Marion County Emergency Communications District
650 3rd Ave SW
P.O. Box 1744
Hamilton, AL 35570
(205)-921-0911

Request for Proposal (RFP) to replace Radio Dispatch Console System

RFP #2022-01

Issued: Monday, August 29th, 2022

Proposals Due: Monday, September 26th 2022 by 4:00 PM CDT

1. Introduction

The Marion County Emergency Communications District ("Marion County E-911") requests vendors to submit sealed bids on a state-of-the-art, IP based radio console system. Vendors will be responsible for procurement, installation and maintenance of all system equipment. Vendors will also be responsible for providing training on the system.

1.2 Response Instructions

The submitted proposal must follow the rules and format established within this RFP. Adherence to these rules will ensure a fair and objective analysis of all proposals. Failure to complete any portion of this request may result in rejection of a proposal.

Completed bids should be mailed to:

Marion County Emergency Communications District
P.O. Box 1744
Hamilton, AL 35570

Or delivered in person to:

Marion County Emergency Communications District
650 3rd Ave SW
Hamilton, AL 35570

At least Two (2) signed and sealed copies of the proposal shall be submitted by no later than 4:00 PM CDT on Monday, September 26th 2022. Proposals received after the above deadline will be returned to the respective Respondent. The proposal submittals should be clearly marked: **RFP 2022-01**.

Each bidder shall be responsible for all costs incurred in order to prepare and submit their response to this RFP.

1.3 Contact with Marion County E-911 Employees

To ensure a fair and objective evaluation of all proposals, vendors are required to submit all inquiries to the designated project contact noted below. Unauthorized contact with other Marion County E-911 employees regarding the contents of this RFP will result in a disqualification of the vendor bid. **The designated point of contact (POC) is**:

Augy Avery
Assistant Director
(205)-921-0911
aavery@marion911.net

1.4 Timeline

The RFP will adhere to the following timeline:

Monday, August 29th 2022: RFP is released to vendors

Monday, September 26th 2022 @4PM CDT: Deadline for submission of complete proposals

Tuesday, September 27th 2022 @4PM CDT: Submissions opened at regularly scheduled Board of Directors meeting

1.5 Vendor Requirements

1. Vendors must include a cover page in their submission that includes the vendor's legal name and contact information, the name of the RFP, federal Tax Identification number, the vendor's contact person for the proposal, and the total cost of the project.

2. The selected vendor shall provide all services including, but not limited to, installation, implementation, training, technical support, and ongoing maintenance for Marion County E-911 to enter into and maintain full use of the system.

3. The selected vendor must provide detailed system configuration and setup services to Marion County E-911 as part of this project. These services are necessary to ensure that the new system is configured to match the processes and workflow of Marion County E-911 to reduce the learning curve and improve the rate of adoption.

4. Vendors must include detailed pricing for the software, hardware and services included in this proposal. In addition, 24x7x365 maintenance costs must be included for four (4) years.

5. Vendors should provide a summary of their experience in implementing a system of this nature and relate its relevance to the proposed project in terms of the technical scope, tasks involved, deliverable products, etc.

6. Vendors should provide maximum timeframes for a technician to arrive on-site at Marion County E-911 for each of the following conditions:

   a. Minor fault or partial failure, system is still effective and able to dispatch.

   b. Major failure, system is unable to dispatch on one or more channels or positions.

1.6. Evaluation

The selected proposal shall provide the most cost-effective approach that meets or exceeds the stated requirements. The lowest price proposal will not necessarily be selected. Marion County E-911 reserves the right to select the proposal which best meets its needs, regardless of the cost of that proposal relative to other proposals received.

Marion County E-911 reserves the right to:

1. Reject any or all proposals, or to make no award.

2. Require modifications to initial proposals.

Evaluation criteria include the following, in no particular order:

1. Completeness – Did the vendor provide everything which was requested and in the proper format?

2. Functionality – Does the proposed solution include the functionality which is essential to Marion County E-911?

3. Cost – Does the proposed solution provide the needed functionality at a reasonable cost to Marion County E-911?

4. Maintenance and Support – Thoroughness of support program, reputation of company with customer's responsiveness, thoroughness of testing, and availability and overall cost of support and upgrades.

5. References and Experience– Quality of overall System, experience with implementation, experience with existing Marion County E-911 systems, degree to which projects went over budget/schedule, company references.

2. Background

Marion County Emergency Communications District ("Marion County E-911") is the Public-Safety-Answering-Point for the entirety of Marion County, Alabama. The county has a population of 29,246 (2021), and covers 744 square miles of mostly rural area. Marion County E-911 provides direct emergency dispatch for 6 Law Enforcement agencies, and 13 Fire Departments. Marion County E-911 also coordinates with 2 Ambulance services, 4 Air-EMS services, and numerous state and local agencies.

County law enforcement agencies operate on a conventional VHF analog radio system maintained by the Marion County Sheriff's Department. The system consists of a combination of both stand-alone, and RF-linked repeaters.

County Fire Departments operate on a separate VHF analog system, maintained by the Marion County Volunteer Firefighters Association. This system also consists of both stand-alone and RF-linked repeaters. Many, but not all parts of the system are DMR digital capable. The system is currently still operated completely in analog mode. Each Fire Department is paged with Two-Tone paging on the radio system, and each department has a unique Two-Tone pair. A long, single-tone is used for countywide notifications.

Marion County E-911 communicates with both groups on their respective radio systems. Both ambulance services in the county utilize commercial PTT-Over-Cellular systems. Marion County E-911 presently does not have the capability to directly communicate with the EMS crews on their radio system. Communications must go through their dispatch by telephone.

Marion County E-911 utilizes a 60 foot tall, free standing tower located at the 911 building. All control radio antennas are located on this tower, and the transmission lines are ran into a "radio room" inside the 911 building, adjacent to the tower. Control radios of various make/model, and tone remote adaptors are currently mounted to the wall of the radio room. From the tone-remote adaptors, twisted pairs carrying audio are ran through the ceiling, approximately 50 feet into the dispatch room, where they are interfaced to a punch down block mounted inside of a cabinet area. The punch down block then interfaces to Two (2) Zetron 4010 consoles, located at Workstation 1 and Workstation 2. These consoles sit on top of the desks at the workstations, alongside several monitors, keyboards and other devices. Workstation 3 does not currently have a radio console, and has more limited space available. Proposals shall include adding a full radio dispatch console to Workstation 3.

3. Scope of Services

It is the intention of these specifications that the selected vendor furnish to Marion County E-911 a state-of-the-art IP based radio console system that will enable the effective and efficient operation of Marion County E-911.

3.1 At a minimum, the system shall support the following:

1. Three (3) Radio Dispatch Console Positions

2. Communication with multiple radio systems and standards

    a. Conventional Analog

    b. DMR

    c. P25 Conventional and Trunking

    d. PTT-Over-Cellular (SouthernLinc CriticalLinc, others)

3. Simple computer GUI-based user operation.

4. The console system shall be capable of a minimum of (5) channels. (4) Radio channels interfaced to Motorola XPR5550e radios provided by Marion County E-911, and (1) SouthernLinc CriticalLink talkgroup. The SouthernLinc talkgroup may be interfaced either through direct IP connection, or through a subscriber device provided by Marion County E-911 or Marion County EMS.

5. Connection to control radios or radio systems shall avoid the use of legacy interfaces such as analog tone-remote adaptors, and instead use direct-IP connectivity or P25 standard interfaces.

6. The system must be capable of interfacing to Marion County E-911's existing Eventide NexLog 740 recorder.

7. The system must be scalable and must be able to integrate with the existing and future options Marion County E-911, or other county agencies may implement.

3.2 Additional Project Objectives

1. The system shall allow Marion County E-911 to communicate efficiently and without a large learning curve. The system must be easy to use.

2. Acquisition and implementation of a new Radio Console System is a project that will impact Marion County E-911 for years to come. Key goals for the project are to:

    a. Replace the legacy system currently being used with a solution that meets or exceeds the needs of Marion County E-911.

    b. Deliver a fully-functional Radio Console system on time and within budget.

c. Provide a technologically sound platform for future expansion of communications systems in Marion County.

4. Radio Console Requirements

The Radio Console System shall be designed to enhance the dispatchers' ability to communicate effectively with field personnel, perform resource management tasks and to minimize the effort and concentration required for efficient use and control of the radio system. This shall in part, be accomplished through the use of high quality, LCD or LED monitors for selecting dedicated channel and talk group control windows representing all base stations, repeaters, talk groups, alert paging and auxiliary functions at each console.

1. To minimize operator confusion and the chance of errors being made, all channels, and talk groups shall be referred to and displayed by alphanumeric names. Numeric only references for talk group or channel names shall not be acceptable. Manually cross-referencing a channel name to a number shall not be acceptable for any dispatch operation.

2. It is desired that all control functions displayed be configurable so that they can be organized on the console screen in the most efficient and flexible manner possible.

3. A minimum of (5) channels shall be provided by the proposer. Initially, these 5 channels will be used to control (4) Motorola XPR5550e radios provided by Marion County E-911, and (1) SouthernLinc CriticalLink talkgroup. However, the system shall be capable of expansion to support additional channels, as well as supporting other platforms such as DMR, P25 conventional, P25 Trunking and other PTT-over-Cellular platforms.

4. Connection to control radios or radio systems shall avoid the use of legacy interfaces such as analog tone-remote adaptors, and instead use direct-IP connectivity or P25 standard interfaces. The system shall support direct IP connectivity to DMR/MotoTRBO repeaters. The system shall also support P25 CSSI to allow for direct connection to P25 Trunking systems, such as the Alabama Interoperable Radio System, without the use of a control radio.

5. Console Position PC Equipment – Each of the radio dispatch consoles shall provide all controls that apply to the various audio resources and auxiliary functions for the console. Operator positions shall be PC based, utilizing modern, commercial-off-the-shelf (COTS) hardware and operating system software in current production at the time the system is staged in order to help provide long service and system life. The PC shall be equipped with a keyboard and mouse, and an LED or LCD display. Each PC and associated equipment shall include provisions for battery backup lasting no less than 10 minutes, OR be easily integrated with small, COTS uninterruptable-power-supplies that Marion County E-911 could provide.

6. The console endpoints and associated hardware shall be neatly rack mounted in the radio room at Marion County E-911. The room has an 8' ceiling. The equipment rack should include enough free space to mount the (4) Motorola XPR5550e radios provided by Marion County E-911, and any additional power supplies they may require. All hardware in the rack, including the radios, should have provisions for no less than 10 minutes of battery backup. Marion County E-911 is requesting that any power supplies, battery backup and additional coaxial cable needed to rack mount the (4) XPR5550e radios be quoted. The vendor will be responsible for installation of the radios into the rack.

7. Although not requested to be quoted at this time, the console software should support the ability to be installed on a laptop PC, or other rugged device, to facilitate the use of the console system from a remote location with IP connectivity.

8. The system should support connection to an existing wired door-entry buzzer system. The current system is wired to a function button on the Zetron consoles, that when pressed, releases the door lock on the main door of the building.

4.1 Console Operator Position Functionality

1. The graphical-user-interface (GUI) shall provide a clean, easy to understand layout of channel resources, paging tones, alert tones and other controls. The GUI should permit interaction with all primary controls from one screen, without the need to toggle between multiple screens.

2. The console shall include a desk microphone, select speaker, and an unselect speaker. Connection to the NENA phone system is not required or desired. The system shall operate without the need for a headset.

3. The console shall include instant-recall-recording (IRR) that captures and stores all radio traffic for a programmable amount of time. The IRR shall allow the dispatcher to select the desired recording by channel name and time, and should show any PTT-ID that was decoded. The IRR should also be accessible from the primary GUI screen. The IRR shall operate independently of the Eventide NexLog 740 recorder presently in place, however all radio traffic shall also be routed to the Eventide recorder for permanent storage.

4. The console GUI shall be comprised of a combination of channel resources, controls, and informational graphics. The following status indications shall be shown to the operator; select, unselect, patch, monitor, busy and mute. There shall be different status colors to identify the following conditions; select, unselect, patch, and mute.

5. Each channel resource shall have an individual volume setting for the select state and the unselect state. This volume level shall be retained when toggling the endpoint between different states and have an administrator configurable minimum

level to prevent muting entirely. The volume level shall only affect a single console position.

6. Mouse operation shall be used to select and use all dispatch functions. Touch screens shall not be required. Console operation should support one-click transmit on any selected or unselected channel resource, and a PTT button on the desk microphone shall instant transmit on the selected channel resource. A large selected PTT icon shall also be provided on the GUI, which shall enable one-click transmit on the selected channel resource.

7. Resource Select – Each channel resource shall be capable of independent selection by the dispatcher. The resource icon shall provide a visual indication when the corresponding channel is selected and when that resource is transmitting or receiving. The proposer shall describe how the system will arbitrate PTT requests from the console positions for the same channel resource and what notification is provided to the dispatcher.

8. Radio Channel Selection – Controls shall be provided for each channel resource to select different frequencies (modes) on the corresponding radio. The frequencies available for selection shall vary depending on which channel resource is being changed. E.g., the Fire channel will only allow the dispatcher to select between Fire repeaters, and the Law channel will only allow selection of law enforcement repeaters. Frequency (mode) selection shall be logical and easy to use, as it will be utilized often. The selected frequency/mode shall be displayed clearly on the channel resource icon.

9. PTT ID Display – The system shall be capable of decoding and displaying individual radio PTT IDs from radios using MDC1200 or FleetSync on analog, or digital PTT IDs on digital systems. The PTT ID information shall appear on the associated channel resource icon as well as in the Instant-Recall-Recorder. If the PTT ID has been assigned an alphanumeric alias, this alias shall be displayed. Aliases must be maintained in a single, common database accessible from all consoles. Aliases must support a minimum length of no less than ten characters. In the event of an emergency call, both the PTT ID and the alias shall be displayed in red.

10. Channel Cross Patch – This function shall allow cross-patching channel resources to permit intercommunications. Dispatch Consoles must have the capability to patch between:

a. One or more conventional channels and one or more digital talkgroups

b. One or more conventional channels and one or more PTT-over-Cellular talkgroups

11. There shall be two types of console patches:

    a. Hard - permanently pre-programmed patches, which the dispatcher cannot modify. Active hard patches must be displayed to the console operators through the console workstation GUI, but the console operator must not have the capability to knock down the patch. The patch shall be presented to the operator as two separate channels engaged in a patch, as a single patched channel, or both.

    b. Soft - temporary patch created and controlled at the console level, which may be activated or deactivated from the console. Resources may be added to or removed from an existing soft patch at any time by the dispatch console operator.

12. Simultaneous Select – A control shall be provided that allows the operator to manually select audio resources for simultaneous transmissions. Dispatcher transmit audio and control functions shall be sent to all selected resources simultaneously.

13. Alert Tones –Controls shall be provided at each operator position to initiate alert tones on the selected radio resources. When activated, the associated tone will be applied to all selected endpoints for a specific duration, or as long as the alert tone icon is pressed. There shall be at minimum 2 distinct alert tones available. Additionally, a separate alert tone shall be available to add to the end of a paging sequence, and should be labelled “Structure Fire”, or similar. The current alert tone used for this function is “Zetron Slow Warble”.

14. Paging Tones – The console shall be capable of two-tone “Quick Call II” paging. Stacking and steering of pages as well as one-touch paging stacks shall be supported. When a page tone or stack of page tones are selected and transmitted, the console shall automatically steer to the correct channel resource AND frequency/mode. When pages in a stack are going to more than one endpoint, the system shall allow the sending of those pages to be in parallel, reducing the total paging time. The system shall support a MINIMUM of 14 paging tones.

15. Cross Mute – Consoles shall include a cross mute feature, which precludes voice communication from a dispatcher’s microphone being repeated over loudspeakers at other consoles in the dispatch center

16. Console Clock – A console clock shall display time in a twenty-four hour format at each operator position. It shall be possible to synchronize the time of day clock to an external time source using industry standard Network Time Protocol method.

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