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State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Request for Quotation

RFO NUMBER CME 70495

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ADDRESS CORRESPONDENCE TO ATTENTION OF:

ROBERTA WAGNER 304-558-0067

SH-P-FO

HEALTH AND HUMAN RESOURCES BUREAU FOR PUBLIC HEALTH OFFICE CHIEF MEDICAL EXAMINER 619 VIRGINIA STREET, WEST CHARLESTON, WV

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PURPOSE:

To acquire, install, and implement a Medical Examiner Management System (MEMS) in the Office of the Chief Medical Examiner (OCME) office "Agency" that is to be completed by May 31, 2007.

SCOPE OF WORK: Project:

The MEMS must be network based, web enabled, and provide Internet/Intranet WAN accessibility, and must utilize existing server hardware, server operating system and database software as listed in Attachment A. Background information is provided in Attachment B.

Application, Web, and database server access is over a Wide Area Network (WAN) and is hosted at the DHHR-MIS secure server Data Center located approximately 3 miles from the OCME operations. Servers are not dedicated and will be shared with other applications/database systems. Additionally, existing workstation software and network infrastructure and services are to be utilized to the fullest extent possible. A modular design is required to allow implementation of OCME functions and system features over time as needs dictate. These include, but are not limited to, Toxicology (Tox) laboratory, Forensic Investigation Unit (FIU), Autopsy/Morgue operations, and Administrative (Admin) support.

A base case management system is required to support all OCME operations with basic functionality and features as described by the specifications in Section A & B of this Request for Quotation. This project must include full implementation, including training, and post implementation support by the successful bidder as detailed in this RFQ.

Section A – Basic Functional Requirements:

1. Case Management Function:

- a. System must provide automatic assignment of cases. The OCME will be allowed to define the starting case number(s). Case numbers can be changed. The case numbering system must support 4 digit years and up to 10,000 cases per year (type of cases that will have unique number sequence are "house", "county", and "declined jurisdiction").
- b. The system must check if a case with the same last name and first name has been entered over the last few days when establishing a new case.
- c. The case must have the ability to be opened after being closed.
- d. The system must have the ability for information to be imported into the system.
- e. The database must allow user to create specific database tables and data entry forms to suit agencies specific internal needs.
- f. The system must allow for the tracking of status of the death certificate.

- g. The system must support records not related to cases.
- h. The system must be able to look up cities, counties and states from the zip code.
- i. The system must automatically look up addresses of hospitals and other locations for a case.
- j. The system must have the capability of a case material check in and check out function (ex: chain of custody).
- k. The system must allow for case initiation at multiple parts of the process. The system must have the ability to require a valid entry in specified fields before data in the form can be saved. Case notes must be able to be stored in the system.
- I. Access to a case must be able to be restricted in the case of a high profile case. Access to a case must be able to be "read only" once the case has been set to a closed status.
- m. Data base system must be able to record cremation requests and record approval or disapproval.

2. Body and Evidence Processing Function:

- a. Data system must allow for a distinct property number for identifying property items, and track the status and physical location of all items pertaining to a case.
- b. The system must have a way for maintaining inventories (evidence, biological specimens, tissue slides, etc.) of items in coolers, rooms, lockers, drawers, etc.

3. Workflow:

- a. System must have user defined work flow and case tracking capabilities based on case status.
- b. The system must automatically create reminders and alerts based on data that is stored in the system on issues like overdue tox results, property that has not been collected for some time, and other items where more time has expired than desirable.
- c. The system must be able to check if all relevant data has been entered before a case is closed.
- d. The menus need to be tailored in the system to the different roles of users. Specific fields must only be entered by certain people within the agency.
- e. A case must be able to be reopened after it has been closed.
- f. The data system must have pre-built work flow capabilities including roles, flow, event handling, etc.
- g. The system must allow for automatic notification capability with updated information.

h. The system must have event management capabilities such as automatic email reminders after "X" number of days.

Missing Person:

- a. The system must allow the user to capture missing person information and match it with existing Date of Entry (DOE) cases.
- b. The system must assign a unique number to any new missing person.
- c. The system must match a missing person against DOE cases at the time of entering a missing person.
- d. The system must be able to match a new DOE case against a list of missing persons.

Mass Fatality:

- a. System must store a separate record for each mass fatality. This describes the mass fatality incident.
- b. System must allow you to enter multiple decedents into the system for a single mass fatality incident.
- c. System must automatically add the incident address if deceased at scene as the death address for the decedent.
- d. System must create individual cases for each decedent with their own case number for each of the decedents you have recorded.
- e. System must create a message telling you how many cases you have created and the last case number that has been generated.
- f. System must record human remains that are recovered in the incident to create individual records and will be identified differently from the case numbers of decedents for each of the body parts.
- g. System must create a message telling you how many body part records were created and the last number and review the details of the incident, the known decedent and all the human remains related to the incident.
- h. System must add additional decedents and also enter additional Human Remains into the record for this mass fatality.
- System must record missing persons that are recovered in the incident to create individual records and will be identified differently from the case numbers of decedents.
- System must allow Missing Person data to integrate with Mass Fatality.

Barcode:

- a. System must have a fully integrated bar coding module to facilitate labeling and tracking of evidence and specimens.
- b. System must use industry standard hand held bar code scanning devices for system input.

- c. Specimen labels must be printed together with barcodes.
- d. Barcode scanning must be used to record the destruction of specimen and medication.
- e. System must alert a user if a specimen or medication has been set to a "Do Not Destroy" status.

7. Toxicology:

- a. The MEMS system <u>will "not" interface</u> with the current toxicology equipment; the MEMS system will only provide recording, tracking, and reporting services for the toxicology department.
- b. Must have the ability to add new cases submitted to the OCME from county medical examiners.
- c. Must have the ability to track case sample disposition/chain of custody.
- d. Must have the ability to search database and acquire specific results for an extensive group of parameters. Some of these include specific positive drugs findings, county of decedent, manner of death, age and sex of decedent.
- e. Must have the ability to search for a case by name of decedent, county of death, or case submitter.
- f. Must have the ability to restrict changes to data, indicate who made changes and when.
- g. Must have the ability to restrict who can see toxicology results and when they can first be allowed to see the results.
- h. Must have the ability to add case notes. The program must have the ability to generate a Toxicology Report, as well as amended and addendum reports.
- i. The report must allow automatic inclusion of reference range information upon entry of positive findings. The reference range information must also be able to be overridden.
- The report must include a free field for comments.

8. Reporting Requirements:

- The system must be compatible with and have the capability to provide appropriate interfaces for ad-hoc report writing tools such as Microsoft access or crystal reports.
- b. The user must be able to add ad-hoc reports to a menu of reports offered.
- c. The user must be able to modify standard reports if needed.
- d. The system must provide a method to automatically submit reports to run on a user-defined schedule.
- e. The system must support the printing of labels with customizable layout and data element content.
- f. The system must have the ability to export files for interfacing with existing

systems.

9. Usability and Navigation:

- a. Client site must be able to run on Internet Explorer desktop with no special installation on client's side.
- b. The system must be able to provide editable on-line help screens.
- c. The system must provide text entry fields that have standard word processing functionality. Example, spell check, cut and paste, word wrap, etc. The spell check function must accept both user-defined words and import purchased dictionary editions.
- d. The system must have the ability for multiple selection input fields displayed at customizable drop down lists.
- e. The system must allow for automated data quality checking (for instance data date checking).
- f. The system must have the capability to alert the user of possible duplicate data for quality control.

10. Office Capabilities:

System must have the ability for remote entry of data on mobile PC's and or PDA's and the subsequent synchronization of data with the main database.

11. Customizable By Users:

- a. Screen prompt text and menus must be customized without programming changes.
- b. The system must allow the user to identify which fields are displayed on a specific screen.
- c. The system must have the capability for look up tables that allow for userdefined codes.

12. Security:

- a. Security must be able to be assigned based on roles (employee function).
- b. Security must be able to be set at the transaction user ID level and down to the level of the fields.
- c. The system must be able to provide security to restrict access to various functions by "inquiry only", "add", "delete", and "update capabilities".
- d. The security system must allow for the use of shared workstations. Example: multiple users able to log onto one work station (critical during training).
- e. The system must have full audit tracking capabilities, tracking by operator, and date/time.
- f. The system must be compatible with standard back up and restore functions.

g. Secure access must be able to be provided via the Internet to other agencies.

13. General Function Requirements:

- a. The system must have the capability to add a remote site: example, for disaster response.
- b. The system must have the capacity to support records for as many as 10,000 cases per year.
- c. The system must provide record, archive, and purge features.
- d. The system must be capable of producing a duplicate record with a different case number: example for mass casualty situations.
- e. The system must allow MS Word and Excel templates into the system records and populate them with case data.
- f. Attached documents in the system must be able to be searched in a full text search mode.
- g. Long text fields must be searchable for text strings.
- h. The system must be a real time system where all data that is affected by a transaction is updated at the time of the transaction.
- i. The system must allow for more than 1 person to access a case and its associated documents simultaneously.
- j. The system must be able to lock a case when it is being edited.

14. Billable Activities:

- a. The system must be able to track record requests for copies of documents and other billable activities.
- b. The system must allow for records receipt of payments.
- c. The system must allow for record completion of service requests.
- d. The system must allow for the production of invoices.
- e. The system must be able to track overdue payments.

15. ICD.10:

The system must have the capability of utilizing ICD-10 codes for diagnostic purposes.

16. Scan and Link Documents:

The system must store documents automatically and reference them in the database.

17. Generate Reports:

- a. The system must automatically generate autopsy reports and statistical spreadsheets using multiple fonts and line drawings, logos and other graphical aspects like shading areas and data must be able to be entered into the database automatically merged with such forms and printed out on laser printers connected to the network.
- b. Data from the database must be able to be inserted into Microsoft Word templates for special reports.
- c. Data from the database must be able to be inserted into Microsoft Excel for the production of quarterly and annual reports.

Section B - General System Requirements:

There are a number of general requirements that are not forensic laboratory specific, but are important from the perspective of the overall system functioning ("consistent look and feel"). This section includes overall specific system capabilities that supplement the detailed requirements specifications contained in other sections.

1. MEMS System Access and Navigation

- a. Security: Control for system access by authorized users. These specifications assume the OCME has appropriate security in place for user access to the information system environment that is separate from MEMS system access.
- b. Must have the ability to create and maintain individual user specific security tables containing user ID and password information that is accessed only by administrator level security.
- c. Must have the ability to restrict user passwords to HIPAA-compliant combinations of characters of a standard minimum length
- d. Must have the ability to track user password revisions and force users to change their passwords at OCME determined intervals
- e. Must have the ability to terminate log-on screen after OCME determined number of unsuccessful tries by a user to log in
- f. Must have the ability to automatically log off idle workstations after a predetermined period of time
- g. Must have the ability to enable a user automatically logged off to log back in and have the system reset to the same screen the user was on when the automatic log off occurred
- h. Must have the ability to limit workstations from which a given user can log on and whether or not they can access system from a remote site
- i. Must have the ability to prevent a user from being logged on to multiple workstations at the same time

- j. Must have the ability to limit hours of access for individual users and lock them out of the system during non-authorized hours
- k. Must have the ability to create an audit trail of who, when, where, and what functions were accessed by a specific user
- Must have the ability to conform to any HIPAA security conditions adopted by the OCME as a part of its privacy and security documentation

2. <u>User Rights and Privileges: This section generally covers what users can do once they are granted access to the MEMS system.</u>

- a. Must have the ability to create rights and privilege groups by type of user
- Must have the ability to create unique user rights based on functions and screen displays
- c. Must have the ability to control which users have the right to update specified data sets and track the data updated
- d. Must have the ability to lock certain records at some specified point after creation (test results for example)
- e. Must have the ability to include add/delete/edit/read only limits on user rights

3. Screen Access and Navigation: User rights notwithstanding, this segment relates to requirements specifications regarding system screen access and navigation.

- a. Must have the ability to access any allowed function from any workstation on the system
- b. Must have the ability to access various screens through the use of menus and appropriate icons on various screens
- c. Must have the ability to move easily from one screen to another utilizing screen appropriate icons or function keys
- d. Must have the ability for off-site customers to access limited read-only fields or portions of the Web MEMS system for data entry and barcode generation

4. General Query Capabilities:

- a. Must have the ability to query specific records based on record key data fields
- b. Must have the ability to perform name searches utilizing sounded (words that sound similar) approaches
- c. Must have the ability to access query function screens from screens where it would be logical to do so rather than having to return to a system menu
- d. Must have the ability to query for any specific test request test status

5. Field Entry and Editing and System Table Maintenance

- a. Field Value Entry and Editing: Any field containing a coded value rather than text must include the following:
- Must have the ability to enter the value desired directly or from a drop down table of valid values through standard mouse selection procedure

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- c. Must have the ability to require mandatory fields to be filled before user can exit the screen, along with prompts or highlights that enable the user to quickly see which fields need to be completed
- d. Must have the ability to define data entry fields for dual entry with separate verification pass prior to accepting the data set
- e. Other Field Editing: Editing of non-table fields
- f. Must have the ability to apply alpha/numeric edits
- g. Must have the ability to test for valid numeric value range.
- h. Must have the ability to perform selected correlation edits between fields.
- Must have the ability to edit for valid dates and reasonable date ranges.
- Must have the ability to insert default values for any code or non-code field.
- k. Must have the ability to default value for current date and time in all appropriate fields that are generated from the system clock, but allow user over-ride.
- System Maintenance: Maintenance of all MEMS system tables for which the user has the responsibility for populating.
- m. Must have the ability to control access to the system tables by authorized administrative personnel.
- n. Must have the ability to update code tables directly from any screen where the field appears by authorized users only.
- o. Must have the ability to maintain the value set for any table.
- p. Must have the ability to time-stamp any table where changes are only valid starting on a specific date. Code set that will be presented to the user will correspond to the system date.

Reporting and Data Transfer 6.

General Reporting: Standard reports embedded in the MEMS system. Many of these reports support general "business management" activities. Examples include:

- a. Must have the ability to provide Workload Reports (periodic weekly, monthly, yearly, etc. workload reports that will indicate separate counts of specimen/samples received and tests performed for each analytical area)
- b. Must have the ability to provide reports that differentiate between client-ordered tests and tests done in- house as part of investigative testing protocol or study.
- c. Must have the ability to provide Work Time Unit reports (reports that calculate the amount of labor it took to run the tests). The system must also be flexible enough so the laboratorians can add, delete, or change tests and work time units as needed.
- d. Must have the ability to provide Quality Assurance Reports. The system must produce reports based on any of data fields and the comment fields where additional QA information will be stored. Examples of QA reports include

- information about unsatisfactory specimens/samples, specimen/sample rejection, improperly labeled specimen/samples and/or request slips, etc.
- e. Must have the ability to provide Turn-around Time Reports (reports showing the turn-around times for specific tests or test groups, including the average turn-around times plus the number that meet, exceed, and are less than predetermined turn-around times).
- f. Must have the ability to provide Quality Control Reports (reports showing periodic summaries of QC results with detailed reports of exceptions including detailed listings of QC results for a particular date range, as well as tracking changes in QC measures and who made the changes).
- g. Must have the ability to provide Submitter Usage Reports (reports providing lists of submitters and the tests they requested for a specified period of time).
- h. Must have the ability to provide Reportable Disease Report (reports listing all reportable diseases based on the results of forensic findings/ testing with flexibility to add, change, and/or delete as necessary).
- i. Must have the ability to provide Test Log Reports (reports on various test logs such as specimen/sample pending log, reportable disease log, specimen/sample send-out log, etc., as well as a list for a specific tasks or test(s) or series of results for a given time period/submitter/etc.)

7. Report Generation Strategy (Internal and Export): This general specification supplements the more detailed specifications contained in other sections.

- a. Must have the ability to provide a reports menu from which the user can select and run standard system reports.
- b. Must have the ability to schedule the production of reports for non-peak system usage or nighttime.
- c. Must have the ability to create user query reports utilizing a standard query tool compatible with the MEMS data base architecture.
- d. Must have the ability to limit scope of query reports.
- e. Must have the ability to select and export data sets for more intensive analysis on a workstation in a format compatible with appropriate desktop database products and statistical analysis packages.

8. Web Front End: More general specification than contained in prior sections relating to database interfaces.

- a. Must have the ability to provide secure Internet site for the exchange of sets that comply with HIPAA and related standards and recommended architecture.
- b. Must have the ability to support user input screens for forensic test request submission and specimen/sample collection.
- c. Must have the ability for external users to pick up test reports and files as well as general purpose report data files.
- d. Must have the ability to provide second-tier authentication for data access.

- 9. Standards and Regulatory Compliance: Many of the standards have been stated elsewhere. As a general rule, the following standards and requirements will apply to the OCME on its internal policies and procedures and functional activities performed.
 - a. Must have the ability to comply wherever feasible with all data processing requirements of the College of American Pathologists (CAP) as well as any other applicable standards.
 - b. Must have the ability to comply with CDC PHIN standards (http://www.cdc.gov/phin/) and applicable HIPAA regulations pertaining to privacy/security and medical transactions containing personal health information.

10. Software Subscription Support (Mandatory):

<u>Hardware</u>: It is the intention of the Agency to purchase, install, and maintain all computer network and computer workstation related hardware associated with the operation of the MEMS.

- a. Vendor supplied hardware must be identified as being included at no additional cost including maintenance and included with the basic system configuration.
- b. No requirement is made of the vendor to support computer workstation and computer network hardware maintenance, but it is required that the vendor provide software support in conjunction with hardware upgrades or hardware failure recoveries as part of the software support agreement.

<u>Software:</u> All software obtained through this RFQ process is required to be provided in perpetuity for a one-time fee to be included in the MEMS price specified in the proposal response. If software support is not renewed, the MEMS must be at the most current version defined by the contract and be fully functional prior to termination of existing support contracts. Failure to renew software support subscription will not render the MEMS inoperable or disable features or functions.

- a. It is required that all customization or tailoring of the software for specific needs automatically carry over to future releases of the MEMS at no extra cost to the Agency.
- b. Software support must be provided for all aspects of the MEMS, by the MEMS vendor for a fixed yearly fee. Software is defined as the MEMS software, any database software, and software supplied by vendor. Also, any software provided during implementation is considered part of this software support.
- c. Initial twelve months of support must be included in initial purchase price with continued software support subscription quoted at a fixed price for a period of up to one (1) year, with a maximum of two (2) one (1) year renewals, or until such reasonable time thereafter as is necessary to obtain a new contract.
- d. Annual software support subscription must include all fixes and upgrades required to keep the MEMS at the most current level or revision.
- e. Technical support must be available throughout the software support contract period. Support may be via voice telephone call or remote access or other means as agreed to provide a solution.

- f. Technical support must be made available 24 hours, 7 days per week. Vendor must provide a support package that includes this level of support as a minimum.
- g. Technical support must respond to requests for assistance within two hours or sooner of the initial request by Agency personnel. A response is regarded to be a voice telephone call, remote access session, or Email response which solves or details a restoration plan to return the MEMS to normal operation.
- h. In the event of significant MEMS problems, which prevent the Agency from reporting test results or providing critical services, the vendor must expand support beyond the normal support process as necessary. This must include weekend and holiday time if needed to solve a major problem and return the MEMS to normal operation at no additional cost.
- i. In the event that problems cannot be resolved by either voice telephone or remote access, an on-site visit may be required. The on-site visit must be scheduled as to resolve the problem at the earliest possible opportunity with consideration to requirements of the Agency, weather conditions, and severity of the problem. On-site visits must be at no additional cost to the Agency unless due to problems not related to the MEMS or MEMS vendor supplied components.
- j. In the event of a catastrophic MEMS failure, the vendor must provide recovery assistance as necessary to restore the MEMS to full operations. Assistance may be via voice telephone call, remote access when possible, Email, Fax, or on-site visit. Prior approval from the Agency must be acquired prior to any work performed outside of contracted services under this RFQ.

11. General Bar Coding:

Bar coding has been mentioned elsewhere in this document. This section pertains to the general use of barcodes in the MEMS environment.

- a. Must have the ability to support a variety of barcode labels for different uses that contain use specific codes.
- b. Must have the ability to print barcode labels on variety of printers.
- c. Must have the ability to print user-defined number of copies.
- d. Must have the ability to support multiple barcode standards.
- e. Must have the ability to add additional standards and alert system as to which barcode standard is being scanned.

12. Data Archiving:

Miscellaneous General Requirements Specifications:

- a. Data Archiving: Although the cost of on- line storage has dropped dramatically there still may be a need to archive data sets from a system performance perspective or database size. The system must have this capability.
- b. Must have the ability to construct logical parameters for selecting data sets to be archived.
- c. Must have the ability to support multi-tiered archiving with a progression of movement from the system hard drive to other forms of data storage.

- d. Must have the ability to find and retrieve specific archived data sets.
- e. Must have the ability to delete archived data sets at end of specified holding periods.

13. Database Conversation:

This project <u>will not</u> require vendors to convert old data collected in previous years to the new system for purposes of data retrieval.

14. INVOICES, PAYMENTS, AND PENALTIES:

The vendor shall submit invoices, in arrears, to the Agency at the address on the face of the purchase order labeled "Invoice To" pursuant to the terms of the contract. Progress payments may be made at the option of the Agency on the basis of milestones completed within the work plan.

Vendor is required to **identify milestones** in the work plan at which compensation would be appropriate. Progress reports must be submitted to Agency with the invoice detailing progress completed or any deliverables identified. Payment will be made only upon approval of acceptable progress or deliverables as documented in the Vendor's report. State law forbids payment of invoices prior to receipt of services.

The Agency reserves the right to negotiate with the successful vendor the final schedule and amounts of payment due.

15. CONTRACT TERM:

Life of Contract: This contract will be effective (date set upon award) and will extend for the period of one (1) year, at which time the contract may, upon mutual consent, be renewed at a fixed price for a period of up to one (1) year, with a maximum of two (2) one (1) year renewals, or until such reasonable time thereafter as is necessary to obtain a new contract. The "reasonable time" period will not exceed twelve (12) months. During the "reasonable time" period the vendor may terminate the contract for any reason upon giving the Agency ninety (90) days written notice. Notice by vendor of intent to terminate will not relieve vendor of the obligation to continue to provide services pursuant to the terms of the contract.

16. Product/Solution Warranty Requirements:

Vendor must include a one-year warranty against defect of the product/solution. The warranty period begins on the date of final acceptance of the delivered system and fulfillment of all contract responsibilities by the vendor. This warranty must include any product/solution patches, bug fixes, product/solution upgrades, and major software releases issued during the first year after Acceptance. This mandatory requirement must be included in the overall bid price.

17. Escrow.

The successful vendor must provide the most recent version of all non-third party software (including source code) and documentation in the configuration in use by the State of West Virginia with an escrow agent (neutral third party) on a quarterly basis through the term of the Contract. The escrowed material shall be delivered to the State of West Virginia in the event the bidder is (1) in bankruptcy proceedings (2) is unable to perform its obligation to the State under the Contract, or (3) or as otherwise provided in the bidder's agreement with the Escrow Agent. The vendor must agree that the State of West Virginia shall be deemed as a third party beneficiary between the bidder and its Escrow Agent.

18. Copyright of Data:

The Contractor may not publish or copyright any data related to or gained through the work described herein without prior approval, unless otherwise stated herein. The State shall have the right to publish, duplicate, use and disclose all such data in any manner, and for any purpose whatsoever, and may authorize others to do so.

"Data" shall mean all results, technical information and materials developed and/or obtained in the performance of the services hereunder, including but not limited to, all reports, surveys, plans, charts, recordings (video and/or sound), pictures, drawings, analyses, source and object code, graphic representations, computer programs and printouts, notes and memoranda, and documents whether finished or unfinished, which result from or are prepared in connection with the services performed hereunder.

19. TERMINATION OF THE CONTRACT:

The Agency may terminate any contract resulting from this RFQ immediately at any time vendor fails to carry out its responsibilities or to make substantial progress under the terms of this contract. The Agency will provide vendor with advance notice of performance conditions which are endangering the contracts continuation. If after such notice vendor fails to remedy the conditions contained in the notice, within the time period contained in the notice, the Agency will issue vendor an order to cease and desist any and all work immediately. The Agency will be obligated only for services rendered and accepted prior to the date of the notice of termination.

The contract may also be terminated upon mutual agreement of the parties with thirty (30) days prior notice.

20. CHANGES IN SCOPE:

Formal contract amendments and change orders must be negotiated by the Agency with the vendor, whenever necessary, to address changes to the terms and conditions, costs of, or scope of work included under the contract. An approved contract amendment means one approved by the West Virginia State Purchasing Division, encumbered and placed in the U.S. Mail prior to the effective date of such amendment. An approved contract amendment is required whenever the change affects the payment provision and/or the scope of the work performed by the vendor.

Vendor must not change the scope of services to be conducted without the approval of the State.

As soon as possible after receipt of a written change request, but in no event more than thirty (30) days thereafter, the vendor must provide the Agency a written statement that the change has no price impact on the contract or if there is a price impact, provide a description of the price increase or decrease involved in implementing the change.

NO CHANGES IN SCOPE WILL BE IMPLEMENTED BY THE VENDOR UNTIL SUCH TIME AS AN approved CHANGE ORDER IS RECEIVED AND APPROVED.

21. SUBCONTRACTS /JOINT VENTURES:

The vendor is solely responsible for all work performed under the contract and must assume prime vendor responsibility for all services offered and products to be delivered under the terms of this contract. The Agency will consider the vendor to be the sole point of contact with regard to all contractual matters. The vendor may, with the prior written consent of the Agency, enter into written subcontracts for performance of work under this contract; however, the vendor is totally responsible for payment of all subcontractors.

22. INDEMNIFICATION:

Vendor agrees to indemnify, defend and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person or firm performing or supplying services, materials or supplies in connection with the performance of the contract; (2) Any claims or losses resulting to any person or entity injured or damaged by vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use or disposition of any data used under the contract in a manner not authorized by the contract, or by Federal or State statutes or regulations; (3) Any failure of vendor, its officers, employees or subcontractors to observe State and Federal laws, including but not limited to labor and wage laws.

23. RECORD RETENTION AND CONFIDENTIALITY:

Vendor must maintain financial records pertaining to the contract for five (5) years following the end of the State fiscal year during which the contract is terminated or State and Federal audits of the contract have been completed, whichever is later. If questions about accounting records arise during an audit, the accounting records pertaining to the contract must be retained until resolution of all pending audit questions and for one (1) year following the termination of any litigation relating to the contract if the litigation has not terminated within the above five (5) year period. Accounting records and procedures will be subject to State and Federal approval.

The vendor must treat all information, including information relating to recipients and providers, which is obtained by it through its performance under this contract as confidential information, and will not use any information so obtained in any manner except as necessary for the proper discharge of its obligations and securement of its rights herein, or as otherwise provided herein. The vendor must adhere to all

applicable State and Federal confidentiality and privacy laws and regulations and will provide appropriate administrative, technical and physical safeguards to insure the security and confidentiality of records. The vendor accepts responsibility for providing adequate supervision and training of its agents and employees to ensure compliance with these confidentiality requirements. With the exception of information provided to its subscribers, no private or confidential data collected, maintained, or used in the course of performance of this contract will be disseminated during the period of this contract or thereafter.

Vendor shall comply with all applicable provisions of the Health Insurance Portability and Accountability Act of 1996, Public Law 104-191, 110 Stat. 1936 (HIPPA) and regulations promulgated there under (HIPPA Regulations).

24. GOVERNING LAW:

The laws of the State of West Virginia will govern this contract. The vendor agrees to comply with the Civil Rights Act of 1964 and all other applicable laws (Federal, State, Legislative or Local Government) regulations.

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Section C - VENDOR & SOFTWARE ABILITIES AND CAPABILITIES:

General Requirements:

- a. Vendor is required to provide the Agency with documented evidence of their ability and capability to successfully deploy a MEMS system in the WV Office of the Chief Medical Examiners environment by May 31, 2007.
- b. The Vendor must have successfully deployed their MEMS, within the United States, in at least one state Medical Examiners office, that included all functional areas including, but not limited to, Toxicology laboratory (TOX), Forensic Investigations (FIU), Autopsy/Morgue operations, and Administrative support services. The vendor must provide at least three (3) references of MEMS implementation in other projects, one of which must be a state Medical Examiners office, within the last five years.
- c. The Vendor must have been in business for a minimum of three (3) years with the primary focus of MEMS installation, implementation, and support.
- d. The MEMS must have the ability to incorporate all the functionality of the current "Medical Examiner" database system as required including menu layout and report formats where specified.
- e. The vendor must identify any and all hardware required to implement the MEMS with detailed configuration instructions as a separate "Hardware Configuration Attachment". Existing hardware as listed in Attachment A must be utilized for application, database, and Web MEMS components. The vendor's list must clearly identify all hardware required for full implementation, whether provided by the vendor or required to be purchased by the Agency, any special configuration or features, and including requirements for equipment needed for remote software support, laboratory test equipment connectivity, bar code, and other misc. equipment. Hardware must be identified with warranty information where available. Please attach a copy of any software license(s) being supplied on this project.
- The vendor must provide a work plan document (project schedule) as an attachment to this RFQ, which must include the project milestones, estimated timeline for completion of each phase of the project, and cost of each milestone.

Project Requirements: 2.

- a. All software, including the MEMS system and associated software, must provide license for unlimited number of concurrent users and unlimited number of cases.
- b. The MEMS base system must include full support for the following sections/functions:
 - Toxicology Laboratory
 - Forensic Death Investigations
 - Autopsy Operations
 - Histology Archiving
 - Child Fatality Review Reporting
 - Domestic Violence Fatality Review Reporting

Administrative Support Functions

- c. The vendor must provide a detailed software list as a separate "Software Attachment", clearly listing vendor supplied software and software not being provided by the vendor i.e. 3rd party software. It must be very clear as to what software is and is not being provided as part of the implementation by the vendor and what software must be purchased separately by the Agency. Failure to disclose or clearly list software required to fully implement the MEMS will become the responsibility of the vendor to procure, install, and configure without additional expense by the Agency and such software will become part of the MEMS implementation. All software must be registered in the Agency name regardless of source. Existing software as listed in Attachment A must be utilized for application, database, and Web MEMS components.
- d. The successful vendor must provide full installation and implementation of MEMS and related software, hardware, and associated peripherals by May 31, 2007
- e. The MEMS must allow for independent modes for live "production", "testing", and "development" in which each operates independently, yet allow moving tested modules to the production environment without re-creation.
- f. The MEMS must be modular in design to allow implementation over time yet allowing core functions to fully support migrated OCME work sections.
- g. The MEMS must allow for parallel testing of migrated sections and existing systems to determine accuracy, reliability, and security of data within the MEMS.
- h. MEMS must allow for utilization of limited MEMS features by physically remote county medical examiner personnel that must access the MEMS over an Internet connection with limited bandwidth.
- i. The MEMS must operate within the existing computer network environment to the fullest extent possible, complying with security, topology, and protocol requirements.
- j. FOR REFERENCE; DHHR/MIS/OCME current security environment includes: Microsoft Windows XP Professional on workstations with Critical Updates pushed by MIS, Symantec Antivirus Corporate Edition, Web Sense Internet filtering, Novel GroupWise 6.5 email and central firewall, maintained through central services managed by MIS.
- k. Network Topology includes: Cisco Routers and Charter Cable Modem service for WAN (Wide Area Network) and TCP/IP based 10/100 Ethernet Local Area Network (LAN), and hardware listed on Attachment A.
- I. A Web based MEMS interface design is mandatory to allow functionality within an Internet/Intranet environment. Direct access using individualized secure passwords by external county medical examiner personnel must be available as part of the MEMS system.
- m. The vendor must provide technical and user training at a level to allow adequate operation, administration, configuration, and support with minimal vendor

- assistance after initial implementation. A training plan and schedule must be provided with request. (See Attachment C Mandatory Requirements Common to All OCME Sections.)
- n. The MEMS must have the ability to allow printing of reports directly from the MEMS and the ability to deliver reports via fax and/or Email.
- o. The MEMS system must have the ability to allow remote retrieval of reports and case management data entry via secure login to MEMS.
- p. The MEMS must have the ability to utilize Barcode technology for sample/specimen tracking throughout the entire testing process.
- q. The MEMS system must employ industry standards coding methods.
- r. The MEMS must comply with pertinent state and federal laws, regulations, and standards.
- s. The vendor must provide for escrow of software source code to allow transfer of the source code to the Agency in case of vendor inability to continue business operations for any reason.

3. Project Vendor Personnel:

- a. The vendor must identify key personnel of the project team that will be responsible for the design and implementation of the MEMS system. The vendor must document for each project team member a narrative and resume' that includes a description of their project role and responsibilities, allocation of time to the project, number of years employed by the vendor, and a description of experience with MEMS implementation.
- b. No redeployment of any member of the project team may be made without prior written consent of the DHHR. Replacement of such personnel, if approved, shall be with personnel of equal ability and qualifications.
- c. The Agency shall retain the right to reject any of the vendor and/or subcontractors' employees whose qualifications are deemed inadequate, in the Agency's judgment, for the successful performance of the services. In considering the vendor's employee's qualifications, the state will act reasonably and in good faith.
- d. During the course of the contract, the Agency reserves the right to require the vendor to reassign or otherwise remove from the project any individual found unacceptable by the Agency.

4. Database:

- Name of database product if one is used.
- 2. Description of data model (flat file, relational, object-oriented, proprietary, etc.)
- 3. Size of largest customer installed system database (Mbytes and number of test records).
- 4. Describe relationship of server size to database size and impact of server memory (all in relationship to system response time).

Pre-Bid Conference

A mandatory pre-bid conference will be held on site, on October 11, 2006 at 1:30 pm at 619 Virginia Street, Charleston, WV 25302. All vendors must attend the pre-bid meeting in order to familiarize themselves with the project location, site conditions, and other relevant information. No allowance will be made subsequently on behalf of the contractor for any error or negligence on his part in connection with this requirement. Failure to attend such pre-bid meeting shall constitute justification to disqualify that vendor's bid.

Vendor's Bid

The vendors all-inclusive bid price will include all costs (direct and indirect costs, including travel and out-of-pocket costs) necessary for all services provided pursuant to the terms of the contract as specified.

The vendor <u>must</u> include with the bid pricing the following:

- a. Vendor must provide a written response to Section C VENDOR & SOFTWARE ABILITIES AND CAPABILITIES that demonstrates their skills and abilities to perform and deliver a Medical Examiner Management System as specified in this Request for Quotation. Please respond in the order of the requirements for Section C, 1 through 4.
- b. Vendor must certify that no entity, agency or person associated with the vendor is debarred or suspended from conducting business with any local, state, or federal government agency. *
- c. A signed and dated a WV-96 Agreement Addendum.*
- d. A signed and dated a No Debt Affidavit. *
- e. A signed and dated **REQUEST FOR QUOTATION CME70495.** *

 (Please note the bid instructions on the back of page 1 of the REQUEST FOR QUOTATION for the submission of bids.)

The contract will be awarded to the lowest responsible qualified vendor meeting the minimum requirements of the bid specifications.

All-inclusive bid price with 1 year (Project milestone		\$ 143,730					
Software main	Software maintenance for 2 nd year						
Software main	\$ 7,043						
	Tota	1 \$					
1/1/whylitel	President	10/30/06					
/ Signature	Title	Date					

^{*} All documentation must be signed by the same person with the same date.

Office of the Chief Medical Examiner Network and Workstation Equipment/Software List

Workstations are IBM and Dell Optiplex desktop and IBM Laptop. All have the following minimum specifications:

- P4 2GHZ+ CPU
- 512 MB RAM
- 20 GB+ Hard Drive
- 100 BT Ethernet
- 17" ViewSonic CRT/LCD Monitors or larger
- 14" LCD or larger on laptop computers
- OS is MS Windows XP Professional on all workstations and laptops
- Email is GroupWise 6.5
- Desktop productivity is MS Office XP Professional
- Antivirus is Symantec Antivirus Corporate Edition

Network File Server Information: Applications Server:

- HP ProLiant ML570 G3 Rack,
- Dual CPU 3.16 GHz/1 M
- 4 GB Ram
- RAID w/4x72.8GB HD
- MS Windows 2003 Server Standard
- RightFax Business Server Unlimited Users
- NetBackup Enterprise

Database Server

- HP ProLiant ML570 G3 Rack,
- Dual CPU 3.16 GHz/1 M
- 4 GB Ram
- RAID w/4x72.8GB HD
- MS Windows 2003 Server
- MS SQL Server 2000

Web Server

- Compaq ProLiant ML350
- Dual Xeon 2.8 GHZ
- 1 GB RAM
- RAID 72 GB RAID-5
- 200 GP Tape Backup HP Ultrium
- OS is MS Windows 2003 with IIS
 6.0

General Network Information OCME Charleston

- Switched 10/100 BT Ethernet LAN
- 3 MB Down/256K UP Charter Cable modem WAN VPN connection with Cisco routing to DHHR-MIS headquarters location
- Firewall and Internet Filtering hosted at DHHR-MIS headquarters location

Office of the Chief Medical Examiner

BACKGROUND INFORMATION:

Operating Environment:

The Office of the Chief Medical Examiner (OCME) is mandated under Chapter 61 of the West Virginia code to investigate and certify all deaths that occur within the state of West Virginia that are the result of "violence, suspected violence, deaths due to accidental causes, deaths that occur during incarceration, deaths that are associated with conditions that pose a hazard to the public safety or health, and all unattended or unexplained deaths..." To this end, a state-of-the-art Medical Examiner Management System (MEMS) capable of providing timely, accurate, and secure operation with efficient and intuitive functionality in a shared network environment, is mandated.

The current networked database system, "Medical Examiner", is a legacy, locally developed database system that has limited functionality and serves only minimal case management needs (basically used only for case number cross-reference purposes). There is no technical support or assistance available for this system and many aspects of the system simply do not function or were never completed. This, and requirements to include and support all OCME functional areas, requires the purchase of a new MEMS system. The leveraging of existing infrastructure is vital to reduce costs and minimize training and support requirements. Information Technology (IT) support is available to OCME from the WV DHHR-Management Information Services (MIS) as needed. Technical assistance from the "Medical Examiner" database system developer will not be unavailable.

Computer/Network Access: All employees have access to computer network resources if only for Email and Intranet/Internet resources.

Location:

The WV Office of the Chief Medical Examiner is located at 619 Virginia St. West, Charleston, West Virginia 25302 and has a staff of approximately 35 employees. The OCME website address is http://www.wvdhhr.org/ocme/index.asp. Normal operating hours are 8:00 AM – 5:00 PM EST, Monday thru Friday and are closed to the public on federal and WV state holidays.

The WV DHHR Office of Management Information Services (OMIS or MIS): This staff operates the West Virginia Department of Health and Human Resources (WVDHHR) network. Their website address is http://www.wvdhhr.org/mis/. The DHHR MIS is located at 350 Capitol St. Room 313, in downtown Charleston West Virginia (approximately 3 miles from the OCME).

Office of the Chief Medical Examiner Mandatory Requirements Common to All OCME Sections

The successful vendor must moderate an onsite project commencement meeting at the Charleston, West Virginia OCME location to demonstrate their MEMS product, define MEMS stakeholders and their respective roles and responsibilities, and provide a tentative timeline for deployment and training. The attendees of this meeting will consist of approximately (10 -15) OCME and State staff members.

- Vendor must moderate monthly oversight committee meetings consisting of approximately (5) attendees until project completion. These meetings will be held in the Charleston, West Virginia OCME facility. A vendor representative is required to be onsite for the oversight committee meetings.
- 2. Vendor must conduct a minimum of one (1) interview and one (1) follow-up interview with staff from each OCME functional area/section and key OCME personnel to assess their MEMS requirements, identify required data elements, identify testing instruments and equipment capable of being integrated with the MEMS system, and determine data migration needs. The vendor must conduct first-round interviews after initial project commencement meeting and before completion of the requirements document. Subsequent interviews may be necessary after completion of the requirements document.
- 3. Vendor will be required to participate in an onsite system turn-over meeting with representatives of the Agency upon completed implementation of the system.
- 4. Vendor must develop a requirements document. This document must include the vendor's findings from interviews with key OCME personnel, suggested functional area/section migration order, and outline any and all procedures and resources necessary to accomplish MEMS implementation for each functional area/section. This document must be available for review and approval by the agency prior to start of implementation.
- 5. Vendor must provide a revised work plan document (project schedule) as described in this RFQ based on the requirements document referenced in this RFQ. This document must be available for review and approval by the Agency prior to the start of implementation.
- 6. Vendor must develop a system turnover plan, which must indicate the conditional criteria required to fully turn over the daily operation of the MEMS system to Agency technical staff. At a minimum, the turnover plan must include: the state of readiness required of the agency to assume operational control, the schedule for system turnover, all required documentation, any data conversion software and system documentation, agency staffing positions required to continue operation (i.e. DBA, DBM, System Manager, Programmer, etc.), and the required staffing levels for each position (i.e. full-time, part-time, etc.). This document must be available for review and approval by the agency prior to the system turn-over meeting.
- 7. The vendor must develop and provide a system and user administration plan. This document must be available for review and approval by the Agency prior to the system turn-over meeting.

- 8. The vendor must develop and provide a formal training plan. This document must be available for review and approval by the Agency prior to training.
- 9. The vendor must develop and provide a system fault tolerance and disaster recovery procedures. This document must be available for review and approval by the Agency prior to the system turn-over meeting.
- 10. The vendor must develop and provide a formal technical support plan. This document must be available for review and approval by the Agency prior to the system turn-over meeting or as OCME functional areas/sections are implemented.
- 11. The vendor will be required to submit to the Agency a monthly project status report outlining completion of the project milestones, identifying upcoming project tasks, updated information on project implementation, etc.
- 12. The vendor will be required to participate in a weekly project conference call/meeting.
- 13. The vendor, during onsite installation of the MEMS system, must provide a daily briefing to the Agency to identify needed project resources.
- 14. The Agency agrees to provide the following:
- 15. Assist the Vendor in identifying, retrieving and compiling information, data, and other essential programmatic data necessary for the services as outlined herein. The Agency shall use its best efforts to provide appropriate administrative support and guidance to the Vendor.
- 16. Arrange for meetings with appropriate Agency personnel for ongoing discussions and briefings with Vendor personnel as necessary and/or requested in order to meet the service requirements of this contract.
- 17. Use its best efforts to process for payment, in accordance with State law, Vendor's legitimate and uncontested invoice, for goods and services, which have been delivered and accepted. Contractual charges must be submitted in a State approved invoice format.
- 18. Provide to the Vendor copies of all current administrative regulations, policies and guidelines that are applicable to the performance of the Vendor's duties. At the Vendor's request, provide clarification regarding any State or Department regulations and procedures.
- 19. The Agency may identify the need for additional work activities within the scope of this contract, but not included in its initial implementation. The Agency must define such additional work requirements to the Vendor in writing. Agency acceptance of the work plan and pricing proposal must also be provided to the Vendor in writing following State Purchasing approval of appropriate contract amendments. In no instance shall any extra contractual work be commenced prior to State Purchasing approval of contract addendum.



NODZEA

State of West Virginia Department of Administration Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

Request for Quotation

REQ NUMBER CME 70495

P/	GE		
		1	

ADDRESS CORRESPONDENCE TO ATTENTION OF ROBERTA WAGNER 304-558-0067

*927130829 407-778-0608 VERTIQ SOFTWARE LLC 18525 SUTTER BOULEVARD #280 MORGAN HILL CA 95037

SH--p F-0

HEALTH AND HUMAN RESOURCES
BUREAU FOR PUBLIC HEALTH
OFFICE CHIEF MEDICAL EXAMINER
619 VIRGINIA STREET, WEST
CHARLESTON, WV
25302 304-558-4865

ADDRESS CHANGES TO BE NOTED ABOVE

DATE PRINTED TERMS OF SALE SHIP VIA FREIGHT TERMS 10/18/2006 II/0I/2006 BID OPENING TIME 01:30PM BID OPENING DATE: LINE QUANTITY UOP ITEM NUMBER UNIT PRICE AMOUNT NO. ************************************ 1. QUESTIONS AND ANSWERS ATTACHED. 2. ADDENDUM ACKNOWLEDGEMENT IS ATTACHED. THIS DOCUMENT SHOULD BE SIGNED AND RETURNED WITH YOUR BID. FAILURE TO SIGN AND RETURN MAY RESULT IN DISQUALIFICATION OF YOUR BID. SEE REVERSE SIDE FOR TERMS AND CONDITIONS SIGNATURE ELEPHONE TITLE FEIN

GENERAL TERMS & CONDITIONS REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

- 1. Awards will be made in the best interest of the State of West Virginia.
- 2. The State may accept or reject in part, or in whole, any bid.
- 3. All quotations are governed by the West Virginia Code and the Legislative Rules of the Purchasing Division.
- 4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125.00 registration fee.
- 5. All services performed or goods delivered under State Purchase Orders/Contracts are to be continued for the term of the Purchase Order/Contract, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
- 6. Payment may only be made after the delivery and acceptance of goods or services.
- 7. Interest may be paid for late payment in accordance with the West Virginia Code.
- 8. Vendor preference will be granted upon written request in accordance with the West Virginia Code.
- 9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
- 10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
- 11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
- 12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
- **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this contract is automatically null and void, and is terminated without further order.
- 14. HIPAA Business Associate Addendum The West Viginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (http://www.state.wv.us/admin/purchase/vrc/hipaa.htm) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Covered Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.

INSTRUCTIONS TO BIDDERS

- 1. Use the quotation forms provided by the Purchasing Division.
- 2. SPECIFICATIONS: Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as EQUAL to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
- 3. Complete all sections of the quotation form.
- 4. Unit prices shall prevail in cases of discrepancy.
- 5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
- 6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications.

SIGNED BID TO:

Department of Administration Purchasing Division 2019 Washington Street East Post Office Box 50130 Charleston, WV 25305-0130

WV-36a STATE OF WEST VIRGINIA	Buyer:	Page	Req. or P. O. No.:
PURCHASING CONTINUATION SHEET	22		CME70495
Vendor:	Spending U	nit:	
	lequisition	No.:	CME70495
ADDENDUM ACKNOW	LEDGEME	NT	
I hereby acknowledge receipt of the following che the necessary revisions to my proposal, plans an			
Addendum No.'s:			
No. 1			
No. 2			
No. 3			
No. 4			
No. 5			
I understand that failure to confirm the rece rejection of bids.	eipt of the a	addendu	nm(s) is cause for
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Exhibit 10 Rev. 11/96

Questions for RFQ - West Virginia MEMS Project - CME 70495

General Terms & Conditions Instructions to Bidders -3	Complete all sections of the quotation form.	Quotation form is not included in RFQ. Will you provide such form in Word format for use with this RFQ?	Pages 6 and 7 of the RFQ provides instruction and space for Request for the Quotation total. Vendors that are bidding on the project are required to review and follow all of these instructions to limit potential disqualification.
Section A, 1, d on	The system must have the ability for	What data needs to be able to	This is a generic requirement. The import formats would
page 1	information to be imported into the	be imported into the system? How will such data he made	be common formats such as comma separated value-
	system	available, i.e. in what form?	csvMS Excel – xis, and other formats natively supported by the MFMS application. There is no
		Will any import be driven by	specific data for import specified in the RFQ, but rather
		user action or be done	the ability is required should future data be desired to be
		automatically via a batch	imported. A MEMS having no data import capability
Section A, 1, g on	The system must support records not	What records will be stored in	OCME inventory (computer, furniture, equipment, etc.).
page 2	related to cases	the system that are unrelated to	supplies. In addition, the database will be used to track
			information relating to individual users and user types.
Section A, 3, c on	The system must be able to check if	The relevant data on a case will	OCME will provide mandatory fields that must be
page 2	all relevant data has been entered before a case is closed.	most likely depend to a large degree on the case type, for	completed for each section prior to closing a case.
		example a suicide case versus	
		a motor venicle accident versus	
		provide more information on the	
		complexity of what will constitute "relevant data"?	
Section A, 3, d on page 2	The menus need to be tailored in the system to the different roles of users.	OCME will provide the specific fields?	Each OCME user will be granted access to certain areas of the database and either be given read or write
	Specific fields must only be entered by certain people within the agency		capabilities in that area. These security roles for each user will be given to vendor by the OCME.
Section A, 3, g on	The system must allow for automatic	Could you elaborate on this	All of these areas will not be captured until initial

Section A, 17, a onaut page 7 repor			Section A, 7, b on Must page 4 cases	page 2 notificinforr
automatically generate autopsy reports and statistical spreadsheets	The system must be able to provide editable online help screens	The system must have the ability to export files for interfacing with existing systems.	Must have the ability to add new cases submitted to the OCME from county medical examiners.	notification capability with updated information.
Is OCME considering using templates and adding data to	Do you want to create your online help screens?	What existing systems would you want to integrate with?	How will County Medical Examiners interface with the system? We presume that the MEMS database will be secure behind the State firewall and that Internet access to the system will be prohibited. Will County Medical Examiners have access via VPN or via a DMZ server outside of the State firewall to the system or is some other form of connection intended?	requirement? Who would be automatically notified with what updated information?
The reports will be generated from entered data. The majority of reports will become templates. But, the	A MEMS allowing some form of customized help screens either by the developer/vendor or by the end user is acceptable. The intent is to allow user friendly and locally pertinent help info be viewed by users that can be easily updated or modified.	This is a generic specification for unknown requirements to export data from the MEMS to a foreign system. Common formats such as CSV, .XLS, etc should be supported without specific need being established. The "integration" refers to an after the fact process of the exported data and not a function of the MEMS. A MEMS with this generic capability would meet this requirement and one that does not would not meet this requirement.	A Web server outside of the DMZ can be provided if required. VPN access can also be an option. The intent of this requirement is to allow some form of outside access in a secure way to allow State county ME's access if/when desired. This specification is generic in that a MEMS having this capability, however accomplished, meets this requirement. A MEMS not allowing this functionality will not meet this requirement.	interviews with all the departments. A few examples of what we would like to "flag" or "alert" appropriate users; the length of time for outsourced toxicology, when toxicology is completed for the doctors, unclaimed body storage, sending homicide reports out, evidence storage, court scheduling for the doctors, and age of uncompleted cases to name a few.

Section B, 1, c on page 7	Must have the ability to restrict user passwords to HIPAA compliant combinations of characters of a	If Windows Authentication is used to provide access to the MEMS system will this be	wants reported for special requests (ad hoc reporting). The combination of Windows Authentication and existing DHHR MIS Policy and Procedure regarding passwords will satisfy this requirement.
The state of the s	The state of the s		
page 7	workstations from which a given user	riease elaborate.	Ine MEMS must be able to function within the current DHHR secure network and only from
,	can log on and whether or not they can access system from a remote site		DHHR authorized workstations as controlled by DHHR MIS. This applies to controlling any
			outside access to the MEMS. The intent is for the MEMS to only be accessible by DHHR authorized
			workstations, users, or authorized remote site locations.
Section B, 1, k on page 8	Must have ability to create audit trail of who, when where and what	When you refer to "functions" is it sufficient to keen in the audit	The requirement must be provided as stated in order to determine any action taken by any user at
	functions were accessed by a specific user	trail what form was being accessed by a specific user?	any given time. The term "functions" is generic in that it be recorded what area of the MEMS was
			being accessed i.e Adding cases, deleting case information, maintaining inventory, etc
Section B, 1, i on page 8	Must have ability to conform to any HIPAA security conditions adopted by	As far as the National Association of Medical	HIPAA Security is enforced by DHHR MIS and is satisfied by DHHR MIS Policies and Procedures
•	the OCME as a part of its privacy and security documentation	Examiners (NAME) is	for systems running behind the DHHR firewall. As long as the system you have proposed runs
	•	do not have to adhere to HIPAA	behind DHHR's firewall, you may ignore this
		describe what HIPAA security	specification
,		adopted by the OCME?	
Section B, 5, a on page 8	Field Value Entry and Editing: Any field containing a coded value rather	Is this supposed to be items 'b'	YES
Caga	than text must include the following:	mru p:	
Section B, 5, d on		Could you elaborate on what is	1

	separate verification pass prior to	separate verification pass prior	allows supervisory verification before data is
	accepting the data set.	to accepting the data set"?	released as valid.
Section B, 5, e on	Other Field Editing: Editing of non-	What is the requirement for	Ability to edit information that appears from
page 9	table fields	editing of non-table fields?	sources other than the MEMS database tables such as external data (if any). The intent is to be
Section B. 5. p on	Must have the ability to time-stamp	We do not understand this	The intent is to be able to establish effective dates
	any table where changes are only	requirement. Could you	for data to appear or be removed depending on a
	valid starting on a specific date. Code	elaborate and include some	valid date or date range being specified and to
	set that will be represented to the	examples to illustrate what is	display or remove a user screen based on this
	date.		dates with data input requirements above and
			beyond normal data entry. An example may be a mass causality scenario.
Section B, 7, d on	Must have the ability to limit the scope	Could you elaborate on this	Query by date of death, county, state, or other
. G		query reports?	and subsequent report to the scope specified.
			The intent is to allow user flexibility in limiting a
			report.
Section B, 9, b on	Must have the ability to comply with	To what extent does OCME	This specification was inserted in the RFQ before
•	HIPAA regulations pertaining to	requirements?	to insure that OCME would be able to
	privacy/security and medical		communicate with other public health systems
	health information		during an event.
			Please describe to what extent the system you have proposed is capable of sending and
			receiving PHIN compliant messages particularly
			Management, and Connecting Laboratory Systems
			Messaging requirements are available in the
			www.cdc.gov/phin.

using industry standards vs. manufacturer name	printers that are known to be	labels on a variety of printers.	Software Section
If available as a normal business offering the support requirements stand as stated. It is not the intent for the vendor to expand its normal business hours for this requirement, however, the MEMS vendor is expected to provide continued support on an open case that is deemed critical or prevents basic functionality of the MEMS if an issue(s) is/are not perused to conclusion. Additionally, emergency support contact information must be provided to the Agency should emergency support be required outside the MEMS vendor normal business hours. If the above can be provided then this requirement will be met.	Vendor support is available Monday thru Friday, 7:00 AM to 5:00 PM PST. Will this constitute non-compliance with the recommended support in this RFQ?	Technical support must be available 24 hours, 7 days per week. Vendor must provide a support package that includes this level of support as a minimum.	Section B, 10, Software Section item f on page 12
It is the intent that the MEMS vendor provide full support for their product to include issues relating to any Agency provided software as it pertains to successful functioning of the MEMS. It is not expected that the MEMS vendor perform bug fixes or direct database or other systems software support, but it is expected that assistance be provided in isolating and identifying problems that affect MEMS functionality so that appropriate Agency staff can take actions to return the MEMS to full functionality. It will not be acceptable for the MEMES vendor to just simply state that there is a problem with Agency provided software and to not assist in troubleshooting/restoration efforts.	Database software in the case of SQL Server from Microsoft will be supplied by Microsoft and not the vendor. The vendor for the MEMS system will not be able to provide software support or bug fixes for third party software such as SQL Server from Microsoft.	Software – support must be provided for all aspects of the MEMS, by the MEMS vendor for a fixed yearly fee.	Section B, 10, Software Section item b on page 11
It is advised that any hardware recommended be described using standards based references rather than product name to avoid purchasing issues. The intent is for the MEMS vendor to disclose any hardware they supply as part of this RFQ at no cost to the Agency including maintenance.	Vendor can give a recommendation for hardware that is compatible with their software?	Hardware -Vendor supplied hardware must be identified at no additional cost including maintenance and included with basic system configuration	Section B, 10, Software Section item a on page 11

YES	Vendor will be allowed to use video conferencing or some other type of web conferencing	A vendor representative is required to be onsite for the oversight committee meetings.	Application of the state of the
			MANDATORY REQUIREMENTS
15 concurrent users	Please advise how many concurrent users would be accessing the system?	has a staff of 35 users. RFQ also specified 'unlimited' users	BACKGROUND INFO
NO. It is the intent for the MEMS vendor to disclose implementation team members and not substitute members after project kickoff for less qualified members in order to fulfill a vendor need	Team members work on various projects simultaneously depending on the different stages of the project. Will this be considered 'redeployment'?	No redeployment of any member of the project team may be made without prior written consent of the DHHR	Section C, 3, b on page 19
YES, if necessary	Will a DMZ server be provided for access by external users via the Internet?	A Web-based MEMS interface design is mandatory to allow functionality within an internet/intranet environment. Direct access using individualized secure passwords by external county me personnel must be available as part of the MEMS system.	Section C, 2, I on page 18
Tracking inventory of equipment. Also, tracking financial invoices related to county investigations Also information related to individual users and user types.	Please define "Administrative Support Functions".	The MEMS base system must include full support for the following sections/functions: Administrative Support Functions	Section C, 2, b on page 17/18
This is a generalized plan based on the project as viewed by the MEMS vendor giving an approximate schedule of implementation(s) within the confines of the project dates as described in the RFQ regardless of participation by OCME or MIS staff.	What project participation will be provided by the OCME? What IT support will be available for this project?	The vendor must provide a work plan document as an attachment to this RFQ.	Section C, 1, f on page 17
YES	Escrow is submitted to an Escrow Agent on an annual basis. Is this acceptable?	Escrowon a quarterly basis.	Section B, 17, Software Section item 17 on page 14
to avoid purchasing issues	compatible with vendor's barcode software?		item b on page 12

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		for this purpose rather than onsite?	•
2	Vendor must conduct a minimum of	Would this be done at the state	OCME State Office
	one interview and one follow-up	office or at regional offices?	619 Virginia Street, West
	interview with staff from each OCME	,	Charleston, WV
	functional area/section and key		
	OCME personnel to assess their		
	MEMS requirementsvendor must		
	conduct first round interview after		
	initial project commencement		
	meeting and before completion of the		
	requirements document.		

WV-96 Rev. 5/94

AGREEMENT ADDENDUM

In the event of conflict between this addendum and the agreement, this addendum shall control:

- 1. ARBITRATION Any references to arbitration contained in the agreement are hereby deleted. Disputes arising out of the agreement shall be presented to the West Virginia Court of Claims.
- 2. HOLD HARMLESS Any clause requiring the Agency to indemnify or hold harmless any party is hereby deleted in its entirety.
- 3. GOVERNING LAW The agreement shall be governed by the laws of the State of West Virginia. This provision replaces any references to any other State's governing law.
- 4. TAXES Provisions in the agreement requiring the Agency to pay taxes are deleted. As a State entity, the Agency is exempt from Federal, State, and local taxes and will not pay taxes for any Vendor including individuals, nor will the Agency file any tax returns or reports on behalf of Vendor or any other party.
- 5. PAYMENT Any references to prepayment are deleted. Payment will be in arrears.
- 6. INTEREST Should the agreement include a provision for interest on late payments, the Agency agrees to pay the maximum legal rate under West Virginia law.

 All other references to interest or late charges are deleted.
- 7. RECOUPMENT Any language in the agreement waiving the Agency's right to set-off, counterclaim, recoupment, or other defense is hereby deleted.
- 8. FISCAL YEAR FUNDING Service performed under the agreement may be continued in succeeding fiscal years for the term of the agreement, contingent upon funds being appropriated by the Legislature or otherwise being available for this service. In the event funds are not appropriated or otherwise available for this service, the agreement shall terminate without penalty on June 30. After that date, the agreement becomes of no effect and is null and void. However, the Agency agrees to use its best efforts to have the amounts contemplated under the agreement included in its budget. Non-appropriation or non-funding shall not be considered an event of default.
- 9. STATUTE OF LIMITATION Any clauses limiting the time in which the Agency may bring suit against the Vendor, lessor, individual, or any other party are deleted.
- 10. <u>SIMILAR SERVICES</u> Any provisions limiting the Agency's right to obtain similar services or equipment in the event of default or non-funding during the term of the agreement are hereby deleted.
- 11. ATTORNEY FEES The Agency recognizes an obligation to pay attorney's fees or costs only when assessed by a court of competent jurisdiction. Any other provision is invalid and considered null and void.
- 12. ASSIGNMENT Notwithstanding any clause to the contrary, the Agency reserves the right to assign the agreement to another State of West Virginia agency, board or commission upon thirty (30) days written notice to the Vendor and Vendor shall obtain the written consent of Agency prior to assigning the agreement.
- 13. LIMITATION OF LIABILITY "The Agency, as a State entity, cannot agree to assume the potential liability of a Vendor. Accordingly, any provision limiting the Vendor's liability for direct damages or limiting the Vendor's liability under a warranty to a certain dollar amount or to the amount of the agreement is hereby deleted. In addition, any limitation is null and void to the extent that it precludes any action for injury to persons or for damages to personal property.
- 14. RIGHT TO TERMINATE Agency shall have the right to terminate the agreement upon thirty (30) days written notice to Vendor.
- 15. **TERMINATION CHARGES** Any provision requiring the Agency to pay a fixed amount or liquidated damages upon termination of the agreement is hereby deleted. The Agency may only agree to reimburse a Vendor for actual costs incurred or losses sustained during the current fiscal year due to wrongful termination by the Agency prior to the end of any current agreement term.
- 16. RENEWAL Any reference to automatic renewal is hereby deleted. The agreement may be renewed only upon mutual written agreement of the parties.
- 17. <u>INSURANCE</u> Any provision requiring the Agency to insure equipment or property of any kind and name the Vendor as beneficiary or as an additional insured is hereby deleted.
- 18. RIGHT TO NOTICE Any provision for repossession of equipment without notice is hereby deleted. However, the Agency does recognize a right of repossession with notice.
- 19. ACCELERATION Any reference to acceleration of payments in the event of default or non-funding is hereby deleted.
- 20. AMENDMENTS All amendments, modifications, alterations or changes to the agreement shall be in writing and signed by both parties. No amendment, modification, alteration or change may be made to this addendum without the express written approval of the Purchasing Division and the Attorney General.

ACCEPTED BY: STATE OF WEST VIRGINIA	VENDOR
Spending Unit:	Company Name: Verti Q Software LLC
gned:	Signed:
Title:	Title: President
Date:	Date: 10/30/06

West Virginia Department of Health & Human Resources FEDERAL PROGRAM PARTICIPATION ACKNOWLEDGMENT, AUTHORIZATION, CONSENT, AND RELEASE

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No person who is current care programs or in fed Department of Health and	eral procurement or non-procu	ded, or otherwise ineligible to participal urement programs shall be hired by	ate in federal healthy the West Virginia
I am ☐ am not ☒ cu health care programs or i	urrently excluded, debarred, su n federal procurement or non-pi	spended, or otherwise ineligible to procurement programs.	articipate in federa
· · · · · · · · · · · · ///	wofefletel	10/30/06 Date	
Į v	Signature	Date	
Resources specifically to ineligible to participate in If hired, I also agree to pe by the West Virginia Departments and I release any persons and	o determine whether I am cu federal health care programs o eriodic conduct of additional suc artment of Health and Human R I the West Virginia Department of	of Health and Human Resources and	nded, or otherwise curement programs urse of employmen its agents, officials.
representatives, employee for damages of any kind th	es, officers, or related personnel nat may result because of compli	both individually and collectively, from iance with this acknowledgment and a	n any and all liability authorization.
For positive identification This information is confide	purposes, the following information and will not be used for an	ation is required when conducting a ny other purposes (please print):	background check
Name	Kessel last name	First name	middle initial
Maiden/Other Names			•
•	(This should include other married na	ames by which you have been known.)	
Current Address	POBox 787 street/box#	Morgan Hill,	<u>CA</u>
NOTE: Your so	cial security card must b	pe presented for verification	purposes.
Social Security #	557 63 4072		23-1942
Oriver's License Number	N9241895	State of Issue C	
	Signature Signature	10 30 06 Date	***************************************
and the second s	EMPLOYING:UNIT	INFORMATION	
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AFFIDAVIT

West Virginia Code §5A-3-10a states:

No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owned is an amount greater than one thousand dollars in the aggregate.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions.

"Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

EXCEPTION:

The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

LICENSING:

The vendor must be licensed in accordance with any and all state requirements to do business with the state of West Virginia.

CONFIDENTIALITY:

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit www.state.wv.us/admin/purchase/privacy for the Notice of Agency Confidentiality Policies.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), it is hereby certified that the vendor acknowledges the information in this said affidavit and are in compliance with the requirements as stated.

Vendor's Name: VertiQ	Software LLC			
	Museline	Date:	10/30/06	
Authorized Signature:	Ham Jagger			

No Debt Affidavit Revised 02/08/06

Executive Summary

As is outlined in more detail in the accompanying sections VertiQ has been working with Coroners and Medical Examiners since 1985. I personally have been working with them since 1990.

We learned early on that "one size fits all", i.e. one solution for all of our customers, does not work. There are many reasons for this:

- The size of the agency
- Local requirements that may not exist elsewhere
- Differences in focus and preferences
- Different types of "parent" agencies

At the same time programming a custom system for a specific agency is a time consuming and costly effort. In addition there is the serious possibility that the programmers do not quite understand the requirements as expressed by the users and therefore the system that gets developed is not suitable without major surgery.

It took us some years of painful learning during the 1990s to realize that what was needed was a solution where:

- Smart users with domain expertise in their field could create and maintain their own custom system.
- Alternatively our support staff could create a custom system for a new client without doing any programming.
- As more and more customers started using this system a library of modules, forms and reports would help new customers in their decision making and speed up the implementation of a custom system even more.

We started work on this new approach in 1999. The first customer installation took place in 2001. Today we have over 30 installations of our software across the USA with Coroners and Medical Examiners. As is inevitable we learned from our early efforts and improved the software toolkit approach and brought out a completely new version this year. As is our policy all of our customers will get the new version of our software free of additional charge as part of our maintenance service.

We are constantly learning from our customers about new and interesting ways to build a better solution. We are truly passionate about continually improving our system. The Coroner and Medical Examiner field is one where technology can make a major impact on efficiency and productivity. I only need to mention

digital images, digital signatures, bar coding, low frequency RFID tags to show that this is a never ending journey both for us and our customers.

In the recent past interest has grown for Medical Examiners to co-operate electronically with other agencies for a variety of reasons. To do so in a secure way requires additional effort which we have implemented for our clients.

Managing the activities in a Medical Examiner agency means keeping many different balls in the air at all times. From the very beginning we provided with our system support for alerts and follow ups. Last year we implemented in addition a sophisticated Task Management module, following in-depth discussions with one of our clients.

Accountability is another key part of the work of a Medical Examiner. Each and any change made by a user is recorded in an audit trail by the system automatically.

Security is also of vital importance to our customers. This applies not only to prevent unauthorized external access to case data but also internally. We designed the system in such a fashion that no user ever has direct access to the database when entering data into the system via a form.

Over the years our company has learned a great deal from our customers. Today we see our role not only as a supplier for electronic case management software for Coroners and Medical Examiners but also as one of an adviser and consultant. When it comes to installing a new system and making decisions on what to do and how to do it you can count on our support staff to be on your team and to be able to contribute to the decision making process due to the fact that they have worked with many agencies in this field before.

A State of the Art Project

Due to the improvement in communication bandwidth, Internet access, Internet awareness and the availability of new software technologies, improvements in effectiveness between co-operating parties and agencies can today be effectively implemented.

At VertiQ we have been talking to our customers about using the Internet to build new co-operative solutions for the last 5 years. This is when we installed our first 100% Internet enabled version of our CME software for Coroners and Medical Examiners at Philadelphia Medical Examiner. Since then we have installed CME at over 30 sites across the USA. CME installations that are close to West Virginia are Maryland State Medical Examiner, Washington / DC Medical Examiner and the State of Virginia Medical Examiner.

Most of our clients see a need to be able to "inter-connect" to other agencies. For some customers being able to do so is a critical aspect of their operations. For example Maryland State Medical Examiner requires data from investigations undertaken by County Medical Examiners; the same applies in the case of the State of Maine Medical Examiner. In the case of the Miami Dade County Medical Examiner the forensic laboratory provides services to other County Coroners in Florida; obtaining case data, specimen information and tox requests via the Internet will be a great time saver as much as being able to provide tox results in the same way back to the customers. There is also a cost saving in not having to key-punch from paper based documents into the system or to post or fax results.

In the case of West Virginia integrating the County Medical Examiners / Coroners will be beneficial as well.

Support for such Internet connectivity had to be developed specially. One of the reasons is that access to the data stored in the system needs to be protected. This protection does not only apply versus access from the Internet but also as far as internal users are concerned.

In order to provide full data security and still allow controlled access to authorized users from the Internet, we support an environment where a DMZ server outside of the firewall is used as the access point for Internet users and the database stays securely behind the firewall. Access for Internet users is secure via the use of secure socket layer encryption (SSL). We have included more information on our capabilities in this connection in separate sections of our RFQ response.

Domain Expertise

We have worked with Coroners and Medical Examines since 1985. We can fairly claim to be very familiar with the application requirements.

With respect to Medical Examiners and Coroner agencies we have learned that each client has specific requirements that are not exactly matched with those of other clients.

Since 1998 we have also worked closely with Forensic Laboratories. We have developed toxicology modules for a number of our clients and are in the process of implementing very sophisticated LIMS systems for the Washington State Patrol and for the Miami Dade County Medical Examiner.

Not surprisingly we have learned that each forensic laboratory also requires a system that is different in significant respects from other forensic laboratories.

No customer wants to simply install a system that worked for another agency, whether this is a Medical Examiner agency or a Forensic Laboratory.

Each of our customers uses the same software, but each of the systems has significant differences. In every situation where we have developed software solutions for one of the forensic laboratories we have learned that the internal processes are quite different and that we could not have applied the previous work we did without changes.

We expect that this will be the case with the West Virginia Medical Examiner as well.

A Toolkit based Approach

Changes can quickly and easily be implemented without any need for programming via the use of the toolkit we have developed.

We have proven by over 5 years of working with our customers that upgrades and new releases can effectively be provided, even if individual customers customize their system to their internal requirements.

With our toolkit many of our customers customize their system on their own (following training by a VertiQ consultant).

Because of the use of the CME toolkit the implementation effort becomes much more of a team effort between us and the customer project team. This can result in significant cost savings since the cost of doing something internally is significantly less than our per diem charge for services.

Custom Modifications

Even though CME based on the use of the toolkit is extremely flexible there are a number of requirements in the RFQ that are currently not supported. They are:

- Archiving cases
- HIPAA support
- Enable for a user who was automatically logged of to log back in and come back to the same screen the user was when the automatic logout occurred
- Limit the workstations from which a given user can log on and whether or not they can access the system from a remote site
- Prevent a user from being logged on to multiple workstations at the same time
- Update code tables directly from any screen where the fields appear where they are used by authorized users only

Support for all of these items can be developed by VertiQ as a custom modification. More information about these items is provided in our detailed response to the RFQ requirements.

With respect to HIPAA none of our current customers requires support for HIPAA. Our sister company, CompuTrust Software Inc. provides software and services to Social Services and Mental Health agencies where HIPAA support is required. Accordingly we are familiar with this topic. Microsoft provides support for HIPAA in their BizTalk Server product line. We will need to discuss the detail of HIPAA integration before we can provide a fixed cost item for this requirement.

None of our current customers archives any data. This includes Los Angeles County Coroner which records some 20,000 cases a year. One of the reasons is that disk storage costs are low. Another is that access to all the data in the system is important for the production of statistics. However we have supported in past versions of our software archiving and can provide an archiving module should this be required.

Due to the fact that each of our customer systems is customized extensively, it is not possible to have a pre-developed user help module available. Each customer has different forms and reports and therefore will require a different on-line Help system. System administration help on how to use the CME toolkit is available and needs no modifications. The CME toolkit has support for on-line help, which can be developed either by us or by the customer via the use of the Microsoft Help Compiler or via Robohelp.

Providing end user training is usually done by our clients rather than by us. The main reason for this is that it is far cheaper. If requested we are prepared to provide end user training services as well.

We have provided cost estimates wherever possible for the custom work that you may decide is required with the system.

Project Management

Many software implementations fail due to underestimating the level of effort and responsibility required from the customer, and also due to improper planning for and monitoring of the implementation effort. It is not possible to install a new system without significant user participation.

A successful, cost-effective case management implementation requires detailed and solid requirements, documented workflow processes, a stable technical infrastructure, and active involvement and subject-matter expertise provided by the Medical Examiner office.

Most of the time the internal project team has day to day responsibilities in the agency that take priority over working on the new system. As a result it is possible that the customer can experience protracted project schedules, significant re-work, cost overruns, and – most importantly – a case management implementation that does not meet the needs of the office.

To avoid this it will be important to have in place an agreed project management plan that will monitor progress and keep the project on schedule.

VertiQ has implemented the Case Management Toolkit in over 30 Medical Examiners' offices since 2001. In our experience, the most successful implementations had all or most of the following characteristics in common:

- Identified and documented workflow processes.
- Documented procedures or a procedures manual.
- IT support trained and knowledgeable in Microsoft SQL/Server, Html forms and report development using tools such as Access, Crystal or SQL Reporting Services (SRS)
- Dedicated subject matter experts provided by the ME office.
- Dedicated project management, responsible for defining and meeting scheduled deliverables, identifying requirements, and defining functional and technical specifications for project implementation.
- An adequate and secure technical infrastructure, including full-time technical support and event monitoring.

VertiQ has outlined a possible detailed project approach in a separate attached document. We share with our customers the desire to maximize the opportunity for a successful project implementation:

Exceptions to the RFP

Our company focuses exclusively on providing software and services to medical examiner agencies and forensic laboratories. We do not claim to have any special expertise on the latest trend in hardware. Our clients usually know more about this than we do since their IT departments manage complete server farms and buy new computer hardware all the time.

Our software is based on the use of vital third party software, such as server and client operating system software, SQL Server database management software and Internet Explorer software, to name 3 of the most important ones. We have no control over these vendors and their software. If for whatever reason their software fails we cannot guarantee to provide a fix without any defined amount of time.

We understand that having 24 hours 7 days of support would certainly be preferable to the support that our company has and will continue to provide for the last 15 years, namely 8:00am to 5:00pm Pacific Standard Time, Monday through Friday, excluding weekends and public holidays. Of course providing that type of service means increased costs at the vendor and our customers have found that this type of service is not necessary as far as the software vendor is concerned. From a hardware point of view this might be quite different, i.e. hardware failure is unpredictable and you will need to be assured that a service technician will be on call pm s 24 hour basis.

One of the reasons that 24/7 is not an issue for our customers is that they do not allow any changes to be made to their production server without having them tested thoroughly on their test server. They also plan for the introduction of such changes carefully (for example, our customers do not rush to implement a new version of the operating system, in some cases they wait for the first service pack to come out).

Pricing

Our pricing is based on a license fee for our software and a service fee based on the amount of services that are needed. We have not quoted for the cost of any third party software.

In most cases it is very hard to determine up-front the amount of services to be provided. Reasons for this are:

- The detail, where as we all know the devil hides, is not yet worked out enough.
- It is not known to what extent the work will be done by us or by the customer project team. This is practical because, after training, your project team will be able to use the toolkit as well.

This applies in the case of this RFQ as well:

The detailed functionality of the Medical Examiner system has not yet been determined.

Some of the tasks outlined in the RFQ could be undertaken by West Virginia ME. It is not clear at this stage to what degree West Virginia ME will be providing resources for this project. We believe that is will be very beneficial if this project is undertaken as a team effort. In this way your agency will require the expertise to modify the system to your changing needs over time without having to pay us to do so.

As and when it was not possible for us to estimate the amount of services that will be needed we have tried to provide a ball park estimate based on our experience with other customers.

Based on our experience with other customers we recommend that VertiQ builds the first version of the system to be used at the West Virginia Medical Examiner. We then use that version to train your system administrator so that in future you will be able to change the system to stay in line with changing requirements.

Having said this there are areas where your project team can assist in the project. For example the development of reports can be undertaken by anybody who has expertise in reporting tools such as Crystal Reports, Access or SRS. VertiQ can develop reports as well, but there will be a cost saving if reports are developed internally. The same applies to user training.

What will be critical is that the internal decision making process functions well right from the start so that the situation can be avoided where VertiQ builds a

complete system to specifications only to discover that there are new requirements that have not been considered yet.

At this stage it is not clear how much contribution will be provided by the internal project team. Accordingly we provided a range of days of services for the main tasks for this project:

Item #	Service Item	Basic	Extended
1	System Administrator Training	3 days	5 days
2	Medical Examiner Database, Forms and Report development	10 days	25 days
3	Assistance in detailed functionality requirements definition and project management	10 days	25 days
4	Assistance in setting up a DMZ server for access by County Medical Examiners / Coroners and other agencies	1 day	3 days
5	On-site presence when system first goes into production	2 days	2 days
	Total	26 days	60 days

This excludes the estimates we have provided for the custom work, i.e. the request for functionality that is not currently supported by CME.

We estimate that 3 to 5 on-site visits will be adequate for this project.

Re license fees the RFQ asks for pricing for an unlimited number of users. In the response to questions we learn that there will be 15 concurrent users in the Medical Examiner agency.

We also know from the RFQ that the intent is for outside agencies, including County Medical Examiners / Coroners to access the system as well.

This is why we decided to provide a license fee option for 15 concurrent users and one for an unlimited number of users for the West Virginia Medical Examiner application.

In summary we believe that

- VertiQ Software has proven expertise in providing 100 % Internet enabled software.
- VertiQ Software also has unique and proven domain expertise in the application area of this project. There are a number of State Medical Examiner agencies that already use CME.
- The CME Toolkit is uniquely flexible in that it makes it possible to develop a custom system without the need for programming

Rolf Kessel President, VertiQ Software October 30, 2006

<u>Section A – Basic Functional Requirements</u>

1. Case Management Functions

The CME system meets all of these requirements.

- a. CME supports many different case number formats, including the one used by the West Virginia Medical Examiner.
- b. You can specify that such a search for a possible duplicate case is automatically executed every time a new case is entered into the system.
- c. Cases can be closed and reopened many times.
- d. There are many ways that data can be imported into the system
- e. The use of the CME Toolkit provides the flexibility that is requested.
- f. This can easily be supported in the CME toolkit.
- g. Records not related to cases can be handled in the system as well.
- h. A special zipcode lookup feature exists in the CME toolkit.
- i. Addresses of hospitals and other organizations can be looked up in the system.
- j. Chain of custody handling is important to all of our customers and supported in our system.
- k. New cases can be launched at multiple parts of the process.
- I. Access control to cases can be restricted in the case of high profile cases. When a case is closed the data in the record is only made available in read-only mode. Exceptions to this are case notes and billing, since these activities continue after a case has been closed.
- m. Many of our clients use CME for cremation requests and approvals.

2. Body and Evidence Processing

CME fully supports the requested functionality.

3. Workflow

- a. A special task management module exists in CME, which can easily be customized due to the fact that it has been developed using the CME Tookit.
- b. The "Daily Log" module in CME perfectly meets this requirement.
- c. It is important to have a quality control phase for every case to ensure that the data entered is correct and usable for future statistics and searches. Doing this at case closure time is a very good idea and has been implemented by many of our customers in this fashion.
- d. Menus can be set up by user role so that, for example autopsy technicians will have a different menu than the clerical staff. Data entry fields can be set up that will allow a data entry only by a certain role.

- e. Cases can be closed and re-opened as many times as necessary. When a case is closed the data becomes read-only, with the exception of those forms that still require data entry even after the case is closed, for example requests for documents and case notes.
- f. Workflow management can be built into the system using the CME Toolkit. A comprehensive Task Management module exists in CME for that purpose.
- g. Updates can trigger notifications as required in the system.
- h. Reminders can be set up in CME to detect if an event, such as the release of property or the entry of tox results is "overdue". This can be fully customized.

4. Missing Persons

We have developed a Missing Persons module initially for Clark County Coroner, Las Vegas. This module allows matching by specifying for certain fields a range to match against; for example age plus or minus a certain number of years.

We now have a newer version of the toolkit that can also support linking a digital photo to a missing persons record and then bringing up photos of DOE cases that match and comparing them visually against digital photos of missing persons. This can be an additional tool for matching purposes.

The CME system meets and exceeds the requirements of the RFQ.

5. Mass Fatality

We have developed a Mass Fatality module using the CME Toolkit as well. It is very easy to customize this module to specific requirements.

The CME system therefore meets the requirements as stated in the RFQ.

6. Barcode Support

Barcodes are fully supported in CME.

CME fully supports the requirements of the RFQ with respect to barcode handling hand chain of custody. Some of our customers are starting to introduce the use of RFID tags for certain chain of custody uses.

7. Toxicology

In 2002 we developed our first toxicology workflow management module for the San Diego County Medical Examiner Forensic Laboratory.

This module is not a full LIMS system (which we have developed for other customers) but allows the management of the workflow through the laboratory, the recording of results and the production of the toxicology report.

This module was subsequently modified to meet their specific in-house requirements by the Philadelphia Medical Examiner.

The CME system therefore meets the requirements as stated in the RFQ.

8. Reporting Requirements

CME fully supports the requirements stated in the RFQ.

CME supports reports developed in Microsoft Access, Crystal Reports and Microsoft Sql Server Reporting Services (SRS).

SRS for SQL Server 2005 has a special ad-hoc query and reporting module. SRS also supports running reports on a schedule and submitting reports to users via electronic mail.

Many of our customers print labels with barcodes for CME.

All the reporting tools supported by CME support exporting reports in files of various formats.

9. Usability and Navigation

- a. CME is fully Internet enabled and only requires that Microsoft Internet Explorer is installed at the user's workstation.
- b. Since CME is fully customizable and each customer system has different data entry forms, we provide a link to on-line help. Such Help can be developed using the Microsoft Help Compiler.
- c. Memo fields in forms use word wrap around and the usual cut and paste functions. Word supports additional dictionaries and the check spelling function that CME uses is the one from Microsoft Word.
- d. Dropdowns are supported in CME and can be either exclusive or allow an overwrite.
- e. Data quality checking is supported through the use of the Logic Wizard in the CME toolkit.
- f. Alerts such as the possibility of duplicate data is also supported in the CME toolkit.

10. Office Capabilities

Some of our customers use Notebook computers in the field in an off-line mode and when they come back to the office use our upload feature to get the data uploaded into the CME database. This is usually used for new cases.

Scott Young, IT manger for Sacramento Coroner has tablets setup for CME access in the field. They use the Kyocera 650s and the Verizon Network. EVDO offers the speed of Broadband. The deputies like having the ability to start working on their reports while in the field. Sometimes they have to wait quite a while for body transport.

This is a far superior solution than the off-line use with a notebook since it is possible to access the actual CME database on-line from outside of the office. The performance of EDVO varies depending on the quality of the cell phone service at the place that it is being used. Sacramento Coroner has found performance to be acceptable. Another advantage of the on-line connectivity using EVDO is that it is not necessary to install the desktop edition of SQL Server on the notebook or tablet computer.

11. Customizable by Users

CME meets and exceeds all the listed requirements through the use of the CME Toolkit.

12. Security

CME meets all the stated requirements for security. Many of our customers have a DMZ server installed to provide secure access to agencies or County Medical Examiners / Coroners via the Internet. Access will take place using Secure Socket Layer (SSL).

Some of our customers also provide VPN access to external users. Usually this is only put into place where there are only a few external users.

13. General Function Requirements

With the exception of item "j" CME meets all the stated requirements.

In a previous version of CME we used to support record locking. However when we upgraded our system to support Microsoft SQL Server we implemented support for the concurrency handling that is supported by SQL Server. The conflict resolution supported by SQL Server is superior to record locking.

Searching attached documents in a full text search mode is possible through the use of Microsoft SharePoint Services. SharePoint Services indexes the documents and so supports text-based searches.

14. Billable Activities

All our clients have billable activities implemented in their CME implementation. CME therefore fully supports the stated requirements.

15.ICD10 Support

CME supports an ICD10 lookup.

16. Scan and Link Documents

This requirement is also supported in the CME toolkit.

17. Generate Reports

The Wordlink module in CME allows you to set up Word templates and have the system insert data from the database into the appropriate places inside the template. Some of our customers use this feature extensively for autopsy and death investigation reports.

Another module exists to insert data into Excel spreadsheets for the purpose of producing quarterly or annual reports. This feature is extensively used by the Washington / DC Medical Examiner.

Section B – General System Requirements

1. MEMS System Access and Navigation

Items a. and b. in the list for this point are fully supported by the CME toolkit.

CME also logs each and every data entry or data modification in its internal audit trail tables (item k).

Both Windows Authentication based user access and SQL Server Access based on SQL Server 2005 provide for password expiry. Both these access methods stop a user login after a certain number of unsuccessful attempts.

The toolkit also supports an automatic log off after a certain amount of idle time has passed.

There are a number of requirements which are not currently supported by the CME toolkit. They are listed below. It will be possible for us to add support for these requested items as a custom development. We have itemized these items separately in our pricing response.

Terminate login after a predetermined number of unsuccessful tries by a user

When SQL Server 2005 is run on Windows Server 2003 SQL Server authenticated accounts can be configured to use the password policies for Windows accounts. This means that you can use the account lockout threshold to control the number of bad password attempts. However, this threshold can only be set at the domain (via the domain policy when using domain accounts) or local computer level (when using local user accounts). The recommendation for the threshold is 10, not 3. So, restricting it to 3 could cause other problems depending on the scope (i.e. whether domain or local user accounts are involved). You can also set the account lockout duration to control when a user can again attempt to login.

Enable for a user who was automatically logged of to log back in and come back to the same screen the user was when the automatic logout occurred

To support session restarts after a user is forcibly logged out is not currently supported in the toolkit: We can however implement this as a custom enhancement as follows:

The forms compiler can be modified to pass the page and ID (e.g. Case number) to the logout page that announces that the user has been logged out. The logout page can save this information in SQL Server (In .NET you can configure either session state or profiles to make this easier). The login page (e.g. CMELogin.asp or CMELogin.aspx in .NET) always calls VASTLogin.asp (or VASTLogin.aspx in .NET); since the latter is not configurable by the user, it can be modified to fetch the information (by modifying the COM+ component) and use it to redirect the start page for the user by setting the CaseNum parameter and adding a GotoPage parameter - after this info has been fetched, it would be deleted from the database so subsequent logins would not be redirected unless a previous forced logout event occurred. The onload event logic for CMELogin.asp would have to be modified to: 1) copy the restart page to the hidden gotopage field, and 2) copy the id to the id dropdown.

We have quoted for 3 days of services to provide this function.

Limit the workstations from which a given user can log on and whether or not they can access the system from a remote site Prevent a user from being logged on to multiple workstations at the same time

These 2 requirements are also not currently supported in the CME Toolkit. They can be implemented as a custom enhancement as follows:

If Windows authentication is used, one option is to control this by modifying the policy on the server – we will need the LimitLogin add-in from Microsoft in order to limit the number of concurrent sessions. An alternative is to build a mechanism. For SQL authentication, we would have to build a mechanism that used SQL Server to store the workstation's IP address (which we can get from the Request object). We can modify VASTLogin.aspx to check that the user is not violating the rules (using the IP address and the user name). We can then use the session end event to update the database to reflect the fact that the user is no longer using the application.

We have quoted 2.5 days of services to provide these functions with the CME Toolkit.

HIPAA Compliance

None of our customers to date has required any HIPAA compliance. This is why there is currently no support for HIPAA per say in the CME Toolkit.

Based on the response to our questions it appears that the use of Windows Authentication and the internal existing DHHR MIS Policy and Procedure will suffice for HIPAA compliance with respect to passwords. We would expect that this will also be the case when SQL Service Authentication will be used for external users as long as it is based on SQL Server 2005.

It will be possible for us to implement support for HIPAA using the BizTalk Accelerator for HIPAA from Microsoft. The following information is straight from the Microsoft website on this topic:

BizTalk Accelerator for HIPAA

Create a powerful foundation for providing health care within boundaries. The Health Insurance Portability and Accountability Act of 1996 (HIPAA) offers important new protections for workers and their families who might have pre-existing medical conditions. With the BizTalk Accelerator for HIPAA, you get the help you need to implement a BizTalk Server infrastructure customized to support the requirements of HIPAA. BizTalk Accelerator for HIPAA includes tools to achieve HIPAA transactional compliance through open standards—based communication and system interoperability.

Microsoft charges a license fee for the use of BizTalk Server and there would be a charge for VertiQ to develop support for BizTalk Server for the MEMS System. We have quoted our per diem rate for this support due to the fact that it is not possible for us at this stage to estimate the amount of effort that will be required to support HIPAA for this project.

2. User Rights and Privileges

The CME toolkit supports all the stated requirements.

3. Screen Access and Navigation

The CME toolkit supports all the stated requirements.

4. General Query Capabilities

We have developed in CME special support for Queries so that our users can develop any query form to suit internal needs. We take great care to ensure that in the case of searches where a large result set occurs all that data is not pushed down to the client PC but kept on the server and only provided to the client PC in small sets of data. More can be access via Next or Previous functions.

Soundex support is also implemented in CME.

Any field in the database can be used for a search function.

5. Field Entry and Editing and System Table Maintenance

The use of the logic wizard in the CME toolkit provides for powerful data editing.

CME fully supports all the stated requirements with the exception of item n, which we can support via a custom modification as outlined below:

Update code tables directly from any screen where the fields appear where they are used by authorized users only

This requirement is also not currently supported in the CME Toolkit. In the current version special forms exist that are available to the CME Administrator to manage dropdowns and other reference data such as organizations and personnel. The requirement as stated in the RFP could be implemented as a custom enhancement to the CME Toolkit:

The dropdown behavior already traps the key presses, so we could add two fields to the configuration tab for the dropdown in the toolbar that allowed a user to specify the edit form to popup when a particular function key is pressed and the name of the code to be edited – the code would be passed to the edit form to encourage the use of generic edit forms. When the user pressed ok, the form would save the changes and the dropdown would refresh its dropdown list.

We have quoted 3 days of services to implement this requirement.

6. Reporting and Data Transfer

The CME Toolkit supports all the listed requirements.

7. Report Generation Strategy

The CME Toolkit supports all the listed requirements.

8. Web Front End

Please consider our response to item a. to be the same as provided above for item 1j, meaning that the CME tookit does not currently support CDC Phin and HIPAA regulations. We are willing to develop the required support as a custom development as stated above.

Items b. and c. are fully supported in the CME toolkit.

We thought it might be useful to clarify item d. in more detail:

Provide second-tier authentication of data access

CME is a three-tier application. All database access is undertaken via a secret user, who does not need to be the dbo. Therefore none of the users of the system ever has any direct access to the database when using CME. For reports access rights can be set up to function only in read-only mode.

If there is an additional concern that components that access the database should also be required to authenticate, then in the case of the CME Toolkit this would mean the COM+ components which it uses. Each component uses the secred User to authenticate with the database, so this is safe and meets the requirement. If Windows Authentication is used, it would be possible to add another level of security by configuring COM+ to require that the application users belong to a particular role before they can access the COM+ component. If SQL Authentication is used, we can create a special user account (probably a local account) to run IIS under for anonymous access and give only that user access to the COM+ components – thus users must go through the website to get access to the database. When the COM+ components are removed (after the .NET light version is replaced by a full .NET version), AzMan can be used to authenticate the user's role.

If the additional component security is required we can provide this and estimate that 2.5 days of services will be adequate for us to provide this functionality.

9. Standards and Regulatory Compliance

We have responded to the requirements under this point with respect to PHIN Standards and HIPAA elsewhere.

10. Software Subscription Support

VertiQ will not be supplying any hardware for this project. Therefore there will be no need for VertiQ to provide any support for the installation or trouble shooting of any hardware or network component to be used with the application. All of our customers have internal IT departments who are far more experienced than we are in dealing with hardware, system software and network related issues.

With respect to Software VertiQ will not be providing support for operating system software or third party software such as Internet Explorer, Microsoft

Office, Microsoft 2003 Server, Microsoft SQL Server or any other third party software that will be used with the project.

If requested by a customer VertiQ is willing to assist in trouble shooting third party software problems. For example we had one customer installation where 20 PCs were being used for CME. 19 of the PCs were working perfectly, but the 20th PC had a problem with its internal clock and was coming up with incorrect time information inside CME forms where the date and time of the activity was automatically being recorded. We offer support in determining what is causing such a third party software or hardware problem. However such support is not provided free of charge as part of our maintenance service but is charged for at our per diem rate in force at the time of the requested service.

It is very important to us that our customers have uninterrupted secure use of our software at all times. When it comes to software there is plenty of scope for new service packs or new versions of software to cause serious problems for the application software

In general our customers want to make sure that if problems happen we deal with them in accordance with their severity and respond quickly to fix any problems that stop you from being able to use our software. In order to accomplish this we agree with our customers a general approach to ensure that there will be no unexpected "surprises" that suddenly cause the application software to stop working:

Each CME customer will set up a test environment that mirrors the production environment as far as all software components are concerned.

Any and all new releases whether from us or from Microsoft will first need to be tested in the test environment.

The customer will ensure that no service packs are installed on client PCs without first having them tested out on the test environment as well.

If you run into any problems during tests of new releases, service packs, this will not be a serious problem regarding the use of our software since this does not affect the production environment.

It is possible that the current production system unearths a bug of a severity requiring immediate assistance. We hope that this will be unlikely to be the case since before going into production the software will have gone through a full acceptance testing phase. However it is possible that this will indeed happen.

In that case it is important that we can work effectively with your internal technical team to resolve it. This means that it will be very important for

us to get some sort of remote access to be able to trouble shoot such a problem. We could use something like WebEx or VPN or whatever else your IT people will bless.

This way we would minimize any unforeseen problems. We have experienced in the past that security patches from Microsoft have caused problems for our software and this could happen again. We need to be able to cope with such possibilities. We cannot commit to any maintenance service without an agreement on the environment that changes will be introduced into the production environment. If they are not first tested in a test environment then we cannot be responsible for having to drop whatever we are working on to deal with a serious problem.

With such an approach it is not necessary for us to provide 24/7 support (and have to charge accordingly for it). We have many clients on the East Coast and successfully provide maintenance services based on our West Coast support hours. Please feel free to check up on the level of support that we have provided to customers in your part of the USA.

11. General Bar Coding

The CME toolkit supports the stated requirements.

12. Data Archiving

None of our CME customers does any archiving of data. This includes LA Coroner who records some 20,000 cases a year.

The reason for this is that in order to produce statistics or searches for specific cases it will be necessary to have access to the case record.

It is true that digital photos will over time take up considerable disk space. This is why we support being able to store all digital photos on a separate server. Some of our customers have asked us to integrate all images and scanned objects and objects created via Microsoft Office in the internal document management system. This can be done via a custom interface to the specific document management system.

Should you decide that it is important to have support for archiving in your system, VertiQ is willing to develop an archiving module for you as a custom development effort based on our per diem rate. We are not able to give you a fixed price for such a module until we have agreed with you the detailed requirements.

13. Database Conversion

As is stated in the RFQ there will be no need to implement a database conversion task. We have in the past done many conversion projects for our customers, including bringing in data from Microsoft Word or Excel objects in order to build up historic data and use it for future statistics.

Another area where electronic data may be available and useful to be incorporated into the system could include lists of hospitals, hospices, medical practitioners and the like, which will be used in the system. Rather than enter those records into the new system by hand it may be preferable to import these into the new system from an electronic record set.

Groupwise Support

Groupwise supports SMTP with authentication. The current implementation of the send mail logic function in the CME toolkit uses "mailto", which passing parameters to the default mail client (e.g. Outlook) on the user's workstation. As long as the mail client is configured to use Groupwise, the CME Toolkit can create email messages and get them posted via Groupwise. NET 2.0 provides an SMTP engine that can be configured to talk to a remote SMTP server using authentication (and, if required) SSL. This mechanism also permits attachments (which can be binary) and can be configured so users receive HTML instead of text; it also makes it possible to send an email without launching the mail client.

<u>Section C – Vendor & Software Abilities and Capabilities</u>

1. General Requirements

VertiQ meets all the stated requirements. Hardware specifications and a project plan have been attached elsewhere in our response to the RFQ.

2. Project Requirements

VertiQ understands and agrees with the points raised under the heading Project Requirements.

Hardware and third party software requirements have been detailed elsewhere in our RFQ response.

The CME system meets the requirements stated in this section.

3. Project Vendor Personnel

A list of key personnel has been provided as part of our RFQ response.

VertiQ works on a team approach and we tend to share the work between more than one person in order to speed up the overall process.

Over the years we have worked with certain subcontractors on a regular basis. They are part of our extended family. Frequently they are ex-employees who preferred to set up their own shop.

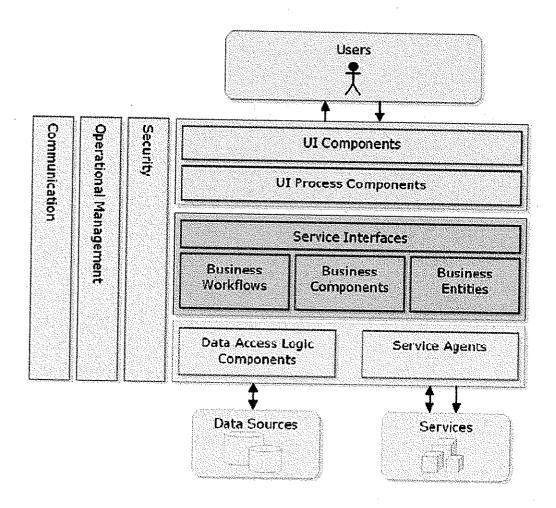
4. Database

We recommend the use of SQL Server 2005. We also support SQL Server 2000.

The largest customer database takes up approximately 5 gig of disk space. Documents and Images are stored elsewhere and take up their own disk space.

<u>Application Design Infrastructure</u>

The software architecture embedded in the CME system is based on a modular approach, focusing on adding value to currently available state of the art components.



A Toolkit-based Architecture

The toolkit has the following features

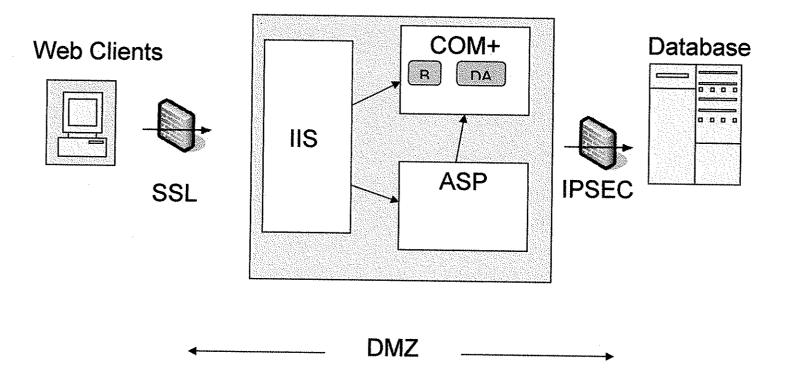
- Implements a component-based application framework
- Uses generative techniques to instantiate a specific application
- A forms wizard that can be used by non-programmers to easily build database-connected data entry forms.

- A logic wizard that makes it easy to control form elements and access to the database.
- Uses the trusted server / subsystem model to authorize access
- Provides easy to configure role-based access to application elements.
- Is deployed as a web-client

Because forms are specified and then compiled in order to be connected to the database:

- Forms can be prototyped before the database design is complete.
- Previously compiled forms can be re-compiled in order to re-connect them to the database should the data model need to be changed.
- Toolkit enhancements that affect the runtime architecture of user-defined forms can easily be incorporated into the application by simply recompiling the forms.

Web Server



Toolkit Security

- Trusted server model
- Role-based access to form categories, forms, and fields
- SQL Server authentication

- Windows authentication
- No cookies
- URL encryption
- SSL support

The web version of CME uses a "Trusted Server Model" to control access to the database: A single database account is used to access the database on behalf of the user. This approach exploits connection pooling so that the application will scale well. The database account can be either a SQL Server account or a Windows 2000 domain account, and does not require db_owner privileges, so the database is very secure.

A user's account can be configured to use either Windows authentication or SQL Server authentication. In either case, when users log into the system, their SQL Server login account (which can be either a Windows 2000 domain account or a SQL Server Authenticated account) is used to authenticate them and to determine their database roles and user name (which can be different from their login id).

Administrative forms can be used to configure the application so that database roles are used to control access to forms and to fields on a form. For example, one role might have complete access to a particular form while another role will only have read access to the same form. And, another role might be prevented from knowing about the form because it will not show up on the navigation panel. Yet another role might have read and write access to all but two fields on the form.

Design Time Architecture

- FrontPage is used to host a design environment for
 - Building the application framework
 - o Creating the navigation structure
 - Defining user access
 - o Compiling forms
 - Specifying data access and form logic
- The Forms Compiler
 - Transforms user specifications into ASP-based data-driven form that instantiates behaviors as components
 - o Generates the stored procedures needed to support the form
- The Logic Wizard generates code for wiring user specified logic to the form

Microsoft is planning to discontinue support for FrontPage. It is our intention to move our form design user interface to Visual Studio Express from Microsoft.

Run-time Architecture

- RDS (over http) is used to communicate with the business layer and data access components hosted in COM+
- The data access components communicate with the database
- Forms use disconnected record sets and conflict resolution to update the database
- Form based updates are automatically audited by the system
- Both Forms and Windows Authentication are supported
- Authorization is Role-based
- Roles can be used to control access to menus, forms, fields and form logic
- Services exist for accessing and updating the database, posting transactions and managing workflow
- Reports
 - Access and Crystal Reports are supported; support for Microsoft SQL Server Reporting Services is currently being implemented
 - o Can be viewed or printed from a menu or from a form
 - Parameters can be passed to reports
- Batch Services
 - Interface with SQL Server's Job Scheduler
 - o Can be managed from forms built using the toolkit
 - o Can be invoked to run on demand via form logic
 - Can be scheduled to run
- A single-user model is used to access the database so that connection pooling will work
- The singe-user account can authenticate using either SQL or Windows Authentication
- Application configuration is controlled by one configuration file
- · Application updates are applied to the server hosting the website

Summary of Architectural Benefits

- Component based
- Extensible
- Role-based
- Uses generative programming techniques to reduce the amount of handcrafted code
- Implements the Trusted Subsystem model
- Uses disconnected record sets and connection pooling
- Focuses effort on the development of components needed to implement the application in order to
 - o Reduce the total amount of code
 - Decouple unit testing from user interface testing
 - o Increase flexibility

TECHNICAL OVERVIEW

The original version of the toolkit was called the CME Toolkit (launched in early 2000). The name of the toolkit matched the name of the product, for which the toolkit was then exclusively being used.

Since then we major new redevelopment of the toolkit has taken place. The toolkit has also been used in 2 other application areas, namely Forensic Laboratories and Trust Accounting.

Accordingly the new version of the toolkit was named the VAST toolkit. VAST stands for Vertical Application Software Toolkit.

VAST Toolkit Components

The VAST Forms Compiler generates an ASP page that instantiates the following components at run-time:

- HTML elements
- Behaviors
- Event handlers
- JavaScript objects
- ADO/RDS objects
- XML Parser
- CME specific ActiveX objects
- Infragistics ActiveX objects
- COM+ components

HTML Elements

Instantiate user interface components.

Types used

- Input element:
 - Text used for age, date, datetime, money, number, password, phone, ssn, text, time, and zipcode behaviors.
 - Button used for copy button and push button behaviors.
 - Checkbox used for checkbox behavior.
 - Radio used for radio button behavior.
 - Label used for the label behavior.
 - Link used for the link behavior.

- Text Area used for the memo behavior.
- Exposes a programmable Document Object Model (DOM).
- Reference:
 - http://msdn.microsoft.com/workshop/author/dhtml/reference/dhtml
 reference entry.asp?frame=true

Behaviors

- Located in scripts\htc.
- Augment the behavior of the HTML element that they contain.
- Use the Element Behavior implementation:
 - Lightweight so parsed only once.
 - Requires an import statement.
 - Written in JavaScript.
- Each behavior exposes:
 - Methods
 - Properties
 - Events
- Each behavior attaches one or more events.
- Reference:
 - http://msdn.microsoft.com/workshop/author/behaviors/overview/elementb_ovw.asp

Current Behaviors

- age
- checkbox
- copybutton
- date
- datetime
- dropdown
- grid
- iframe
- imagebutton (
- label
- link
- memo
- money
- number
- password
- phone
- pushbutton
- radiobutton
- savebutton
- ssn

- text
- time
- zipcode

Event Handlers

- Facilitate the implementation of a loosely coupled architecture.
- Used to communicate information between objects.
- All behaviors attach the *ondocumentready* event in order to initialize themselves.
- All behaviors attach the *onblur* (or *click*) *event* in order to act on a user's input.
- All text-based behaviors attach the *onkeypress* and *onchanged* events.
- All input behaviors raise events on Changed, on Required, and on Alert events in order to manage the state of the form.
- Behaviors based on the *input* element call logic (defined by the logic wizard) when the *onblur* (or *onclick*) event is raised.
- The logic defined for the form's *onblur* event is called each time a behavior's *onblur* event is called, after the logic for the behavior has been run.
- The *onSave* event is raised by the save button and handled by the *formdata* behavior to save the data on the form.

JavaScript Objects

- Used for any script-based implementation that runs in IE and ASP.
- Associative arrays and objects used to store and efficiently pass information between behaviors.
- Logic Wizard generates a *PageLogic* object that instantiates a *FieldLogic* object in order to run logic wizard functions defined in *js\FieldLogic.js*.
- References:
 - http://msdn.microsoft.com/library/enus/script56/html/js56jsoriJScript.asp?frame=true
 - JavaScript & DHTML Cookbook by <u>Danny Goodman</u>
 - JavaScript: The Definitive Guide by <u>David Flanagan</u>

ADO/RDS Objects

- Used to communicate with COM+ objects running on the server in order to minimize page turns.
- The formdata behavior uses RDS to retrieve and save form data.
- The grid behavior uses RDS to retrieve and save grid data.
- The *dropdown* behavior uses RDS to retrieve dropdown lists.

• Used by various logic wizard functions defined in *js\FieldLogic.js*. (Search for string "RDS.DataSpace".)

Microsoft XML Parser

- Used by the Logic Wizard to store and retrieve user defined logic from/to XML files stored in *xml\user*.
- Used by the *formdata* and *grid* behaviors and several COM+ components to communicate data conflicts.
- Used by several logic wizard functions defined in js\FieldLogic.js.
 - store the options and properties defined for each behavior.
- store and retrieve the options and properties set for a behavior by a user.
- implement the web service used by check printing.

Infragistics ActiveX Components

- The *Data Table* component (in pvdt80.cab) is used to implement the *grid* behavior.
- The *Combo box* component (in pvcombo.cab) is used to implement the *dropdown* behavior.
- In VAST, the *TreeX* component (PVTreeX.ocx) is used by the VAST toolbar.

COM+ Components

- Except for four cases, all database access goes through a COM+ component:
 - VASTLogin.asp uses ADO directly to authenticate a Window user account.
 - Access uses ODBC to directly access the database.
 - Crystal Reports uses OLEDB to directly access the database.
- VAST COM+ Components use ADO to access the database.
- Named instances:
 - Supported in VAST.
 - Use server = for CME.
- Connection pooling is used.
- ADO/RDS is used to instantiate a COM+ component on a client machine:
 - The RDS DataSpace object is used.
 - The component must have a key in ADCLaunch in the registry on the server.
- Roles (based on Windows Authentication) can be used to control access.
- Used by numerous behaviors and logic wizard functions

Using RDS

- var oDataSpace = new ActiveXObject("RDS.DataSpace");
- var oBusinessObject = oDataSpace.CreateObject("COM+Component", Protocol + Server);
- var oResult = oBusinessObject.Method(...);

VAST Forms Compiler

- FrontPage toolbar and VASTFormMaintenance.asp call VASTFormWizard.asp, which
 - Loads HTML file in htmlsrc into IFrame
 - Instantiates formwiz.htc, which uses
 - BehaviorBuilder.js to process the embedded XML.
 - spcompiler.js to compile the stored procedures.
 - DOM to modify the HTML
 - Submits VASTSavePage.asp, which writes the ASP page.

ASP

- <%@ Language=JScript %>
- <% // Copyright Obvious Systems %>
- <html xmlns:VAST>
- <script language="jscript"
 src="../scripts/js/TextBasedObjectFactory.js"></script>
- <?IMPORT namespace="VAST" implementation="../scripts/htc/fdata.htc">
- <?IMPORT namespace="VAST" implementation="../scripts/htc/factions.htc">
- <?IMPORT namespace="VAST" implementation="../scripts/htc/fiframe.htc">
- <?IMPORT namespace="VAST" implementation="../scripts/htc/fbutton.htc">
- <?IMPORT namespace="VAST" implementation="../scripts/htc/ftext.htc">
- <?IMPORT namespace="VAST" implementation="../scripts/htc/fcheckbox.htc">
- <head>
- <% var UserName = Request.QueryString('UserName'): %>
- <% var Roles = Request.QueryString('Roles'); %>
- <% var ReadonlyPage = Request.QueryString('readonly'); %>
- <% var srv = Application('DBServer'); %>
- <% var db = Application('Database'); %>
- <% var protocol = Application('Protocol'); %>
- <% var audit = Application('audit'); %>
- <title>Page Title</title>
- <% var fso = Server.CreateObject("Scripting.FileSystemObject");
- if (fso.FileExists(Server.MapPath("../scripts/js/user/FPTestUserFunctions.js"))

```
{%>
<script language="jscript"</pre>
src="../scripts/js/user/FPTestUserFunctions.js"></script>
<%}%>
<script language="iscript" src="../scripts/js/FieldLogic.js"></script>
<script language="jscript" src="../scripts/js/user/FPTestLogic.js"></script>
<% var vastproperties = "<pre>roperties><parameters/></properties>"; %>
<!-- #include file = "../scripts/inc/BuildParameters.inc" -->
<% =xml %>
<script language="jscript" src="../scripts/js/Parameter.js"></script>
<script language=iscript>
 var oParameter = Parameter.createParameterObject();
 var oPageLogic = new
PageLogic("<%=db%>;<%=srv%>;<%=UserName%>;<%=audit%>;<%=protoc
ol%>");
</script>
link id="cmeStyles" rel="stylesheet" type="text/css" href="../css/CME.css">
<script language="jscript" src="../scripts/js/FormObjectBase.js"></script>
<script language=iscript for=window</pre>
event=onbeforeunload>FormData.beforeunload();</script>
<script language=javascript>
 if (top.banner!= null)
  top.banner.welcome.style.display="block";
  top.banner.casestatus.style.display="none";
</script>
</head>
<BODY vastproperties>
<VAST:formdata id=FormData protocol="<%=protocol%>"
onLogic="oPageLogic.run( window.event );"
connect="<%=db%>;<%=srv%>;<%=UserName%>;<%=audit%>"
roles="<%=Roles%>" auditkey=""> </VAST:formdata>
<P><VAST:iframe id=Id MyFrame style="WIDTH: 317px; HEIGHT: 274px"
scroll border> <IFRAME style="WIDTH: 317px; HEIGHT: 274px"
name=MyFrame src="testpostfunctions.asp" frameBorder=ves
scrolling=yes></IFRAME></VAST:iframe></P>
<P><VAST:button id=Id btnTest name="btnTest" value="Test"
onLogic="oPageLogic.run( window.event );"> <INPUT class=button id=btnTest
type=button value=Test name=btnTest></VAST:button>
```

Database Assumptions

Table relationships are defined by referential integrity constraints.

Keys are not well-known but each table must have a key.

VAST Stored Procedure Compiler

- Discovers keys and identity fields
- Uses referential integrity constraints to build the join clause for the select statement
- Supports aliases
- Places the keys at the beginning of the select statement
- See spcompiler.js

VAST Form Data Management

- FormData.js calls COM+ method getUpdatableRS to fetch a disconnected updateable record for fields bound to the database
- GridData (see fGridHelperObjects.js) calls COM+ method getUpdatableRS to fetch a disconnected updateable record set for fields in a grid
- Behavior formsave monitors the change state of the form and calls (via formdata and grid) COM+ methods
 - saveNewFormData and updateFormData to save the form fields
 - saveFormGridChanges and saveFormGridInserts to save grid data
- Changes are audited and conflict resolution is performed
- Form records are automatically created on demand

VAST Logic Wizard

- The events form for the VAST FrontPage toolbar calls FPLogicWizard.asp, which uses
 - FPLogicParser.js to parse the logic.
 - FPXMLDataIsland.js to retrieve, store and translate (to JavaScript) the logic.
 - FPFieldList.js for field name searches.
- Logic is stored in xml and translated (via XSLT) to JavaScript.

VAST Logic Functions

- call Calls a user defined function
- checkbutton Enables a button if all required fields have values and the page has no field messages (alerts) or update conflicts
- checkdatetime Checks whether the dates and/or dates and times of fields listed before the comparison operator logically compare to the dates and/or dates and times that are listed after the comparison operator

- clear Clears one or more controls on the page
- click Simulates a user clicking a button
- copy Copies a constant or control value to another control
- createcase Creates a new case
- crystalreport Opens a Crystal report
- disable Disables one or more controls
- enable Enables one or more controls
- gotoform Replaces the current form with the form specified
- math Performs arithmetic on two values
- message Displays a message on status line or as an alert
- newcase Creates a new case and, optionally, checks for duplicates
- pdf Displays a PDF file
- printform Prints the current form
- printreport Prints a Microsoft Access report
- printcrystalreport Prints a Crystal report
- required Tells save button that local field must have data
- reset Notifies a control that it should reset itself
- · savecase Saves the data on the current form
- searchgrid Searches a grid column for a specific value
- selectrow Selects rows in a grid with a column that has a specified value
- setage Calculates the age of a decedent, given his/her date of birth and date of death
- setfocus Causes a field to receive focus
- storedprocedure Calls the specified stored procedure and passes it the parameters
- wordlink Invokes a wordlink document
- applyformvalues Tells a form displayed by popupform what values are to be returned to the calling form
- closeform Closes the form
- copytogrid Copies constants or control values to a row in a grid
- disableform Disables a form
- disablemenu Disables a menu
- display Causes one or more hidden fields to be displayed
- displaymenu Causes a hidden menu to be displayed
- enableform Enables a form
- enablemenu Enables a menu
- executejob Immediately executes a previously defined SQL Server job
- exportfile Exports a file from a text blob field
- getqueue Gets the entries in a queue
- · hide Causes one or more visible fields to be hidden
- · hidemenu Causes a visible menu to be hidden
- importfile Imports a file into a table as a text blob
- loadgrid Loads a grid with the result set returned by a stored procedure
- match The match function determines whether a field matches an expression
- mathgrid Performs the operations described for the math function for each row in a grid

- popupform Displays a form in either a modal or modeless dialog window
- popupmessage Displays a modal popup message and optionally returns user's response
- resetform Notifies the form that it should reset itself by creating an empty record set and resetting the non-local behaviors
- saveform Saves the form data (but not the grid data) on the current form
- savegrid The savegrid function saves the grid data on the current form
- search Returns the results of a search request in a grid specified in the call
- · sendmail Sends an email
- setcopybutton Sets either the "appendonly" or "noappend" property of a copy button to either true or false
- setiframe Replaces the current form in an IFRAME with the form specified
- setimagebutton Sets the image for an image button
- setlink Sets the website relative url of a link
- setreturnvalues Tells a form displayed by popupform what values are to be returned when the form is closed
- showformhelp Displays the help page for the form in a modeless popup window
- storedproceduregrid Calls the specified stored procedure and passes it the parameters for each row in the grid
- sum Sums a grid column
- unselectrows Deselects all selected rows in a grid. Use selectrow (with the third parameter false) to deselect rows with a specific column value
- updatesignature Updates a signature for a checking account

VAST Batch COM+ Components

Overview

- Tasks that may take a while to execute are scheduled as SQL Server jobs
- Pattern
 - Logic function calls method in Batch COM+ component to schedule appropriate DTS package by creating a SQL Server job
 - DTS package calls method in Batch COM+ component to perform the task
 - Batch COM+ method writes entry in tblDailyLogEvents when it completes
 - Batch jobs can be scheduled to run immediately or at a specific time
 - The Schedule Job form can be used to run a batch job on a recurring schedule
 - DTS packages run a JavaScript task
 - Parameters that may need to be changed are specified in the JavaScript task and passed to the appropriate Batch COM+ method.

The SQL Server job passes configuration parameters to the DTS package. The **Batch** component has public methods

- StartDTSImportFileJob
- GetQueue
- ArchiveFile
- UnArchiveFile
- CheckForDuplicateInputFile
- NotifyImportFinished
- GetQueuePath
- CreateMasterImportRecord
- CopyInputFileToProcessTable
- MoveInputFileToProcessQueue
- SaveUploadedTextFile
- ExportData

VAST Menus

- Role based
- Uses the following tables
 - Roles stored in tblVASTMenuRoles
 - Menus stored as XML stream in tblVASTMenus
- Specify menu behavior in FrontPage so forms compiler will generate code to call getVASTMenu and to instantiate behavior fmenu.htc.

VAST Login Mechanism

- Can build custom login form for SQL or WS authentication
- VASTLogin.asp
 - Calls doVASTSQLLogin for SQL authentication
 - Calls doVASTWindowsLogin for Windows authentication
 - Calls writeVASTFramework to send role-based framework to IE
- doVASTSQLLogin and doVASTWindowsLogin
 - Call getUserProfile, which
 - Calls prcGetVASTUserProfile which returns UserName, Role, and Institution
 - Returns a ":" delimited user profile string containing the values returned by prcGetVASTUserProfile
 - Return user profile string
- writeVASTFramework encrypts the user profile string and passes it to each frame as query parameter *uri*.
- Each form calls getVASTParameters, which
 - Decrypts the user profile string
 - Calls addURIParameters, which
 - Parses the string into name value pairs username, userroles, and institution

Adds it to the XML data island for parameters on the form

VAST Alert Support via the Daily Log

- Can be built like a regular form
 - Use grid behavior to display log
 - Use logic function loadgrid to load the grid
 - Use grid's onselectrow event to run logic
- Setup a table for storing daily log events
- Use form logic or database triggers to add entries to the table for storing daily log events

Parameter Passing in VAST

- The VAST FrontPage toolbar defines the following standard parameters (see FormFieldList.cls)
 - UserName
 - UserRoles
 - DatabaseServer
 - DatabaseName
 - Protocol
- getVASTParameters makes the standard parameters available to all forms
- The menu behavior (see fmenu.htc) always passes the encrypted user profile string and any parameters defined for the menu item to the form being called
- Logic functions gotoform and popupform can pass additional parameters

VAST Search

- Can be built using a regular form
 - Use a grid to define the fields to be displayed
 - Use search logic function to tie the display grid and the search criteria together
 - Supports
 - Ranges
 - Soundex
 - Paging
 - "Last n" searches
 - Views
 - Calls COM+ method search, which uses graph theory to generate the appropriate join

Crystal Reports

- RAS and RDC are supported
- Logic function crystalreport calls crystal\VASTCrystalViewerInterface.asp which invokes either RAS or RDC
- Logic function printcrystalreport calls crystal/vcrystal/VASTCrystalPrintInterface.htm which invokes RDC since RAS can only support printing once the report has been viewed

Launching Word

- If a pdf, docmenu navigates to pdf
- If a Word document, document calls opencase method openDocument, which:
 - If new document
 - Creates document directory if necessary
 - Calls CMELaunch. Word method CreateDocument
 - Adds document to tblCMEDocuments
 - If existing document
 - Checks whether document is read-only
 - Calls CMELaunch. Word method OpenDocument

Launching Access

- When a report menu item is clicked reportmenu
 - Calls opencase method openReport, which calls CMELaunch.Access method OpenReport
- When a print menu item is clicked printmenu
 - Calls opencase method printReport, which calls CMELaunch.Access method PrintReport

SQL Server Reporting Services

A new function to support SRS is currently being tested. The SQL Server 2005 Ad-hoc Reporting facilities that come as part of SRS for that version will be available and useful for clients as well.

The VAST Toolbar

- Toolbar is only activated if open a VAST website
 - See Connect.cls
- Uses IE to get/save information from/to the website

- See IE.cls and LogicWizard.cls
- XXBehavior.cls manages toolbar button, which inserts a behavior. (XX is the name of the behavior, e.g. Age)
- XXProperties.cls manages the property page for a behavior
- IWS.cls is used to make XMLHTTP based web services calls to the website
- IData.cls is used to make RDS based calls to COM+
- BehaviorFactory.cls builds a behavior string for insertion in the HTML document
- VASTConfig.cls loads VASTFP.xml
- VASTPage.cls recognizes a behavior when the user double clicks the appropriate element
- VASTFieldExplorer.cls displays manages the field explorer button
- VASTToolbarButtons.cls adds the toolbar buttons
- IDrop.cls, IProperties.cls, IEvents.cls, INotify.cls, and IGrid.cls are interface definitions for call backs
- frmXXOptionsPage.frm are forms for displaying options tabs.
- CompileForm.cls compiles a form
- frmFieldExplorer.frm displays database tables and fields and supports drag and drop, and right clicks
- frmExplorer.frm displays the fields and functions display and supports drag and drop, and right clicks
- AppFrameMaint.cls manages the application framework button
- MenuMaintenance.cls manages the menu maintenance button

Installing VAST

Installation Wizard installs VAST:

- Use TestDBVASTSetupWizard.js to test the database installation
- VASTSetupWizard.js
 - Uses CMEInstaller.dll to create Windows accounts, security groups, and ACLs.
 - Can not be restarted
 - Performs the following tasks
 - Creates website
 - Creates accounts and groups, and ACLs
 - Creates network shares
 - Creates templates for default Wordlink documents
 - Installs XML Parser, CMEASP.wsc, and CapiCom.dll
 - Installs COM+ components
 - Configures global.asa
 - Installs user files
 - Installs database
- Installing VAST FrontPage Toolbar
 - Requires FrontPage Server Extensions
 - Current release in VASTFPToolbarB6(1).zip
 - Extract archive to temporary directory

- Run setup
- Copy VASTFP.xml to c:\Program Files\Vast Toolbar

.NET Road Map

We are currently implementing a road map that will see our software take full advantage of facilities available in .NET 3.0 features and will be

- Based on loosely coupled object-oriented components
- Using Web Services to communicate with the service interface on the server
- Use .NET code generation and reflection mechanisms
- Utilize additional extensibility the form designer will provide via an xml configuration file
- Move the form design component from FrontPage to Visual Studio Express (probably not before 2008)
- Generating ASP.NET pages that are good .NET citizens
- Providing support for a Smart Client to implement a transacted and encrypted store for offline work

This functionality will be implemented not in one single new version but as part of a road map stretching over 3 to 5 releases.

- 1. Implement .NET light:
 - Modify forms compiler so generates .NET pages that run in ASP compatibility mode.
 - b. Use COM Interop to call COM+ services.
 - c. Convert Crystal Reports to .NET.
- 2. Re-write image module so uses .NET.
 - a. Generate thumbnail when image is uploaded.
 - b. Store thumbnail in database.
 - c. Store image in file system.
 - d. Use MTOM to upload image.
 - e. Consider writing One Click application or .NET binary component to upload local directory of Photos.
 - i. Use MTOM support in WCF.
- 3. Implement Barcode service.
 - a. Use WCF.
 - b. Support security via SSL or WS-Security mechanisms.

- 4. Current Research Projects:
 - a. Script injection of logic functions with ATLAS classes.
 - b. Generate BLL and DAL classes. DAL acts as ADO.NET adapter for COM+ ADO record sets. Consider using provider model.
 - c. Replace behaviors with Infragistics (or ASP.NET) server controls.
- 5. Replace behaviors with Infragistics (or ASP.NET) server controls using ATLAS.
 - a. Where appropriate use WCF.
- 6. Replace menu system with sitemap mechanism.
 - a. Implement provider so can store in SQL Server.
- 7. Place parameter passing information in web.config.
- 8. Rewrite COM+ as .NET library that uses ADO.NET.
 - a. Add support for SQL Server failover.
- 9. Replace security mechanism with .NET mechanism and AZMAN.
- 10. Replace ASP.NET controls with WFP/E.
 - a. Mid 2007.
- 11. Investigate use of Info Card for security.
 - a. Mid 2007.

Hardware/Software Recommendations

Hardware	Suggested or Equivalent as compatible with CME Software System	Approximate Costs
Server		
Compatible with Attachment A		
PC's OS		
Compatible with Attachment A		
Bar-coding		
USB barcode scanner	Symbol LS2208 or LS4208 Or HHP – IT3800 – #3800LR-12	\$155 - \$225
Barcode Printer	Zebra printer # LP2844	\$345+
Barcode Labels	Zebra paper: The large are 4" x 2.5" and are labeled: Part # 18176 The small are 3" x 1" and are labeled: Part # 802230-105	4" x 2.5" Quick Print 3000 Direct Thermal Labels - 735 Labels/Roll - 12 Rolls/Case - 800540-250 - \$135 800522-125 - 2.25" x 1.25" Quick Print 3000 Direct Thermal Labels - 1135 Labels/Roll - 12 Rolls/Case - \$85
lmaging		
Kodak Easyshare dock	Kodak	\$100 - \$180
Kodak Digital Camera	Kodak	\$200 - \$400
Laptops		
Toughbook CF-18 - indestructible notebook	Panasonic	\$,3282 – \$3,573 plus tax

Software	Required	Approximate Costs
Software		
SQL Server Enterprise 2005 – 1 license for server plus 3 'administrator' licenses	Microsoft	\$2,700 for single server install + \$170 per administrator install - estimate 3
Office XP or 2003	Microsoft	\$160-\$183
FrontPage 2003	Microsoft	\$199
Crystal Reports 11 Developer – 1 license for server	Business Objects	\$595
WASP Barcode Font Software Pro 638808255015	WASPbarcode.com	\$195

The above products have been recommended by our users and have not necessarily been tested by VertiQ Software with our CME software.

Project Management for MEMS System

- 1. Medical Examiner Case Management System
- 2. Project Management
- 3. Production Cutover

1. Development of the Medical Examiner System

With respect to setting up forms and reports to be used for the West Virginia Medical Examiner system we have "merged" all the forms used by our customers for different aspects of the system into one Forms Review website for review by new customers. You can select any number of these forms and we will combine them into a website / database for your internal use.

You can make changes to these forms using the CME Toolkit. Ideally we would implement some of these changes together with you as part of our system administration training.

VertiQ can customize any of these forms for you as well. We provide such services also at our per diem rate. Based on the work we have done with other customers the amount of work to create a custom system for your agency can vary a great deal. The same applies to the development of reports. We provide some 30 standard reports that have been used by other customers. These can easily be modified to fit your specific database. Additional reports can be developed using one of the 3 report writers supported in the system.

The amount of time will vary depending on how many of the existing forms you will find suitable and to what extend they will need changes and how many new forms will have to be developed from scratch. The same applies to reports.

In some cases our clients prefer to develop the forms and reports internally following training in the use of the toolkit. For example, Kurt Murine, who is a senior investigator at the Orange County Coroner and certainly not a programmer, developed all the forms and reports with assistance from Scott Hayes, also not a programmer, following training by us. It does require time and effort to do so. At King County Medical Examiner in Seattle the actual system was also developed internally after 2 initial training visits by VertiQ. However at King County the County IT department provided the resource for this project. At Miami Dade County Dr. Mark Shuman, who is a pathologist made up all the forms for their internal system.

The process of getting the system up and running will be faster if VertiQ takes the first stab at putting the system into place following the initial detailed review of the required functionality. Long-term it will be better if your system administrator can use the toolkit independently of us and we support your system administrator for any of the more complex issues.

Training of users could be done by VertiQ staff as well. However we do not think that this will be the most cost effective way to do this. We generally prefer a "train the trainer" approach; it might be best to select one person at each department who becomes that internal trainer. If that person also is part of the

initial setup and testing process then the training issue should not be a complicated one. This is the approach that was taken at San Diego County Medical Examiner.

With respect to setting up On-line User Help the CME toolkit provides for support of On-line Help. Since every customer comes up with different and customized forms it is not practical to have any ready-made help screens set up since they need to be customized for the actual system in use. In the current version of the CME toolkit we use the Microsoft Help Compiler for On-line Help; you can also use Robohelp as well. So far we have not set up any on-line help forms for any of our customers; they have preferred to do this on their own.

There will be some set-up work for the West Virginia Medical Examiner staff as well in getting the DINS system up and running. This will include entering data relating to local hospitals, nursing homes, funeral homes, law enforcement agencies etc. into the system and the specific dropdown selections they will want to use. It will also include scanning forms, if that will be the method of linking previous cases into the system. Needless to say their participation in system testing will be critical as well.

Service Fees

As you can see from the above notes there are many possible scenarios as to what work will be done by VertiQ Software and what work will be done by the "West Virginia Project Team". Almost all of our customers have a full time system administrator supporting our system. During the installation phase some of our customers obtained additional support from their IT department as well. Some users were also made available for the project. It is this team effort that will make the project a success.

Based on the work we have done with our other clients we are very familiar with the requirements of a Medical Examiner system and in addition to implementing a custom system we also act as consultants and can share experiences gained through our work with other customers.

In our pricing section we have included estimates for the amount of time that each major module can take to implement. The costs for such items can vary depending on how much of the task will be done by VertiQ versus the West Virginia Project Team.

The services that VertiQ can provide can include:

- Assistance in installing and configuring the CME software
- Reviewing your current internal application requirements in detail, based also on a discussion of other customer's customized systems.

- Development of a detailed functional requirements document
- Development of data entry forms to be used.
- Development of reports to be used.
- Database conversion
- Assistance with installation and testing of the system.
- System administrator training

2. Project Management

The following list of activities outlines the project management tasks.

We estimate 20 to 40 days of effort for project management activities. West Virginia may decide that project management could be taken care of by West Virginia personnel. If West Virginia decides to ask VertiQ to undertake this activity, we will assign a project manager for this function.

VertiQ will provide project management services at our per diem rate, plus reasonable travel and related costs. If requested we can combine travel and related costs with the per diem rate into one rate, based on the anticipated amount of travel needed for this service.

Project Management Tasks

- Create and maintain detailed project plan in Microsoft Project
- Identify Resources (including customer project team)
- Identify Tasks
- Assign Resources to Tasks
- Schedule Tasks and Resources
- Review proposed schedule and plan with team
- Gather, report and adjust based on weekly updates

Design

- Logistic Requirements (critical location dependencies, event dependencies, etc)
- Contacts List
- Environments
- Project Kickoff Client Document
- Project Definition (project from CEO perspective: budget, goal, constraints)
- BPA (business process analysis)
- Architecture Document
- Gap Document (aka "document the existing", "document the new", "identify the gap")
- Solution Spec

Others

- Create and maintain Action Item Log
- Create and maintain Decision Log
- Create weekly status reports (due this week, achieved this week, not achieved this week, plan for next week, yellow and red-flag radar report)

<u>Implementation</u>

- Implementation Team Kickoff Meeting Document
- System Test Plans
- Migration Schedule
- Roll Out Schedule

Post Production

- Post Project Review Report
- Client Satisfaction Assessment
- Project Summary Report
- Transition Documentation (e.g. handoff docs)
- Maintenance/support plan and/or review

Production Cutover

This detailed task outline is the template from which a full project plan will be created for the Production Cutover. This template has been proven over many years of projects and includes a number of safeguards and QA measures to ensure a smooth cutover.

At project inception, the VertiQ project manager will assign resources, dates, dependencies, and otherwise refine the plan. The customer staff will primarily focus on review and approval tasks, as indicated below.

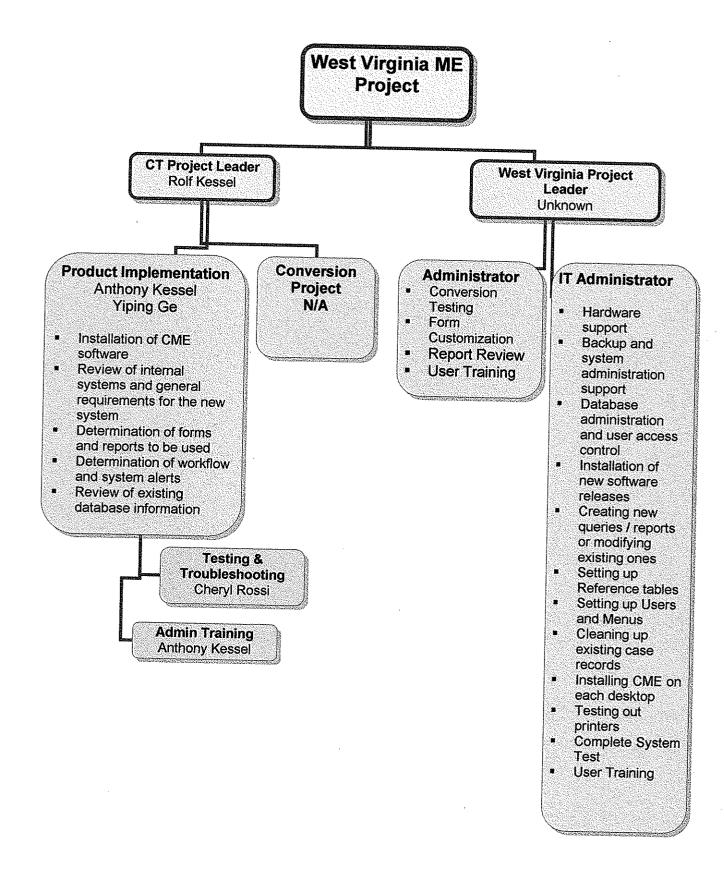
ID	Name	Customer Staff?
1	Production Cutover	
2	Planning/Management	April of the section
3	Environment Setup	
4	Ensure Access to Version Control system (e.g. MS SourceSafe)	Agentically confirmment and included parameter resolution of \$500 through \$40 attributes
5	Procure and Setup New Production Hardware, OS, Networking, etc	and the second of the first second absence of any and and and and all the first second
6	Provide read-only access to Old Production system	Annance promotes resigned interfered section of equipment enginees
7	Modify Plan Template (additional tasks, resource assignment, dependencies, leveling, etc)	principal (Administration for the state of the
8	Kickoff Meeting	Yes
9	Team Meetings	rea fairnean de fairne ann an Fairleach an dean fair an teannail a mh ann an ann ann ann ann ann ann ann ann
10	Mgmt Meetings	Yes
11	Team Status Updates	***************************************
12	Mgmt Status Updates	Yes
13	Plan Updates	to Personal Control Co
14	Strategy	***************************************
15	Identify Risks, Constraints and Options	
16	Identify requirements for Live Pilot	Yes
17	Identify requirements for running both systems in parallel	e para manta a tra estra de la transforma de manta de la compansa de la compansa de la compansa de la compansa
18	Estimate Cutover duration (including post-cutover QA)	, (16.16)
19	Estimate Rollback duration	ri bermi i i zammeremi inari izi izi izi izi izi izi izi izi izi i
20	Identify Cutover Window duration (weekend?)	
21	If Cutover+Rollback > 70% of Window	
22	use trial cutover to confirm estimates	
23	identify any cutover tasks that can be done in advance	William Control of the Control of th
24	identify options for reducing cutover (hardware, software, personnel, parallelization)	The state of the s

25	Identify Live Pilot "Readiness" checklist	Yes
26	Ready for Parallel Use of both systems	
27	New Production Environment (HW, OS, Security, etc) Ready and stable	annene literatur (et aleisen (france vennière en
28	Code Frozen	dis termini di steritori il membro di dia mendencia di amendence e e di produce a e e e e e e e e e e e e e e e
29	No unresolved "show stopper" defects	
30	No medium priority defects that are not consistently reproducible	
31	No medium priority defects with a significant effort required for eventual resolution	et tree a month on a state (com per a month on a month of the sussible
32	If more than N unresolved medium priority defects, assess on case by case basis	- Andrew State (September 1984) and the State (September 1984) and the State (September 1984) and the Andrews
33	Pass rate for user readiness test for pilot team is 100%	
34	Identify Cutover "Readiness" checklist	Yes
35	New Production Environment ready (HW, OS, Security, etc) and stable	THE THE PARTY OF T
36	Code Frozen for > 1 week	
37	Number of new defects reported in prior week < N	and the second comment for the second of
38	No unresolved "show stopper" defects	Metablished by Lond Assessment and Japan Assessment and Japan
39	No medium priority defects unresolved, unless approved by customer project director	
40	Less than N unresolved low priority defects	
41	pass rate for user readiness test is 100% for critical team members	H HARATH HISTORY CONTRACTOR CONTR
42	pass rate for user readiness test > 90% for all other users	
	confirm no external "storms" on the horizon (staffing, special projects, etc)	
44	Etc	от в Изатам Батонови, аттиват положену је је за јеодине јеодине
45	Identify "Roll Back" or "Go Forward" checklist	Yes
	Roll Back if discover any "down system" anomalies during cutover	MINISTER MANUSCRIPTION PROPERTY AND ASSESSMENT ASSESSME
47	Go Forward if only a few low priority anomalies	
	Stop and Roll Back if cutover running time exceeds N (i.e. not enough time for a roll back)	
49	Etc	Made de de la
50	Identify Post-Production Release checklist	Yes
51	New release within 1st week only if "down system" anomaly	-

	t parameter and the contract of the contract o	
52	New release after 1 month for N medium priority defects	معمد أو المعمد المعادل
53	No Change Requests released until after 2nd Month	manufacture of all of reliable week
54	Identify sign-offs required for Post-Production release	
55	Review Cutover Plan	Yes
56	Refine Cutover Plan	
57	Create separate Risk Management document (extract key items from plan)	
58	Cutover Plan Signed-Off	Yes
59	Cutover Risk Management document signed off	Yes
60	Put Cutover Plan and Risk Management doc in Version Control	
31	QA Preparation	area transica de la maiorita de para aperta acada de para
62	Identify Test Cases from Acceptance Tests to be used in Cutover QA	
63	Create "Test the Tests" test cases for trial cutover (e.g., errors that should be caught)	
64	Create "Roll Back" acceptance test cases	
35	Create "Post-Production" test cases	Edit Milliand () Annial Inglish () Alpha () Annia () Anni
66	Review and Refine Cutover Test Cases	Yes
67	Cutover Test Cases Signed Off	Yes
38	Put Cutover Test Cases into Version Control	then processed a region, my requiring any reproductively com-
39	Training	The lateral stranger of the might be designed to the
70	Create User Readiness Assessment tests (with Role specific questions)	naj mand inj injenjar taj jej pravas prava prava
71	Review User Readiness Assessment Tests	Yes
72	User Readiness Assessment Tests Signed Off	Yes
73	Schedule User Readiness Testing (aim for 1 week prior to scheduled go live)	0000 4 Miles (100 Mile
74	Schedule Post Production Training follow-ups	
75	User Training Completed (milestone reference to Master Plan)	Yes
76	User Readiness Assessment Completed	Yes
7	If pass rates below threshold, repeat above two steps	
'8	Deployment	***************************************
'9	Live Pilot	
30	Review Live Pilot Readiness Checklist (repeat above steps if not ready)	Yes
31	Trial Cutover	

82 Execute Cutover (see cutover steps below)	t terminal de places de la companie
83 Measure actual duration	manuscript of the System of the State of
84 Execute Cutover Test Cases	nama (namusia in material and masterial and material and material and material and material and material and m
	Managari Paritana II Pris iira iira iira iira iira iira iira i
Look for Gaps in Cutover Checklists, Test Cases and Plan in general	
Live Pilot given "GO" (if "no go", repeat above steps as needed)	Yes
87 Start Live Pilot	
Pilot users work in parallel (double duty) on both systems	Yes
Trainers provide "side-by-side" support first N days	Yes
Help Desk, Support and Engineering available for rapid response	Yes
P1 Report Anomalies (see issue management doc)	Yes
End Live Pilot	
Final pre-deployment Release	**************************************
Review reported Anomalies	Yes
ldentify and fix defects for next release	d periode de l'organis e tentro e est tentro e en l'organis de l'est tentro e en l'organis de l'est tentro e e
Create and Deploy Release to Test Environment	Yes
Refine Cutover Plan and Test Cases	T PROPERTY OF THE LANGE TO THE LOSS OF THE PARTY.
98 Final Cutover Plan Approved	Yes
99 Final Cutover Test Cases Approved	Yes
Put Revised Test Cases and Cutover Plan into Version Control	recentración estatular anticolor
Refresh/Reset New Production Environment (prep for final Cutover)	
102 "Go Live"	
03 Review/Confirm "Go Live" Readiness Check	Yes
104 "Go Live" approved by Customer Project Director	Yes
05 Cutover	***************************************
Send notification to business and IT community at least 1 week in advance	And the second production of the second produc
07 Disable access to old production system	ret tidaktet oldanlande oldalar kyrenn provoneyra prograsy
Disable access (should already be disabled) to new production system	inimakadan minimakan minimaka
09 Convert Data (see conversion plan)	
10 Execute Cutover Test Cases	
11 Report Anomalies	Yes
12 Review relevant "Go Live" and "Rollback" checklist	Yes

113	If successful, Cutover Accepted and Signed Off	Yes	
114	Execute any automatic links/redirects from Old to New production	alaka pantajan din muunan estat di ka jingka ka Justingka di kana katu Justingka di	
115	confirm user access to new production system	Мура (- умбоновов), оберхно (пому), обласно умборов формания умага аксептивались акрептивально, об	
116	Notify users of successful rollover	a it is an emercinant to come a format more annother and a section of embryonic and	
117	Enable access to New Production system		
118	Enable "read-only" access to old production system for select users		
119	Rollback if Necessary		
120	Disable access to New Production System	The second secon	
121	Restore/reset access to old Production System		
122	Notify users of rollback to old Production System		
123	Report, Review and Assess anomalies	Yes	
124	Review and refine Cutover Plan and Test Cases		
125	Post-Production Support		
126	Help Desk, Support and Engineering ready for rapid response		
127	Conduct Follow-up Training	Yes	
128	Execute Post-Production Test Cases	eta kususua memenya man eri maan va man al buma na	
129	Report Post-Production Anomalies (see Issue Management document)	on the last have at the entire in the entire	
130	Manage Deployment of additional releases as per Cutover Plan (see above)		



Implementation Team

VertiQ Project Team

Rolf Kessel - President, Project Leader

Anthony Kessel – Product Implementation/Training

Yiping Ge – Product Implementation/Training

Srinivas Suribhatla – Programmer Analyst

Cheryl Rossi - Product testing

Adrian Bailey - Conversion Project

Charlie Bloor - Conversion Project

Sarika Alvekar - Conversion Project/Training

ROLF KESSEL

PROFESSIONAL EXPERIENCE	CA President In 1990 Interpac Software acquired Pacfic W from Pacific Western Bank in San Jose, Calif supports specialized computer software soluted Administrators, and Coroners and Medical Ex	esident 1990 Interpac Software acquired Pacfic Western Information Systems (PWIS om Pacific Western Bank in San Jose, California. The company develops and pports specialized computer software solutions for Public Guardians and Iministrators, and Coroners and Medical Examiners. In 1998, the company's ime was appropriately changed to reflect the name of its major product and	
	Interpac Software Incorporated Santa Monica (1979 - 1990) , CA President Founded Interpac Software Incorporated that developed a suite of office automation software for Prime Computers. It contained separate but in word processing, spreadsheet, electronic mail and business graphics components.		
	Software Company United Kingdom Consultant Instrumental in developing a fixed asset accompleted assets accom	(1976 - 1979) ounting software package with	
	Packaged Programs Ltd. Johannesburg, South Africa President The company focused on mainframe account applications.	(1973 - 1976) ting and personnel software	
	IBM, Honeywell & Siemens Johannesburg, South Africa Engineering, Sales, Executive	(1966 - 1973)	
EDUCATION	University of Karlsruhe, Germany Physics	(1961 - 1966)	

Anthony Kessel

Experience

VertiQ Software Product Manager 18525 Sutter blvd. #280 Morgan Hill, Ca 95037 3/2005 to Present

- Customizing and Development of CME applications including:

New Development -Adams County Coroner, Arapahoe County Coroner, San Mateo County Coroner, Alameda County Coroner, Franklin County Coroner

Upgrade Development - Travis County Medical Examiner, Los Angeles County Coroner

- Technical support of CME applications
- Training users on CME applications

HiTech Law Office Manager 950 Tower Lane Suite 925 Foster City, Ca 94404 2001 to 3/2005

- Responsible for all activities associated in running a law firm, including but not limited to: billing, insurance, accounts receivable, collections, and customer relations.

Education

- Johnson & Whales, BAS Business Management 1996 -2000

Yiping Ge

BACKGROUND SUMMARY

- -6 years web site and application development/design;
- -4 years technical support for PCs;
- -4 Years database development and administration.

EDUCATION

* BSc in Applied Mathematics & Computer Science, Zhejiang University, China

WORKING EXPERIENCE

Mar 2002 - Present

Product & Deployment Manager, VertiQ Software LLC., CA

- * Customizing CME web applications
- * Software training and installation
- * Development of new applications with CME Toolkit
- * Technical support of CME applications

July 1999 - Oct. 2001:

Web developer/designer, EnjoyWeb, Inc., CA, USA

- * Company corporate web site development and design with HTML, JavaScript, FrontPage, Flash4, and PhotoShop.
- * Company intranet design and development using HTML, asp, and JavaScript.
- * Various product UI development using XML, CGI, SMIL, HTML and JavaScript.
- * Online e-commerce system development using PHP, SQL and HTML.

Mar.97 - Dec.98:

Tech Support, GL Displays Inc., CA, USA

* Office computer system technical support

Responsible for installing new software and hardware of Win NT, 95 and 98.

- * NT Intranet development with IIS, SQL, Index Server and ASP. Developed a project tracking system using ASP, Access and IIS
- * Web pages design and development

Created and maintaining a web site for a non-profit organization, including a search engine

Aug.94 - Feb.97:

Tech Support, Asia Pacific Center, Bath College of HE, UK

* Office computer system technical support and training

Responsible for center's computer hardware and software installation and training, including PC, LAN and Mac.

* FoxPro client database develop and admin.

Developed a client database for mailing, contacts and billing.

June92 - July94:

Database Coordinator, JLA, Bath College of HE, UK

* FoxPro JLA membership database Design and administration

Developed a database for member services including mailing, member renewal, and search inquiries.

* Office computer system technical support

Installing new PC hardware and software, staff training.

Nov.89 - Dec.90:

Customer Support Engineer, TOPPER Electric, Hangzhou, China

- * Office computer system technical support
- * Client database develop

COMPUTER SKILLS

- * MS-DOS, Window3.1, Window 95,98, 2000 & NT, Mac OS and Linux.
- * SQL 2000, FoxPro, dBase, MS Access, SQL and MS office applications.
- * IIS, HTTP, and FTP.
- $*\ Front Page, Dreamweaver, Photo Shop, Quark Xpress, and Flash 4.$
- * HTML, XML, DHTML, JavaScript, PHP, ASP, and SQL.

SRINIVAS SURIBHATLA

Programmer Analyst

Summary:

Over ten years of experience in Analysis, Design, Development, Testing and Implementation of application software in Client-Server environment and Web Technologies. Work involves developing user-friendly interfaces, coding, testing and debugging. Expertise in Visual Basic 6.0, Oracle 7.3 and SQL programming. Familiar with ActiveX Controls. Working knowledge of ASP, ADO and COM.

Software:

CME Toolkit, Visual Basic 6.0/5.0, ASP, ADO, COM, ORACLE 7.3, MS SQL Server 7.0,PL/SQL, SQL, MS-ACCESS 97 and Crystal Reports 4.6 IBM UniVerse 10.0.

Operating Systems:

UNIX

WINDOWS 2000, WINDOWS NT, WINDOWS 95, MS-DOS and

Languages:

C

Hardware:

Pentium based machines, Compaq Proliant 1500

Education:

Post Graduate Course in Computer Applications (PGCCA) at

CMC Centre, Gachibowli, Hyderabad.

Master of Sciences (MSc) from Osmania University,

Hyderabad.

Project Experience:

CompuTrust Software Corporation/VertiQ Software LLC, Morgan Hill, CA Apr'00 – Till Date

Genesys, CTSC, Morgan Hill, CA

This application is used by department of Mental Health to keep track of information about the cases dealt by them. This application runs on both PC and a Handheld Clio

Responsibilities:

- Responsible for the design of user interface for the PC Version
- Responsible for the development of PC Version of the Software
- Preparation of the Design Document
- Developed a routine to transfer the data from the PC to Clio
- Responsible for testing the Clio version of Software
- Preparation of the User manual

Team Size: 2

Environment: MS Windows NT, MS Windows CE - Handheld PC Edition 3.01,MS Visual Basic 6.0, MS SQL Server 7.0

Account Master, CTSC, Morgan Hill, CA

Account master application is used by public guardians and public administrators. This application comprises of the following modules Client Profile, Client Accounting Inventory, Court Legal, Care Providers, Daily Living, Diagnosis Medication, Physician Insurance, Relatives, Case Closure, Estate Summary, Placement, Decedent Profile, Decedent Accounting Inventory, Worksheet, Inventory and Real Property.

Responsibilities:

- Responsible for the design of user interface for all the modules
- Responsible for the development of Client Profile, Decedent Profile, Client Accounting Inventory, Decedent Accounting Inventory, Relatives, Physician Insurance
- Preparation of the Design Document
- Responsible for testing the
- Preparation of the User manual

Team Size: 2

Environment: MS Windows NT, MS Visual Basic 6.0, Oracle 7.3

Diamond State Port Corp, Wilmington, DE Nov'99 – Mar'00

Palette Correction, MIS Dept., DSPC, Wilmington, DE

This system gives the user the provision of correction of the scanned palettes. This system will allow the user to modify the quantities shipped in/out, date of shipment, customer ID and other details. The system was built in two phases, one in Visual Basic 6.0 as client. The second phase was to provide the user interface in web enabled thin clients in ASP as an intranet project.

Responsibilities:

- Responsible for the Design of the application
- Responsible for Coding and Testing of the application
- Development of the ASP pages for the intranet project and data accumulation using ADO record sets.
- Creation of the HTML pages for the intranet project.
- Preparation of the User Manual for the user convenience.
- · Preparation of the design document.

Team Size: 2

Environment: MS Windows NT, MS Visual Basic 6.0, Oracle 7.3, ASP, HTML, JavaScript, IIS.

Invoice Generation, MIS Dept., DSPC, Wilmington, DE

This System generates invoices to be sent to the customers who have used Storage facilities at Port of Wilmington. The user enters the Start Date and Cut off Date. The system gets the details of the palettes that have a Cargo activity between the dates entered by the user. Depending upon the quantity stored the customer will be billed accordingly. After the computation, Invoice's are generated for each customer. A separate file will be created for each customer (based upon customer

ID) which contains all the details of the cargo activity commodity wise. The system also provides the user to send the detailed file created to the customer through an email

Responsibilities:

- Responsible for the Design of the application
- Implementing the business logic at the server level.
- Responsible for the Development of Stored Procedures using Oracle for the implementation of the business rules thereby making a thin client application.
- Responsible for Coding and Testing of the application
- Development of the user interface in Visual Basic.
- · Preparation of the design document.

Team Size:

2

Environment:

MS Windows NT, MS Visual Basic 6.0, Oracle 7.3

Set Free Time for Ship, MIS Dept., DSPC, Wilmington, DE

This system gives the user to set the Free Time Start for a ship. When the Free time Start for a ship is set then the system automatically computes billing start date for the commodities, depending upon the commodity type. The system was developed in both Visual Basic and ASP as the client.

Responsibilities:

- Responsible for the Design of the application.
- Responsible for Coding and Testing of the application.
- Development of the ASP pages for the intranet project and data accumulation using ADO record sets.
- Creation of the HTML pages for the intranet project.
- Preparation of the User Manual for the user convenience.
- Preparation of the design document.

Team Size:

2

Environment: JavaScript, IIS.

MS Windows NT, MS Visual Basic 6.0, Oracle 7.3, ASP, HTML,

KVB-Enertec Inc, Hatfield, PA

Jan'99

Oct'99

SI Reports, KVB-Enertec Inc, Hatfield, PA

This system gives an extensive information regarding the power distribution. The reports generated using this system are the Daily Demand, Maximum Demand, Daily Measurements, Daily Interruptions, Daily Blocking, Monthly Availability, and Energy Quality for a Month. The Reports are designed in Crystal Reports. Intouch 7.0 logs the data and the logged data is read using Visual basic. The data retrieved is stored into Access tables from which the reports are generated. For every type of report a template is built and the user can configure the report by setting the duration, start time, time interval, configuring the tags for which the data has to be read.

Responsibilities:

- Responsible for the Design of the Reports
- Responsible for Coding and Testing of the Reports

Preparation of the design document.

Team Size: 2

Environment: MS Windows for Workgroups/ MS Windows NT, Wonderware "InTouch

7.0",

MS Visual Basic 5.0, Crystal Reports 4.6.1, MS Access 97

Trending Graph, KVB-Enertec Inc, Hatfield

This utility is developed to plot the data, collected from the Gas analysers which monitor the emissions of various gases. It provides the user a Zooming facility where in the user can select a time interval. The graph will be plotted for the selected time interval there by providing the information to the level desired by the user. As and when the new data is collected and the timestamp happens to be in the same interval as selected by the user the graph is refreshed with newly collected data, other wise the collected data is stored and it is plotted on to the graph as the user returns back to the default mode

Responsibilities:

• Involved in the Design of the Trending Graph

• Responsible for Coding and Testing of the Trending Graph

• Preparation of the design document.

Team Size: 2

Environment: MS Windows for Workgroups/ MS Windows NT, MS Visual Basic 6.0

Security for NTDahs, KVB-Enertec Inc, Hatfield

This Program provides user interface through which Access permissions can be set. The NTDahs application has a set of programs, each program can be accessed by a set of groups. And each group has set of permissions. The entire Application, Groups and permissions are displayed on Treeview control where each Application is represented as a Node and Groups as sub-nodes for the Application. The permissions are displayed as sub-nodes of Groups.

Responsibilities:

- Involved in the Design of the GUI for the NTDahs Security Program
- Responsible for Coding and Testing of the NTDahs Security Program
- Preparation of the design document.

Team Size: 2

Environment: MS Windows for Workgroups/ MS Windows NT, MS Visual Basic 6.0

Maintenance of Calibration Bottle's History, KVB-Enertec Inc, Hatfield

This program provides user interface to configure calibration bottles for various gases.

Responsibilities:

- Involved in the Design of the GUI for the Maintenance of Calibration bottle's History
- Responsible for Coding and Testing of the Maintenance of Calibration bottle's History
- Preparation of the design document.

Team Size:

2

Environment:

MS Windows for Workgroups/ MS Windows NT, MS Visual Basic 5.0

Hotel Reservation & Information System (HRIS), TRCO, IRAN Oct'96 – Dec'98

HRIS is integrated software using the latest technologies of GUI in Client/Server environment. This software gives a complete and integrated Business solution for Automating the management of the group of five star hotels under the TRCO, IRAN. An on-line system for the better management of the hotel, with the MIS reports and information provided along with the on-line query features. HRIS comprises of the following Front Office and Back Office modules. Reservation, Front Desk, Front Office Cashier, Front Office MIS, Accounts Receivable, Night Audit, Telephones, Inquiry, House Keeping, Travel Agency, Point Of Sales. Finance & Accounts, Food & Beverages, Budgeting, Payroll, PIS, Stores, Purchase, DBA, TRCO MIS.

Responsibilities:

- Responsible for preparation of the System Requirements Specification, System Design Document for Budgeting Sub-system in accordance with ISO 9001 procedures.
- Development of Personnel Information System using Visual Basic 5.0
- Developed Persian Date Control to support Persian Date format
- Responsible for Coding and Testing of the Budgeting Sub-system
- Program Coding using SQL, PL/SQL ,Stored Procedures, Functions, Triggers and Packages
- Reviewer of Financial Accounting Sub-System and Purchase Sub-system.
- Involved in Acceptance Test of HRIS S/W by TRCO
- Involved in the Preparation of user manuals for Budgeting and Personnel Information system

Team Size:

21

Environment:

Oracle 7.3 on SCO UNIX, Visual Basic 5.0 on Windows 95

Games Information Management System - Prototype for Football, CMC Ltd, Mar'96–Sep'96

The aim of this project is to include Football as a part of the Games Information Management System. The database, which was in Informix, is ported to MS-Access and the front-end GUI part is developed using Visual Basic 4.0. On-line Query Screens for Television and Query modules for Media are the significant features of the system.

Responsibilities:

- Porting of Informix data to MS-Access
- Identifying the screens for Query and Game conduction modules.
- Design and Development of GUI screens
- Coding
- Testing with existing data

Team Size:

4

Environment:

Visual Basic 4.0, Access 2.0

International Request Processing System (IRPS), CMC Ltd, Sep'95–Feb'96

International Request Processing System (IRPS) processes the requests for Professional Services from the clients from all over the Globe. The request will be for a person with certain set of skills and experience. IRPS will display the list of people meeting the requirements and the manager can nominate people from the displayed list.

Responsibilities:

- Study and Analysis of Design document
- Design of screens and reports
- Development and Coding
- Testing and Implementation
- Preparation of User Manual

Team Size:

2

Environment: Visual Basic 4.0/ Visual Basic 3.0, Oracle 7.0

Cheryl Rossi

Experience:

Computrust Software/ VertiQ Software

18525 Sutter Blvd. #280 Morgan Hill, CA 95037 July 2004 – Present

- · Assigned all incoming customer tech support issues
- · Maintained electronic records on all customer tech support issues
- · Responsible for posting and processing all incoming receivables
- Purchased computer hardware and equipment,
- Tested software applications and functions for CME Software
- Edited form applications for CME Software
- Created testing log for management for CME Software
- Assisted with form design and development for CME Software

Haas Insurance Services

1777 Hamilton Ave. San Jose, CA 95125 February 1998- February 2003

- Assisted with policy assembly
- Provided customer service
- · Reconstructed phone log through data entry
- Maintained company database
- Processed claims as well as new applications electronically
- Responsible for all company accounting
- Responsible for all account receivables and payables
- · Provided excellent customer service as office manager

ADRIAN P. BAILEY

EXPERIENCE

Adrian P. Bailey & Associates

Self-employed IT contractor (January 1996 - present)

Manage my own consulting business employing several subcontractors. Area of specialty is database application development utilizing Microsoft Access, SQL Server, Oracle and Visual Basic. Maintenance work carried out on legacy Advanced Revelation, Universe and Prime Information systems. Recent projects include working with many of CompuTrust Software Corporation's clients, developing reports and data migration tools, and assisting with implementations of VAST (Vertical Application Software Toolkit). Projects for other clients include a postage billing system for a direct marketing servicing agency in Florida, a recipes database for the USA Rice Federation, a customer relations management system for a merchant credit card account processing company, a worldwide product fulfillment tracking application for Sony Pictures Television International, a cinema marketing database application for Sony Pictures Entertainment, a movie production cost tracking system

for Columbia Pictures, a "Wheel of Fortune" and "Jeopardy" puzzle repository for GoPlay TV.

CompuTrust Software Corporation (formerly Pacific Western Information Systems) Database Applications Analyst (September 1990 - December 1995) involved in all aspects of the business, including application design and development, technical support, client relations, specification preparation, training, business development and marketing. Managed the development of a two-year long project to provide an electronic billing system for the State of New Jersey Medicare program. Involved in the development and implementation of CompuTrust trust accounting application installations and CME case management application installations for coroners and medical examiners.

Exe Computer Services, Exeter, England
Database Applications Developer (June 1986 - August 1990)
Developed and implemented an accounting system for the West Country Tourist
Board. Developed and implemented a ferry passenger booking system for Torbay
Seaways. Various other duties included maintenance programming, training and
technical support.

Sargent and Probert Solicitors, Exeter, England
Database Applications Developer (July 1985 - May 1986)
Developed a historical client case tracking system. Maintained in-house client billing and time recording systems.

EDUCATION

United States B.Sc. in Computer Science Equivalency

Exeter University, Exeter, England

Cambridge University Examination Board "Special Level" in Mathematics

Cambridge University Examination Board "Advanced Level" in Mathematics, Further Mathematics, Chemistry and Biology

London Examination Board "Ordinary Level" in Mathematics, Further Mathematics, Chemistry, Biology, Physics, English Language, English Literature, French, German and Latin

Bournemouth Grammar School, Bournemouth, England

CHARLES BLOOR

EXPERIENCE

Adrian P. Bailey & Associates

Database Applications Analyst (August 2001 – present)

Developed data conversion software for various Coroners offices in the U.S., using Microsoft Access and SQL Server. Created a "Wheel of Fortune" and "Jeopardy" puzzle repository for GoPlay TV. Created an Oracle database for a worldwide product fulfillment tracking application for Sony Pictures Television International. Created a cinema marketing database application using Microsoft Access for Sony Pictures Entertainment. Carried out maintenance programming for several other miscellaneous database solutions using Oracle, SQL Server and Microsoft Access.

Toyota

Senior Database Developer (April 2001 – July 2001)

Developed an intranet-based automobile finance quotation system using Microsoft SQL Server. Created functionality to import automobile industry residual value data. Developed a data archival system.

Adrian P. Bailey & Associates

Database Applications Analyst (May 2000 - March 2001)

Created an Oracle database for a movie production cost tracking system for Columbia Pictures. Developed data conversion software for various Coroners offices in the U.S. Developed a customer relations management system for a merchant credit card account processing company.

Royal Borough of Kingston, Surrey, England IT Consultant (January 2000 – May 2000)

Supported a project to bring back in house a previously outsourced workflow management system based on Microsoft SQL Server. Provided technical consultancy, documentation and user support. Achieved Microsoft Certified Systems Engineer accreditation.

AlphaGen, London, England

IT Consultant (September 1998 – October 1999)

Provided chargeable consultancy for a company selling and customizing accountancy software based on Microsoft SQL Server. Installed and configured server hardware and software. Performed software upgrades on live financial systems. Gained MCP accreditation in both SQL Server 6.5 and 7.0 database administration. Gained Compaq Accredited Systems Engineer accreditation.

Westminster Management Services, London, England Systems Administrator (April 1995 – September 1998)

Provided systems administration for a 600-user wide area network. Created office automation solutions for public and private sector housing organizations. Created custom database solutions using Borland Paradox. Assisted with the implementation of the UK's first major implementation of Windows NT4, while supporting legacy systems.

EDUCATION

United States B.Sc. in Computer Science Equivalency

Cambridge University Examination Board "Ordinary Level" in Mathematics, Chemistry, Physics, English Language, English Literature, Art, French and Latin

Bournemouth Grammar School, Bournemouth, England

Sarika Alvekar

I have 5 years of experience in developing applications using Microsoft technologies. I have extensive experience in developing web-based applications using Microsoft FrontPage 2000, Macromedia Dreamweaver 3, Visual Basic, SQL Server and MS Access as development tools. I have been actively involved in the development and implementation of projects.

- Offers analysis and creativity for effective solutions.
- Proficient in generating attractive web pages.
- Expert in handling softwares like Macromedia Fireworks, Flash, Dreamweaver,
- Adobe Photoshop to give aesthetic touch to web pages.

Technical Skills

Platforms: Windows XP, Windows 2000/98/95

Languages: ASP, VBScript, JavaScript, HTML, VB 6.0, FoxPro 2.5, C++, C

RDBMS: SQL Server 2000, MS Access 97/2000

Tools: Microsoft FrontPage 2000, Dreamweaver 3, Flash 5, Fireworks 3, Adobe Photoshop 6.0

Work Experience

Computrust/VertiQ Software Corporation

Oct. 2004 - Present

Morgan Hill, CA, USA

Position : System Analyst

Environment : ASP, JavaScript, Visual Basic 6.0, Microsoft FrontPage, SQL

Server 2000, MS Access 2000

VertiQ has a toolkit, which we use to develop applications for Medical Examiners and Coroners. We customize application according to Client's requirements. Toolkit provides facility to client to do future modifications themselves.

- Handle design and development of various applications.
- Extensively involved in troubleshooting.
- Worked on various data conversions.
- Trained some customers with our Toolkit.
- Involve in testing phase of new release of Toolkit.

Central Computing Facility, Mumbai University

Mar. 2003 – Aug. 2004

Santa Cruz, Mumbai, India

<u>Position</u>

: System Programmer

Environment

: Visual Basic 6.0, FoxPro 2.5, MS Access 2000

CCF handles computerized processing of examinations of Mumbai University.

This processing contains creation of

database through data entry, generation of various types of reports, summaries, results, manuscripts.

Learnt FoxPro and developed various programs.

- Involved fully in development of programs for various exams.
- Developed Visual Basic application for some exams.

Handled Pre and Post exam work Individually for various exams.

Shigram Technologies Limited

Apr. 2002 - Feb. 2003

Bandra, Mumbai, India

Position

: Software Engineer / Site Administrator

Environment

: ASP, VBScript, JavaScript, SQL Server 2000, Macromedia

Dreamweaver

STL had their own website "ramrampavna.com" which was a portal in Marathi language. Also they used to sell

Marathi play's cds all over the world

- Developed pages for information on various topics such as Marathi festivals, people, Current Affairs etc.
- Developed screens for online wedding invitation cards using ASP.
- Maintained site database in SQL Server 2000.
- Creates site hits report weekly using Web Trends Log Analyzer.
- Handles site's main server using Symantec pcAnywhere

P2B Ace Solutions Pvt. Ltd.

Aug.2001 – Mar. 2002

Bandra, Mumbai, India

Position

: Software Engineer

Environment

: ASP, VBScript, JavaScript, SQL Server 2000,

Macromedia Dreamweaver

P2B Ace was a software development company. They used to develop application using Microsoft tools and Mainframe. I got opportunity to work on EDP Manager Software, WWW.Dhanojekunbi.Com, Expert Leave Management System

- Developed pages for whole site in asp.
- Designed the structure of the sites.
- Maintained database in MS Access 97.

Education

- Bachelor of Engineering in Computer Engineering 2001 FR.C.R.C.E., Bandra, Mumbai, India The SHRI BRIHAD BHARATIYA SAMAJ SCHOLARSHIP
- Diploma in Computer Engineering 1998
 Government Polytechnic, Bandra, Mumbai, India
 The MAHINDRA ALL INDIA TALENT SCHOLARSHIP
- S.S.C 1995
 New English School, Bandra, Mumbai, India



VertiQ Software LLC 18525 Sutter Blvd., Suite 280 P. O. Box 787 (Mailing Address) Morgan Hill, CA 95037

Phone: 408-778-0608 Fax: 408-782-0850

CME Quotation for West Virginia MEMS 10/30/2006

1. Software License Fees for CME (Includes Imaging, Mass Fatality and Barcode Modules)

of Users
Up to 15 Users
Unlimited Users

One-Time License Fee \$37,500 \$50,000

Optional Modules

2. Toxicology Module

One-Time License Fee \$7,500

One-Time License Fee \$7,500

3. Service Fees relating to implementing CME

Service fees apply to implementation and support during the implementation of CME at a customer. The amount of services required varies depending on what part of the project is undertaken by agency personnel and IT support versus what is undertaken by Vertiq.

The installation of the software on the server can be done within 30 minutes. If there are environmental "challenges" locally to be dealt with it could take more time.

Some of our clients have developed all their forms internally following training by us. In most cases our clients prefer us to develop the first version of their forms for them. This process gets the new system up much faster. We supply 2 days free of charge for this custom form development. Frequently forms that were developed for other customers are suitable and can easily be imported into a new customer's system.

Report development is another variable. We supply to new customers a library of Access reports that other customers have already compiled in the past. In general our customers are willing to share this type of work. If such reports are useful to a new customer as well, the amount of work to customize this for a new client is small. VertiQ is also willing to develop reports from scratch for customers. When local expertise exists in Access or Crystal it may be more cost effective for this work to be done in-house. In general it is preferable if someone at the agency knows how to use Access or Crystal to develop ad-hoc reports without having to wait for either VertiQ or someone from the IT department to develop a report. Developing the export of data into an Excel spreadsheet to support the production of quarterly and annual reports is another task that our customers can do on their own or VertiQ can implement as part of their services.

In view of the above, it is hard for us to state the exact amount of services that will be required for a new client.

Our customers decide on a bank of service hours / days based on their anticipated needs and in line with local support. VertiQ will only bill for services after they have been provided.

Our current Per Diem Rate for Services is \$1,400 (\$175 per hour) for services other than development which is \$1,600 per day (\$200 per hour) plus reasonable travel and related costs.

5. Estimated Range of chargeable services for CME:

Project Services Remote Installation Support First meeting - Project Commencement & Assess MEMS requirements	Number of Days 1 day 2 days	Total \$1,400 \$2,800
Second meeting - Follow up to assess MEMS requirements	2 days	\$2,800
Forms Development	12 days (estimate, the actual amount will depend on the number of forms and their complexity). Some clients have done their own forms development from scratch following training in the use of the CME toolkit.	\$19,200
Wordlink Development	1 day estimate depending on quantity of documents to link	\$1,600
Report Development	Frequently our customers do the report development effort themselves, since they are in-house. There are many standard reports in the system that can be tailored to a new customer's system. Some customers have asked us to spend 10 days on report development	*
Assistance in setting up a DMZ server for access by County Medical Examiners / Coroners and other agencies	1 day	\$1,400
Assistance in detailed functionality requirements definition and project management	10 days	\$16,000
Installation of custom system at client's site	This is usually done by the client IT staff, after downloading the customer website and database from our FTP site.	-0-
Third Meeting - Training in the use of the CME toolkit - Review of custom system, in-house training in all system administration aspects.	3 days	\$4,200
Setting up of all the dropdown information and reference data to be used like Cities, Counties, Organizations, Personnel; acceptance testing.	During this time VertiQ will provide support via telephone and email.	-0-
Support for acceptance testing, final conversion, moving the system into production	2 days	\$2,800
Fourth Meeting - Turnover Meeting and add'1 training	3 days	\$4,200
* Optional VertiQ Development - These times can be reduced if some of the work will be undertaken by the customer project team	37 days	\$56,400

following training.

Additional Optional Services

Support Session Restart	3 days	\$4,800
Workstation Limitation	2.5 days	\$4,000
Update Code Tables	3 days	\$4,800
Archiving	Unknown	Charged at
		Diem rate
HIPPA/PHINS	Unknown	Charged at
		Diem rate
Total Estimated Services	8.5 days	\$13,600

6. Estimated Reasonable Travel and Related Costs

Travel costs vary depending on the time of booking the airfare. Hotel costs can vary as well, depending on the season. We have estimated reasonable travel and related costs based on the following assumptions:

- Cost of air travel with 14 day advance fare from San Jose, CA or SFO to Charleston at \$700 per round trip
- Cost of one night stay with government rate at a Charleston hotel \$150 plus meal allowance at \$50 per day
- Rental car costs or other transportation costs at \$70 per day

Travel Description	Number of <u>Days</u>	<u>Airfare</u>	<u>Hotel plus</u> <u>meal</u> allowance	Other Transportation	Total
CME Trip #1 Project Commencement & Assess MEMS requirements	2	\$700	\$400	\$140	\$1,240
CME Trip #2 Follow up to assess MEMS requirements	2	\$700	\$400	\$140	\$1,240
CME Trip #3 Training Meeting	3	\$700	\$600	\$210	\$1,510
CME Trip #4 Turnover Meeting	2	\$700	\$400	\$140	\$1,240
Total					\$5,230

7. Software Escrow

VertiQ Software has placed the source code in escrow with Iron Mountain Intellectual Property Mgmt., formerly DSI Technology Escrow Services. VertiQ is paying an annual fee for DSI to store the source code in a secure fashion. CME customers may elect to pay an annual fee to Iron Mountain in order for Iron Mountain to make available the source code to a client in the case that VertiQ ceases to do business.

Cost annually \$650

8. Annual Maintenance

For the first 90 days following the installation of CME there is no charge for support for CME related questions and problems. For any problems or questions related to the use of Access or the administration of Windows 2000, 2003 or SQL Server VertiQ will be willing to assist but this will constitute a chargeable service at our usual per diem rate (apportioned to the amount of time spent).

Maintenance includes telephone support (based on 8:30 am to 5:00 pm working hours, Pacific Standard time, excluding public holidays), bug fixes, and an annual 1- day visit to review new application requirements by the customer and enhancements planned for CME in the next release.

Maintenance charges per annum up to 15 Users	\$6,750
Maintenance charges per annum unlimited Users	\$9,000
Maintenance charges per annum up for Toxicology Module	\$1,350

All fees are exclusive of any sales taxes if applicable.

Summary of Fees and Charges

	•	15 Users	15 Users	Unlimited	Unlimited
				Users	Users
1.	Software License Fees	\$37,500	\$37,500	\$50,000	\$50,000
2.	Bank of days for services chargeable, 4 free days*	\$56,400	\$56,400	\$56,400	\$56,400
3.	Optional Services per RFQ		\$13,600		\$13,600
4.	Toxicology Module	\$7,500	\$7,500	\$7,500	\$7,500
5.	Travel and related costs	\$5,230	\$5,230	\$5,230	\$5,230
6.	Source Escrow	\$650	\$650	\$650	\$650
ТО	TAL	\$107,280	\$120,880	\$119,780	\$133,380
1.	1 ST Year Maintenance charges per annum up to 15 Users	\$6,750	\$6,750	\$9,000	\$9,000
2.	1 st Year Maintenance charges per annum for Toxicology Module	\$1,350	\$1,350	\$1,350	\$1,350
First Y	ear Total Fees	\$115,380	\$128,980	\$130,130	\$143,730

^{*} You may decide to contract with us for additional services, depending on the amount of local involvement in aspects like report development.

Payment Terms

1st PAYMENT: 40% of license fee upon successful installation of software at client's location

2nd PAYMENT 50% of license fee upon installation of customized data entry forms

FINAL PAYMENT: 10% of license fee and customization fee upon acceptance

Payment for services is due upon completion of the specific service item and receipt of invoice.