

REQUEST FOR BIDS

Morgan County Emergency Management Communication District

Digital Voice Recording System

Requirements and Specifications

1 Statement of Purpose

The Morgan County Emergency Management Communication District (Herein after “MCEMCD”) is soliciting bids for a Digital Voice Recording Solution. MCEMCD is seeking a Vendor(s) that can fulfill the requirements from a technical and customer service perspective. MCEMCD is looking for a competitive bid that incorporates total cost of ownership principles such as system architecture, reliability, system life cycle, ongoing maintenance and process improvement.

The word “must” is used in this document to define MCEMCD requirements that are *critical and non-compliance will result in disqualification of a bid*. Vendors will be expected to *provide* all items with must in the description. Partial bids, i.e. those that do not offer all requested elements, will not be considered.

The Vendor’s attention is particularly directed to the requirements in the Technical Specifications. Vendors must state compliance in the format specified via a “Fully Compliant,” “Partially Compliant,” or “Not Compliant.” Vendors must provide documented evidence of compliance for those items that they respond “Fully Compliant,” or “Partially Compliant,” Failure to submit these statements or to provide to MCEMCD documentary evidence of claimed compliance, if requested to do so, may disqualify the bid. If the system will meet the requirement in the future, indicate revision or version number and date available.

2 Qualifications

Vendors must provide, as part of their response to this RFB, a complete and audited set of financial statements for the previous 36 months.

Vendors that are involved in any litigation associated with the system must provide a full description of any current litigation to which they, any parent company, or any subsidiary are a party.

The Vendor must provide full disclosure of any bankruptcies, judgments, or liens against them, any parent company, or any subsidiary.

MCEMCD may make such investigations as deemed necessary to determine the ability of the Vendor to perform the work, and the Vendor shall furnish to the MCEMCD all such information and data for this purpose as the MCEMCD may request. MCEMCD reserves the right to reject any offer if the evidence submitted by, or investigation of, such Vendor fails to satisfy MCEMCD that such Vendor is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional offers will not be accepted.

3 Procurement Policy

MCEMCD will make decisions based on merit and the MCEMCD's overall business needs, which includes the appropriate balance of cost, timeliness, quality, technical suitability, viability, economic diversity, legal requirements and other business considerations.

MCEMCD reserves the right to reject any or all bids or portions thereof. MCEMCD makes no guarantee of any minimum or maximum amount of Product or Service to be procured. MCEMCD reserves the right to make no award under this RFB, and the right to cancel this RFB. MCEMCD reserves the right to procure any part of the products and services of this RFB from MCEMCD's internal sources.

MCEMCD shall incur no obligation or liability whatsoever by reason of issuance of this RFB or action by anyone relative thereto.

4 Strategic Vendor Relationships and Certifications

It is understood that the MCEMCD requires that all communication systems be able to cohabitate and work together without any issues. To that end, MCEMCD requires that Vendor be capable of providing an executive summary detailing business relationship and technology relationship for the following corporations. Note: Please list and describe all certifications. Vendors that do not have certified integrations and strategic partnerships with the below corporations will not be considered.

Motorola
Nortel
Cisco
Avaya
M/A-COM

5 Vendor's Responsibility

Vendor must analyze and respond to all sections of this RFB, unless otherwise noted, by providing sufficient information to allow MCEMCD to evaluate Vendor's bid. Paragraph numbers in the bid must relate to the paragraph numbers in the RFB. Vendor is required to clearly explain any assumptions or conditions it imposes on or includes in its bid. The Vendor is obligated to furnish all information as requested and complete all forms according to each section's instructions. Any deviations or exceptions to MCEMCD's requirements should be noted and explained. Additional information may be attached to the bid; however, failure to provide complete information in the format specified may result in the Vendor being eliminated from the selection process at MCEMCD's discretion.

By submitting its bid, Vendor agrees that any costs incurred by the Vendor in responding to this RFB, or in support of activities associated with this RFB, are to be borne by Vendor and may not be billed to MCEMCD.

Lack of a response to a specific requirement will be interpreted by MCEMCD as Not Compliant.

6 General Instructions

Bids must be made in the legal name of the firm or individual under which business is conducted (showing actual business address) and must be signed in ink by a person duly authorized to legally bind the person, partnership, or corporation submitting the bid.

For those requirements listed in the Request for Bid that include the words shall or must, the Vendor will describe, in detail, how the requirement is achieved by the system and must provide diagrams, certifications as well as other forms of proof, as may be relevant, that the Vendor can meet the requirement. Specific requirements will be detailed in each section.

Vendors must define the capability of their organization to supply and maintain the system requested. The response should be specific and complete in every detail, and prepared in a simple and straightforward manner.

The Vendor must bear all cost associated with the preparation and oral presentation of their bid and any requested demonstrations.

Vendor must provide all information requested. If the item requires that additional documentation be provided, the response must reference the specific location within the documentation that contains the required information. Also, the full version of the referenced document must be included in the response.

All unit pricing, as well as any bulk pricing must be included in the pricing section. It is the responsibility of the responding Vendor to include all pricing as part of their response to this bid

request. If any pricing is omitted, it will be assumed that the cost is covered in the systems and pricing proposed.

Vendors may be requested to make an oral presentation of their bid to MCEMCD after the bid opening. Such presentations provide an opportunity for the Vendors to clarify their bid and ensure a thorough mutual understanding. MCEMCD will schedule the time and location for the presentations. Technical questions only will be addressed at this time.

MCEMCD will examine the qualifications and abilities of all responders to meet the following criteria:

- a. Quality and thoroughness of the bid submitted.
- b. Vendor's references, experience, and financial and business stability.
- c. Ability to meet or exceed the Technical Requirements set forth by the MCEMCD.
- d. Support capabilities for on-going maintenance.
- e. Future enhancements and growth of system.
- f. Training requirements.
- g. System operation and ease of use.
- h. Prices quoted for the system and options.

Vendors must have been engaged in providing similar equipment and services in the past.

Critical Dates

<u>Process Step</u>	<u>Critical Dates</u>
Issue RFB	October 25, 2007
Vendors Submit Questions	within 15 days
MCEMCD Provides Questions and Answers to Vendors	within 15 days
Vendors Submit Bids	December 3, 2007
Evaluation and Selection of Vendor(s)	December 10, 2007

7 Questions

All questions and inquiries concerning the request for the bid must be addressed in writing to:

Contact	Gordon Neihardt
Title	Manager
Phone	(256) 552-0911
Fax	(256) 351-4840
email	gneihardt@morgan911.org

8 Submission Deadline

Bids are to be submitted no later than 2:00 p.m. on December 3, 2007:

Three (3) clearly identified original of your bid are required to include supporting documentation.

Copies sent to:

Contact Name	Gordon Neihardt
Address	4216 Highway 31 S
City, State, Zip	Decatur, AL 35603
Phone	(256) 552-0911
Fax	(256) 351-4840
Email	gneihardt@morgan911.org

9 Bid Format

In order to more efficiently gain information from each RFB response, please construct the response in the following format:

Cover Letter, designating single point of contact

Table of Contents

Executive Summary

Overview of Proposed System

Tabbed Sections:

This section of the final Bid Document must be divided into tabbed sections, each tabbed section comprising the following:

Technical Response

This section is to include the response to each paragraph within the Vendor's Requirements and Technical Specifications section of this RFB.

Price Bid

This section is to include an itemized list of equipment and associated costs for the proposed solution. In addition, costs for installation, training, first year maintenance, extended maintenance and shipping and handling should be itemized.

Service

This section is to include a description of the Vendor's project management, service, and support capabilities. This should include, but is not limited to, a description of project management team roles and responsibilities, escalation procedures, remote diagnostic capabilities, implementation schedules and methodology, etc. The Vendor must provide local service. Vendor must provide MTBF and information on System hardware. Vendor shall provide a list of no less than five service references in the local area.

Warranty

This section is to include a description of all equipment and labor warranties offered. In addition, any software licensing and procurement policies should be outlined. Vendor must provide warranty services during the warranty period from a service facility located in the local area.

Training

This section is to include all training options offered by the Vendor. In addition, course descriptions should be included. Vendor must provide all technical and user training. Trainer must be located in the local area.

Literature

This section is to include sample screens, reports, and graphs. In addition, all product brochures and a copy of the operator's manual should be included.

Financial

This section is to include the complete and fully audited financial statements of the Vendor of the system.

10 Submission Requirements

The Vendor must also submit the following information as evidence of compliance with the specifications. The offer may be rejected or otherwise disregarded if the information is incomplete or if the proposed system deviates from the specifications.

- a) Detailed description of any special equipment required to meet the requirements of this RFB.
- b) List of three current installations of equivalent system design/architecture proposed in response to RFB installed by the Vendor giving agency or firm name, city, and state. The name and telephone number of a knowledgeable contact person employed by the agency or firm must be supplied for purposes of references.
- c) Technical diagram of the proposed IT infrastructure and replay path
- d) Any applicable rack diagrams
- e) Value added services: Vendor must have an active, independent, formal users group to allow members the ability to optimize the value of the proposed system in their organizations through education, training programs, quality initiatives, and events. Vendor must provide information on how to become a member of the organization and contact information for three current, active members. Vendors that do not provide a formal users group will not be considered.
- f) Product Discontinuation Documentation: The Vendor must provide a clearly documented, published product discontinuation (Sunset) policy that clearly defines the following:
 - Available Versions
 - End of Sale Date
 - End of Software Development Date
 - End of Support Date

Note: Vendors that cannot provide the required policy statement will not be considered.

g) Documented project management methodology to include:

- Project Execution Plan
- Statement of Work
- Staff Responsibilities
- Software Upgrade Policy
- Problem Escalation Policy

All system manuals and documentation (in PDF format) must be provided upon final system acceptance.

Bids must be valid for a period of 90 days from date of submission.

Vendor must provide a statement of any past, existing, or anticipated actions for regulatory compliance violations. Except for those that may be listed, Vendor must warrant and represent that there are no past, present, or anticipated civil or criminal administrative or judicial actions against them for any of the Products contained in the proposed system.

Technical Specifications

Introduction

This specification is for an advanced digital system for designed to provide recording of 64 channels of voice communications. The equipment furnished under this specification must be designed for continuous duty operation (e.g., 24 hours per day, 365 days per year).

The new system will provide 64 total voice recording channels for recording telephone and radio voice traffic and will provide 120 days of online hard drive storage for fast retrieval. All elements of the system will have 100% redundancy for 100% fault tolerance.

Please provide a detailed diagram (in PDF file) containing the following components:

- Pertinent Radio System Components
- Vendor Components
 - Audio Recording System Components
 - Data Recoding System Components (if different from audio)
 - Additional servers, switches/hubs, cabling, break-out boxes, routers, punch-down blocks, audio mixing units, client PC's. (If dedicated client Workstations are required, please provide detailed hardware and software specifications).

All Connection/Access Points. Also, please include written descriptions of the following:

- All components being tapped
- All Vendor's tapping devices
- The types of taps (passive/active)
- Whether the taps are analog or digital
- Whether the taps are 2-wire, 4-wire, T1, etc.
- How summing issues may be addressed in the radio system

The system graphical user interface for search, replay and dubbing must be user friendly and simple to operate. A user interface similar to Microsoft Outlook® is preferred. It must include the ability to simultaneously search and replay recorded telephone, conventional radio channels as well as trunked radio communications using captured data from system without any extraneous process by the operator. All communications regarding a specific incident, both radio and telephone communications system-wide, should be able to be replayed together in the sequence in which the communications occurred.

The system shall provide an Instant Recall application on each Call Taker's and Dispatcher's PC desktop. The Instant Recall solution must be a client software application solution integrated with the system.

The proposed system must include all necessary mounting equipment to secure the proposed recording equipment. Space required to house the system will be considered, as part of these requirements.

The breakdown of the 64 voice recording channels is as follows:

16 channels connected to conventional radio frequencies.

10 channels connected to Dispatcher telephone stations for administrative and 911 traffic

10 channels connected directly to 911 trunks for 911 traffic

10 channels connected directly to other telephone lines

Remaining channels available as needed

1 System Layout

- 1.1 The system must be capable of recording up to 192 channels (extension side) per chassis.
- 1.2 The system must be capable of recording up to 200 channels (trunk side) per chassis.
- 1.3 The search and replay application must be capable of searching and replaying all channels at the same time.
- 1.4 Each system recording module must support 2 archive drives.
- 1.5 Each system recording module must support an internal RAID1 or RAID5 hard disk configuration.
- 1.6 The system must be designed to allow future advances in archive technology to be incorporated without chassis modification. Please describe how this would be accomplished.
- 1.7 Each recording module must support up to 78,000 channel hours of recordings on-line for high speed access without needing additional, external hardware or transfer of recordings to third part hardware..
- 1.8 The system must be able to record a mix of digital extensions and analog ports (for analog extensions and radio ports) in the same chassis. Systems that require separate recorders for analog and digital telephony recording will not be considered.
- 1.9 The decryption of native digital formats must be done within the recording chassis. Recorders that require externally mounted interfacing (logger patches, D to A converters) will not be considered.
- 1.10 To ease troubleshooting and minimize support and space requirements, the audio recording architecture shall be non-distributed, combining voice connectivity cards,

internal hard drive, operating system and storage within the recorder chassis (one-box solution).

- 1.11 The recorder must use Windows 2003 Server. Supplier that does not use a “hardened” operating system will not be considered.
- 1.12 The Supplier must provide a system-wide multi-channel search and replay application which can be loaded on a client workstation.
- 1.13 For security reasons, all audio files stored on the recorder must be saved in a format that cannot be played via standard replay application, such as Windows Media Player, QuickTime, and others. Any Supplier’s solution that stores voice recordings in a standard format (wav, MP3, etc) will not be considered.
- 1.14 Upgrades must be allowed either directly using the system DVD, floppy drive or remotely via LAN or modem connection through pc Anywhere remote control software.
- 1.15 The system must support an optional reporting tool package with pre-built reports to allow flexibility in creating new reports. At minimum the pre-built reports must include productivity and usage reports (per channel activity), Caller ID report (list of call records by caller ID), ANI/ALI report including (ANI, Zip Code, Address, City and Name) and Security report including login, playback and file handling information. In addition, the reports package must support report printing, zoom in and out, emailing of completed reports and export to file.

2 Recording Inputs

2.1 General

- 2.1.1 Each system recording module (single chassis) must contain interfaces for all analog and digital telephony standards.
- 2.1.2 It must be possible to add recording channels to the system recording module without upgrading other elements of the system recording module (chassis, memory, processors etc.) up to the maximum limit of the chassis.
- 2.1.3 The system must support user-definable channel names and channel numbers to assist in searching, management, and monitoring.

2.2 Automatic Gain Control

- 2.2.1 Automatic Gain Control (AGC) must be available for replay. It must be possible for the System Administrator to enable or disable AGC on replay without requiring intervention by Supplier. In order to preserve evidence, the system must be capable of recording without modifying input levels; therefore, recorders, which use fixed AGC as part of the recording process, will not be considered.

2.3 Analog Inputs

- 2.3.1 The system recording module inputs must be balanced and isolated from any internal voltage source.
- 2.3.2 The system recording module must support DC impedance for telephony connections greater than 10 MΩ.
- 2.3.3 The system recording module must support a minimum crosstalk coupling of -60 db.
- 2.3.4 The system recording module must support a minimum signal to noise ratio of 35 db.
- 2.3.5 The system recording module must support analog recording modules with optional 600Ω resistance for passive serial connection/termination to radio lines.
- 2.3.6 The system recording module must support a minimum dynamic input range of -50 dBm.
- 2.3.7 The system recording module must support a frequency response between 300 Hz (-6dB) and 3400 Hz (-7dB).
- 2.3.8 It must be possible to configure the analog recording inputs with optional warning tone without additional components or cost at any time in the life of the system. The System Administrator must be able to enable or disable the warn tone per channel.
- 2.3.9 The system recording module must have the ability to set alarms based on a specified period of non-activity and activity on a per channel basis.

2.4 Digital Inputs

- 2.4.1 The system recording module must be capable of supporting interfaces to digital telephone systems. The Supplier must provide a list of available interfaces.

2.5 Record Triggers

- 2.5.1 When recording analog telephony/radio channels, the system must provide the following record triggers:
 - Level or energy detection with manually adjustable threshold,
 - External (contact closure, squelch output),
 - On/off hook detection (for telephony), and
 - No trigger for continuous recording.
- 2.5.2 When recording digital telephony/radio channels, the system must support the following record triggers:
 - Level or energy detection with manually adjustable threshold

- On/off hook detection (for telephony), and
- No trigger for continuous recording.

2.5.3 The system must support configurable record trigger for each channel separately to accommodate various channel requirements.

2.5.4 The system recording module must support integration with equipment that supplies a dry contact closure to signify the beginning and end of a call.

2.6 Filters

2.6.1 The system recording module must support built-in configurable frequency filters. Note: This can be used to filter out the 2175Hz tone produced by the radio system.

2.7 Voice Activation

2.7.1 The system must continuously record voice activity to ensure each voice transmission is completely captured and not clipped.

2.8 Analog Signaling

2.8.1 Dialed Digits – The system recording module must be capable of decoding all dialed digits (DTMF) during a message, to enhance search capabilities. The digits will be stored with the audio record. The system recording module must be capable of saving up to 48 dialed digits for each recorded message.

2.8.2 Calling Number – the recorder must be capable of decoding CLI information that meets the following specification: Bellcore GR-30, ISDN BRI, and ISDN PRI.

2.8.3 The system recording module must support internal (without the use of external decoding equipment) MDC-1200 decoding.

3 Voice Processing

3.1 The system recording module must be capable of converting analog input signals to digital data, compressing the digital data and storing the digital data to disk.

3.2 Digital input signals, such as ISDN Basic Rate, must be converted to discrete 64kbit/sec audio signals and then compressed.

3.3 The types of speech compression supported by the system must be selectable from 5.3 kb/s to 64kb/s.

3.4 It must be possible for the System Administrator to select compression algorithm on a per recording channel basis.

4 Operation

4.1 Time Synchronization

- 4.1.1 The system recording module must be capable of synchronizing to designated SNTP or NTP server(s).

4.2 Diagnostics & Alarms

- 4.2.1 The system must support 4 different means of reporting alarms from each recorder.
 - LED
 - Audible Alarm
 - Monitoring application loaded on individual clients
 - SNMP with standard MIB file.
- 4.2.2 Alarms and management feedback must be provided via a built-in client application AND via SNMP commands monitored from an SNMP management application such as HP OpenView, CastleRock, etc. Supplier must provide standard MIB files for the proposed system.
- 4.2.3 The system recording module must include built-in tests that automatically monitor the status of the system, initiating audible, visual, and network alarms in the event of a failure. The system administrator must have the option of silencing the alarm indicators.
- 4.2.4 The system must keep a full audit trail of all user access and system maintenance functions with details of who accessed the system and when, with details of what was changed or accessed.
- 4.2.5 The system must support the ability to create a list of events that will trigger an alarm. In addition, the alarm type (SNMP, beep tone, etc.) must also be selectable on the basis of specific events.
- 4.2.6 The system must keep a full audit trail of all alarms and faults and provide a method of viewing the alarm history.

5 Hard Drive

- 5.1 Each system recording module (single chassis) must be capable of being configured with internally mounted hard drive(s). Each recording module must be capable of storing up to 78,000 channel hours per recorder.
- 5.2 The system recording module database must be proprietary, and must be capable of maintaining an extremely high insert rate, be resistant to hacker and virus attacks, and be very secure and stable (not prone to corruption).

5.3 Item Deleted

- 5.4 Messages stored on the system recording module hard disk(s) must automatically be copied to the archive media unless the archiving is disabled.
- 5.5 In the event that the system recording module hard disk is approaching 100% full of un-archived data and there is no archive available, the recorder must initiate an alarm warning that data will be lost if a new archive is not enabled.
- 5.6 For security reasons, it must not be possible to manually delete specific individual messages from the system hard drive(s).
- 5.7 The operating system, primary recorder software, recordings and associated call records must be striped across multiple hard disks when the system recording module is configured with a RAID 5 subsystem.

6 Archive

- 6.1 The system recording module must be capable of supporting single or dual archive decks. In dual deck mode it must be possible to operate the decks in sequential or parallel mode.
- 6.2 The system must support manual archiving by channel and date range.
- 6.3 The system must have an optional feature to select the expiration date after which the media can be overwritten.
- 6.4 The system must support an archive methodology where one deck is actively archiving while the other deck is in standby mode. The second deck starts archiving only if the removable archive media becomes full on the first deck or if the first deck fails.
- 6.5 The system must support an archive methodology where both decks archive simultaneously to create duplicate set of archive media.
- 6.6 The system must support a dual deck configuration where one deck is archiving while the second deck is being used for replay.
- 6.7 To minimize space requirements, the system must support internally mounted DVD, AIT-1, AIT-2 or DDS drives. Systems that only support archive drives or sub-system external to the recorder mainframe will not be considered.
- 6.8 Each 9.4 GB DVD archive disk shall be capable of recording up to 3600 channel-hours.
- 6.9 Each AIT-1 archive tape must be capable of recording 13000 channel-hours.
- 6.10 The vendor must provide a removable media management methodology that includes:
 - Label printer used to print label with unique ID, date of creation and logger ID.

- An integrated search and replay application that indicates by ID, logger ID and creation date which piece of media contains the desired recordings.
- 6.11 When the removable media is full, the system must alarm to notify the administrator that a change of media is required.
 - 6.12 Access to the archive drives (in the system recording module) must be simple but prevent unauthorized ejection of media to prevent loss of data security and to protect the chain of evidence.
 - 6.13 The system must include archiving and retrieval from a remote dedicated server. This is to enable media management from a remote location.
 - 6.14 The system must support configurable archiving schemes: archiving continuously and at specific time.

7 Centralized Archive

- 7.1 The system solution must include the capability of archiving voice recordings to centralized storage to facilitate long-term high-speed access to recordings.
- 7.2 The system centralized archive solution must support RAID, SAN and NAS. The vendor must provide a reference site (name and installation date) which employs centralized storage.
- 7.3 The system centralized archive solution must be fully integrated with the EMC Centera storage system. In addition, the vendor must be certified by EMC and provide proof of certification.
- 7.4 The system centralized archive solution must accommodate jukeboxes and tape libraries.
- 7.5 The system centralized archive solution must operate on servers running the Windows 2003 Server Standard Edition operating system.
- 7.6 The system centralized storage solution must support a redundant architecture to maximize uptime.
- 7.7 The system centralized storage solution must support an optional architecture that provides geographic redundancy.
- 7.8 The system centralized storage solution must support rules-based archiving.
- 7.9 The transfer of voice recordings from the recorders to the centralized storage can be bandwidth intensive. The centralized storage solution must include transfer options.

- 7.10 The centralized storage solution must allow an administrator to program variable retention periods on a per channel basis.

8 Redundancy

- 8.1 The system recording module (single chassis) must support an internal RAID 1 or RAID 5 disk array.
- 8.2 The system recording module (single chassis) must support dual DVD or dual AIT-1 archive drives.
- 8.3 The system recording module (single chassis) must contain dual hot-swap power supplies with load-balancing and dual independent power feeds.
- 8.4 The system must be capable of providing 100% redundant voice recording by means of a parallel recording architecture.
- 8.5 The system must have the capability of providing offsite centralized storage to guard against geographic disaster. The vendor must provide a reference site (name and installation date) which employs a parallel recording architecture with offsite centralized storage.

9 M/A-COM Compatibility

- 9.1 The system must be certified by M/A-COM to be EDACS compatible.
- 9.2 For EDACS systems, the voice recording must be captured via a T1 connection to the IMC.
- 9.3 For all radio transmissions in the EDACS system, data must be captured via the TRIM PC such that users of the system must be able to locate specific recordings by LID, GID or Agency/Fleet.
- 9.4 The vendor must provide a reference site (name and installation date) which employs EDACS de-trunking via T-1 connection and the TRIM PC.

10 Call Data

- 10.1 The system must provide the capability to decode and store call data (CTI, CDR, SMDR, VOIP, and ATIA) in a Microsoft SQL Server 2000 database. All intrinsic features and functionality of the database must be available.
- 10.2 The system must provide an external call data storage component that must utilize the latest Microsoft Windows 2003 Server.
- 10.3 The system must support a dual call data storage environment to protect against geographic disaster and provide a maximized level of redundancy.
- 10.4 The system must be capable of providing up to 7 years of data storage on hard drive (Online) without requiring the use of removable media on any type.
- 10.5 The system solution must provide the capability to natively decode and store CDR and CTI data from a wide variety of switches.

11 Reconstruction

General

11.1 Item Deleted

- 11.2 The system must support the ability for a remote caller to replay recordings from a remote telephone connection.
- 11.3 The system must support streaming of audio and video over the LAN in compressed format
- 11.4 The system must be capable of recording on all channels during replay. The replay operation must not affect the recording performance in any way.
- 11.5 The system must provide a Web-based application that supports online help. Please provide an actual screen shot of the basic screen in jpg format.
- 11.6 The system reconstruction application must support parallel recording environments in two ways: 1) transparent to the user, the system will search and retrieve recordings from the parallel recording systems and the user will be able to select whether or not duplicate recordings will be presented, and 2) by allowing the user the ability to switch between multiple recording complexes

Search

- 11.7 The system reconstruction application must allow simple and quick search based on frequently used search parameters. At least three search parameters could be configured by the user to best fit its needs. Please provide an actual screenshot in .jpg format.
- 11.8 The system reconstruction application must support searches using ANI/ALI data (when available) as the search criteria.
- 11.9 The system reconstruction application must support searches using annotation data including text annotation, voice annotation and bookmarks as the search criteria. Searches by text annotations must be available by any part of the text content.
- 11.10 The system reconstruction application must allow users to search on the following criteria, individually, in any combination (Boolean) and supporting wild cards:
 - Time & Date
 - Duration
 - Channel ID
 - Position or Alias
 - Extension Number
 - Condition Code (incoming or outgoing)
 - Dialed Number (where available)
 - Calling Number (where available)
 - Annotation - user specific notes
 - ANI/ALI data (where available)

It must be possible to combine any number of search criteria elements into one search function to provide complex but efficient system-wide searching capability.

- 11.11 The system must allow multimedia and multi-source searches from single application without the need to switch between screens and databases for each media type or source. For example: recorded audio from both radio and telephony systems, as well as recorded video could be searched using single query.
- 11.12 The system must support searching by any data fields associated with the recordings. This search functionality should include both structured searches as well free expression searches to allow maximum flexibility to the user.
- 11.13 The system must allow saving and editing of searches to be used by either all users (public searches) or by a specific user (private searches)
- 11.14 It must be possible to perform a search using keyword such as “robbery” etc.

Search Results Display

- 11.15 The system reconstruction application must be capable of displaying multimedia search results graphically arranged by time of recording to allow a full view of the incident picture. Please provide an actual screen shot in .jpg format depicting the graphical display.
- 11.16 There must be no limit to the number of recorder channels that can be displayed synchronously, up to the recorder system capacity.
- 11.17 The system reconstruction application must allow for the user to configure the graphical display by channel, resource, radio-id, and talk-group.
- 11.18 The system reconstruction application must be capable of displaying multimedia search results in table format.

Replay

- 11.19 The system reconstruction application must be capable of replaying an unlimited number of multimedia channels in synchronized mode, allowing effective scenario reconstruction.
- 11.20 The system reconstruction application must allow the user the capability of selecting and replaying part of a call, transmission, and video in either single item selection or when selecting multiple items.
- 11.21 The system reconstruction application must support block replay. This replay feature involves the selection of multiple recordings displayed graphically.
- 11.22 The system reconstruction application must support spoken time and date during replay.
 - Spoken time/date must be synchronized to recorder time.
 - On playback from a standard PC, the spoken time and date and the audio from the call must be played on separate speakers e.g., the spoken time is played on the left speaker and the audio on the right speaker.
 - Spoken time/date intervals must be configurable separately, e.g. spoken time every 30 seconds, and spoken date every 2 minutes.
 - Spoken time/date volume must be controlled separately from the master audio volume control.

- 11.23 The system must support the ability to toggle Automatic Gain Control (AGC) on & off during replay.
- 11.24 The system reconstruction application must be able to replay the silence between recordings to fully recreate the original incident. The application must allow the user the option to play back the recordings with silence between recordings played (silence reconstruction) or not (skip silence).
- 11.25 The system must support the playback of recordings in mixed mode, where the recordings are replayed as they occurred; or in sequential mode, where each recording is played back sequentially one at a time. This may aid the user in understanding individual recordings where multiple occur on different recorder channels simultaneously.
- 11.26 The system reconstruction application must support volume and balance control per audio channel.
- 11.27 It must be possible to vary the speed of playback without pitch distortion, from 0.5x to 2x.
- 11.28 It must be possible to define the skip forward/backward interval between 1 and 60 seconds.

Search Results Management

- 11.29 The system reconstruction application must allow the user to add selected items to a clipboard. This is to allow the user to focus on group of recordings and get a better understanding of the incident.
- 11.30 The system reconstruction application must allow the user to filter the search results based on user-configurable parameters. The filter could be activated to include or exclude recording that match the filter criteria.
- 11.31 The system reconstruction application must provide the capability to text annotate selected recordings. The annotation field will be at least 4000 characters in length and allow 10 such entries per call. The search and replay application must allow the user to search on text within the annotation field. The text annotation field will be stamped with a specific point of time so it can be related to a specific part of the recording.
- 11.32 The system reconstruction application must provide the capability to voice annotate selected recordings. The search and replay application must allow a minimum of 10 voice annotations per recording and be capable of graphically displaying the voice annotations within the recording. The voice annotation field will be stamped with a specific point of time so it can be related to a specific part of the recording.
- 11.33 The system reconstruction application must allow the user to set flags (markers) within a recording. In addition, the search and replay tool must be capable of graphically

displaying the flags within the recording. The flag will be stamped with a specific point of time so it can be related to a specific part of the recording.

Output

- 11.34 The system reconstruction application must be able to save the audio from a custom search into a single stereo .wav file.
- 11.35 The system reconstruction application must be able to save the audio and the video from a custom search into a single stereo .avi file.
- 11.36 The system reconstruction application must allow the user the capability of saving as .wav and .avi part of a call, transmission.
- 11.37 The system reconstruction application must allow saving the audio with both spoken date and time and with Automatic Gain Control (AGC).
- 11.38 The system must provide the ability to display and save all (no limit to the extent of the workstation capabilities) recordings associated with a particular incident to a single directory (a “Scenario”), recognizable by the reconstruction application as a single entity. The solution must be able to search for and re-display the saved scenario + associated data and provide the ability to continue searching or filtering for recordings within the saved scenario without access to a recorder.
- 11.39 The system reconstruction application must provide the ability to print the recordings’ associated data in a table format. The user must be able to configure which data fields will be included in the print.

12 Incident Information Management

Organization and Management

- 12.1 The system should support upload of incident related information into a single folder. The information should include: recordings made by the system as well as other files - documents, photos, video clips, etc.
- 12.2 The system incident information management application must support the organization of any incident related material according to the user preferences and must include an intuitive way to find information.
- 12.3 The system incident information management application must allow association of different reference numbers, such as: CAD created incident number, court case number, etc. to the incident information for quick location of the entire incident information.
- 12.4 The system incident information management application must enable review of both audio and video recordings done by the system without the need to switch to the reconstruction application.

- 12.5 The system incident information management application must enable review of uploaded files (documents, photos, video clips, etc.) directly from the incident information management application.

Distribution Management

- 12.6 The system incident information management application must enable remote access to information to authorized users. This could be used by investigators, for example, in order to review evidentiary material in an organized manner rather than replay it from CD or cassette.
- 12.7 The system incident information management application must support production of multimedia recordings as well as other files by burning them onto a CD or DVD. Integrated CD/DVD burning software should be supported as well to save the user from switching to additional application in order to complete a single production process.
- 12.8 The system incident information management application must support single process manageable production of audio recordings on tape cassette.
- 12.9 The system incident information management application must support distribution of multimedia recordings as well as other files by email.
- 12.10 The system distribution process must support inclusion certification audio for both authentication and introduction purposes.

Security

- 12.11 The system incident information management application must support access management to incident information on per user basis and for 'read', 'modify' and 'full' levels.
- 12.12 The system distribution process must support authentication mechanism to ensure the integrity of the incident information including audio and video recording as well as files such as: documents, photos, video clips, etc.
- 12.13 The system incident information management application must enable traceability of actions history taken on any of the incident information items.
- 12.14 The system incident information management application must support the quarantine of incident information. This is to ensure sensitive case information is stored separately from other recordings.

13 Instant Recall

- 13.1 The system Instant Recall application must provide users the ability to replay a message from a remote PC workstation via the network. The Instant Recall application must be software-based only and must not require any additional hardware to be installed in the recorder or console of the 911 Center. Solutions that require individual hardware-based Instant Recall devices will not be considered.
- 13.2 The system Instant Recall application must provide users the ability to replay a message from a remote PC workstation via the network with a single step action in all the following three ways: single mouse click, hot-key (predefined by the user), and double click on tray icon.
- 13.3 Audio must be streamed over the LAN via the Instant Replay application to the client workstation to allow fast replay.
- 13.4 The Instant Recall application must provide a replay interface with the following play controls (skip forward, skip backward, pause, stop, play, etc).
- 13.5 The Instant Recall application must be capable of loop replay. During replay of the last message, it must be possible to select a passage within the message using markers and to have that passage automatically loop back and repeat the passage.
- 13.6 The Instant Recall application must be capable of controlling the speed of replay. It must be possible to change the rate of replay to multiple settings between half speed and double speed to assist in clarification of the message. Replay rate must be changeable within sections marked by the looping feature. In addition, to maintain intelligibility, the pitch shall be corrected as the rate is changed.
- 13.7 The Instant Recall application shall be configurable to enable access to a group of channels (consisting of 1 or more channels) or all channels for the replay of last message for each position. These channels must be fixed on a per client basis to prevent unauthorized access to other channels.
- 13.8 The Instant Recall application must allow access calls up to 24 hours in the past (configurable timeframe). This time back must be configurable by the administrator for per user.
- 13.9 The Instant Recall application must display a list of messages (if present) upon start up. This list must be refreshed continuously to reflect the last messages. It must be possible to pick any message within the list and have the application automatically start playing that message. In this way it will be possible for the operator to quickly select a message that may be older than the most recent (last) message on the particular channel.
- 13.10 Where applicable, the Instant Recall application must display ANI/ALI information.

- 13.11 The Instant Recall application must provide the capability to annotate selected recordings in three formats: bookmark, text annotation, and speech annotation. All annotations must be associated with the exact time indication to which they relate in the call.
- 13.12 The Instant Recall application must be a standard part of each recorder provided by the Supplier. Suppliers that do not provide Instant Recall software as a standard configuration will not be considered.

14 ANI/ALI

- 14.1 The system solution must integrate with the current ANI/ALI output provided by the 911 service provider.
- 14.2 The system solution shall decode the inbound ANI/ALI information, normalize the information into a static call record, insert the call record into a call record database, and associate the call record with the corresponding recording.
- 14.3 The system solution must provide an ANI/ALI annotation application which is adaptable to changes in the ANI/ALI format.
- 14.4 The system solution must be able to extract the ANI/ALI information from the ANI /ALI controller or the appropriate output on the CAD system.
- 14.5 The system solution must support a configuration with parallel ANI/ALI annotation applications. The dual server configuration ensures that all 911 calls are annotated, even in situations where one of the servers experiences a problem.
- 14.6 The system must provide the capability to accept and store ALL ANI/ALI call data identified in the NENA ANI/ALI Phase II specifications (data element, type and length). The data elements MUST include:

Item	Field	Field Length	Description
1	NPA	3	The three digit area code of the Calling/Working Number.
2	Calling Number	7	The seven digit telephone number of the Calling/Working Number.
3	House Number	10	The house number. This field should be spaced filled if no house number is available.
4	House Suffix Number	4	The house number extension. (e.g. 1/2) This field should be space filled if no suffix applies.
5	Prefix Directional	2	The leading street direction prefix. Valid entries are: N, S, E, W, NE, NW, SE, SW. This field should be space filled if no prefix applies.
6	Street Name	60	The service address of the Calling Number.

7	Street Suffix	4	The street abbreviation, as defined by the U. S. Postal Service Publication 28. (e.g. AVE) This field should be space filled if no suffix applies.
8	Post Directional	2	The trailing street direction suffix. Valid entries are: N, S, E, W, NE, NW, SE, SW. This field should be space filled if no suffix applies.
9	Community Name	32	The service community name of the street / house number as assigned by the Municipal Street Address Guide.
10	State	2	The alphabetic state abbreviation as defined by the U. S. Postal Service. (e.g. PA)
11	Location	60	The additional address information describing the exact location of the Calling Number. (e.g. SUITE 2002, APT 706A) This field should be space filled if no location applies. See Notes for additional information on the use this field.
12	Customer Name	32	The subscriber name associated with the Calling Number.
13	Class of Service	1	Valid entries are:
			1 = Residence
			2 = Business
			3 = Residence Private Branch Exchange (PBX)
			4 = Business PBX
			5 = CENTREX
			6 = Coin 1 way out
			7 = Coin 2 way
			8 = Mobile
			9 = Residence Off Premise Extension (OPX)
			0 = Business OPX
14	Type of Service	1	Valid entries are:
			0 = Not Foreign Exchange (FX) or Non Published (Non Pub)
			1 = FX in 9-1-1 serving area
			2 = FX outside 9-1-1 serving area
			3 = Non Pub
			4 = Non Pub FX in 9-1-1 serving area
			5 = Non Pub FX outside 9-1-1 serving area
15	Exchange	4	Exchange used to place cellular phone call.
16	ESN	5	ESN for cellular phone
17	Main NPA	3	The three digit area code of the Main Number associated with the Calling Number.
18	Main Number	7	The seven digit telephone number of the Main Number associated with the Calling Number
19	County ID	4	County Identifier

20	Company ID	5	The Telephone Company Identification code. This field is to be populated using the NENA Company Code.
21	Zip Code	5	The five digit Postal Zip Code.
22	Zip + 4	4	Four digit zip code addendum
23	General Use	11	Field not used, space fill.
24	Customer Code	3	Customer code of cellular customer
25	Comments	30	Miscellaneous customer comments
26	X Coordinate	9	Longitude position of caller
27	Y Coordinate	9	Latitude position of caller
28	Z Coordinate	5	Altitude of caller
29	Cell ID	6	Identification Number of cellular phone used to place 911 call
30	Sector ID	1	Sector Identifier for sector in which call is placed
31	TAR code	6	Taxing Area Rate code.
32	Alternate Number	10	Alternate Number. Directory Number if different than Calling Number.

All fields must be discretely searchable via the standard replay client provided with the system.

15 Evaluation

- 15.1 Does the system allow the user the ability to customize on-line evaluations? Is a wizard provided for creating evaluation forms? If yes, describe how this works.
- 15.2 Does your system allow you to predefine lists of data that can be linked to the evaluation form for scoring and/or training purposes?
- 15.3 Is the solution able to weight each of the questions on the evaluation form with a different value and does the software calculate an overall score for all of the questions? Does your solution allow for aggregate scoring based upon a group of similar questions?
- 15.4 Does the solution have the capability of inserting notes on a per-question basis and a summary notes into the on-line grading form?
- 15.5 The proposed system must provide the capability of saving both complete and incomplete reviews. Users must be able to easily retrieve incomplete reviews for future completion, as well as retrieve complete evaluations for review. Please describe this process.
- 15.6 Does the system provide the capability to calibrate evaluations, i.e. offer a second opinion?
- 15.7 Does the system allow for multiple calls to be included on one monitoring form and aggregated the scores for the calls into one overall score?
- 15.8 Does the system provide the capability to export the completed evaluation form to a standard file format?

16 Reporting

- 16.1 How many and what reports are included with the system? Please attach samples of all reports that are included with the software.
- 16.2 Can reports be presented in both tabular and graphical formats?
- 16.3 Is multi-site (enterprise wide) reporting part of the standard system?
- 16.4 Can report criteria be saved for later use to maximize database storage? I. E. does the reporting function store the report result or just the report criteria?
- 16.5 Can supervisors view management information on call center quality performance including call center/team performance, agent performance over time and performance in comparison to others?
- 16.6 Can reports be saved or exported in different file formats (e.g. HTML, Excel, .RTF)? If so, which ones?

- 16.7 Is your reporting application compatible with third party reporting packages (e.g. Crystal Reports, Excel etc.)?
- 16.8 Does the system provide the ability to run a report that shows all of the notes that have been made by the quality monitor while grading agents?
- 16.9 Does the solution provide a report that includes a visual graph that compares how multiple quality monitors scored a single agent over a period of time? Does it provide a report with a visual graph that shows the Quality Monitor's consistency by day, week or month for an agent or group?
- 16.10 Does the proposed system provide the user the ability to chart the agent's productivity and quality points? Describe how the system accomplishes this function.
- 16.11 Do users have the option to "drill down", playback recordings or view the full evaluation form simply by clicking on the item in the report or graph?
- 16.12 Can reports be scheduled to run a recurring basis?
- 16.13 Send reports - The product shall be able to send reports to email, printer, user folder (user workspace within the product). Describe your products compliance.

17 Infrastructure

- 17.1 To ensure scalability, all external data must be captured and stored in a MS SQL 2000 database residing on a dedicated server (separate from audio recorder). Multiple server configurations will be acceptable. Suppliers offering "single box" proposals where audio and external data sources are captured and stored in a single chassis will not be considered.
- 17.2 Each replay client must have the capability to search ALL recorders within the system simultaneously and return one data set to the user interface. Suppliers that do not provide single search across multiple database capability will not be considered.
- 17.3 Each system recording module must support dual network connectivity with teaming capability.

18 Security

- 18.1 The system must support configurable security to include unique security accounts allowing operators to access only specified channels with specified functionality.
- 18.2 The system must support the capability to prevent unauthorized users from ejecting media from the system recording module. Media that has been designated for removal from a remote PC Workstation must not be ejected from the recorder.
- 18.3 The system must support a configurable security methodology which prevents unauthorized users from replaying media.
- 18.4 The recorder must not require access to the operating system level for any function of use or maintenance of the system. All operations should be provided through a user-friendly application from a remote client PC. No recorder will be accepted that requires the need to access the recorder desktop or operating system for any configuration, installation or upgrades to the system.
- 18.5 All audio files stored on the system must be saved in a secure format. Formats that can be played by the standard media player (like Windows Media Player) are not acceptable.
- 18.6 The system vendor must provide a written anti virus strategy. The system must support at least 2 major anti virus software packages and be certified with each major “anti virus software” version release no later than 1 month after general availability. Any vendor that is not able to prove past conformity to this level of anti virus protection and process will not be considered.

19 Remote Management

- 19.1 The system must be capable of being maintained remotely via PC Anywhere.
- 19.2 Access to the system via the remote control software must be account name and password protected.
- 19.3 The system must support centralized configuration (manage multiple system recording modules from the same PC workstation).
- 19.4 It must be possible to monitor the status and alarms of each individual recorder from a single PC Workstation. A status change on any recorder mainframe must result in a status change indication being displayed on the PC Workstation.

20 Electrical Requirements

- 20.1 Each system recording module must be fitted with dual hot-swap power supplies with load-balancing and dual independent power feeds AC power supply (100 to 240 +/- 10% VAC).

21 Environment

- 21.1 The operating temperature of the system recording module will be in the range +5C to +35C (+41F to +95F).
- 21.2 The storage temperature of the system recording module will be in the range 0C to +50C (32F to +122F).
- 21.3 The operating humidity of the system recording module must be in the range 20% to 80% relative humidity, non-condensing.
- 21.4 The storage humidity of the system recording module must be in the range 10% to 90% relative humidity, non-condensing.

22 Physical

- 22.1 Each recorder module shall be rack mountable for installation into an equipment cabinet. Recorder will be installed into a Dell 4 post rack.
- 22.2 Provide a rack diagram (front view). Include all equipment (system recording modules, servers, IT equipment, etc).
- 22.3 The vendor must provide an excel spreadsheet listing the following information for each piece of proposed equipment:
 - Weight (Kg)
 - Height (mm)
 - Width (mm)
 - Depth (mm)
 - Weight (lbs)
 - Height (in)
 - Width (in)
 - Depth (in)
 - Height in U
 - Watts
 - kVA
 - Draw (amps)
 - Thermal Diss BTU/Hr
 - Inlets (AC power)
- 22.4 Each individual recording chassis must support up to 192 channels (extension side) or 480 channels (trunk side) of conventional telephony in no more than a 4U form factor.