Illinois Valley Regional Dispatch
RFP Disclaimer
Radio Dispatch Consoles

To the extent any of the following requirements are propriety or vendor specific or in any way limits open and competitive proposals IVRD may waive the requirements so bidders may submit proposals that insure they are substantially complying with said requirements.

Illinois Valley Regional Dispatch
Chairman Douglas P. Bernabei
1901 4th Street
Peru, Illinois 61354
Request for Proposals
Radio Dispatch Consoles
NOTICE TO BIDDERS

Illinois Valley Regional Dispatch (IVRD) is currently accepting bids from qualified vendors for procurement, installation and configuration of radio dispatch consoles for IVRD. Bid specification packages and bid forms will be made available starting at 9:00 a.m. on Tuesday, May 24, 2016. The packets may be obtained at the Peru City Clerk's Office, 1901 4th Street, Peru, Illinois, or may be obtained online at www.peru.il.us. Interested vendors must attend a mandatory pre-bid conference at 10:00 a.m., Thursday, June 2, 2016. The conference will be held in the community room of Peru City Hall at 1901 4th Street, Peru, Illinois wherein a presentation will be made by IVRD representatives explaining the bid process and the expected timeline for implementation. A tour of the proposed IVRD dispatch center facility will be held and IVRD will provide as much specific information to assist bidders in the bid process.

Based on questions submitted, IVRD will hold a second mandatory bidder's conference which will be held at 10:00 a.m. on Thursday, June 23, 2016. The conference will be held in the community room of Peru City Hall at 1901 4th Street in Peru, Illinois. At this conference questions posed by prospective bidders and any new additional information will be provided.

Sealed bids shall be submitted no later than 9:00 a.m., Tuesday, July 26, 2016 to the office of the Peru City Clerk, at which time they will be opened and publicly read aloud. Envelopes shall be marked "Proposal for Dispatch Radio Consoles" in the lower left-hand comer. Bidders shall submit one original and three bound copies of proposals. After opening, proposals will be forwarded to IVRD for tabulation, review and recommendation to the IVRD Board at a future meeting. In awarding the bid, the Board reserves the right to reject any and all bids, waive formalities, informalities and technicalities therein, and to take whatever bid they determine to be in the best interest of IVRD considering lowest or best bid, quality of goods and work, time of delivery or completion, responsibility of vendors being considered, previous experience of vendors with IVRD contracts, or any other factors they deem appropriate. All inquiries, requests for additional information or clarification to assist in the RFP process shall be submitted in writing via email by 12:00 p.m., Tuesday June 14, 2016 and shall be directed to IVRD Chairman Douglas Bernabei at chiefbernabei@perupolice.org and copied to IVRD Equipment Committee Member Don Aleksy at d.aleksy@lasalle-il.gov.

INSTRUCTIONS TO BIDDERS

1. BIDS

Bids should be submitted in sealed envelope(s) clearly marked in the lower left-hand corner **"Proposal for Dispatch Radio Consoles."** Bids received after the bid deadline as specified in the Notice to Bidders will not be considered.

2. BID FORMS

Bids are to be submitted on forms provided in this package. Bid forms are to be completed in their entirety and all requested information provided. Where indicated, bids are to be signed by an individual authorized by the bidding company. Incomplete or unsigned bid forms are cause for rejection of the bid.

3. TAXES

IVRD is exempt from all Federal and State taxes. Your prices should reflect same.

4. PRE-BID CONFERENCE

Mandatory pre-bid conference will be held at 10:00 a.m., Thursday June 2, 2016 in the community room of Peru City Hall at 1901 4th Street, Peru, Illinois. Second mandatory pre-bid conference will be held at 10 a.m., Thursday, June 23, 2016 in the community room of Peru City Hall at 1901 4th Street, Peru, Illinois.

5. SCOPE OF WORK

As described in depth in the Request for Proposal (RFP)

6. SPECIFICATIONS

A. Provide IVRD IT Manager with any necessary specifications if additional IP circuit wiring as required to support the new system.

B. Provide IVRD representative with any necessary specifications if additional cooling or ventilation is required for the new system.

C. Once operational and accepted remove any old hardware, packing materials, etc. from equipment room.

7. OTHER REQUIREMENTS

A. Pricing shall show a total price.

B. Onsite user training for IVRD Administrative staff to include setting of passwords or any other standard system features.

C. Administrative training for IVRD IT staff.

INTRODUCTION

IVRD is comprised of numerous Illinois Valley municipalities that will serve a population base of 35,000. IVRD will be located at the Peru Police Department, 1503 4th Street, Peru, Illinois.

Scope of Work

This project shall include the full procurement, installation and configuration of a redundant recording solution. **IVRD intends for this project to be 100% turn-key.** As a turn-key project the Proposer will be responsible for the provisioning of equipment, system design/performance to specifications, installation, testing, and final acceptance of the system. All costs to provide these turn-key services shall be included in the Pricing Proposal.

IVRD Dispatch Consoles

Proposer should provide a solution for three new dispatch consoles. System shall be compatible to expand based on future growth to be at least eight positions capable. Workspace furniture for each position will be provided by IVRD.

Trunked & Conventional Operation

To eliminate multiple entry of configuration information, the radio dispatch console solution shall obtain from the radio system infrastructure as necessary any:

- Trunked talkgroup IDs
- Trunked talkgroup aliases
- Trunked radio unit IDs
- Trunked radio aliases
- Conventional radio channel aliases
- Conventional radio unit IDs
- Conventional radio aliases
- To ease regional training, backup scenarios, and interoperability, the dispatch console GUI (graphical user interface) must be common for consoles connected to the same ómaster siteô
- Console positions shall be connected directly to the IP network, which supports communication with both trunked and conventional radios and all other dispatch activity.
- Client Operating Systems (OS) and dispatching application must be capable of supporting Windows Vista and be upgradeable to Windows 7, or any required Windows Operating System.
- Flexible and customizable GUI must provide multiple screen layouts (folders) to organize resources by agency, or shift to meet the needs of the console user(s).

- The Console positions must be connected directly to the IP network, which supports communication with both trunked and conventional radios and all other dispatch activity.
- Consoles shall be capable of full participation in end-to-end (console to digital P25 trunking talk group, console to digital conventional P25, and console to console) voice encryption for secure communication, priority handling of emergency calls (for trunking), and Agency Partitioning.
- Each console shall be centrally configured and managed from the ómaster siteôrnetwork manager.
- Trunked and conventional radio channels shall be customizable with various controls, such as patch status, frequency select, coded/clear select, and individual volume control, based on user preferences.
- Per-channel controls must be configurable as fully or partially shown, or hidden to save space on the screen.
- Dispatchers shall be able to respond to a missed call by selecting an entry in the Activity Log.
- The number of calls and call information displayed in the Activity Log shall be customizable.
- The console shall allow multiple agencies to share a system to gain interoperability and cost savings benefits, while still maintaining control of their own channels, encryption keys, console configuration, etc.
- Console shall be capable of supporting the following Vocoder Algorithms: AMBE, IMBE, ACELP, G.728 (for Analog Conventional).
- Console shall be capable of supporting the following Encryption Algorithms: AES (256 bit), DES-OFB, DVI-XL, ADP (Advanced Digital Privacy).
- The console shall provide Transmit Priority Levels when interfacing trunking talk groups in order to provide an orderly and consistent method for ensuring higher priority transmissions are able to take over resources from lower priority transmissions.
- Console users shall be able to patch between trunked and/or conventional radios that are normally unable to communicate with each other.
- Patched radio users with capable subscribers on capable radio networks shall see the ID or alias of the other patched radio(s), as opposed to that of the console. This minimizes confusion and the need for the dispatcher to intervene in the call.
- Patches must be automatically re-established if interrupted so the dispatcher can concentrate on continuing operations.
- For digital radio systems, the encryption and decryption services within each dispatch operation position shall enable dispatchers to fully participate in secure communications while keeping the sensitive, vital information completely encrypted between the dispatcher and the radio users.
- Dispatchers shall have the capability to interface with other agencies that have different encryption configurations without any manual intervention or delay.

- Console shall support up to 60 calls using up to four different algorithms and multiple secure keys must be supported simultaneously.
- To help reduce dispatcher stress and potential errors when managing encrypted audio situations, indicators, and alerts for dispatchers shall only be provided when the console mode does not match that of a received call; or when a patch or multi-select group is being set up between a mix of clear and secure channels.
- The console system shall not require configuration or performance management equipment separate from the radio network. The console system shall be configured and managed by the radio system's configuration manager, fault manager, and performance reporting applications. This provides a single point for configuring and managing the entire dispatch and radio system.
- Centrally made configuration changes shall be automatically distributed throughout the system in order to save time and effort for system administrators and technicians.

- Console system must include interfaces to enable trunked system users to incorporate analog conventional channels into their dispatch operations without a separate hardware network and channel banks.
- Conventional audio shall be transported between the dispatch consoles and the conventional interface by the same IP network that is used for the trunked audio.
- The conventional radio system interface shall provide E&M and tone remote station control and support 4-wire analog connections for conventional.
- Each analog conventional interface hardware element shall support at least four analog channels.
- Each Digital conventional interface hardware element shall provide digital station control via a V.24 connection.
- Each Digital conventional interface hardware element shall support at least two digital conventional channels.
- The console dispatcher's audio inputs and outputs shall be 600 Ohm, balanced and transformer coupled (except for microphone which shall be 2000 Ohm, balanced, and does not use a transformer).
- Console Speaker Mounting Options shall include desktop, furniture mount, or wall mount (with bracket accessory).
- The console system must support local auxiliary inputs and outputs (i.e. relay control).
- The status of auxiliary inputs and outputs shall be conveniently interpreted from the GUI with the use of familiar graphical icons, such as a door shown open or closed.
- The IP console server shall enable console operators to control and monitor external devices, such as doors and lights, from the console user interface.

- The dispatch consoles shall utilize IP-based connectivity to remote auxiliary control units, which may be physically located close to where they are needed, at any console site or RF site.
- The dispatch consoles shall not rely on centralized electronics, centralized contact closures or centralized input buffers to interface to auxiliary devices (i.e. door closure indication).
- The remote auxiliary control unit shall utilize output relays capable of switching 1A @ 24VDC or 1A @ 24VAC.
- The remote auxiliary control unit shall be rack mountable in a standard 19-inch rack and one rack unit high to conserve rack space.
- The remote auxiliary control unit shall utilize input buffers are capable of sensing a dry closure through 1000 feet or less (round trip) of 24 AWG wire.
- The remote auxiliary control unit shall provide single pole Form A relay outputs.
- The dispatch consoles and remote auxiliary control units shall communicate with each other across the radio and console systemôs IP transport network.

Console Capacities - the consoles must support the following capacities:

- 160 resources per operator position
- Up to 60 simultaneous audio sessions per console
- Up to 60 simultaneous encryption/decryption sessions per secure capable console
- Up to 3 Multi-Select groups per dispatch console (with up to 20 members per Multi-Select group)
- Up to 16 Patch groups per dispatch console (with up to 20 members per Patch group)
- Up to 1 private call resource per dispatch console
- Up to 5 simultaneously active Channel Markers per dispatch console
- Up to 25 Security Groups per dispatch console user
- Up to 4 Speakers per dispatch console
- Up to 2 Headset Jack Boxes per dispatch console
- Up to 1 Desktop Microphone per dispatch console
- Up to 1 Footswitch per dispatch console
- Up to 1 General Purpose Input/output Module (GPIOM) per dispatch console
- Up to 4 encryption algorithms per dispatch console

Console Link Types- the consoles must support the following console Site Link types:

- Fractional T1/E1,
- Single T1/E1,
- Multiple T1/E1s
- Redundant and non-redundant links

- IP site links

Conventional Analog Channel Interface ï the conventional analog interface hardware must support the following:

- Rack mountable, 1 rack unit high
- T1R1, T2R2, T4R4, T8R8, T12R12, T14R14 channels
- Four RJ45 connector ports for interfacing to analog conventional base stations. Each port shall contain the following inputs and outputs:
    - 600 Ohm, balanced analog audio input ï To accept radio audio from the station.
    - 600 Ohm, balanced analog audio output ï To send console transmit audio to the station.
    - Input buffer ï To detect Carrier Operated Relay (COR) closure in the station.
    - 1 Amp, 24 VDC relay output ï For relay keying of the station.
- Can be configured to support AGC, DLM, or no input conditioning.

Conventional Digital Channel Interface ï the conventional digital interface hardware must support the following:

- Rack mountable, 1 rack unit high
- T1R1, T2R2, T4R4, T8R8, T12R12, T14R14
- Two RJ45 connector ports for interfacing to digital P25 conventional base stations.
- V.24 to station or comparator.
- No Digital Interface Unit (DIU) shall be required.

Safety - ï the conventional digital interface hardware must support the following:

- CSA 60950-1-03 / UL 60950-1
- EN60950-1 2001

Emissions ï the console hardware must support the following EMC Emissions & Immunity specifications:

- FCC part 15 Class A
- ICES-003
- EN55022 1998 + A1: 2001 + A2:2003 (CISPR-22 Class A)
- EN55024 + A1:2001 + A2:2003
- EN61000-3-2 2000
- EN61000-3-3 1995 + A1:2001

The various hardware elements of the console product line shall be certified to meet the requirements for UL, CSA and CE.

Evaluation & Award

IVRD reserves the right to evaluate proposals in terms of the IVRDôs best interests, applying criteria provided in this RFP and any other criteria IVRD, in its sole discretion, deems pertinent. Any proposal that does not meet the necessary criteria, or for which a fixed dollar amount cannot be precisely determined, will be considered non-responsive and may be rejected.

IVRD reserves the right to choose systems that best fit its current and future needs based on a variety of factors including:

Minimum 3 position console expandable to at least 8 positions
RFP Compliance
Experience / References
Capabilities, Features and
Functionality Survivability / Fault
Tolerance Warranty, Maintenance and
Support Total Cost of Ownership
Any other factors deemed relevant by the evaluation team

IVRD may request additional information and/or a "best and final" offer from some or all Proposers. Furthermore, award of contract may be made without discussion with any Proposer after proposals are received. Proposals should therefore be submitted on the most favorable terms.

Pre-Bid Meeting & Site Visits

Mandatory bidder's conferences, as scheduled in the instructions to bidders, will be held in the community room of Peru City Hall at 1901 4th Street, Peru, Illinois. Any party wishing to submit a Proposal is highly encouraged to send appropriate representatives to attend this meeting. Immediately following the bid meeting site visits will be provided to the primary dispatch center, back-up dispatch center and back-up datacenter.

It is critical that Proposers send appropriate personnel to attend the Pre-Bid meetings and site visits. IVRD may deny requests for additional information or site visits due to a Proposers failure to attend these meetings with appropriate staff.

Accuracy of Information

Respondents are solely responsible for conducting their own independent research, due diligence, or other work necessary for the preparation of responses, negotiation of contracts, and the subsequent delivery of services pursuant to any contract. IVRD takes no responsibility for the completeness or the accuracy of any information presented in this RFP or otherwise distributed or made available during the selection process, or during the term of any subsequent contract.

Qualifications of Contractor / Subcontractor

Any Proposer desiring to use subcontractors must include within their Proposal a list and description of any such qualified subcontractors. IVRD will require documentation and references to ensure the qualification of a subcontractor. IVRD will require that a subcontractor cannot be changed without written permission and that any changes in subcontractors will not provide an extension of time to the Contractor. IVRD may at its sole discretion require that certain employees of the Contractor or any subcontractor submit to a background

investigation, to include a full criminal history, at the expense of IVRD to gain access to certain sensitive or otherwise restricted areas.

Site Modifications / Civil Work

Proposers must indicate any special requirements (e.g. architectural, mechanical, electrical, civil or structural modifications) that their equipment may need at any locations that are intended to be utilized in the construction of the system or performance of work as required herein.

The costs for these special requirements shall be disclosed in the Proposal as this is a turnkey project, whereby the costs to furnish and install the proposed network infrastructure are fixed to the Proposal amount. IVRD will have no obligation to pay or reimburse Contractor for any special requirement not provided for in their proposal.

Time for Completion

The Project's time frame for completion is expected to be no later than 120 days upon contract award unless otherwise agreed to by both parties. This project is interdependent on several other projects including pending installation of new dispatch center furniture, server racks, radio system and phone system. Additionally, Proposers are advised that telephone and radio recording cutover may occur at different times and Proposer may be required to support each cutover separately. Further, as a result of diverse funding sources and cutovers, it is possible that radio recording functionality may be procured and provisioned after telephone system procurement and provisioning.

Parallel Implementation

The new consoles may be required to operate concurrently with existing consoles in use for some period of time during respective communications system cutovers. The current system is the only system in use by IVRD and must operate 24/7/365. Therefore, duplicated systems will coexist for some period of time as various systems are cutover.

The Contractor is responsible for developing a plan to accommodate mutually dependent systems.

Standards and Summary Reference

The Proposer may be required to demonstrate that it has designed, delivered and installed radio consoles supporting IP connectivity on other projects having comparable size and scope. These systems shall be described with enough information that a reasonable determination of project equivalency may be made.

General Requirements

The proposed consoles shall be designed and deployed in a configuration with the following general requirements:

- Minimum 3 position consoles expandable to at least 8.
- Minimum 48 channel capability.
- Support for recording radio traffic, encrypted and unencrypted, through IP connections to system.
- Support for recording Next Generation 9-1-1(current release version) telephone traffic through IP connections.
- Support for recording Avaya IP Office telephone traffic through IP connections as an option.
- Support for recording analog CAMA Trunks and POTS lines.
- Support for recording analog position audio.
- Support for access to recordings based on multiple tiers of user permissions associated with talk groups, lines and radio console positions.
- Support for future growth, analog and digitally.

Radio Recording Requirements

Proposer shall be required to work with logging recorder vendor to develop a trusted IP connection for the recording of radio traffic.

Work Quality

All workmanship shall be of the highest quality, in accordance with industry-accepted practices, vendor-specific installation standards, and the National Electric Code. Work areas shall be maintained in a neat, orderly fashion.

The installation of audio, signal and control cables within equipment cabinets, enclosures, racks and cable trays must be properly routed such that wires/cables do not cross over each within cable bundles.

Cables must be properly labeled, routed and secured. To the maximum extent possible, cables carrying AC power, low-level audio, RF and digital signals must be grouped separately where feasible.

The installation of any network cabling within or outside the equipment cabinets, enclosures, racks, cable trays will be routed in accordance with industry standard cable management systems such as Panduit.

IVRD shall have the ability to temporarily stop work progress by the Contractor if workmanship falls below acceptable levels and shall have the authority to require the Contractor to remove and/or correct all observed instances of poor wiring practice, inappropriate use of installation materials and other obvious installation defects as a result of apparent poor workmanship. Approval to resume installation work activities shall be provided to the Contractor once agreement is reached in resolving observed workmanship defects.

Training and Maintenance

The Contractor will provide basic user training for fifteen (15) system users. Such training shall include a basic understanding of the client application, searching call activity, call playback and call export.

The Contractor will provide administrative training for three (3) system administrators. Such training shall include an in-depth understanding of the operation of the system as well as administration of users, archiving and similar topics.

The Contractor will coordinate all training sessions with IVRD. All training must be approved by IVRD. All training will be delivered prior to formal system acceptance.

The Contractor will allow, upon system acceptance, designated IVRD personnel to be provided with security and access codes, which will allow IVRD to make routine operational changes and conduct basic maintenance. The Contractor must continuously and within a reasonable time frame notify IVRD of any computer and/or software code revisions and any recommended equipment modifications. All such code revisions, upgrades and modifications shall be automatically incorporated into the project, up through the commencement of formal acceptance testing.

Spare Parts

Contractor will be required to supply an initial manufacturer's recommended level of stock of spare parts which shall be reviewed and approved by IVRD, as determined necessary, to maintain the system in the event of a critical component failure. These spare parts shall be located at a location designated by the IVRD.

As spare parts are consumed in the course of routine or repair maintenance during the initial and subsequent warranty period(s), the Contractor shall immediately replenish its stock of locally housed spare parts, where necessary. If at any time the Contractor is aware of any equipment repair or recall notifications the Contractor shall notify the IVRD. Trends of unusual system or component failure shall be brought to the attention of IVRD by the Contractor.

Service Manuals

Contractor shall provide volumes of installation, service and user documentation for each component delivered under this procurement. The quantity shall be determined by the number of recorders plus one (1) additional set.

Warranty

The Contractor shall warrant all provided equipment furnished as part of the contract for a period of one year after the date of system acceptance. The warranty will commence at the time of final acceptance approval and the Contractor shall provide all labor and parts for maintenance and repair, including preventive maintenance, of the system provided. All costs for the one-year warranty will be borne by the Contractor.

Ongoing Service

IVRD desires to have ongoing support in the form of extended warranty as well as routine maintenance following the initial warranty period. Proposer should include with submittal a detailed service proposal to provide:

Upgrades to software, firmware and related materials (inclusive of time and materials)
Maintenance and repair (inclusive of time and materials) of provided equipment.

Proposer shall indicate the method of delivery of such services to include their intention to use their own personnel or sub-contractors. For major failures, Contractor shall remotely interrogate and attempt to resolve the problem within 30 minutes and arrive on site, if required, within 4 hours. For non-major issues, Contractor shall remotely interrogate and attempt to resolve the problem within 2 hours and arrive on site, if required, the next business day.