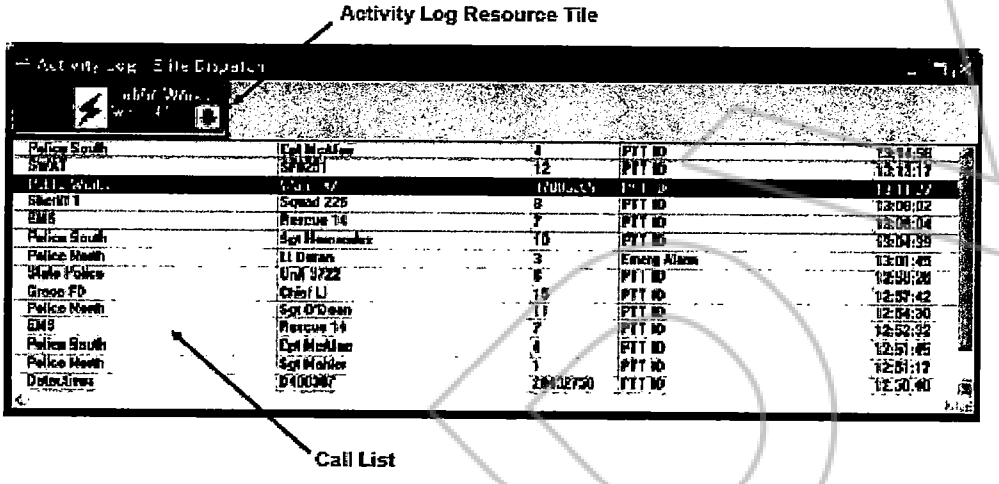


Figure 1-13: Activity Log Window

Up to 1000 calls can be held in the activity log. The most recent call is in top of the list and the oldest is at the bottom. Once the list is filled, the oldest calls are discarded as new calls come in. the dispatcher may resize the activity log to show various numbers of calls. For example, when there is light activity, the dispatcher may choose to only show a few calls. During busy hours, the dispatcher may view more calls by simply dragging the lower right hand corner of the activity log (making it longer) to see additional calls.

Dispatchers may respond to incoming calls simply by clicking on a call in the list. When this is done, the entry appears highlighted and the name of the radio resource appears at the top of the activity log. The dispatcher can then press the instant transmit button on the activity log resource tile to communicate with that radio resource.

The information displayed by the activity log can be customized to suit the dispatcher's needs. The activity log can be configured to show combinations of Resource Name, Unit ID or Alias, Status Number or Alias, Receiving Site ID, Receiving Zone ID and Time. This configuration is done via the Elite Admin application and, if so configured, via the dispatcher interface.

There are two levels of control over whether or not the activity log is displayed on a dispatch console. The first level is via the Elite Admin application which controls whether or not a dispatch console has the capability of displaying the activity log. The second level is via the dispatch console user interface where the dispatch console user can choose to view or not view the activity log. Note that if the dispatch console has not been given the capability of displaying the activity log, then the dispatch console user cannot see the activity log at all.

The number of lines that are initially displayed by the activity log is configurable via the Elite Admin application or the dispatcher interface. The number of lines that are displayed may also be changed in real time by changing the size of the activity log window using standard Microsoft Windows resizing

techniques. The user can scroll through all the entries in the activity log, even if they cannot all be displayed at once.

The information listed in the activity log can be stored in a text file on the dispatch console's hard disk. The size of the text file can be specified to be between 1 MByte and 20 MBytes. When the file fills up, new data overwrites old data beginning with the oldest data. All data associated with a call is logged to the file, regardless of what portion of the data is actually shown in the activity log window.

Help

The dispatch console is designed to allow the dispatcher to quickly access information on how to use its features. This help is available right on the dispatch console graphical user interface. There are three types of help available to the dispatcher: Online, Micro and Tool Tips.

Online Help

Online Help provides detailed information on how to use the dispatch console. The user accesses Online Help via the Help menu on the menu bar. The user can search for topics or key words to quickly find the desired information or the user can use a table of contents to find the information. The information is displayed in a pop-up window on the dispatch user interface.

Online Help allows new dispatchers to shorten their learning curve and more experienced dispatchers to quickly remember how to operate seldom-used features.

Micro Help

Micro Help provides information about the state of controls or indicators in a resource tile. When the cursor is placed over a control or indicator on a resource tile, a description of the control or indicator's state is given across the bottom of the resource tile. Figure 1-14 shows micro help text on a radio resource. The text across the bottom of the resource describes the icon the cursor is pointing to.

The text displayed by the Micro Help feature may be edited via the Elite Admin application.

Micro Help allows a dispatcher to view the status of a control or indicator textually instead of graphically.

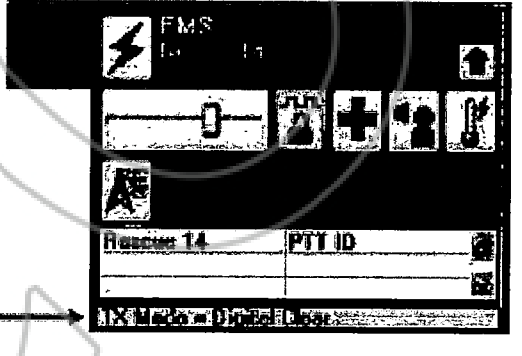


Figure 1-14: Micro Help on a Radio Resource

Tool Tips Help

Tool Tips Help provides information about tool bar buttons and menu bar menus to the dispatcher. When the cursor is placed over a tool bar button, the button's name appears in a small pop-up window next to the cursor, and a short explanation of the button appears in the status bar at the bottom of the dispatch user interface window. When the cursor is moved across a menu item in a menu, a

description of the menu item appears in the status bar at the bottom of the dispatch user interface window.

The text displayed by the Tool Tips feature may be edited via the Elite Admin application.

Tool Tips allow a dispatcher to quickly see a short explanation of the button or menu item of interest.

Inbound Event Display (IED) Graphical User Interface (not included)

For those users who prefer a call-based GUI over a resource-based GUI, the MCC 7500 dispatch console supports the Inbound Event Display (IED) GUI. The IED GUI displays incoming radio events in a queue format. The dispatch console user can manage and respond to these events directly from the queue. Filtering and sorting features are available to allow the information in the queue to be tailored to the needs of the dispatch console user.

The console can be configured to operate in "quiet mode" when using the IED GUI. This is well suited to customers who wish to operate in a Request To Talk (RTT) environment.

The types of events that can be displayed in the IED window include:

- Emergency Alarm events
- Radio Status events
- Radio Message events

These events can be on trunked radio resources, ASTRO 25 Conventional radio resources and MDC 1200 radio resources.

An example of an IED window is shown in Figure

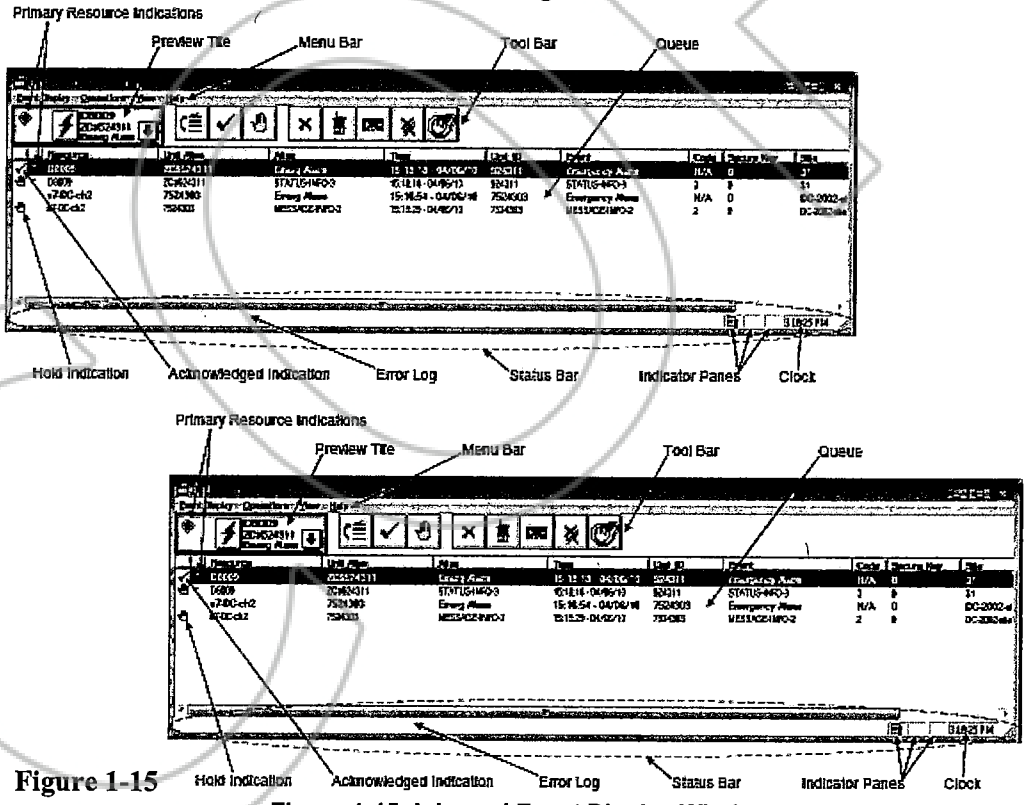


Figure 1-15

Figure 1-15: Inbound Event Display Window

The IED GUI is based on Microsoft Windows GUI programming standards and contains many controls, displays and features which are familiar to anyone who has used Windows-based applications. Detailed description of these features can be provided upon request.

1.4.4.9 Elite Admin Application

The Elite Dispatch GUI screens are configured using the Elite Admin application. This application is designed to be extremely flexible. It allows the administrator to make the screen look very simple with minimal icons and channels, or more sophisticated with many folders and channels.

The Elite Admin application allows supervisors to create screens that can be used by multiple dispatchers (accessed over the network) or even a customized screen per dispatcher. Each screen configuration may be password protected to ensure proper use and control. All of the screen configurations are stored on the server. Once the screens are downloaded to a particular dispatch position, the configuration is run independently from the server and LAN.

Through the Elite Admin application, the supervisor can perform functions including:

- Create new configurations (for any dispatcher).
- Modify existing configurations
- Save configurations
- Determine how many toolbar(s) and where on the toolbar(s) they should go
- Determine the number of resource folders
- Determine the number of patch/multi-select folders
- Name the resource folders and patch/multi-select folders
- Determine the location of patch/multi-select folders
- Determine the height of patch/multi-select folders (e.g., taller if there are many members in the groups)
- Create pre-assigned patch/multi-select groups
- Determine if dispatchers have the ability to assign and deassign resources
- Determine if the activity log is shown initially and where on the screen it is shown (dispatchers may still hide or show the activity log)
- Assign/deassign radio and auxiliary input/output resources to various folders
- Determine location of radio and auxiliary input/output resources in the folders (dispatchers may temporarily change the locations by dragging and dropping the resources)
- Determine where features are placed on each radio resource
- Modify the icons used for resource features
- Add a safety switch on radio resources
- Determine the size of each radio resource (compressed, larger compressed or expanded)
- Determine border color for each radio resource
- Determine audio routing of resources to speakers
- Determine whether selected radio audio stays in a speaker or moves to a headset when headsets are used (this is done on a per-resource per-console basis)
- Set initial volume level of each radio resource
- Determine if auxiliary inputs and outputs appear in a separate window
- Determine icons used for auxiliary input and outputs
- Determine if auxiliary outputs are safety switch protected
- Determine border color for each auxiliary input and output
- Modify tool tips and micro help text

1.4.4.10 Dispatch APIs

The Motorola MCC 7500 dispatch console allows other software applications to monitor and control its application software. This is done via the application programmer interfaces (APIs) described in the following sections.

The APIs are architected is such a way that they can support multiple applications accessing them simultaneously. This allows the APIs to service both the dispatch console user interface and a 3rd party application simultaneously. This is necessary if a CAD system is helping to control the dispatch console with the dispatch console user.

There are three APIs available for use by 3rd parties who wish to access radio system features and functionality via a dispatch console:

- **Console Dispatch Interface API** – Provides a set of functions/messages used for overall management and maintenance of the connections between a software application and the dispatch system.
- **Resource Configuration API** – Provides a set of functions used to retrieve configuration and aliasing information pertaining to the dispatch system.
- **Console Features API** - Provides a set of functions/messages allowing for the real-time monitoring and control of a Motorola dispatch communication system.

The ability to locally manage unit ID aliases via an API is not supported at the current time, but may be included in a future release.

A Software Developer Kit (SDK) containing all the information necessary for a 3rd party to be able to access and use the APIs is available for purchase.

1.4.4.11 Auxiliary Inputs and Outputs

Auxiliary inputs and outputs (Aux I/Os) allow customers to control external devices via relay closures and sense the state of external devices via inputs buffers from the dispatch console. There are two basic types of Aux I/Os:

- **Public Aux I/Os** are accessible by more than one dispatch console. A change in state of the Aux I/O is reflected across all of the dispatch consoles which have it assigned on their user interfaces. These Aux I/Os are typically physically located in a common location that is shared by all the dispatch consoles.
- **Private Aux I/Os** are accessible by only one dispatch console. A change of the Aux I/O is only reflected at the single position console which has it assigned on its user interface. These Aux I/Os are typically physically located in the hardware of the dispatch console that is controlling it.

1.4.4.11.1 Public Aux I/O

The Motorola MCC 7500 dispatch console supports Public Aux I/Os by accessing and controlling SDM3000 RTUs and displaying the status of the RTUs' inputs and outputs on the dispatch console graphical user interface (GUI). The graphical user interface displays the inputs and outputs by using the same icons that are used with inputs and outputs on CENTRACOM Gold Series dispatch consoles. A separate GUI to display the inputs and outputs is not required on the dispatch console.

Graphical icons provided by the dispatch console GUI are used to represent both the function and state of relay outputs. For example, an icon consisting of a light bulb may be used to represent a relay output which is controlling lighting of some type. The dispatcher would click on the button associated

with the icon to change the state of the relay output and the icon would change between a lighted bulb and an unlighted bulb to reflect the state of the lighting.

Graphical icons are also used to provide a visual indication of both the function and state of external inputs. For example, an icon consisting of a door may be used to represent an external input which is connected to a door position sensor. The door can be shown in the open state when the sensor says the door is open and it can be shown in the closed state when the sensor says it is closed.

Multiple dispatch consoles may monitor and control the same relay output and/or external inputs. In this case, state changes are indicated across all dispatch consoles simultaneously.

Individual relay outputs can be configured so that they require a safety switch to be pressed before they respond to any commands from the dispatcher. A relay output on one dispatch console can be protected by a safety switch while the same relay output on a different dispatch console is not. The resetting of latched inputs may also be protected by using the safety switch.

Note that accessing Public Aux I/Os between zones is not supported. In other words, it is not possible for a dispatch console in one zone to monitor or control a Public Aux I/O in a different zone.

Supported Aux I/O Configurations

The following Aux I/O configurations are supported.

- **Momentary Input** – This is an input where the user interface always shows the true state of the input. If the input is active, it is shown as active. If it is not active, it is shown as not active.
- **Latched input** - This is an input where the user interface doesn't necessarily show the true state of the input. When the input goes active, the user interface shows the state as active. The display will continue to show the state as active even if the input changes to the inactive state. A dispatcher must manually reset the display to return it to the inactive state. Note that a dispatcher cannot clear the display until the input itself is in the inactive state.
- **Momentary Output** - This is an output relay which is activated when the dispatcher presses the button on the user interface and deactivated when the dispatcher releases the button.
- **Latched Output** - This is an output relay which changes state only when the dispatcher presses the button. The release of the button has no effect on the state of the relay. One press activates the relay; the next press deactivates the relay.
- **Interlocked Latched Output** - This is a latched output relay which is part of a group of latched output relays. Only one of the relays in the group may be active at a time. Pressing the button for a relay automatically deactivates the previously active relay. Pressing the same button twice does not deactivate that relay. There is always one and only one relay active in the group at all times. Interlocked relays work in a "break before make" fashion; that is, the previously active relay is deactivated before the new relay is activated. The maximum number of relays that can be grouped together in an interlocked group is the number of relays in the RTU hosting the interlocked group.

SDM3000 RTU

The MOSCAD SDM3000 RTU is used to support most dispatch console Aux I/O needs. The SDM3000 RTU is rack mountable in a standard 19 inch rack and is one rack unit high.

SDM3000 RTUs can be physically located at console sites, trunking RF sites or analog conventional RF sites. The dispatch consoles and RTUs communicate with each other across the radio system's IP transport network. This allows much greater flexibility in putting Aux I/Os where they are needed compared to CENTRACOM Gold Series which required all the Aux I/Os to be located in the CEB.

The SDM3000 RTU is capable of supporting up to 16 outputs and 48 inputs. Expansion chassis (each being the same physical size as the SDM3000 RTU) can be added to increase the number of inputs and outputs as follows:

	Number of Output Relays	Number of Input Buffers
Single SDM3000 RTU	16	48
Single SDM3000 RTU with 1 expansion chassis	32	96
Single SDM3000 RTU with 2 expansion chassis	48	144

1.4.4.11.2 Private Aux I/O

The Motorola MCC 7500 dispatch console supports four Private Aux I/Os located in the VPM of the dispatch console. The four Private Aux I/Os are dedicated to specific functions and cannot be reprogrammed for other functions. The functions supported by the Private Aux I/Os are:

- Call on Selected Channel (called the Inbound Select Relay in other documents) - This is a relay which closes when the dispatch console has one or more call indications on the selected channel or channels. The relay opens when the last call indication on a selected channel goes away. Note that there does not need to be any audio on the selected channel for the relay to close. All that is required is a call indication.
- Op PTT (called the PTT Relay in other documents) - This is a relay which closes when any microphone on the dispatch console is open for a transmission to a radio. The relay opens when the microphone is closed after a transmission to a radio. Note that the relay does not close when a headset microphone is being used to communicate on an external telephone system that is sharing the dispatch console's headset via the Telephone Headset Port on the VPM.
- Emergency Beacon (called the Emergency Activity Relay in other documents) - This is a relay which closes when there are one or more active emergencies on the dispatch console. The relay opens when the last active emergency is knocked down.
- Activate Private Relay when Public Aux I/O is Active (called the Auxio Alarm Relay in other documents) - This relay closes when a properly-configured public Aux I/O goes active. The relay can be connected to an external audible or visual indication to draw the dispatcher's attention to the fact that the public Aux I/O is active. The relay remains closed until the dispatcher manually resets it from the dispatch GUI.

The VPM provide single pole Form A relay outputs capable of switching 1A @ 30VDC or 1A @ 30VAC.

1.4.5 Conventional K-Core

The ASTRO 25 K-core is a scalable and virtualized core which provides an adaptable and affordable platform for mission critical wireless communications. The K-core is targeted at small capacity conventional customers who require an ASTRO25 conventional only system. The K-core allows customers to interface channels to an IP based MCC 7500 Console, provides a migration path for customers with fielded Motorola Conventional solutions, and allows the flexibility for customers to join a larger system in the future while maximizing their equipment investment. The K-core is available in a non-redundant configuration (K1) or redundant configuration (K2).

1.4.5.1 GCP8000 Conventional Site Controller

The GCP 8000 Conventional Site Controller provides mission critical call processing and mobility management throughout the ASTRO 25 Conventional System. The GCP 8000 interfaces via multiple

Ethernet LAN switches, and provides access to the packet switched network via the Core Gateway. The GCP 8000 is capable of supporting the full set of dispatch consoles, archiving interface servers, and conventional gateways. The GCP 8000 can only be located at the K1/K2 Core. The GCP 8000 is responsible for:

- Fault management for the GCP 8000
- Processing conventional call requests from the conventional gateway or from the Console
- Assigning the multicast groups for conventional calls
- Issuing a call grant to the requestor
- Issuing a beginning of mobile transmission to the consoles (with alias information)
- Arbitration between multiple radios and/or consoles vying for the same channel
- Processing an end of call
- Acknowledge subscriber signaling calls (e.g. Emergency)
- Distributes subscriber signaling to affiliated consoles
- As well as other conventional voice call processing

1.4.5.2 GGM8000 Site Gateway

In a K-core, the site gateway combines the functions of core and gateway routers. It handles LAN traffic within the core site and provides an interface between the core and the customer network via backhaul switch when applicable. The core gateway performs the routing control of audio, data, and network management traffic in and out of the zone, replicating packets while achieving the fast access levels required by real-time voice systems.

1.4.5.3 GGM8000-based Conventional Channel Gateway

Conventional Channel Gateways (CCGWs) are used in the MCC 7500 Dispatch Console to connect the dispatchers to analog or digital conventional channels in their system.

The GGM 8000 that is hosting a CCGW may be solely dedicated to that task or it may also be used as a console site router or an RF site router. In order to also be used as a site router, the WAN link must be either IP-based or smaller than or equal to a T1/E1 and the WAN link must not be redundant.

The site routers cannot be used as CCGWs when redundant site links are used, regardless of the type of router being used.

Beginning in the 7.13 system release an enhanced version of the GGM 8000-based CCGW is available that provides significant additional functionality and capacity over the legacy CCGWs. Where necessary for clarity, this document will differentiate between the two types of GGM 8000-based CCGWs by using the terms "legacy" and "enhanced".

The enhanced GGM 8000-based CCGW can support combinations of analog, MDC 1200, ACIM Link, digital and mixed mode channels simultaneously. Low density and high density versions of the enhanced GGM 8000-based CCGW are available.

The low density version contains four analog ports and four V.24 ports plus an Ethernet port. Up to eight conventional channels can be connected to the analog and V.24 ports. The eight channels can be mixtures of analog, MDC 1200, ACIM Link, digital or mixed mode. In addition to the eight channels connected to ports, up to sixteen IP based channels can be supported.

The high density version contains eight analog ports and eight V.24 ports plus an Ethernet port. Up to sixteen conventional channels can be connected to the analog and V.24 ports. The sixteen channels

can be mixtures of analog, MDC 1200, ACIM Link, digital or mixed mode. In addition to the sixteen channels connected to ports, up to sixteen IP based channels can be supported.

Note that mixed mode channels must use a V.24 port for the digital portion, they cannot use IP.

The site routers cannot be used as CCGWs when redundant site links are used, regardless of the type of router being used.

1.4.5.4 LAN Switch

The LAN switch aggregates all the Ethernet interfaces for MCC7500 dispatch positions, gateways, controllers and routers.

1.4.5.5 Configuration Manager

The Configuration Manager application runs on a Microsoft OS and can co-hab on a Console OP or can run from its own PC (note the Console OP will only support one other application cohabiting with it). There should be one and only one Configuration Manager that is connected and running continuously and can only be used from the core. The Configuration Manager application is used to configure the Console OP, the AIS and the CCGW through the same LDAP interface used in the large "M" and "L" systems. A number of parameters have been preset to minimize the amount of configuration needed.

1.4.6 Design Details

1.4.6.1 Redundancy and Fallback Operations

The K2 Core features redundant Site Controllers, dual Core Ethernet Switches and dual core backhaul routers and switches. The combination of equipment allows for no single point of complete system failure. The site controllers, which host the database of all system resources and devices, are mirror images of each other. Physically, they have separate chassis, controllers and power supplies. In the event of a failure of the main controller, all functions are transitioned to the back-up controller and the system will continue to operate. When configuration changes are made, both controllers are automatically updated by the configuration manager. The K2 configuration also features dual core Ethernet switches. Each site controller is connected to a separate core switch, and other devices in the core such as CCGWs and Operator positions are logically distributed across the core switches so that a failure of one switch does not remove all functionality from the system. For high availability resources, CCGW ports can be defined as main and alternate across the two core switches. Backhaul routers and switches connect remote sites which are external to the core. The K2 features dual backhaul Ethernet switches and routers. Should either device fail, only the sites connected to that switch will be unavailable.

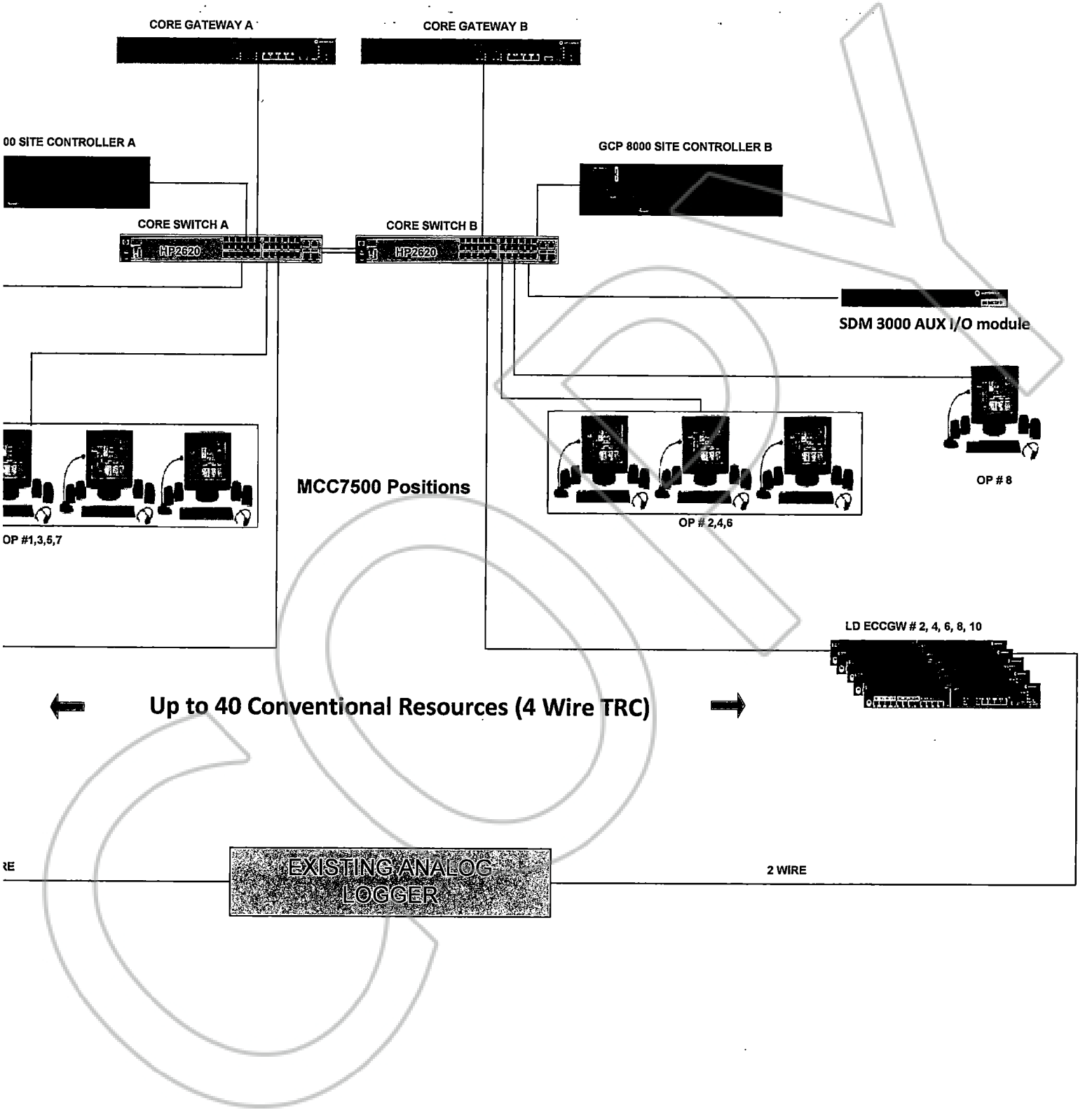
1.4.6.2 System Expansion

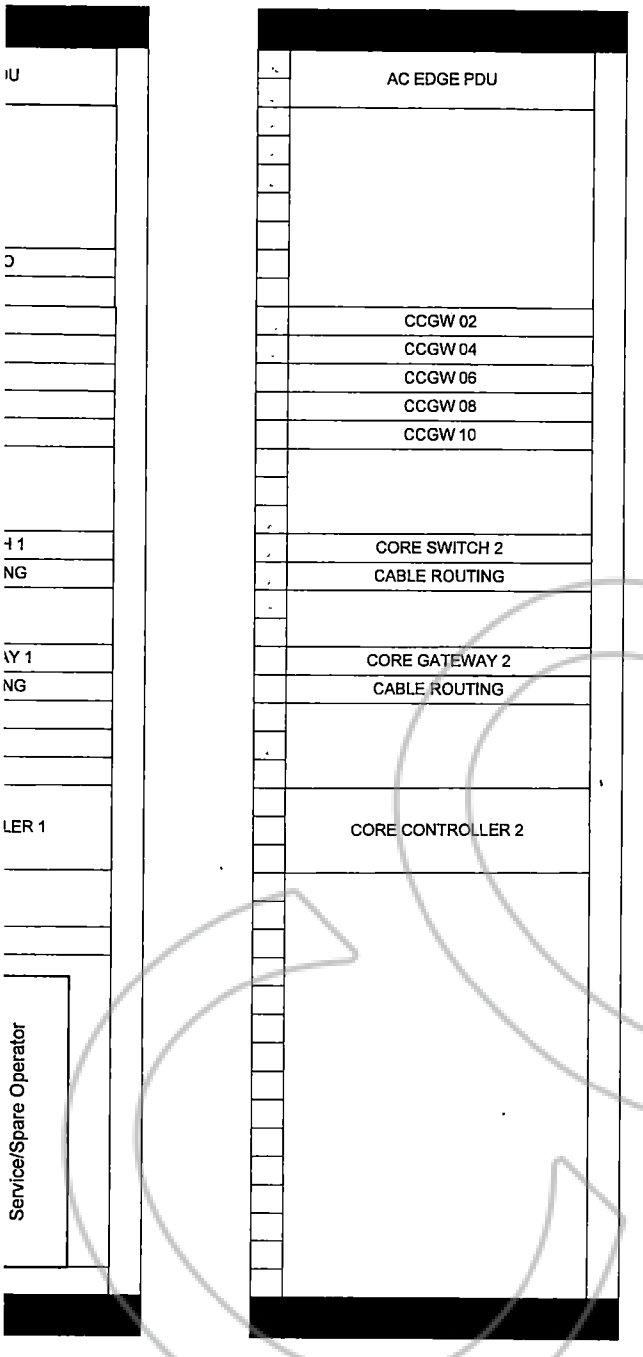
The K2 Core can be expanded to a total of 50 resources and/or 75 IP addresses. Expansion beyond 50 resources requires upgrade to an M2 core.

SECTION 2

SYSTEM DRAWINGS

DOUGLAS COUNTY DISPATCH CENTER





Douglas County – Preliminary Rack Drawing

SECTION 3

EQUIPMENT LIST

Qty	Model	Description
1	SQM01SUM0237	SINGLE ZONE CONV NON-RED CORE
1	CA02259AA	ADD: Redundancy
1	CA01663AB	ADD: RACK
1	TRN7342	SEVEN FOOT RACK
2	DS110110711	PDU, AC EDGE RACK MOUNT DISTRIBUTION PANEL, 120VAC 60A, 12-15A CIRCUIT
24	DS37502851	BREAKER KIT AIRPAX 15AMP SNAPAC, FOR AC EDGE OR DC EDGE III QTY 1
2	DSRS0615R	POWER STRIP, 6 REAR OUTLETS 19 IN, 15-AMP RACKMOUNT, LOCKING SWITCH
1	DSCL5808N	ATEN : 8 PORT LCD KVM
4	DS2L5202UP	ATEN PS/2 TO USB INTELLIGENT KVM
		Configuration Manager
1	TT2833	COMPUTER, Z440 WORKSTATION WINDOWS 7 (NON RETURNABLE)
1	T7885	MCAFEE WINDOWS AV CLIENT
1	DDN9748	19 INCH BLACK SHELF
		Dispatch Users
		Replacement for Gold Elite Ops + 1 new op
1	B1905	MCC 7500 ASTRO 25 SOFTWARE
7	B1933	MOTOROLA VOICE PROCESSOR MODULE
7	CA01642AA	ADD: MCC 7500 BASIC CONSOLE FUNCTIONALITY SOFTWARE LICENSE
7	CA01644AA	ADD: MCC 7500 /MCC 7100 ADV CONVL OPERATION
7	CA00147AF	ADD: MCC 7500 SECURE OPERATION
7	CA00245AA	ADD: ADP ALGORITHM
7	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
7	TT2833	COMPUTER, Z440 WORKSTATION WINDOWS 7 (NON RETURNABLE)
7	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
7	T7885	MCAFEE WINDOWS AV CLIENT
7	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A PLUG-IN W/ (6) 15A NEMA 5-15 OUTLETS

Qty	Model	Description
14	B1912	MCC SERIES DESKTOP SPEAKER
7	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE
14	B1913	MCC SERIES HEADSET JACK
7	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH FOR USE WITH MOTOROLA MCC 7500 DISP
7	DDN2090	DUAL IRR SW USB HASP W LICENSE, SOUND CARD, & SPKRS (V47)
		Add-on New Op in Director office
1	B1933	MOTOROLA VOICE PROCESSOR MODULE
1	CA01642AA	ADD: MCC 7500 BASIC CONSOLE FUNCTIONALITY SOFTWARE LICENSE
1	CA01644AA	ADD: MCC 7500 /MCC 7100 ADV CONVL OPERATION
1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
1	CA00245AA	ADD: ADP ALGORITHM
1	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
1	TT2833	COMPUTER, Z440 WORKSTATION WINDOWS 7 (NON RETURNABLE)
1	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
1	T7885	MCAFEE WINDOWS AV CLIENT
1	DSRMP615A	SPD, TYPE 3, 120V RACK MOUNT, 15A PLUG-IN W/ (6) 15A NEMA 5-15 OUTLETS
2	B1912	MCC SERIES DESKTOP SPEAKER
1	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE
2	B1913	MCC SERIES HEADSET JACK
1	DSTWIN6328A	PROVIDES ONE DUAL PEDAL FOOTSWITCH FOR USE WITH MOTOROLA MCC 7500 DISP
1	DDN2090	DUAL IRR SW USB HASP W LICENSE, SOUND CARD, & SPKRS (V47)
		Add-on Service Op
1	B1933	MOTOROLA VOICE PROCESSOR MODULE
1	CA01642AA	ADD: MCC 7500 BASIC CONSOLE FUNCTIONALITY SOFTWARE LICENSE
1	CA01644AA	ADD: MCC 7500 /MCC 7100 ADV CONVL OPERATION
1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
1	CA00245AA	ADD: ADP ALGORITHM
1	CA00140AA	ADD: AC LINE CORD, NORTH AMERICAN
1	TT2833	COMPUTER, Z440 WORKSTATION WINDOWS 7 (NON RETURNABLE)
1	T7449	WINDOWS SUPPLEMENTAL TRANS CONFIG
1	T7885	MCAFEE WINDOWS AV CLIENT
2	B1912	MCC SERIES DESKTOP SPEAKER
1	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE
2	B1913	MCC SERIES HEADSET JACK
1	DDN2090	DUAL IRR SW USB HASP W LICENSE, SOUND CARD, & SPKRS (V47)
1	BLN1297	VPM POWER SUPPLY MOUNTING KIT

Qty	Model	Description
1	DSWH340AA	HP XW4/Z2/Z4 ADJUSTABLE FIXED RAIL RACK KIT
18	RLN6099A	HDST MODULE BASE W/PTT, 25' CBL
18	RMN5078B	SUPRAPLUS NC SINGLE MUFF HEADSET
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02141AA	ADD: LOW DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02141AA	ADD: LOW DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02141AA	ADD: LOW DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02141AA	ADD: LOW DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02141AA	ADD: LOW DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02141AA	ADD: LOW DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02141AA	ADD: LOW DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02141AA	ADD: LOW DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02141AA	ADD: LOW DENSITY ENH CONV GATEWAY
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	CA02141AA	ADD: LOW DENSITY ENH CONV GATEWAY

Qty	Model	Description
1	F4543	SITE MANAGER BASIC
1	VA00874	ADD: AUX I-O SERV FW CURR ASTRO REL
1	V266	ADD: 90VAC TO 260VAC PS TO SM
3	V592	AAD TERM BLCK & CONN WI
1	BVN1013	MKM 7000 Console Alias Manager Software
		SPARES
1	B1912	MCC SERIES DESKTOP SPEAKER
1	B1914	MCC SERIES DESKTOP GOOSENECK MICROPHONE
1	B1913	MCC SERIES HEADSET JACK
1	TT2833	COMPUTER, Z440 WORKSTATION WINDOWS 7 (NON RETURNABLE)
1	CLN1856	2620-24 ETHERNET SWITCH
1	DLN6966	FRU: GCP 8000/GCM 8000/GPB 8000
1	SQM01SUM0205	GGM 8000 GATEWAY
1	CA01616AA	ADD: AC POWER
1	TYN4012B	FRU: GGM 8000 LD ENH CONV GATEWAY MODULE
1	B1934	MCC 7500 VOICE PROCESSOR MODULE FRU
1	CA00147AF	ADD: MCC 7500 SECURE OPERATION
1	CA00245AA	ADD: ADP ALGORITHM
1	30009351001	DC CABLE ASSY
1	01009613001	PWR SPLY 108W AC INP 12VDC OUT W18
1	3082933N08	GR500 AC POWER CORD
1	DLN6781	FRU: POWER SUPPLY
1	DLN6898	FRU: FAN MODULE

SECTION 4

STATEMENT OF WORK

4.1 INTRODUCTION

This Statement of Work (SOW) describes the deliverables to be furnished to Douglas County, "Customer" and the tasks to be performed by Motorola Solutions, Inc. ("Motorola"), its subcontractors, and by Customer, in order to implement the proposed solution detailed in this proposal. This SOW provides the most current understanding of the work required by both parties to ensure a successful project implementation.

It is understood that this SOW may be revised during contract negotiations or during the Contract Design Review (CDR), and through any other Change Orders that may occur during the execution of the project. If there are changes to the Scope of Work, those changes must be reflected in this SOW before becoming binding on either party. This SOW will be an Exhibit to the Contract negotiated between Motorola and Customer. After contract execution, changes to the SOW must be made through the formal contract Change Order process as set forth in the Contract.

4.2 THE MOTOROLA TEAM

The Motorola Systems Integration (SI) group assembles a team for each project to fulfill customer specific requirements. The Motorola SI group and Douglas County team members will form a partnership dedicated to addressing Douglas County's needs.

4.2.1 Motorola Project Manager

The Project Manager has full responsibility for the successful completion of the implementation lifecycle from start to finish. The tasks of the Project Manager include, but are not limited to, the following:

- Act as main point of contact between Customer Project Manager and Motorola resources throughout the entire project Lifecycle.
- Full responsibility for supervising and coordinating day-to-day activities, deliverables, and milestone completions. Management of project Lifecycle requires periodic job site visits by the Project Manager at which time he/she will ensure work is being performed on time, as scoped, with the utmost quality, and professionalism by Motorola employees, agents, and subcontractors.
- Manage/supervise field installation and implementation teams to ensure that all on-site installation, integration, and optimization tasks are performed per contract requirements, industry best practices, and applicable standards and guidelines.
- Develop, track, manage, and communicate both orally and in writing (hard copy or electronic format) the project plan, schedule, status of deliverables, risk items, change orders, action items, punch list, and other reporting deliverables as set forth with the Customer.
- Schedule and participate with Customer in progress review meetings as deemed necessary throughout the project Lifecycle.
- Develop, update, maintain, and distribute project punch list.
- Inspect and maintain inventory of all received equipment to insure total delivery.
- Inspect site to ensure readiness for receiving and installing of site equipment.

- Support hardware implementation with proper documentation, guidance and training to ensure quality workmanship and customer satisfaction by all Motorola vendors and subcontractors.
- Monitor the project to ensure that support resources are available as scheduled and as identified in the contract.
- Review and administer change control procedures with Customer Project Manager.
- Provide timely responses to issues related to project progress raised by the Customer Project Manager.

4.2.2 Motorola System Engineer

The Project Engineer has full responsibility for system design and performance. The Project Engineer's primary responsibility is to ensure the technical integrity of the system design to contract throughout the entire project Lifecycle. The Project Engineer's other tasks include:

- Responsible for overall system design and ensuring that the system is installed and operating in accordance with the approved system design.
- Development of system installation documents (i.e. equipment list or bill of materials, system level, floor and rack-up drawings).
- Define Customer's communication needs, design the preliminary system, and participate in the Detailed Design Review to finalize and confirm the system design to meet Customer's requirements.
- Define Motorola and Customer demarcation points.
- Define technical requirements for interfacing with Motorola supplied equipment.
- Provide electrical load requirements to Customer for proposed equipment.
- Responsible for development and execution of the Acceptance Test Plan and guide the project team through the processes and procedures necessary to prove that the system performs as specified in the contract.
- Responsible for the process of documenting functionality acceptance testing once the system is field installed.
- Responsible for developing any needed changes in design resulting from Change Orders.
- Develop and oversee execution of system acceptance tests and cutover plan that will balance Customer's needs and approval with installation logistics.
- Provide systems and network engineering support throughout the implementation Lifecycle.

4.2.3 Sierra Electronics

Sierra Electronics is a Motorola Service Partner. Sierra Electronics, under subcontract with Motorola, will provide:

- Installation of all Motorola provided equipment.
- On-site support during precut testing and cutover.
- Ongoing on-site 1st level support during 1st year warranty.

4.2.4 Motorola Customer Support Manager

The Customer Support Manager establishes the maintenance and service support program throughout the warranty and post-warranty periods. Other tasks include:

- Coordinates Motorola service support resources to enhance the quality of service delivery and to ensure Customer's satisfaction over the life of their communication's system.
- Oversee the execution of Customer's support contract (maintenance or warranty).

- Serves as the single point of contact for service issue resolution and escalation.

4.3 SITE READINESS SURVEY

Prior to starting any equipment installations, Motorola and Customer shall conduct a site readiness review to examine existing work, or work performed by others, that is required to support the Motorola solution. The site readiness review documents any conditions that will prevent start of equipment installation work to be performed by Motorola. Customer shall be responsible for correcting any deficiencies found during the site readiness review affecting personnel or equipment safety prior to system installation.

Site readiness shall include at a minimum the following:

- Create site evaluation report to verify site meets or exceeds requirements, as defined in Motorola's Standards and Guidelines for Communication Sites (R56).
  - The R56 audit report will detail all work required to bring the site in to compliance with R56.
  - Customer may address any required site upgrades or may request a formal quote from Motorola based on the outcome of the site audit.
- Note any changes in site conditions and proposed equipment locations compared to any previously conducted site walks.
- Notify Customer of any anomalies outside of Motorola's control that prevent site work to commence or have caused deviations from the originally proposed design.
- Review of work performed by others, as noted in this SOW, necessary to be completed prior to start of equipment installations.

Note: A preliminary site survey identified several R56 grounding deficiencies in the equipment room. Motorola has provided a ROM estimate to bring the site up to R56 standards and will perform a professional site audit upon contract award in order to provide a detailed quote for all agreed upon upgrades.

4.4 CIVIL/SITE PREPARATION

Customer shall be responsible for all civil work and site improvements that are not specifically listed as a Motorola responsibility. This work must be completed prior to the start of equipment installation.

Motorola Responsibilities

- Provide electrical and power requirements for Motorola provided equipment.
- Provide heat load for Motorola provided equipment.
- Provide equipment rack drawings and layout for Customer space planning.

Customer Responsibilities

- Secure site lease/ownership, zoning, permits, regulatory approvals, easements, power, and Telco connections.
- Provide clear and stable access to the sites for transporting electronics and other materials. Sufficient site access must be available for trucks to deliver materials under their own power and for personnel to move materials to the facility without assistance from special equipment.
- Supply adequately sized electrical service, backup power (UPS, generator, batteries, etc.) including the installation of conduit, circuit breakers, outlets, etc., at each equipment location within reach of AC line cords (typically 6-8').
- Provide adequate HVAC, grounding, lighting, and surge protection based upon Motorola's Standards and Guidelines for Communication Sites (R56).

- Provide floor space and desk space for the system equipment at Customer provided facilities. Each rack shall be provided a minimum 24-inch x 24-inch footprint with a 36-inch clearance in the front and back.
- Provide grounding system that meets Motorola's Standards and Guidelines for Communication Sites (R56) and supply a single point system ground, of five ohms or less, to be used on all equipment supplied under the Contract.
- Provide obstruction-free area for the cable run between equipment locations including conduits or raceways as required.
- Resolve any environmental issues including, but not limited to, asbestos, structural integrity of the site, and any other building risks. (Resolve environmental or hazardous material issues).
- Supply all permits as required.
- Complete all Customer deliverables in accordance with the approved project schedule.

Completion Criteria

- All sites are ready for equipment installations in compliance with Motorola's Standards and Guidelines for Communication Sites (R56).

4.5 PROJECT LIFECYCLE PHASES AND RESPONSIBILITIES

Based on many years of experience, Motorola has developed a project implementation methodology that identifies major project phases–Contract/Project Initiation (Award), Detailed Design Review, Order Processing, Manufacturing and Staging, Installation, System Optimization, Acceptance Testing, and Project Finalization. Each phase follows a Work Breakdown Structure (WBS) that clearly identifies the work to be performed during this project.

Throughout the duration of this project, Motorola will provide the equipment and services within each applicable phase as described within this proposal. Detailed descriptions of the specific tasks associated with the individual phases are contained in the following sections.

4.6 CONTRACT

4.6.1 Contract Award (Milestone)

- The Customer and Motorola execute the contract; both parties receive all the necessary documentation.

4.6.2 Contract Administration

Motorola Responsibilities

- Assign a Project Manager, as the single point of contact with authority to make project decisions.
- Assign resources necessary for project implementation.
- Set up the project in the Motorola information system.
- Schedule the project kickoff meeting with the Customer.

Customer Responsibilities

- Assign a Project Manager, as the single point of contact responsible for Customer signed approvals.
- Assign other resources necessary to ensure completion of project tasks for which the Customer is responsible.

4.6.3 Project Kickoff

Motorola Responsibilities

- Conduct a project kickoff meeting during the Contract Design Review (CDR) phase of the project.
- Ensure key project team participants attend the meeting.
- Introduce all project participants attending the meeting.
- Review the roles of the project participants to identify communication flows and decision-making authority between project participants.
- Review the overall project scope and objectives with the Customer.
- Review the resource and scheduling requirements with the Customer.
- Review the Project Schedule with the Customer to address upcoming milestones and/or events.
- Review the teams' interactions (Motorola and the Customer), meetings, reports, milestone acceptance, and the Customer's participation in particular phases.

Customer Responsibilities

- The Customer's key project team participants attend the meeting.
- Review Motorola and Customer Responsibilities.

4.7 CONTRACT DESIGN REVIEW (CDR)

4.7.1 Review Contract Design

Motorola Responsibilities

- Meet with the Customer project team (This may be combined with the project kickoff meeting.)
- Review the operational requirements and the impact of those requirements on various equipment configurations.
- Establish a defined baseline for the system design and identify any special product requirements and their impact on system implementation.
- Work with the Customer to develop programming templates for applicable components.
- Review the System Design, Statement of Work, Project Schedule, and Acceptance Test Plans, and update the contract documents accordingly.
- Discuss the proposed Cutover Plan and methods to document a detailed procedure.
- Submit design documents to the Customer for approval. These documents form the basis of the system, which Motorola will manufacture, assemble, stage, and install.
- Prepare equipment layout plans for staging.
- Establish demarcation point to define the connection point between the Motorola-supplied equipment and the Customer-supplied link(s) and external interfaces.
- Conduct site evaluations, if not previously conducted, to capture site details of the system design and to determine site readiness.

Customer Responsibilities:

- The Customer's key project team participants attend the meeting.
- Make timely decisions, according to the Project Schedule.

Completion Criteria

- Complete Design Documentation, which may include updated System Description, Equipment List, system drawings, or other documents applicable to the project.

- Incorporate any deviations from the proposed system into the contract documents accordingly.
- The system design is "frozen" in preparation for subsequent project phases such as Order Processing and Manufacturing.
- A Change Order is executed in accordance with all material changes resulting from the Design Review to the contract.

4.7.2 Design Approval (Milestone)

- The Customer executes a Design Approval milestone document.

4.8 ORDER PROCESSING

4.8.1 Process Equipment List

Motorola Responsibilities

- Validate Equipment List by checking for valid model numbers, versions, compatible options to main equipment, and delivery data.
- Enter order into Motorola's Customer Order Fulfillment (COF) system.
- Create Ship Views, to confirm with the Customer the secure storage location(s) to which the equipment will ship. Ship Views are the mailing labels that carry complete equipment shipping information, which direct the timing, method of shipment, and ship path for ultimate destination receipt.
- Create equipment orders.
- Reconcile the equipment list(s) to the Contract.

Customer Responsibilities

- Approve shipping location(s).

4.9 MANUFACTURING AND STAGING

4.9.1 Manufacture Equipment

Motorola Responsibilities:

- Manufacture and procure the Equipment necessary for the system based on equipment order.

Customer Responsibilities:

- None.

4.9.2 Ship to Staging (Milestone)

- Ship all equipment needed for staging to Motorola's Customer Center for Solutions Integration (CCSi) factory staging facility in Schaumburg, Illinois. There is no planned Customer attendance or Customer witnessed demonstration and test at CCSi.

4.9.3 Stage System

Motorola Responsibilities:

- Set up and rack the system equipment as it will be configured in the field.
- Cut and label cables according to the approved CDR documentation.
- Assemble required subsystems to assure system functionality.
- Power up, program, and test all staged equipment.
- Load application parameters on all equipment according to input from Systems Engineering.
- Inventory the equipment with serial numbers and installation references.
- Complete system documentation.
- Provide a Factory Acceptance Test Plan.

Customer Responsibilities:

- Provide information on existing system interfaces as may be required.
- Provide information on room layouts or other information necessary for the assembly to meet field conditions.

4.9.4 Perform Staging Acceptance Test Procedures

Motorola Responsibilities:

- Test and validate system software and features.
- Functional testing of standard system features.
- Power-up site equipment and perform standardized functionality tests.
- Perform system burn-in 24 hours a day during staging to isolate and capture any defects.

4.9.5 Ship Equipment to Field

Motorola Responsibilities:

- Pack system for shipment to final destination.
- Arrange for shipment to the field.

4.9.6 CCSi Ship Acceptance (Milestone)

- Staged equipment shipped to the field.

4.10 SYSTEM INSTALLATION

Implementation services included as part of this proposal will occur between normal business hours, Monday – Friday, 8:30am-5pm. Should Customer require services to occur during non-business hours, additional costs may apply and will be handled via the change order process.

The installation pricing assumes that existing building facilities have sufficient heating, ventilation and air conditioning (HVAC), space, necessary power and back-up power, along with required cable routing facilities and penetrations to interconnect the hardware. Facility improvements, removal or disposal of existing equipment, and/or temporary installations of equipment have not been included in the current scope of work.

The K2-core and MCC7500 dispatch consoles will be replacing the existing CENTRACOM Gold Elite dispatch system. In order to minimize disruptions and downtime, Motorola has planned for a

phased installation allowing a phased cutover from the Gold Elite consoles to the MCC7500 Consoles. A preliminary overview of this plan is described below and will be further refined and agreed upon during the Detailed Design Review.

1. K-Core and MCC7500 equipment will be installed in the equipment room including the service MCC7500 operator position.
    a. Pre-wire all conventional resources to CCGWs in accordance with design documents to support cutover plan.
    b. Pre-wire all Logging recorder inputs to CCGWs in accordance with design documents to support cutover plan.
    c. Pre-wire all AUX I/O inputs and outputs to AUX I/O blocks in accordance with design documents to support cutover plan.
2. Two new operator positions will be installed in locations not previously outfitted with Gold Elite positions: one in the main dispatch area and one in the supervisor office.
3. Three of the six existing Gold Elite operator positions will be decommissioned, removed and replaced by new MCC7500 operator position equipment. Dispatch operations will be limited to three positions from this time until cutover to the MCC7500 consoles.
4. The seven new MCC7500 positions will be configured and commissioned for testing and training.
5. Administrator/Supervisor Training will be delivered by Motorola's WLS trainer.
6. Cutover dispatch from Gold Elite to MCC7500 consoles.
7. Remaining three Gold Elite operator positions will be decommissioned, removed and replaced by new MCC7500 operator position equipment.
8. Cleanup and removal of remaining CENTRACOM electronics.

4.10.1 System Equipment

Motorola Responsibilities

Install the following subsystems as detailed in the System Description, Equipment List and System Diagrams in Customer provided equipment space:

4.10.1.1 Dispatch

- ASTRO 25 K2 Core.
- MCC 7500 Radio Dispatch System.
  - Six console positions will be installed in place of existing Gold Elite positions.
  - One additional position will be installed in the main dispatch room.
  - One position will be installed in the supervisor office.
  - One position will be installed in the equipment room to serve as a service position.

Perform the following interfaces:

- Required radio audio circuits to the existing logging recorder system.
- Install and interface CAT5e cabling between network switches and workstation equipment.
- Conventional resources to convention channel gateways.

- Radio audio to headset audio jacks.

Customer Responsibilities

- Provide space for the proposed equipment racks and console components.
- Provide sensors and controls for inputs and outputs to be controlled by MCC7500 AUX I/O server.
  - Motorola demarcation point for AUX I/O controls is at the provided punchblock.

4.10.2 Equipment Installation Complete

- Perform R56 site installation quality audits, verifying proper physical installation and operational configurations.
- Document and resolve any installation deficiencies.
- Motorola provided equipment installations completed and accepted by the Customer.

4.10.3 System Installation Acceptance (Milestone)

- All equipment installations are completed and accepted by the Customer.

4.11 SYSTEM OPTIMIZATION

4.11.1 Optimize System

Motorola Responsibilities

- Perform the console programming, based on the console templates designed and approved during the CDR phase.
- Verify that all equipment is operating properly and that all electrical and signal levels are set accurately.
- Verify that all audio and data levels are at factory settings.
- Motorola and its subcontractors optimize each subsystem.
- Check audio and data levels to verify factory settings.
- Verify communication interfaces between devices for proper operation.
- Test features and functionality are in accordance with manufacturers' specifications and that they comply with the final configuration established during the CDR/system staging.
- Setup the consoles to perform the dispatching operation.

Customer Responsibilities

- Provide access/escort to the sites.

4.11.2 Optimization Complete

- System optimization is completed. Motorola and the Customer agree that the equipment is ready for acceptance testing.

4.12 TRAINING

4.12.1 Perform Training

Dispatch supervisor training is provided as detailed in the Training Plan.

Motorola Responsibilities

- Provide applicable training materials to each student.
- Conduct the training classes outlined in the Training Plan.

Customer Responsibilities

- Coordinate with staff to ensure availability per the agreed upon schedule.

4.12.2 Training Complete

- All training classes completed.
- Motorola and Customer memorialize completion of training by signing a milestone completion certificate to be provided by Motorola.

4.13 AUDIT AND ACCEPTANCE TESTING

4.13.1 Perform Functional Acceptance Testing

Motorola Responsibilities

- Verify the operational functionality and features of the individual subsystems and the system supplied by Motorola, as contracted.
- If any major task as contractually described fails, repeat that particular task after Motorola determines that corrective action has been taken.
- Document all issues that arise during the acceptance tests.
- Document the results of the acceptance tests and present to the Customer for review.
- Resolve any minor task failures before Final System Acceptance.

Customer Responsibilities

- Witness the functional testing.

Completion Criteria

- Successful completion of the functional testing.
- Customer approval of the functional testing.

4.14 FINALIZE

4.14.1 Cutover

Motorola Responsibilities

- Motorola and the Customer develop a mutually agreed upon cutover plan based upon discussions held during the CDR.
- During cutover, follow the written plan and implement the defined contingencies, as required.

- Conduct cutover meeting(s) with user group representatives to address both how to mitigate technical and communication problem impact to the users during cutover and during the general operation of the system.

Customer Responsibilities

- Attend cutover meetings and approve the cutover plan.
- Notify the user group(s) affected by the cutover (date and time).

4.14.2 Resolve Punch list

Motorola Responsibilities

- Resolve Motorola assigned punch list items as part of Final Acceptance.

Customer Responsibilities

- Assist Motorola with resolution of identified punch list items by providing support, such as access to the sites, equipment and system, and approval of the resolved punch list item(s).
- Resolve Customer assigned punch list items.

4.14.3 Transition to Service/Project Transition Certificate

Motorola Responsibilities

- Review the items necessary for transitioning the project to warranty support and service.
- Provide a Customer Support Plan detailing the warranty and post warranty support, if applicable, associated with the Contract equipment.
- Provide additional information regarding post warranty support, included in the Warranty/Post Warranty section of this document.

Customer Responsibilities

- Participate in the Transition Service/Project Transition Certificate (PTC) process.

4.14.4 Finalize Documentation

Motorola Responsibilities

- Provide an electronic as-built system manual on a Compact Disk (CD). The documentation will include the following:
  - System Level Diagram.
  - Site Equipment Rack Configurations.
  - ATP Test Checklists.
  - Equipment Inventory List.
  - Console Programming Template
  - Operator, Product Manuals

Drawings are created utilizing AutoCAD design software and will be delivered in Adobe PDF format. All other system manual documents converted from native format to Adobe PDF format to be included on the System Manual CD.

Customer Responsibilities

- Receive and approve all documentation provided by Motorola.

4.14.5 Final Acceptance (Milestone)

- All deliverables completed, as contractually required.
- Final System Acceptance received from the Customer.

4.15 PROJECT ADMINISTRATION

4.15.1 Project Status Meetings

Motorola Responsibilities

- Motorola Project Manager, or designee, will attend all project status meetings with the Customer, as determined during the CDR.
- Record and distribute meeting minutes.
- The agenda will include the following:
  - Overall project status compared to the Project Schedule.
  - Product or service related issues that may affect the Project Schedule.
  - Status of the action items and the responsibilities associated with them, in accordance with the Project Schedule.
  - Any miscellaneous concerns of either the Customer or Motorola.

Customer Responsibilities

- Attend meetings.
- Respond to issues in a timely manner.

4.15.2 Progress Milestone Submittal

Motorola Responsibilities

- Submit progress milestone completion certificate/documentation.

Customer Responsibilities

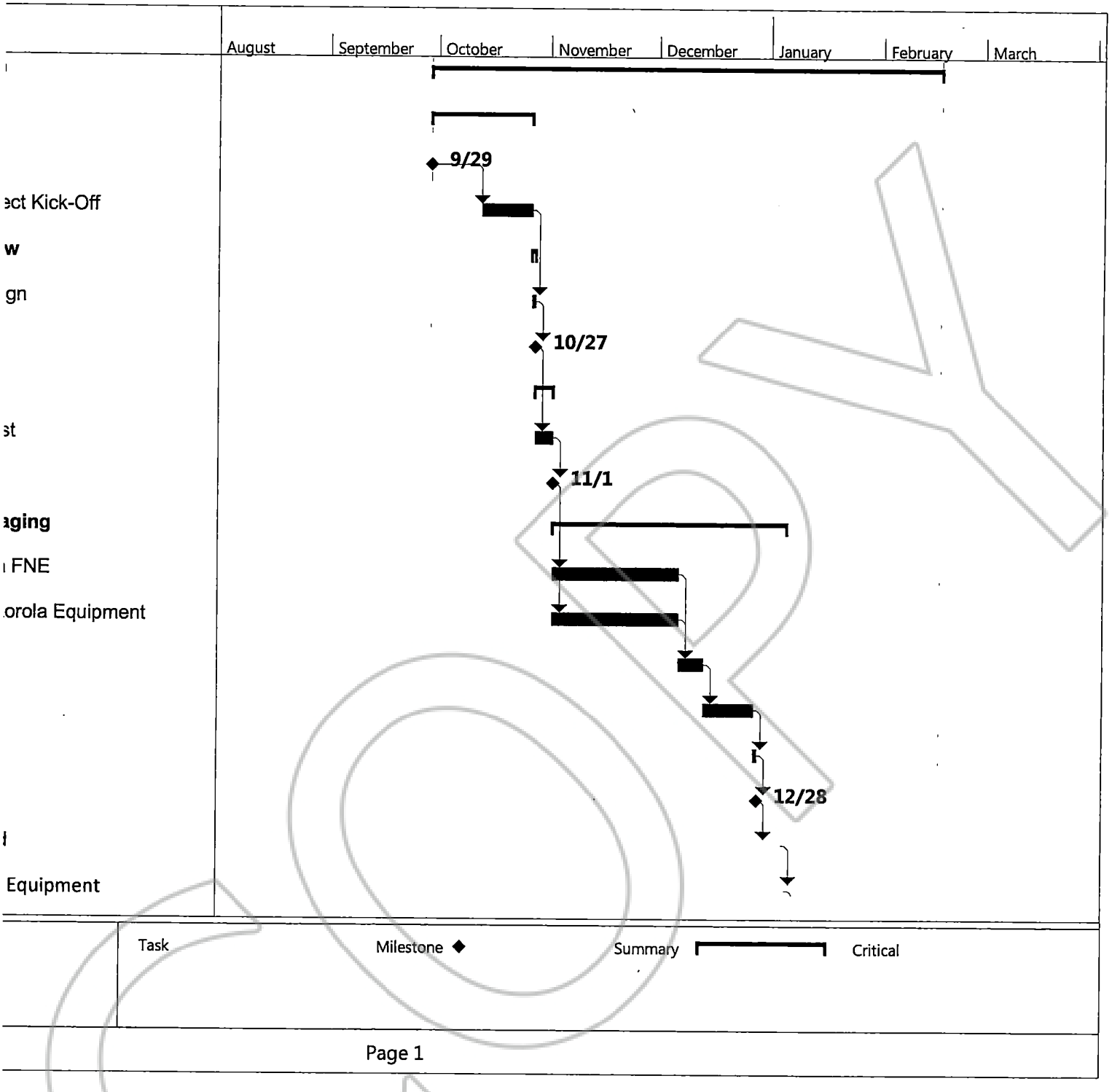
- Approve milestone, which will signify confirmation of completion of the work associated with the scheduled task.

4.15.3 Change Order Process

Either Party may request changes within the general scope of this Agreement. If a requested change causes an increase or decrease in the cost or time required to perform this Agreement, the Parties will agree to an equitable adjustment of the Contract Price, Performance Schedule, or both, and will reflect the adjustment in a change order. Neither Party is obligated to perform requested changes unless both Parties execute a written change order.

SECTION 5

PROJECT SCHEDULE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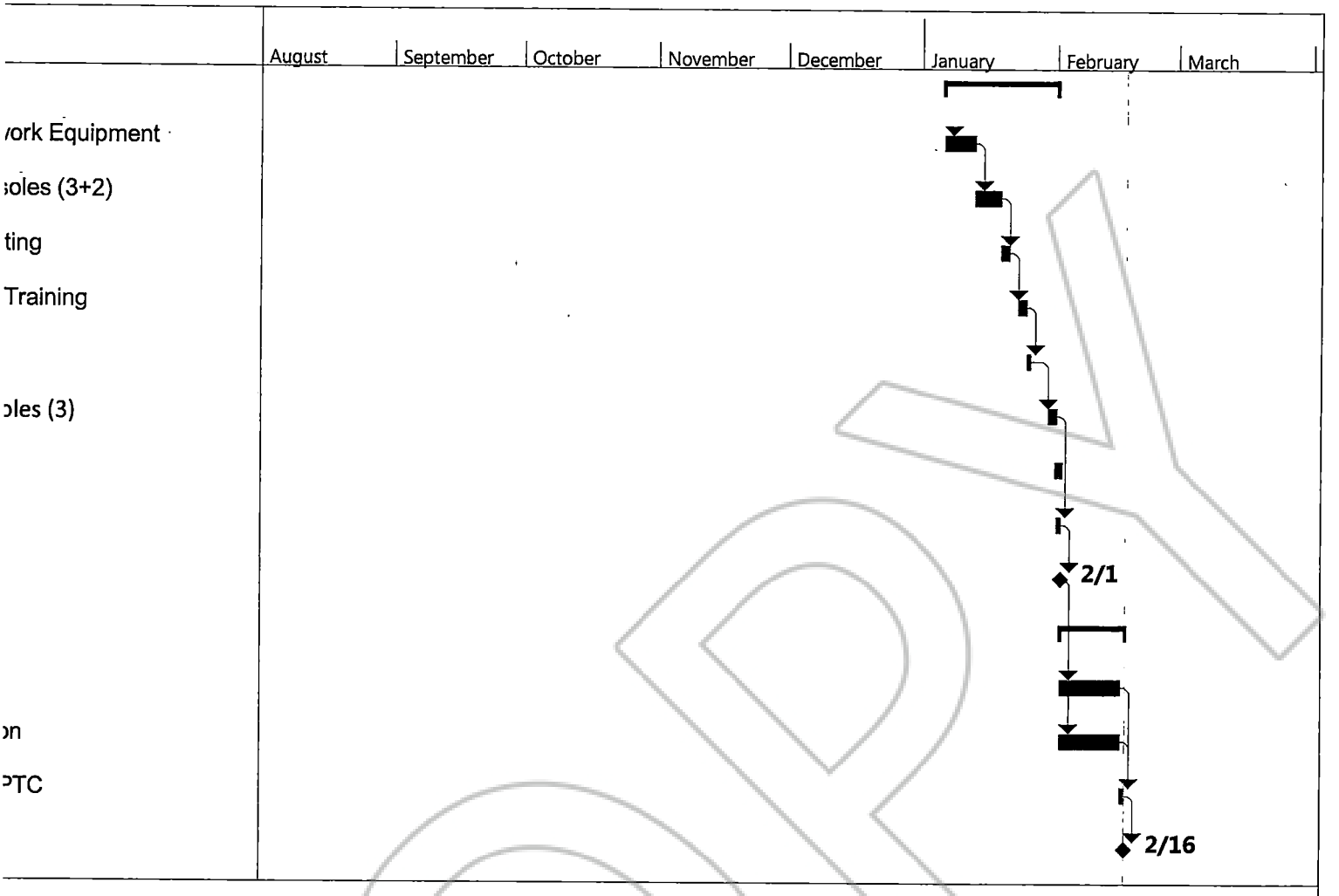

Task Milestone Summary Critical

SECTION 6

TRAINING PLAN

6.1 OVERVIEW

Our commitment to Customer is to provide unsurpassed services that ensure the equipment operates efficiently for the life of the system, and in doing so, directly train your personnel to acquire a level of knowledge to utilize the system at its maximum potential.

Dispatch personnel will gain in-depth understanding of the power of your new system through education and proficient daily use. Our high-quality training focuses attention on student needs. Training is complemented by our detailed documentation and available continuing education program.

6.2 COURSES PROPOSED

Motorola Solutions has identified the following courses that are necessary to achieve your training goals. Class delivery for instructor-led courses in the field will be tailored for your system and features. Course outlines and detailed descriptions can be provided upon request.

Specifically, our proposed training plan addresses the following courses:

6.2.1 Radio Dispatch System

Course	Target Audience	No. of Sessions	Duration (days)	Location	Date	No. of Attendees
MCC7500 Console Operator and Administrator Utilizing Interactive End User Tool Kit (2 training consoles)	Supervisors	1 (8-hour session)	1	Douglas County, NV	Prior to cutover	2
Operator Course Synopsis: This course provides participants with an introduction to the dispatch console, its basic operation and tailored job aids which will be available for assistance in operation. Through facilitation and hands-on activities, the user learns how to perform common tasks associated with the console operation. **Admin Course Synopsis:** This course provides participants with the knowledge and skills to manage and utilize the MCC 7500 console administrator functions. Through facilitation and hands-on activities, the participant learns how to customize the console screens. **Note:** During the first half of the day is the operator class. The Admin class and the Interactive End User Tool Kit will be covered in the second half of the day.						

6.2.1 Optional Technical Training

Course	Target Audience	No. of Sessions	Duration (days)	Location	Date	No. of Attendees
MCC 7000 Series Dispatch Consoles Workshop (Instructor-led)	Console Technicians	1	4 days	Douglas County, NV	Prior to maintaining	Up to 12
Course Synopsis: This course familiarizes participants with the installation, configuration, management and repair of MCC 7000 Series IP dispatch consoles. It also covers Archiving Interface Servers, AUX I/O servers, and Conventional Channel Gateways. The focus is on a detailed discussion of console hardware and hands-on activities with the installation and configuration of the MCC 7000 Series IP dispatch consoles.						

SECTION 7

ACCEPTANCE TEST PLAN

7.1 MCC 7100/7500 TRUNKED RESOURCES

7.1.1 Instant Transmit

1. DESCRIPTION

The instant transmit switch provides immediate operator access to a channel, independent of its select status (selected or unselected). It provides priority over other dispatcher transmit bars or optional footswitches.

SETUP

RADIO-1 - TALKGROUP 1
CONSOLE-1 – TALKGROUP 1 (Selected),
TALKGROUP 2 (Unselect mode)

VERSION #1.010

2. TEST

Step 1. Using CONSOLE-1, press the Instant Transmit button on TALKGROUP 1.

Step 2. Verify that the Transmit indicator is lit.

Step 3. Verify RADIO-1 can monitor and respond to the call on TALKGROUP 1.

Step 4. On RADIO-1 change to TALKGROUP 2.

Step 5. Using CONSOLE-1, press the Instant Transmit button on the TALKGROUP 2 radio resource.

Step 6. Verify RADIO-1 can monitor and respond to the call on TALKGROUP 2.

Pass____ Fail____

7.1.2 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____

7.1.3 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 #1.010

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.

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____

7.1.4 Multigroup Call

1. DESCRIPTION

This trunking feature allows an equipped console operator position to transmit an announcement to several different talkgroups simultaneously. As with Talkgroup Calls, multigroup calls operate across sites as well as within the same site.

SETUP

RADIO-1 - TALKGROUP 1
RADIO-2 - TALKGROUP 2
RADIO-3 - RANDOM .
CONSOLE-1 - ATG 1

Note: TALKGROUP 1 and TALKGROUP 2 are members of ATG 1. RANDOM is any talkgroup not a member of ATG 1.

VERSION #1.010

2. TEST

Step 1. Using CONSOLE-1, select the ATG 1 resource.

Step 2. Initiate the Multigroup Call from CONSOLE-1.

Step 3. Observe that RADIO-1 and RADIO-2 receive the Multigroup Call.

Step 4. Verify that RADIO-3 does not receive the Multigroup Call because it is not a member of ATG 1.

Step 5. Answer the Multigroup Call using RADIO-1 and observe CONSOLE-1 receives the response.

Step 6. Verify that if the call is answered within the repeater hang time, the console will receive the call on the ATG 1 resource tile, otherwise the console will receive the call on the TALKGROUP 1 tile.

Step 7. Verify that if the call is answered within the repeater hang time, RADIO-2 will monitor the call.

Pass____ Fail____

7.1.5 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____

7.1.6 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____

7.1.7 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____

7.1.8 Call Alert

1. DESCRIPTION

Call Alert Page allows a subscriber/dispatcher to selectively alert another radio unit. The initiating subscriber/console will receive notification as to whether or not the call alert was received. Units receiving a Call Alert will sound an alert tone and show a visual alert indication. The display will also show the individual ID of the initiating subscriber/console unit.

SETUP

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

VERSION #1.030

2. TEST

Step 1. Using CONSOLE-1, select the call alert button in the "Private Call" resource window.

Step 2. Enter the ID of RADIO-1 and send the call alert to RADIO-1.

Step 3. Verify that RADIO-1 receives the alert and that the ID or alias of the console is shown.

Step 4. Turn off RADIO-1.

Step 5. Using CONSOLE-1, send the call alert to RADIO-1 again.

Step 6. Verify that after trying to page RADIO-1, the console displays "Can not send call alert - target not found" in the summary/status list.

Pass____ Fail____

7.1.9 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____

7.2 SIGNOFF CERTIFICATE

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

Signatures

WITNESS: [redacted] Date: _____

Please Print Name: _____ [redacted] Initials:

Please Print Title: _____

WITNESS: [redacted] Date: _____

Please Print Name: _____ [redacted] Initials:

Please Print Title: _____

WITNESS: [redacted] Date: _____

Please Print Name: _____ [redacted] Initials:

Please Print Title: _____

SECTION 8

WARRANTY AND SUPPORT

Motorola has over 80 years of experience supporting mission critical communications for public safety and public service agencies. Motorola's technical and service professionals use a structured approach to life cycle service delivery and provide comprehensive maintenance and support throughout the life of the system. The value of support is measured by system availability, which is optimized through the use of proactive processes, such as preventive maintenance, fault monitoring and active response management. System availability is a function of having in place a support plan delivered by highly skilled support professionals, backed by proven processes, tools, and continuous training.

8.1 THE MOTOROLA SERVICE DELIVERY TEAM

8.1.1 Customer Support Manager

Your Motorola Customer Support Manager provides coordination of support resources to enhance the quality of service delivery and to ensure your satisfaction. The Customer Support Manager (CSM) is responsible to oversee the execution of the Warranty and Service Agreement and ensure that Motorola meets its response and restoration cycle time commitments. The CSM will supervise and manage the Motorola Authorized Servicer's functions.

Motorola has proven experience to deliver mission critical network support

- Extensive Experience – Motorola has over 80 years of experience supporting mission critical communications and the Public Safety community.
- Capacity to Respond – Motorola's network of local service centers, repair depots, system support center and parts support enable Motorola to provide quick and effective service delivery.
- Flexibility and Scalability – Motorola's Support Plans are customized to meet individual Customer needs.
- Skills and Process – Motorola uses a well-established, structured, and disciplined approach to provide service delivery. Motorola's team of well-trained and committed people understands the communications technology business.

8.1.2 Motorola System Technologists

The Motorola System Technologists (ST) are available to assist Motorola's Authorized Servicers when needed for network health and operations.

8.1.3 Motorola System Support Center

Located in Schaumburg, Illinois, the System Support Center (SSC) is a key component to the overall management and system maintenance. As detailed in this Customer Support Plan, the following services are provided by the System Support Center depending on the selected service package:

- Network Monitoring.
- Dispatch Service.
- Infrastructure Repair with Advanced Replacement.
- Technical Support.

8.1.4 Motorola Local Service Provider

Motorola's authorized service centers are staffed with trained and qualified technicians. They provide rapid response, repair, restoration, installations, removals, programming and scheduled preventive maintenance tasks for site standards compliance and RF operability. Motorola's authorized service centers are assessed annually for technical and administrative competency.

8.2 PROPOSED WARRANTY AND SUPPORT PLAN

Motorola places great emphasis on supplying communications systems with high standards for design, manufacture and performance. To enhance the value of the acquired communications system, Motorola offers customized warranty and post-warranty services as outlined in this section.

Motorola will provide warranty services per our standard warranty terms and conditions as outlined in the Communications System Agreement within this proposal. In addition to the warranty services, Motorola will provide at no charge during the Warranty Period above-warranty services that are described generally below. A full description and Statement of Work describing the services that will be provided are available upon request.

8.2.1 Dispatch Service

Motorola's System Support Center (SSC) is the single point of contact for all service issues. With Dispatch Service, one phone call to the SSC and the system response and restoration process begins immediately. Dispatch ensures that local, trained and qualified technicians will arrive on location within hours to diagnose and restore the communications network. Once the issue has been addressed the SSC verifies resolution and, with customer approval, closes the case. Activity records are also available to provide comprehensive history of site performance, issues, and resolutions.

8.2.2 Technical Support Service

Motorola Technical Support Service assures you maximum preparedness with on-demand technical support and commitment to restoration. The skilled professionals and advanced systems at the Motorola System Support Center are there to keep your network running at peak performance 24 hours a day, 7 days a week.

Specifically, Technical Support provides:

- Expert technologists trained in troubleshooting to analyze, isolate and correct problems to get your system issue(s) resolved quickly.
- Best-in-class Remote Diagnosis capabilities: advanced diagnostics and fully equipped test labs
- Automated test systems to quickly diagnose boards
- Shared knowledge database constantly updated for technologists to utilize to reduce cycle time
- Immediate access to Network Designers and Engineers
- Rigorous and defined case and escalation management process and procedures
- Motorola technologists participate in ongoing training programs
- Customer case performance reports available upon request

8.2.3 OnSite Infrastructure Response – Standard - 24X7

On Site Infrastructure Response provides local, trained and qualified technicians who arrive on location to diagnose and restore the communications network. Motorola Dispatch contacts the local authorized service center in your area and dispatches a qualified technician to the site. An automated

escalation and case management process ensures that the technician arrives and system restoration begins within the contracted response times.

The field technician performs first level trouble-shooting, provides information regarding the system condition, removes any failed components for repair, and reinstalls new or reconditioned components. If the technician is unable to resolve the issue, the case is escalated to the System Support Center or product engineering teams as needed.

8.2.4 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 ISO9001 and TL9000-certified processes and methodologies ensure that your equipment is quickly returned maintaining the highest quality standards.

8.2.5 Advanced Replacement

Advanced Replacement supplements your spares inventory with Motorola's centralized inventory of critical equipment. In advance of Motorola repairing the malfunctioning unit, a replacement unit is sent to you within 24 hours to ensure a spare unit is available. Upon receipt of the malfunctioning unit, Motorola repairs the unit and replaces it in our centralized inventory.

8.2.6 Network Preventative Maintenance

Network Preventative Maintenance provides an operational test and alignment on your infrastructure or fixed network equipment to ensure that it meets original manufacturer's specifications. Trained technicians:

- Physically inspect equipment
- Remove dust and foreign substances
- Clean filters
- Measure, record, align and adjust equipment to meet original manufacturer's specifications

This service is performed based on a schedule agreed upon between you and Motorola. Network Preventative Maintenance proactively detects issues that may result in system malfunctions and operational interruptions.

8.2.7 Security Update Service

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 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.

8.3 POST WARRANTY SERVICES

As Motorola's continuing commitment to supporting your system, warranty services can be extended after the Warranty Period to provide maintenance and service support in future years. Any of the services that we identify can be customized in future years, and are available for purchase either in "System Support Services" packages or as individual service offerings. These system support services significantly benefit you because the system can be effectively supported after the Warranty Period, thereby maximizing the operational capabilities and useful life of the system and protecting your investment in the system.

SECTION 9

PRICING SUMMARY

Motorola is pleased to provide the following equipment and services to Douglas County

Description	Price
Total System Price*	**$735,000.00**

*Sale price of $735,000 is based on Douglas County trade-in of existing CENTRACOM Gold Elite Central Electronics Bank (CEB) and Console Interface Electronics (CIE).

Description	Price
Optional MCC 7000 Series Dispatch Consoles Workshop (resident training)**	**$2,642.00 each student**

**Customer is responsible for travel and accommodations.

Description	Price
Optional MCC 7000 Series Dispatch Consoles Workshop (field delivered)	**$17,860.00**

Description	Price
ROM pricing for site R56 upgrades - TBD based on formal site R56 audit	**$8,000.00 - $14,000.00**

SECTION 10

TERMS AND CONDITIONS

This proposal is subject to the terms and conditions of the enclosed Communications System Agreement, together with its Exhibits.

Communications System Agreement

Motorola Solutions, Inc. ("Motorola") and Douglas County, Nevada ("Customer") enter into this "Agreement," pursuant to which Customer will purchase and Motorola will sell the System, as described below. Motorola and Customer may be referred to individually as a "Party" and collectively as the "Parties." For good and valuable consideration, the Parties agree as follows:

Section 1 EXHIBITS

The exhibits listed below are incorporated into and made a part of this Agreement. In interpreting this Agreement and resolving any ambiguities, the main body of this Agreement takes precedence over the exhibits and any inconsistency between Exhibits A through E will be resolved in their listed order.

Exhibit A	Motorola "Software License Agreement"
Exhibit B	"Payment Schedule"
Exhibit C	"Technical and Implementation Documents"
C-1	"System Description" dated October 26, 2016
C-2	"Equipment List" dated October 26, 2016
C-3	"Statement of Work" dated October 26, 2016
C-4	"Acceptance Test Plan" or "ATP" dated October 26, 2016
C-5	"Performance Schedule" dated October 26, 2016
Exhibit D	Service Statement(s) of Work and "Service Terms and Conditions" (if applicable)
Exhibit E	"System Acceptance Certificate"

Section 2 DEFINITIONS

Capitalized terms used in this Agreement have the following meanings:

2.1. "Acceptance Tests" means those tests described in the Acceptance Test Plan.

2.2. "Administrative User Credentials" means an account that has total access over the operating system, files, end user accounts and passwords at either the System level or box level. Customer's personnel with access to the Administrative User Credentials may be referred to as the Administrative User.

2.3. "Beneficial Use" means when Customer first uses the System or a Subsystem for operational purposes (excluding training or testing).

2.4. "Confidential Information" means all information consistent with the fulfillment of this Agreement that is (i) disclosed under this Agreement in oral, written, graphic, machine recognizable, and/or sample form, being clearly designated, labeled or marked as confidential or its equivalent or (ii) obtained by examination, testing or analysis of any hardware, software or any component part thereof provided by discloser to recipient. The nature and existence of this Agreement are considered Confidential Information. Confidential information that is disclosed orally must be identified as confidential at the time of disclosure and confirmed by the discloser by submitting a written document to the recipient within thirty (30) days after such disclosure. The written document must contain a summary of the Confidential Information disclosed with enough specificity for identification purpose and must be labeled or marked as confidential or its equivalent.

2.5. "Contract Price" means the price for the System, excluding applicable sales or similar taxes and freight charges.

2.6. "Effective Date" means that date upon which the last Party executes this Agreement.

2.7. "Equipment" means the equipment that Customer purchases from Motorola under this Agreement. Equipment that is part of the System is described in the Equipment List.

2.8. "Force Majeure" means an event, circumstance, or act of a third party that is beyond a Party's reasonable control (e.g., an act of God, an act of the public enemy, an act of a government entity, strikes or other labor disturbances, hurricanes, earthquakes, fires, floods, epidemics, embargoes, war, and riots).

2.9. "Infringement Claim" means a third party claim alleging that the Equipment manufactured by Motorola or the Motorola Software directly infringes a United States patent or copyright.

2.10. "Motorola Software" means Software that Motorola or its affiliated company owns.

2.11. "Non-Motorola Software" means Software that another party owns.

2.12. "Open Source Software" (also called "freeware" or "shareware") means software with either freely obtainable source code, license for modification, or permission for free distribution.

2.13. "Proprietary Rights" means the patents, patent applications, inventions, copyrights, trade secrets, trademarks, trade names, mask works, know-how, and other intellectual property rights in and to the Equipment and Software, including those created or produced by Motorola under this Agreement and any corrections, bug fixes, enhancements, updates or modifications to or derivative works from the Software whether made by Motorola or another party.

2.14. "Software" means the Motorola Software and Non-Motorola Software, in object code format that is furnished with the System or Equipment.

2.15. "Specifications" means the functionality and performance requirements that are described in the Technical and Implementation Documents.

2.16. "Subsystem" means a major part of the System that performs specific functions or operations. Subsystems are described in the Technical and Implementation Documents.

2.17. "System" means the Equipment, Software, and incidental hardware and materials that are combined together into an integrated system; the System is described in the Technical and Implementation Documents.

2.18. "System Acceptance" means the Acceptance Tests have been successfully completed.

2.19. "Warranty Period" means one (1) year from the date of System Acceptance or Beneficial Use, whichever occurs first.

Section 3 SCOPE OF AGREEMENT AND TERM

3.1. SCOPE OF WORK. Motorola will provide, install and test the System, and perform its other contractual responsibilities, all in accordance with this Agreement. Customer will perform its contractual responsibilities in accordance with this Agreement.

3.2. CHANGE ORDERS. Either Party may request changes within the general scope of this Agreement. If a requested change causes an increase or decrease in the cost or time required to perform this Agreement, the Parties will agree to an equitable adjustment of the Contract Price, Performance Schedule, or both, and will reflect the adjustment in a change order. Neither Party is obligated to perform requested changes unless both Parties execute a written change order.

3.3. TERM. Unless terminated in accordance with other provisions of this Agreement or extended by mutual agreement of the Parties, the term of this Agreement begins on the Effective Date and continues until the date of Final Project Acceptance or expiration of the Warranty Period, whichever occurs last.

3.4. ADDITIONAL EQUIPMENT OR SOFTWARE. For three (3) years after the Effective Date, Customer may order additional Equipment or Software if it is then available. Each order must refer to this Agreement and must specify the pricing and delivery terms. Notwithstanding any additional or contrary

terms in the order, the applicable provisions of this Agreement (except for pricing, delivery, passage of title and risk of loss to Equipment, warranty commencement, and payment terms) will govern the purchase and sale of the additional Equipment or Software. Title and risk of loss to additional Equipment will pass at shipment, warranty will commence upon delivery, and payment is due within twenty (20) days after the invoice date. Motorola will send Customer an invoice as the additional Equipment is shipped or Software is licensed. Alternatively, Customer may register with and place orders through Motorola Online ("MOL"), and this Agreement will be the "Underlying Agreement" for those MOL transactions rather than the MOL On-Line Terms and Conditions of Sale. MOL registration and other information may be found at https://businessonline.motorola.com and the MOL telephone number is (800) 814-0601.

3.5. MAINTENANCE SERVICE. During the Warranty Period, in addition to warranty services, Motorola will provide maintenance services for the Equipment and support for the Motorola Software pursuant to the Statement of Work set forth in Exhibit D. Those services and support are included in the Contract Price. If Customer wishes to purchase additional maintenance and support services for the Equipment during the Warranty Period, or any maintenance and support services for the Equipment either during the Warranty Period or after the Warranty Period, the description of and pricing for the services will be set forth in a separate document. If Customer wishes to purchase extended support for the Motorola Software after the Warranty Period, it may do so by ordering software subscription services. Unless otherwise agreed by the parties in writing, the terms and conditions applicable to those maintenance, support or software subscription services will be Motorola's standard Service Terms and Conditions, together with the appropriate statements of work.

3.6. MOTOROLA SOFTWARE. Any Motorola Software, including subsequent releases, is licensed to Customer solely in accordance with the Software License Agreement. Customer hereby accepts and agrees to abide by all of the terms and restrictions of the Software License Agreement.

3.7. NON-MOTOROLA SOFTWARE. Any Non-Motorola Software is licensed to Customer in accordance with the standard license, terms, and restrictions of the copyright owner on the Effective Date unless the copyright owner has granted to Motorola the right to sublicense the Non-Motorola Software pursuant to the Software License Agreement, in which case it applies and the copyright owner will have all of Licensor's rights and protections under the Software License Agreement. Motorola makes no representations or warranties of any kind regarding Non-Motorola Software. Non-Motorola Software may include Open Source Software. All Open Source Software is licensed to Customer in accordance with, and Customer agrees to abide by, the provisions of the standard license of the copyright owner and not the Software License Agreement. Upon request by Customer, Motorola will use commercially reasonable efforts to determine whether any Open Source Software will be provided under this Agreement; and if so, identify the Open Source Software and provide to Customer a copy of the applicable standard license (or specify where that license may be found); and provide to Customer a copy of the Open Source Software source code if it is publicly available without charge (although a distribution fee or a charge for related services may be applicable).

3.8. SUBSTITUTIONS. At no additional cost to Customer, Motorola may substitute any Equipment, Software, or services to be provided by Motorola, if the substitute meets or exceeds the Specifications and is of equivalent or better quality to the Customer. Any substitution will be reflected in a change order.

3.9. OPTIONAL EQUIPMENT OR SOFTWARE. This paragraph applies only if a "Priced Options" exhibit is shown in Section 1, or if the parties amend this Agreement to add a Priced Options exhibit. During the term of the option as stated in the Priced Options exhibit (or if no term is stated, then for one (1) year after the Effective Date), Customer has the right and option to purchase the equipment, software, and related services that are described in the Priced Options exhibit. Customer may exercise this option by giving written notice to Seller which must designate what equipment, software, and related services Customer is selecting (including quantities, if applicable). To the extent they apply, the terms and conditions of this Agreement will govern the transaction; however, the parties acknowledge that certain provisions must be agreed upon, and they agree to negotiate those in good faith promptly after Customer delivers the option exercise notice. Examples of provisions that may need to be negotiated are: specific lists of deliverables, statements of work, acceptance test plans, delivery and implementation schedules,

payment terms, maintenance and support provisions, additions to or modifications of the Software License Agreement, hosting terms, and modifications to the acceptance and warranty provisions.

Section 4 PERFORMANCE SCHEDULE

The Parties will perform their respective responsibilities in accordance with the Performance Schedule. By executing this Agreement, Customer authorizes Motorola to proceed with contract performance.

Section 5 CONTRACT PRICE, PAYMENT AND INVOICING

5.1. CONTRACT PRICE. The Contract Price in U.S. dollars is $ 735,000.00 . If applicable, a pricing summary is included with the Payment Schedule. Motorola has priced the services, Software, and Equipment as an integrated system. A reduction in Software or Equipment quantities, or services, may affect the overall Contract Price, including discounts if applicable.

5.2. INVOICING AND PAYMENT. Motorola will submit invoices to Customer according to the Payment Schedule. Except for a payment that is due on the Effective Date, Customer will make payments to Motorola within twenty (20) days after the date of each invoice. Customer will make payments when due in the form of a wire transfer, check, or cashier's check from a U.S. financial institution. Overdue invoices will bear simple interest at the maximum allowable rate. For reference, the Federal Tax Identification Number for Motorola Solutions, Inc. is 36-1115800.

5.3. FREIGHT, TITLE, AND RISK OF LOSS. Motorola will pre-pay and add all freight charges to the invoices. Title to the Equipment will pass to Customer upon shipment. Title to Software will not pass to Customer at any time. Risk of loss will pass to Customer upon delivery of the Equipment to the Customer. Motorola will pack and ship all Equipment in accordance with good commercial practices.

5.4. INVOICING AND SHIPPING ADDRESSES. Invoices will be sent to the Customer at the following address:

EMERGENCY SERVICES DISPATCH Attn: Ron Segan
P.O. Box 218, Minden, NV 89423

The address which is the ultimate destination where the Equipment will be delivered to Customer is:

EMERGENCY SERVICES DISPATCH
1615 8th St, Minden, NV 89423

The Equipment will be shipped to the Customer at the following address (insert if this information is known):

Customer may change this information by giving written notice to Motorola.

Section 6 SITES AND SITE CONDITIONS

6.1. ACCESS TO SITES. In addition to its responsibilities described elsewhere in this Agreement, Customer will provide a designated project manager; all necessary construction and building permits, zoning variances, licenses, and any other approvals that are necessary to develop or use the sites and mounting locations; and access to the work sites or vehicles identified in the Technical and Implementation Documents as reasonably requested by Motorola so that it may perform its duties in accordance with the Performance Schedule and Statement of Work. If the Statement of Work so indicates, Motorola may assist Customer in the local building permit process.

6.2. SITE CONDITIONS. Customer will ensure that all work sites it provides will be safe, secure, and in compliance with all applicable industry and OSHA standards. To the extent applicable and unless the Statement of Work states to the contrary, Customer will ensure that these work sites have adequate: physical space; air conditioning and other environmental conditions; adequate and appropriate electrical

power outlets, distribution, equipment and connections; and adequate telephone or other communication lines (including modem access and adequate interfacing networking capabilities), all for the installation, use and maintenance of the System. Before installing the Equipment or Software at a work site, Motorola may inspect the work site and advise Customer of any apparent deficiencies or non-conformities with the requirements of this Section. This Agreement is predicated upon normal soil conditions as defined by the version of E.I.A. standard RS-222 in effect on the Effective Date.

6.3. SITE ISSUES. If a Party determines that the sites identified in the Technical and Implementation Documents are no longer available or desired, or if subsurface, structural, adverse environmental or latent conditions at any site differ from those indicated in the Technical and Implementation Documents, the Parties will promptly investigate the conditions and will select replacement sites or adjust the installation plans and specifications as necessary. If change in sites or adjustment to the installation plans and specifications causes a change in the cost or time to perform, the Parties will equitably amend the Contract Price, Performance Schedule, or both, by a change order.

Section 7 TRAINING

Any training to be provided by Motorola to Customer will be described in the Statement of Work. Customer will notify Motorola immediately if a date change for a scheduled training program is required. If Motorola incurs additional costs because Customer reschedules a training program less than thirty (30) days before its scheduled start date, Motorola may recover these additional costs.

Section 8 SYSTEM ACCEPTANCE

8.1. COMMENCEMENT OF ACCEPTANCE TESTING. Motorola will provide to Customer at least ten (10) days notice before the Acceptance Tests commence. System testing will occur only in accordance with the Acceptance Test Plan.

8.2. SYSTEM ACCEPTANCE. System Acceptance will occur upon successful completion of the Acceptance Tests. Upon System Acceptance, the Parties will memorialize this event by promptly executing a System Acceptance Certificate. If the Acceptance Test Plan includes separate tests for individual Subsystems or phases of the System, acceptance of the individual Subsystem or phase will occur upon the successful completion of the Acceptance Tests for the Subsystem or phase, and the Parties will promptly execute an acceptance certificate for the Subsystem or phase. If Customer believes the System has failed the completed Acceptance Tests, Customer will provide to Motorola a written notice that includes the specific details of the failure. If Customer does not provide to Motorola a failure notice within thirty (30) days after completion of the Acceptance Tests, System Acceptance will be deemed to have occurred as of the completion of the Acceptance Tests. Minor omissions or variances in the System that do not materially impair the operation of the System as a whole will not postpone System Acceptance or Subsystem acceptance, but will be corrected according to a mutually agreed schedule.

8.3. BENEFICIAL USE. Customer acknowledges that Motorola's ability to perform its implementation and testing responsibilities may be impeded if Customer begins using the System before System Acceptance. Therefore, Customer will not commence Beneficial Use before System Acceptance without Motorola's prior written authorization, which will not be unreasonably withheld. Motorola is not responsible for System performance deficiencies that occur during unauthorized Beneficial Use. Upon commencement of Beneficial Use, Customer assumes responsibility for the use and operation of the System.

8.4 FINAL PROJECT ACCEPTANCE. Final Project Acceptance will occur after System Acceptance when all deliverables and other work have been completed. When Final Project Acceptance occurs, the parties will promptly memorialize this final event by so indicating on the System Acceptance Certificate.

Section 9 REPRESENTATIONS AND WARRANTIES

9.1. SYSTEM FUNCTIONALITY. Motorola represents that the System will perform in accordance with the Specifications in all material respects. Upon System Acceptance or Beneficial Use, whichever

occurs first, this System functionality representation is fulfilled. Motorola is not responsible for System performance deficiencies that are caused by ancillary equipment not furnished by Motorola which is attached to or used in connection with the System or for reasons or parties beyond Motorola's control, such as natural causes; the construction of a building that adversely affects the microwave path reliability or radio frequency (RF) coverage; the addition of frequencies at System sites that cause RF interference or intermodulation; or Customer changes to load usage or configuration outside the Specifications.

9.2. EQUIPMENT WARRANTY. During the Warranty Period, Motorola warrants that the Equipment under normal use and service will be free from material defects in materials and workmanship. If System Acceptance is delayed beyond six (6) months after shipment of the Equipment by events or causes within Customer's control, this warranty expires eighteen (18) months after the shipment of the Equipment.

9.3. MOTOROLA SOFTWARE WARRANTY. Unless otherwise stated in the Software License Agreement, during the Warranty Period, Motorola warrants the Motorola Software in accordance with the terms of the Software License Agreement and the provisions of this Section 9 that are applicable to the Motorola Software. If System Acceptance is delayed beyond six (6) months after shipment of the Motorola Software by events or causes within Customer's control, this warranty expires eighteen (18) months after the shipment of the Motorola Software. TO THE EXTENT, IF ANY, THAT THERE IS A SEPARATE LICENSE AGREEMENT PACKAGED WITH, OR PROVIDED ELECTRONICALLY WITH, A PARTICULAR PRODUCT THAT BECOMES EFFECTIVE ON AN ACT OF ACCEPTANCE BY THE END USER, THEN THAT AGREEMENT SUPERCEDES THIS SOFTWARE LICENSE AGREEMENT AS TO THE END USER OF EACH SUCH PRODUCT.

9.4. EXCLUSIONS TO EQUIPMENT AND MOTOROLA SOFTWARE WARRANTIES. These warranties do not apply to: (i) defects or damage resulting from: use of the Equipment or Motorola Software in other than its normal, customary, and authorized manner; accident, liquids, neglect, or acts of God; testing, maintenance, disassembly, repair, installation, alteration, modification, or adjustment not provided or authorized in writing by Motorola; Customer's failure to comply with all applicable industry and OSHA standards; (ii) breakage of or damage to antennas unless caused directly by defects in material or workmanship; (iii) Equipment that has had the serial number removed or made illegible; (iv) batteries (because they carry their own separate limited warranty) or consumables; (v) freight costs to ship Equipment to the repair depot; (vi) scratches or other cosmetic damage to Equipment surfaces that does not affect the operation of the Equipment; and (vii) normal or customary wear and tear.

9.5. WARRANTY CLAIMS. To assert a warranty claim, Customer must notify Motorola in writing of the claim before the expiration of the Warranty Period. Upon receipt of this notice, Motorola will investigate the warranty claim. If this investigation confirms a valid warranty claim, Motorola will (at its option and at no additional charge to Customer) repair the defective Equipment or Motorola Software, replace it with the same or equivalent product, or refund the price of the defective Equipment or Motorola Software. That action will be the full extent of Motorola's liability for the warranty claim. If this investigation indicates the warranty claim is not valid, then Motorola may invoice Customer for responding to the claim on a time and materials basis using Motorola's then current labor rates. Repaired or replaced product is warranted for the balance of the original applicable warranty period. All replaced products or parts will become the property of Motorola.

9.6. ORIGINAL END USER IS COVERED. These express limited warranties are extended by Motorola to the original user purchasing the System for commercial, industrial, or governmental use only, and are not assignable or transferable.

9.7. DISCLAIMER OF OTHER WARRANTIES. THESE WARRANTIES ARE THE COMPLETE WARRANTIES FOR THE EQUIPMENT AND MOTOROLA SOFTWARE PROVIDED UNDER THIS AGREEMENT AND ARE GIVEN IN LIEU OF ALL OTHER WARRANTIES. MOTOROLA DISCLAIMS ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Section 10 DELAYS

10.1. FORCE MAJEURE. Neither Party will be liable for its non-performance or delayed performance if caused by a Force Majeure. A Party that becomes aware of a Force Majeure that will significantly delay performance will notify the other Party promptly (but in no event later than fifteen days) after it discovers the Force Majeure. If a Force Majeure occurs, the Parties will execute a change order to extend the Performance Schedule for a time period that is reasonable under the circumstances.

10.2. PERFORMANCE SCHEDULE DELAYS CAUSED BY CUSTOMER. If Customer (including its other contractors) delays the Performance Schedule, it will make the promised payments according to the Payment Schedule as if no delay occurred; and the Parties will execute a change order to extend the Performance Schedule and, if requested, compensate Motorola for all reasonable charges incurred because of the delay. Delay charges may include costs incurred by Motorola or its subcontractors for additional freight, warehousing and handling of Equipment; extension of the warranties; travel; suspending and re-mobilizing the work; additional engineering, project management, and standby time calculated at then current rates; and preparing and implementing an alternative implementation plan.

Section 11 DISPUTES

The Parties will use the following procedure to address any dispute arising under this Agreement (a "Dispute").

11.1. GOVERNING LAW. This Agreement will be governed by and construed in accordance with the laws of the State in which the System is installed.

11.2. NEGOTIATION. Either Party may initiate the Dispute resolution procedures by sending a notice of Dispute ("Notice of Dispute"). The Parties will attempt to resolve the Dispute promptly through good faith negotiations including 1) timely escalation of the Dispute to executives who have authority to settle the Dispute and who are at a higher level of management than the persons with direct responsibility for the matter and 2) direct communication between the executives. If the Dispute has not been resolved within ten (10) days from the Notice of Dispute, the Parties will proceed to mediation.

11.3 MEDIATION. The Parties will choose an independent mediator within thirty (30) days of a notice to mediate from either Party ("Notice of Mediation"). Neither Party may unreasonably withhold consent to the selection of a mediator. If the Parties are unable to agree upon a mediator, either Party may request that American Arbitration Association nominate a mediator. Each Party will bear its own costs of mediation, but the Parties will share the cost of the mediator equally. Each Party will participate in the mediation in good faith and will be represented at the mediation by a business executive with authority to settle the Dispute.

11.4. LITIGATION, VENUE and JURISDICTION. If a Dispute remains unresolved for sixty (60) days after receipt of the Notice of Mediation, either Party may then submit the Dispute to a court of competent jurisdiction in the state in which the System is installed. Each Party irrevocably agrees to submit to the exclusive jurisdiction of the courts in such state over any claim or matter arising under or in connection with this Agreement.

11.5. CONFIDENTIALITY. All communications pursuant to subsections 11.2 and 11.3 will be treated as compromise and settlement negotiations for purposes of applicable rules of evidence and any additional confidentiality protections provided by applicable law. The use of these Dispute resolution procedures will not be construed under the doctrines of laches, waiver or estoppel to affect adversely the rights of either Party.

Section 12 DEFAULT AND TERMINATION

12.1 DEFAULT BY A PARTY. If either Party fails to perform a material obligation under this Agreement, the other Party may consider the non-performing Party to be in default (unless a Force Majeure causes the failure) and may assert a default claim by giving the non-performing Party a written and detailed notice of default. Except for a default by Customer for failing to pay any amount when due under this Agreement which must be cured immediately, the defaulting Party will have thirty (30) days

after receipt of the notice of default to either cure the default or, if the default is not curable within thirty (30) days, provide a written cure plan. The defaulting Party will begin implementing the cure plan immediately after receipt of notice by the other Party that it approves the plan. If Customer is the defaulting Party, Motorola may stop work on the project until it approves the Customer's cure plan.

12.2. FAILURE TO CURE. If a defaulting Party fails to cure the default as provided above in Section 12.1, unless otherwise agreed in writing, the non-defaulting Party may terminate any unfulfilled portion of this Agreement. In the event of termination for default, the defaulting Party will promptly return to the non-defaulting Party any of its Confidential Information. If Customer is the non-defaulting Party, terminates this Agreement as permitted by this Section, and completes the System through a third Party, Customer may as its exclusive remedy recover from Motorola reasonable costs incurred to complete the System to a capability not exceeding that specified in this Agreement less the unpaid portion of the Contract Price. Customer will mitigate damages and provide Motorola with detailed invoices substantiating the charges.

Section 13 INDEMNIFICATION

13.1. GENERAL INDEMNITY BY MOTOROLA. Motorola will indemnify and hold Customer harmless from any and all liability, expense, judgment, suit, cause of action, or demand for personal injury, death, or direct damage to tangible property which may accrue against Customer to the extent it is caused by the negligence of Motorola, its subcontractors, or their employees or agents, while performing their duties under this Agreement, if Customer gives Motorola prompt, written notice of any claim or suit. Customer will cooperate with Motorola in its defense or settlement of the claim or suit. This section sets forth the full extent of Motorola's general indemnification of Customer from liabilities that are in any way related to Motorola's performance under this Agreement.

13.2. GENERAL INDEMNITY BY CUSTOMER. Customer will indemnify and hold Motorola harmless from any and all liability, expense, judgment, suit, cause of action, or demand for personal injury, death, or direct damage to tangible property which may accrue against Motorola to the extent it is caused by the negligence of Customer, its other contractors, or their employees or agents, while performing their duties under this Agreement, if Motorola gives Customer prompt, written notice of any the claim or suit. Motorola will cooperate with Customer in its defense or settlement of the claim or suit. This section sets forth the full extent of Customer's general indemnification of Motorola from liabilities that are in any way related to Customer's performance under this Agreement.

13.3. PATENT AND COPYRIGHT INFRINGEMENT.

13.3.1. Motorola will defend at its expense any suit brought against Customer to the extent it is based on a third-party claim alleging that the Equipment manufactured by Motorola or the Motorola Software ("Motorola Product") directly infringes a United States patent or copyright ("Infringement Claim"). Motorola's duties to defend and indemnify are conditioned upon: Customer promptly notifying Motorola in writing of the Infringement Claim; Motorola having sole control of the defense of the suit and all negotiations for its settlement or compromise; and Customer providing to Motorola cooperation and, if requested by Motorola, reasonable assistance in the defense of the Infringement Claim. In addition to Motorola's obligation to defend, and subject to the same conditions, Motorola will pay all damages finally awarded against Customer by a court of competent jurisdiction for an Infringement Claim or agreed to, in writing, by Motorola in settlement of an Infringement Claim.

13.3.2. If an Infringement Claim occurs, or in Motorola's opinion is likely to occur, Motorola may at its option and expense: (a) procure for Customer the right to continue using the Motorola Product; (b) replace or modify the Motorola Product so that it becomes non-infringing while providing functionally equivalent performance; or (c) accept the return of the Motorola Product and grant Customer a credit for the Motorola Product, less a reasonable charge for depreciation. The depreciation amount will be calculated based upon generally accepted accounting standards.

13.3.3. Motorola will have no duty to defend or indemnify for any Infringement Claim that is based upon: (a) the combination of the Motorola Product with any software, apparatus or device not furnished by Motorola; (b) the use of ancillary equipment or software not furnished by Motorola and that is attached to

or used in connection with the Motorola Product; (c) Motorola Product designed or manufactured in accordance with Customer's designs, specifications, guidelines or instructions, if the alleged infringement would not have occurred without such designs, specifications, guidelines or instructions; (d) a modification of the Motorola Product by a party other than Motorola; (e) use of the Motorola Product in a manner for which the Motorola Product was not designed or that is inconsistent with the terms of this Agreement; or (f) the failure by Customer to install an enhancement release to the Motorola Software that is intended to correct the claimed infringement. In no event will Motorola's liability resulting from its indemnity obligation to Customer extend in any way to royalties payable on a per use basis or the Customer's revenues, or any royalty basis other than a reasonable royalty based upon revenue derived by Motorola from Customer from sales or license of the infringing Motorola Product.

13.3.4. This Section 13 provides Customer's sole and exclusive remedies and Motorola's entire liability in the event of an Infringement Claim. Customer has no right to recover and Motorola has no obligation to provide any other or further remedies, whether under another provision of this Agreement or any other legal theory or principle, in connection with an Infringement Claim. In addition, the rights and remedies provided in this Section 13 are subject to and limited by the restrictions set forth in Section 14.

Section 14 LIMITATION OF LIABILITY

Except for personal injury or death, Motorola's total liability, whether for breach of contract, warranty, negligence, strict liability in tort, indemnification, or otherwise, will be limited to the direct damages recoverable under law, but not to exceed the price of the Equipment, Software, or services with respect to which losses or damages are claimed. ALTHOUGH THE PARTIES ACKNOWLEDGE THE POSSIBILITY OF SUCH LOSSES OR DAMAGES, THEY AGREE THAT MOTOROLA WILL NOT BE LIABLE FOR ANY COMMERCIAL LOSS; INCONVENIENCE; LOSS OF USE, TIME, DATA, GOOD WILL, REVENUES, PROFITS OR SAVINGS; OR OTHER SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO OR ARISING FROM THIS AGREEMENT, THE SALE OR USE OF THE EQUIPMENT OR SOFTWARE, OR THE PERFORMANCE OF SERVICES BY MOTOROLA PURSUANT TO THIS AGREEMENT. This limitation of liability provision survives the expiration or termination of the Agreement and applies notwithstanding any contrary provision. No action for contract breach or otherwise relating to the transactions contemplated by this Agreement may be brought more than one (1) year after the accrual of the cause of action, except for money due upon an open account.

Section 15 CONFIDENTIALITY AND PROPRIETARY RIGHTS

15.1. CONFIDENTIAL INFORMATION.

15.1.1. Each party is a disclosing party ("Discloser") and a receiving party ("Recipient") under this Agreement. During the term of this Agreement and for a period of three (3) years from the expiration or termination of this Agreement, Recipient will (i) not disclose Confidential Information to any third party; (ii) restrict disclosure of Confidential Information to only those employees (including, but not limited to, employees of any wholly owned subsidiary, a parent company, any other wholly owned subsidiaries of the same parent company), agents or consultants who must be directly involved with the Confidential Information for the purpose and who are bound by confidentiality terms substantially similar to those in this Agreement; (iii) not copy, reproduce, reverse engineer, de-compile or disassemble any Confidential Information; (iv) use the same degree of care as for its own information of like importance, but at least use reasonable care, in safeguarding against disclosure of Confidential Information; (v) promptly notify Discloser upon discovery of any unauthorized use or disclosure of the Confidential Information and take reasonable steps to regain possession of the Confidential Information and prevent further unauthorized actions or other breach of this Agreement; and (vi) only use the Confidential Information as needed to fulfill this Agreement.

15.1.2. Recipient is not obligated to maintain as confidential, Confidential Information that Recipient can demonstrate by documentation (i) is now available or becomes available to the public without breach of this Agreement; (ii) is explicitly approved for release by written authorization of Discloser; (iii) is lawfully obtained from a third party or parties without a duty of confidentiality; (iv) is known to the Recipient prior to

such disclosure; or (v) is independently developed by Recipient without the use of any of Discloser's Confidential Information or any breach of this Agreement.

15.1.3. All Confidential Information remains the property of the discloser and will not be copied or reproduced without the express written permission of the Discloser, except for copies that are absolutely necessary in order to fulfill this Agreement. Within ten (10) days of receipt of Discloser's written request, Recipient will return all Confidential Information to Discloser along with all copies and portions thereof, or certify in writing that all such Confidential Information has been destroyed. However, Recipient may retain one (1) archival copy of the Confidential Information that it may use only in case of a dispute concerning this Agreement. No license, express or implied, in the Confidential Information is granted other than to use the Confidential Information in the manner and to the extent authorized by this Agreement. The Discloser warrants that it is authorized to disclose any Confidential Information it discloses pursuant to this Agreement.

15.2. PRESERVATION OF MOTOROLA'S PROPRIETARY RIGHTS. Motorola, the third party manufacturer of any Equipment, and the copyright owner of any Non-Motorola Software own and retain all of their respective Proprietary Rights in the Equipment and Software, and nothing in this Agreement is intended to restrict their Proprietary Rights. All intellectual property developed, originated, or prepared by Motorola in connection with providing to Customer the Equipment, Software, or related services remain vested exclusively in Motorola, and this Agreement does not grant to Customer any shared development rights of intellectual property. Except as explicitly provided in the Software License Agreement, Motorola does not grant to Customer, either directly or by implication, estoppel, or otherwise, any right, title or interest in Motorola's Proprietary Rights. Customer will not modify, disassemble, peel components, decompile, otherwise reverse engineer or attempt to reverse engineer, derive source code or create derivative works from, adapt, translate, merge with other software, reproduce, distribute, sublicense, sell or export the Software, or permit or encourage any third party to do so. The preceding sentence does not apply to Open Source Software which is governed by the standard license of the copyright owner.

Section 16 GENERAL

16.1. TAXES. The Contract Price does not include any excise, sales, lease, use, property, or other taxes, assessments or duties, all of which will be paid by Customer except as exempt by law. If Motorola is required to pay any of these taxes, Motorola will send an invoice to Customer and Customer will pay to Motorola the amount of the taxes (including any interest and penalties) within twenty (20) days after the date of the invoice. Customer will be solely responsible for reporting the Equipment for personal property tax purposes, and Motorola will be solely responsible for reporting taxes on its income or net worth.

16.2. ASSIGNABILITY AND SUBCONTRACTING. Except as provided herein, neither Party may assign this Agreement or any of its rights or obligations hereunder without the prior written consent of the other Party, which consent will not be unreasonably withheld. Any attempted assignment, delegation, or transfer without the necessary consent will be void. Notwithstanding the foregoing, Motorola may assign this Agreement to any of its affiliates or its right to receive payment without the prior consent of Customer. In addition, in the event Motorola separates one or more of its businesses (each a "Separated Business"), whether by way of a sale, establishment of a joint venture, spin-off or otherwise (each a "Separation Event"), Motorola may, without the prior written consent of the other Party and at no additional cost to Motorola, assign this Agreement such that it will continue to benefit the Separated Business and its affiliates (and Motorola and its affiliates, to the extent applicable) following the Separation Event. Motorola may subcontract any of the work, but subcontracting will not relieve Motorola of its duties under this Agreement.

16.3 WAIVER. Failure or delay by either Party to exercise a right or power under this Agreement will not be a waiver of the right or power. For a waiver of a right or power to be effective, it must be in a writing signed by the waiving Party. An effective waiver of a right or power will not be construed as either a future or continuing waiver of that same right or power, or the waiver of any other right or power.

16.4. SEVERABILITY. If a court of competent jurisdiction renders any part of this Agreement invalid or unenforceable, that part will be severed and the remainder of this Agreement will continue in full force and effect.

16.5. INDEPENDENT CONTRACTORS. Each Party will perform its duties under this Agreement as an independent contractor. The Parties and their personnel will not be considered to be employees or agents of the other Party. Nothing in this Agreement will be interpreted as granting either Party the right or authority to make commitments of any kind for the other. This Agreement will not constitute, create, or be interpreted as a joint venture, partnership or formal business organization of any kind.

16.6. HEADINGS AND SECTION REFERENCES. The section headings in this Agreement are inserted only for convenience and are not to be construed as part of this Agreement or as a limitation of the scope of the particular section to which the heading refers. This Agreement will be fairly interpreted in accordance with its terms and conditions and not for or against either Party.

16.7. ENTIRE AGREEMENT. This Agreement, including all Exhibits, constitutes the entire agreement of the Parties regarding the subject matter of the Agreement and supersedes all previous agreements, proposals, and understandings, whether written or oral, relating to this subject matter. This Agreement may be executed in multiple counterparts, and shall have the same legal force and effect as if the Parties had executed it as a single document. The Parties may sign in writing, or by electronic signature, including by email. An electronic signature, or a facsimile copy or computer image, such as a PDF or tiff image, of a signature, shall be treated as and shall have the same effect as an original signature. In addition, an electronic signature, a true and correct facsimile copy or computer image of this Agreement shall be treated as and shall have the same effect as an original signed copy of this document. This Agreement may be amended or modified only by a written instrument signed by authorized representatives of both Parties. The preprinted terms and conditions found on any Customer purchase order, acknowledgment or other form will not be considered an amendment or modification of this Agreement, even if a representative of each Party signs that document.

16.8. NOTICES. Notices required under this Agreement to be given by one Party to the other must be in writing and either personally delivered or sent to the address shown below by certified mail, return receipt requested and postage prepaid (or by a recognized courier service, such as Federal Express, UPS, or DHL), or by facsimile with correct answerback received, and will be effective upon receipt:

Motorola Solutions, Inc.	Customer
Attn: _____	Attn: Ron Segan
_____	P.O. Box 218, Minden, NV 89423
fax: _____	fax: 775-782-6286

16.9. COMPLIANCE WITH APPLICABLE LAWS. Each Party will comply with all applicable federal, state, and local laws, regulations and rules concerning the performance of this Agreement or use of the System. Customer will obtain and comply with all Federal Communications Commission ("FCC") licenses and authorizations required for the installation, operation and use of the System before the scheduled installation of the Equipment. Although Motorola might assist Customer in the preparation of its FCC license applications, neither Motorola nor any of its employees is an agent or representative of Customer in FCC or other matters.

16.10. AUTHORITY TO EXECUTE AGREEMENT. Each Party represents that it has obtained all necessary approvals, consents and authorizations to enter into this Agreement and to perform its duties under this Agreement; the person executing this Agreement on its behalf has the authority to do so; upon execution and delivery of this Agreement by the Parties, it is a valid and binding contract, enforceable in accordance with its terms; and the execution, delivery, and performance of this Agreement does not violate any bylaw, charter, regulation, law or any other governing authority of the Party.

16.11. ADMINISTRATOR LEVEL ACCOUNT ACCESS. Motorola will provide Customer with Administrative User Credentials. Customer agrees to only grant Administrative User Credentials to those personnel with the training or experience to correctly use the access. Customer is responsible for

protecting Administrative User Credentials from disclosure and maintaining Credential validity by, among other things, updating passwords when required. Customer may be asked to provide valid Administrative User Credentials when in contact with Motorola System support. Customer understands that changes made as the Administrative User can significantly impact the performance of the System. Customer agrees that it will be solely responsible for any negative impact on the System or its users by any such changes. System issues occurring as a result of changes made by an Administrative User may impact Motorola's ability to perform its obligations under the Agreement or its Maintenance and Support Agreement. In such cases, a revision to the appropriate provisions of the Agreement, including the Statement of Work, may be necessary. To the extent Motorola provides assistance to correct any issues caused by or arising out of the use of or failure to maintain Administrative User Credentials, Motorola will be entitled to bill Customer and Customer will pay Motorola on a time and materials basis for resolving the issue.

16.12. SURVIVAL OF TERMS. The following provisions will survive the expiration or termination of this Agreement for any reason: Section 3.6 (Motorola Software); Section 3.7 (Non-Motorola Software); if any payment obligations exist, Sections 5.1 and 5.2 (Contract Price and Invoicing and Payment); Subsection 9.7 (Disclaimer of Implied Warranties); Section 11 (Disputes); Section 14 (Limitation of Liability); and Section 15 (Confidentiality and Proprietary Rights); and all of the General provisions in Section 16.

The Parties hereby enter into this Agreement as of the Effective Date.

Motorola Solutions, Inc.

By: _____
Name: Larry Mabry
Title: MSSSI Vice President & Director Sales
Date: 12/6/2016

Customer

By: _____
Name: Doug N. Johnson
Title: Chairman
Date: November 16, 2016

Exhibit A

SOFTWARE LICENSE AGREEMENT

This Exhibit A Software License Agreement ("Agreement") is between Motorola Solutions, Inc., ("Motorola"), and _____ ("Licensee").

For good and valuable consideration, the parties agree as follows:

Section 1 DEFINITIONS

1.1 "Designated Products" means products provided by Motorola to Licensee with which or for which the Software and Documentation is licensed for use.

1.2 "Documentation" means product and software documentation that specifies technical and performance features and capabilities, and the user, operation and training manuals for the Software (including all physical or electronic media upon which such information is provided).

1.3 "Open Source Software" means software with either freely obtainable source code, license for modification, or permission for free distribution.

1.4 "Open Source Software License" means the terms or conditions under which the Open Source Software is licensed.

1.5 "Primary Agreement" means the agreement to which this exhibit is attached.

1.6 "Security Vulnerability" means a flaw or weakness in system security procedures, design, implementation, or internal controls that could be exercised (accidentally triggered or intentionally exploited) and result in a security breach such that data is compromised, manipulated or stolen or the system damaged.

1.7 "Software" (i) means proprietary software in object code format, and adaptations, translations, de-compilations, disassemblies, emulations, or derivative works of such software; (ii) means any modifications, enhancements, new versions and new releases of the software provided by Motorola; and (iii) may contain one or more items of software owned by a third party supplier. The term "Software" does not include any third party software provided under separate license or third party software not licensable under the terms of this Agreement.

Section 2 SCOPE

Motorola and Licensee enter into this Agreement in connection with Motorola's delivery of certain proprietary Software or products containing embedded or pre-loaded proprietary Software, or both. This Agreement contains the terms and conditions of the license Motorola is providing to Licensee, and Licensee's use of the Software and Documentation.

Section 3 GRANT OF LICENSE

3.1. Subject to the provisions of this Agreement and the payment of applicable license fees, Motorola grants to Licensee a personal, limited, non-transferable (except as permitted in Section 7) and non-exclusive license under Motorola's copyrights and Confidential Information (as defined in the Primary Agreement) embodied in the Software to use the Software, in object code form, and the Documentation solely in connection with Licensee's use of the Designated Products. This Agreement does not grant any rights to source code.

3.2. If the Software licensed under this Agreement contains or is derived from Open Source Software, the terms and conditions governing the use of such Open Source Software are in the Open Source

Software Licenses of the copyright owner and not this Agreement. If there is a conflict between the terms and conditions of this Agreement and the terms and conditions of the Open Source Software Licenses governing Licensee's use of the Open Source Software, the terms and conditions of the license grant of the applicable Open Source Software Licenses will take precedence over the license grants in this Agreement. If requested by Licensee, Motorola will use commercially reasonable efforts to: (i) determine whether any Open Source Software is provided under this Agreement; (ii) identify the Open Source Software and provide Licensee a copy of the applicable Open Source Software License (or specify where that license may be found); and, (iii) provide Licensee a copy of the Open Source Software source code, without charge, if it is publicly available (although distribution fees may be applicable).

Section 4 LIMITATIONS ON USE

4.1. Licensee may use the Software only for Licensee's internal business purposes and only in accordance with the Documentation. Any other use of the Software is strictly prohibited. Without limiting the general nature of these restrictions, Licensee will not make the Software available for use by third parties on a "time sharing," "application service provider," or "service bureau" basis or for any other similar commercial rental or sharing arrangement.

4.2. Licensee will not, and will not allow or enable any third party to: (i) reverse engineer, disassemble, peel components, decompile, reprogram or otherwise reduce the Software or any portion to a human perceptible form or otherwise attempt to recreate the source code; (ii) modify, adapt, create derivative works of, or merge the Software; (iii) copy, reproduce, distribute, lend, or lease the Software or Documentation to any third party, grant any sublicense or other rights in the Software or Documentation to any third party, or take any action that would cause the Software or Documentation to be placed in the public domain; (iv) remove, or in any way alter or obscure, any copyright notice or other notice of Motorola's proprietary rights; (v) provide, copy, transmit, disclose, divulge or make the Software or Documentation available to, or permit the use of the Software by any third party or on any machine except as expressly authorized by this Agreement; or (vi) use, or permit the use of, the Software in a manner that would result in the production of a copy of the Software solely by activating a machine containing the Software. Licensee may make one copy of Software to be used solely for archival, back-up, or disaster recovery purposes; *provided* that Licensee may not operate that copy of the Software at the same time as the original Software is being operated. Licensee may make as many copies of the Documentation as it may reasonably require for the internal use of the Software.

4.3. Unless otherwise authorized by Motorola in writing, Licensee will not, and will not enable or allow any third party to: (i) install a licensed copy of the Software on more than one unit of a Designated Product; or (ii) copy onto or transfer Software installed in one unit of a Designated Product onto one other device. Licensee may temporarily transfer Software installed on a Designated Product to another device if the Designated Product is inoperable or malfunctioning, if Licensee provides written notice to Motorola of the temporary transfer and identifies the device on which the Software is transferred. Temporary transfer of the Software to another device must be discontinued when the original Designated Product is returned to operation and the Software must be removed from the other device. Licensee must provide prompt written notice to Motorola at the time temporary transfer is discontinued.

4.4. When using Motorola's Radio Service Software ("RSS"), Licensee must purchase a separate license for each location at which Licensee uses RSS. Licensee's use of RSS at a licensed location does not entitle Licensee to use or access RSS remotely. Licensee may make one copy of RSS for each licensed location. Licensee shall provide Motorola with a list of all locations at which Licensee uses or intends to use RSS upon Motorola's request.

4.5. Licensee will maintain, during the term of this Agreement and for a period of two years thereafter, accurate records relating to this license grant to verify compliance with this Agreement. Motorola or an independent third party ("Auditor") may inspect Licensee's premises, books and records, upon reasonable prior notice to Licensee, during Licensee's normal business hours and subject to Licensee's facility and security regulations. Motorola is responsible for the payment of all expenses and costs of the Auditor. Any information obtained by Motorola and the Auditor will be kept in strict confidence by Motorola and the

Auditor and used solely for the purpose of verifying Licensee's compliance with the terms of this Agreement.

Section 5 OWNERSHIP AND TITLE

Motorola, its licensors, and its suppliers retain all of their proprietary rights in any form in and to the Software and Documentation, including, but not limited to, all rights in patents, patent applications, inventions, copyrights, trademarks, trade secrets, trade names, and other proprietary rights in or relating to the Software and Documentation (including any corrections, bug fixes, enhancements, updates, modifications, adaptations, translations, de-compilations, disassemblies, emulations to or derivative works from the Software or Documentation, whether made by Motorola or another party, or any improvements that result from Motorola's processes or, provision of information services). No rights are granted to Licensee under this Agreement by implication, estoppel or otherwise, except for those rights which are expressly granted to Licensee in this Agreement. All intellectual property developed, originated, or prepared by Motorola in connection with providing the Software, Designated Products, Documentation or related services, remains vested exclusively in Motorola, and Licensee will not have any shared development or other intellectual property rights.

Section 6 LIMITED WARRANTY; DISCLAIMER OF WARRANTY

6.1. The commencement date and the term of the Software warranty will be as set forth in the Primary Agreement (the "Warranty Period"). If Licensee is not in breach of any of its obligations under this Agreement, Motorola warrants that the unmodified Software, when used properly and in accordance with the Documentation and this Agreement, will be free from a reproducible defect that eliminates the functionality or successful operation of a feature critical to the primary functionality or successful operation of the Software. Whether a defect occurs will be determined by Motorola solely with reference to the Documentation. Motorola does not warrant that Licensee's use of the Software or the Designated Products will be uninterrupted, error-free, completely free of Security Vulnerabilities, or that the Software or the Designated Products will meet Licensee's particular requirements. Motorola makes no representations or warranties with respect to any third party software included in the Software.

6.2 Motorola's sole obligation to Licensee and Licensee's exclusive remedy under this warranty is to use reasonable efforts to remedy any material Software defect covered by this warranty. These efforts will involve either replacing the media or attempting to correct significant, demonstrable program or documentation errors or Security Vulnerabilities. If Motorola cannot correct the defect within a reasonable time, then at Motorola's option, Motorola will replace the defective Software with functionally-equivalent Software, license to Licensee substitute Software which will accomplish the same objective, or terminate the license and refund the Licensee's paid license fee.

6.3. Warranty claims are described in the Primary Agreement.

6.4. The express warranties set forth in this Section 6 are in lieu of, and Motorola disclaims, any and all other warranties (express or implied, oral or written) with respect to the Software or Documentation, including, without limitation, any and all implied warranties of condition, title, non-infringement, merchantability, or fitness for a particular purpose or use by Licensee (whether or not Motorola knows, has reason to know, has been advised, or is otherwise aware of any such purpose or use), whether arising by law, by reason of custom or usage of trade, or by course of dealing. In addition, Motorola disclaims any warranty to any person other than Licensee with respect to the Software or Documentation.

Section 7 TRANSFERS

Licensee will not transfer the Software or Documentation to any third party without Motorola's prior written consent. Motorola's consent may be withheld at its discretion and may be conditioned upon transferee paying all applicable license fees and agreeing to be bound by this Agreement. If the Designated Products are Motorola's radio products and Licensee transfers ownership of the Motorola radio products to a third party, Licensee may assign its right to use the Software (other than RSS and Motorola's FLASHport® software) which is embedded in or furnished for use with the radio products and the related

Documentation; *provided* that Licensee transfers all copies of the Software and Documentation to the transferee, and Licensee and the transferee sign a transfer form to be provided by Motorola upon request, obligating the transferee to be bound by this Agreement.

Section 8 TERM AND TERMINATION

8.1 Licensee's right to use the Software and Documentation will begin when the Primary Agreement is signed by both parties and will continue for the life of the Designated Products with which or for which the Software and Documentation have been provided by Motorola, unless Licensee breaches this Agreement, in which case this Agreement and Licensee's right to use the Software and Documentation may be terminated immediately upon notice by Motorola.

8.2 Within thirty (30) days after termination of this Agreement, Licensee must certify in writing to Motorola that all copies of the Software have been removed or deleted from the Designated Products and that all copies of the Software and Documentation have been returned to Motorola or destroyed by Licensee and are no longer in use by Licensee.

8.3 Licensee acknowledges that Motorola made a considerable investment of resources in the development, marketing, and distribution of the Software and Documentation and that Licensee's breach of this Agreement will result in irreparable harm to Motorola for which monetary damages would be inadequate. If Licensee breaches this Agreement, Motorola may terminate this Agreement and be entitled to all available remedies at law or in equity (including immediate injunctive relief and repossession of all non-embedded Software and associated Documentation unless Licensee is a Federal agency of the United States Government).

Section 9 UNITED STATES GOVERNMENT LICENSING PROVISIONS

This Section applies if Licensee is the United States Government or a United States Government agency. Licensee's use, duplication or disclosure of the Software and Documentation under Motorola's copyrights or trade secret rights is subject to the restrictions set forth in subparagraphs (c)(1) and (2) of the Commercial Computer Software-Restricted Rights clause at FAR 52.227-19 (JUNE 1987), if applicable, unless they are being provided to the Department of Defense. If the Software and Documentation are being provided to the Department of Defense, Licensee's use, duplication, or disclosure of the Software and Documentation is subject to the restricted rights set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 (OCT 1988), if applicable. The Software and Documentation may or may not include a Restricted Rights notice, or other notice referring to this Agreement. The provisions of this Agreement will continue to apply, but only to the extent that they are consistent with the rights provided to the Licensee under the provisions of the FAR or DFARS mentioned above, as applicable to the particular procuring agency and procurement transaction.

Section 10 CONFIDENTIALITY

Licensee acknowledges that the Software and Documentation contain Motorola's valuable proprietary and Confidential Information and are Motorola's trade secrets, and that the provisions in the Primary Agreement concerning Confidential Information apply.

Section 11 LIMITATION OF LIABILITY

The Limitation of Liability provision is described in the Primary Agreement.

Section 12 NOTICES

Notices are described in the Primary Agreement.

Section 13 GENERAL

13.1. COPYRIGHT NOTICES. The existence of a copyright notice on the Software will not be construed as an admission or presumption of publication of the Software or public disclosure of any trade secrets associated with the Software.

13.2. COMPLIANCE WITH LAWS. Licensee acknowledges that the Software is subject to the laws and regulations of the United States and Licensee will comply with all applicable laws and regulations, including export laws and regulations of the United States. Licensee will not, without the prior authorization of Motorola and the appropriate governmental authority of the United States, in any form export or re-export, sell or resell, ship or reship, or divert, through direct or indirect means, any item or technical data or direct or indirect products sold or otherwise furnished to any person within any territory for which the United States Government or any of its agencies at the time of the action, requires an export license or other governmental approval. Violation of this provision is a material breach of this Agreement.

13.3. ASSIGNMENTS AND SUBCONTRACTING. Motorola may assign its rights or subcontract its obligations under this Agreement, or encumber or sell its rights in any Software, without prior notice to or consent of Licensee.

13.4. GOVERNING LAW. This Agreement is governed by the laws of the United States to the extent that they apply and otherwise by the internal substantive laws of the State to which the Software is shipped if Licensee is a sovereign government entity, or the internal substantive laws of the State of Illinois if Licensee is not a sovereign government entity. The terms of the U.N. Convention on Contracts for the International Sale of Goods do not apply. In the event that the Uniform Computer Information Transaction Act, any version of this Act, or a substantially similar law (collectively "UCITA") becomes applicable to a party's performance under this Agreement, UCITA does not govern any aspect of this Agreement or any license granted under this Agreement, or any of the parties' rights or obligations under this Agreement. The governing law will be that in effect prior to the applicability of UCITA.

13.5. THIRD PARTY BENEFICIARIES. This Agreement is entered into solely for the benefit of Motorola and Licensee. No third party has the right to make any claim or assert any right under this Agreement, and no third party is deemed a beneficiary of this Agreement. Notwithstanding the foregoing, any licensor or supplier of third party software included in the Software will be a direct and intended third party beneficiary of this Agreement.

13.6. SURVIVAL. Sections 4, 5, 6.3, 7, 8, 9, 10, 11 and 13 survive the termination of this Agreement.

13.7. ORDER OF PRECEDENCE. In the event of inconsistencies between this Exhibit and the Primary Agreement, the parties agree that this Exhibit prevails, only with respect to the specific subject matter of this Exhibit, and not the Primary Agreement or any other exhibit as it applies to any other subject matter.

13.8 SECURITY. Motorola uses reasonable means in the design and writing of its own Software and the acquisition of third party Software to limit Security Vulnerabilities. While no software can be guaranteed to be free from Security Vulnerabilities, if a Security Vulnerability is discovered, Motorola will take the steps set forth in Section 6 of this Agreement.

Exhibit B

PAYMENT SCHEDULE

Except for a payment that is due on the Effective Date, Customer will make payments to Motorola within thirty (30) days after the date of each invoice. Customer 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. 25% of the Contract Price due upon contract execution;

2. 30% of the Contract Price due upon shipment of the equipment;

3. 30% of the Contract Price due upon delivery of equipment;

4. 5% of the Contract Price due upon installation of equipment;

5. 5% of the Contract Price due upon system acceptance or start of beneficial use; and

5. 5% of the Contract Price due upon Final Acceptance.

Overdue invoices will bear simple interest at the rate of ten percent (10%) per annum, unless such rate exceeds the maximum allowed by law, in which case it will be reduced to the maximum allowable rate. 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.

Exhibit E

System Acceptance Certificate

Customer Name: _____

Project Name: _____

This System Acceptance Certificate memorializes the occurrence of System Acceptance. Motorola and Customer acknowledge that:

1. The Acceptance Tests set forth in the Acceptance Test Plan have been successfully completed.

2. The System is accepted.

Customer Representative:

Signature: _____
Print Name: _____
Title: _____
Date: _____

Motorola Representative:

Signature: _____
Print Name: _____
Title: _____
Date: _____

FINAL PROJECT ACCEPTANCE:

Motorola has provided and Customer has received all deliverables, and Motorola has performed all other work required for Final Project Acceptance.

Customer Representative:

Signature: _____
Print Name: _____
Title: _____
Date: _____

Motorola Representative:

Signature: _____
Print Name: _____
Title: _____
Date: _____

Douglas County State of Nevada

CERTIFIED COPY

I certify that the document to which this certificate is attached is a full and correct copy of the original record on file in the Clerk-Treasurer's Office on this

19 day of [illegible], 2016

By _____, Deputy