Collaborative Software Initiative

21 July 09

Ms Roberta Wagner CPIM
Buyer Supervisor
Purchasing Division
Department of Administration
State of West Virginia

Subject: Collaborative Software Initiative, Inc. Response to Request for Quote No EPH90097

Reference: Request for Quote No. EHP90097

Dear Ms. Wagner

Collaborative Software Initiative, Inc. (CSI) is pleased to respond to your Request for Quotation No EHP90097 to provide a Public Health Information Network (PHIN) compliant electronic disease surveillance system to the State of West Virginia. You will find included with this cover letter a detailed response to the requirements set forth in this RFQ. Also, Addendum's B and D include additional information about our solution.

Collaborative Software Initiative is proposing CSI TriSano™, our citizen-centric surveillance and outbreak management application for infectious disease, environmental hazards, and bioterrorism attacks. It allows local, state and Federal entities to track, control and ultimately prevent illness and death. CSI TriSano™ not only meets the needs of public health but has the flexibility to be implemented anywhere to support needs for data collection, data export for analysis, data interpretation and data dissemination. To learn more about CSI TriSano™, we encourage you to visit: http://csinitiative.com/products/trisano/overview/

CSI TriSano™ is provided as an annual subscription, including enterprise features, a commercial software license and support. This proposal is valid for a period of 90 days.

Collaborative Software Initiative, Inc. looks forward to providing the State of West Virginia this critical system to help protect the health of its citizens. Please contact me if you have any questions

Sincerely,

Lori Williams-Peters

Lori Williams-Peters
Corporate Development Officer
Collaborative Software Initiative, Inc
1 SW Columbia Street, Suite 640
Portland, OR 97258

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 fee

5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, 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.

13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.

14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia 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 Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.

15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

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 case 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: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130

RFQ No. EHP90097

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

VENDOR OWING A DEBT TO THE STATE:
West Virginia Code §5A-3-10a provides that: 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 owed is an amount greater than one thousand dollars in the aggregate.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:
If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the ***West Virginia Code***. The vendor **must** make said affirmation with its bid submission. Further, public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the ***West Virginia Code*** and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the ***West Virginia Code*** may take place before their work on the public improvement is begun.

ANTITRUST:
In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:
Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

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. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf.

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

Vendor's Name: Collaborative Software Initiative, Inc.

Authorized Signature: _____ Date: July 21, 2009

AGREEMENT ADDENDUM

WV-96
Rev. 10/07

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

1. **DISPUTES** - Any references in the agreement to arbitration or to the jurisdiction of any court 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. **SIMILAR SERVICES** - 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 to a certain dollar amount or to the amount of the agreement is hereby deleted. Limitations on special, incidental or consequential damages are acceptable. 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. Agency agrees to pay Vendor for services rendered or goods received prior to the effective date of termination.

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. **INSURANCE** - 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. **CONFIDENTIALITY:** -Any provision regarding confidentiality of the terms and conditions of the agreement is hereby deleted. State contracts are public records under the West Virginia Freedom of Information Act

21. **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

Spending Unit: _____

Signed: _____

Title: _____

Date: _____

VENDOR

Company Name: Collaborative Software Initiative, INC.

Signed: Signature upon award

Title: _____

Date: _____

ATTACHMENT
P O # EHD90097

This agreement constitutes the entire agreement between the parties, and there are no other terms and conditions applicable to the licenses granted hereunder

Agreed

Signature upon award
Signature Date

Signature Date

Title

Title

Collaborative Software Initiative, Inc.
Company Name

Agency/Division

Rev. 09/08

State of West Virginia

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with ***West Virginia Code***, §5A-3-37. (Does not apply to construction contracts). ***West Virginia Code***, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the ***West Virginia Code***. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1. **Application is made for 2.5% resident vendor preference for the reason checked:**
___ Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**
___ Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**
___ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or,**

2. **Application is made for 2.5% resident vendor preference for the reason checked:**
___ Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

3. **Application is made for 2.5% resident vendor preference for the reason checked:**
___ Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

4. **Application is made for 5% resident vendor preference for the reason checked:**
___ Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or,**

5. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
___ Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or,**

6. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
___ Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Collaborative Software Initiative, Inc. **Signed:** [signature]

Date: July 21, 2009 **Title:** Chief Financial Officer

**Check any combination of preference consideration(s) indicated above, which you are entitled to receive.*

1.0 Bid Quotation Sheet

West Virginia WVEDSS Bid Quotation Sheet

Qty	Description	Unit Cost	Total Cost
1 ea	Software Application		
	CSI TriSano™ 1.0 annual subscription with no charge upgrade to CSI TriSano™ 2 0 annual subscription	3 cents per citizen based on 2008 census	$54 434
160 hours	Technical Services	$120 per hour plus travel and expenses	$19,200 plus travel and expenses
	Implementation Planning		
	Intallation		
	Configuration and Customization		
	Documentation Development		
40 hours	On-Site Training	$2000 per day plus travel and expenses	$10,000 plus travel and expenses
	Documentation (in paper and electronic form)		included in annual subscription
1 ea	System Installation Manual		
1 ea	System Administration Manual		
1 ea	User Manual		
1 ea	Data Dictionary		
1 ea	Entity Relationship Diagram		
	Software Maintenance		included in annual subscription
	Year 2		
	Year 3		

Technical Support	included in annual subscription
Year 2	
Year 3	
Total for Year 1 - CSI TriSano™ 1 0/2 0 Year 1 (license, annual subscription technical services, training software maintenance and technical support as described above)	$83,634 plus travel and expenses
Total for Year 2 - CSI TriSano™ 2 0 (annual subscription software maintenance and technical support based on 2008 census)	$54 434
Total for Year 3 - CSI TriSano™ 2 0 (annual subscription software maintenance and technical support based on 2008 census)	$54 434
Grand Total for 3 years as described above	$192 502

1.3.1 System Performance

1.3 Responsibilities of the Vendor

1.3.1 System Performance

1.3.1.1 Response time for any user request should be an average of less than eight (8) seconds; target response time is less than one (1) second. A maximum response time for transactions involving certain long running processes (e.g. reports and exports) should have a target response time of less than two (2) minutes. These requirements must be met in the worst-case scenario - a 128Kb/sec integrated services digital network (ISDN) connection.

Yes. CSI TriSano™ provides response time average of less than eight (8) seconds and maximum target response time of long running transactions of under two (2) minutes. With the included CSI TriSano™ AVR component (data warehouse, reporting, and analysis) reports and exports run in a separate environment from the CSI TriSano™ Core (the transaction system). Performance of an application depends on many factors such as the configuration of the personal computer, network connection to the internet server performance, and application configuration that are outside the control of Collaborative Software Initiative or CSI TriSano™

1.3.1.2 The system interface should appear the same across all internet connection speeds.

Yes The CSI TriSano™ web-based interface is consistent across all internet connection speeds

1.3.1.3 All data field validations should be verified within the user's browser without sending data to the server.

Due to the level of sophistication of the configurability provided by the CSI TriSano™ data field validation is verified at the server However, CSI TriSano™ utilizes Ajax where appropriate to ensure a good user experience

1.3.1.4 A minimum of 250 concurrent users must be supported by the application software.

Yes CSI TriSano™ supports more than 250 concurrent users

1.3.1.5 A minimum of 10,000 disease investigations per year must be supported by the application software.

Yes. CSI TriSano™ supports more than 10,000 disease investigations per year

1.3.1.6 When there is a new system update, the fully tested update should be delivered within 30 days.

Yes When there is a new system update a fully tested update will be delivered within 30 days

1.3.2 Security

1.3.2 Security

1.3.2.1 System must retain an access log of when a user logs on, logs out, or his/her session times out. This text log will contain the user's account identifier ID, date, time of logon/logout/timeout, and activity type (log in, log out, time out). This log must be stored in Comma Separated Value (CSV) format and easily accessible for analysis by the system administrator.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems such as but not limited to CA SiteMinder

1.3.2.2 System must support strong password functionality that can be configured by the system administrator. These capabilities include the length of passwords, types of characters required (numbers, symbols, uppercase letters, lowercase letters), the password change interval in days, and the user password expiration notification in days.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems such as but not limited to CA SiteMinder

1.3.2.3 Must use Advanced encryption standard (AES) or other industry standard of data security through strong encryption, minimum of 128-bit, in all external communication.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems such as but not limited to CA SiteMinder

1.3.2.4 System must monitor and report any unauthorized access attempts to the system administrator.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems such as but not limited to CA SiteMinder.

1.3.2.5 System must support multiple user account status options to minimally include: 'Inactive or locked', 'Active', and 'Must change password upon next login. System should provide an audit log of access changes.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems such as but not limited to CA SiteMinder

1.3.2.6 System must alert users to an expiring password based on the user password expiration notification set by the administrator and prompt the user to change their password in advance of expiration.

This capability is handled by a security system outside CSI TriSano™. CSI TriSano™ integrates with various security systems, such as but not limited to CA SiteMinder

1.3.2.7 System must allow users to change their own password after successfully logging into the application and enforce strong password functionality as discussed in 1.3.2.2.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems. such as but not limited to CA SiteMinder

1.3.2.8 System must support a 'forgotten password' functionality that requires the user to enter their email address account ID. If the ID exists as a valid account that is not inactive or locked, the system will then generate a new, random password that will be e-mailed to the user for a single use. The system will force the user to change this password after successfully logging in.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems such as but not limited to CA SiteMinder.

1.3.2.9 System must allow the system administrator to restrict user account access by system function (query, export, report, etc.), disease condition, facility, and/or jurisdiction. System should provide an audit log of access changes, e.g.: who granted user access, what type of access, user name, date of creation and modification.

Yes CSI TriSano™ is built using configurable Roles and Privileges CSI TriSano™ has privileges for query, export, and report and many others. Administrator can create Roles that include Privileges. Users are granted Roles in Jurisdictions. Specific disease condition security and facility security are not currently included but are planned for 2 1 in Q4 2009 CSI TriSano™ logs security changes

1.3.2.10 The vendor will provide system upgrades, patches and other changes to the application via a secure(login/password) file transfer protocol FTP site that can be accessed only by West Virginia technical staff to obtain appropriate files and documentation.

Yes Collaborative Software Initiative will provide West Virginia with a secure file transfer protocol site to obtain appropriate files and documentation.

1.3.2.11 Any configurations required for the system to be installed and to run on the West Virginia test/training and production databases will be built into the source code provided by the vendor. West Virginia staff will not modify installation and/or configuration files provided by the vendor for either environment.

Yes Collaborative Software Initiative will provide configurations and other installation documentation to West Virginia as part of the source code package. West Virginia staff will not need to modify installation and/or configuration files provided by Collaborative Software Initiative for either the test/training or production databases.

1.3.2.12 The vendor will provide "back out" procedures in the event a version of the application needs to be uninstalled by West Virginia Staff.

Yes Collaborative Software Initiative will provide 'back out' procedures to West Virginia in the event a version of CSI TriSano™ needs to be uninstalled as part of the CSI TriSano™ Runbook

1.3.2.13 System must store all passwords in Advanced encryption standard (AES) or other industry standard encrypted format.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems such as but not limited to CA SiteMinder

1.3.2.14 System must not use schema owner or privileged user (SYS, SYSTEM, etc) to connect to the database.

Yes CSI TriSano™ does not use the schema owner or privileged user to connect to the database An application user is used that has the minimal access required for application logic/ETL (extract/transform/load) logic The ETL process does have privileges to create tables etc due to the design constraints driven by the flexibility of the CSI TriSano™ Form Builder

1.3.2.15 System must use least privileged user to connect to database. The user utilized to connect to the database for configuring strong password parameters should not be the same user connecting to the database for other administrative processes and that should not be the same user connecting to the database for update, or the user connecting to the database for query, etc.

CSI TriSano™ uses the least privileged owner to connect to the database. CSI TriSano™ does not store passwords as it utilizes a security system, such as but not limited to CA SiteMinder CSI TriSano™ Core uses the same user to connect to the database for query, update, and administrative purposes CSI TriSano™ AVR is a separate subsystem from CSI TriSano™ Core and uses different database users

1.3.2.16 System should be tested to mitigate the Top 25 Most Dangerous Programming Errors as developed by SANS (SysAdmin, Audit, Network, Security) Institute/Mitre Coporation. This may be found in the attached 2009 CWE/SANS (Common Weakness Enumeration) Top 25 Most Dangerous Programming Errors or on-line at http://cwe.mitre.org/top25 . Generate reports detailing any security issues from the top25 list.

Yes CSI TriSano™ has been tested against the Top 25 Most Dangerous Programming Errors as developed by SANS (SysAdmin Audit Network Security) Institute/Mitre Coporation

1.3.2.17 There should not be any structured query language (SQL), either static or dynamic, executed on any web page. All queries, inserts and updates should be handled by passing parameters to stored procedures. If not explain how you will safeguard against SQL injection attacks.

Yes. There is no static or dynamic SQL executed on any web page. CSI TriSano™ Core is based on Ruby on Rails (and runs on top of Java) CSI TriSano™ follows the Ruby On Rails Security Guide which addresses SQL injection attacks

1.3.3 Data Validation

1.3.3 Data Validation

1.3.3.1 All dates including but not limited to onset date, report date, date of death, etc. provided in the course of a disease investigation should be equal to or greater than the birth date.

Yes. All appropriate dates in CSI TriSano™ are equal to or greater than the birth date.

1.3.3.2 After input validation and before leaving the current data entry screen, the system should clearly indicate to or

warn the user of any missing or incorrect required data specific to the screen.

Yes CSI TriSano™ provides error messages to the user for any missing or incorrect required data specific to the screen

1.3.3.3 Any specific disease question validations specified by the system administrator (see 1.3.4.1.3).

Yes. The CSI TriSano™ Form Builder allows an administrator to create disease-specific forms with questions and the system will perform validation checks on these questions.

1.3.3.4 Measurement units must always be displayed for any question that expects a user response keyed in a specific measurement system.

Yes Measurement units are displayed for questions that expect a user response for a specific measurement system In addition, help text can be defined for any entry field that is part of the CSI TriSano™ system. For questions added using the Form Builder, measurement units can be displayed for any question and put in the help text for that question as well

1.3.4 System Administration Functions

1.3.4 System Administration Functions

1.3.4.1 Disease Condition Management

1.3.4.1.1 System must allow the system administrator to define new disease conditions and disease groupings (e.g., foodborne) without vendor involvement.

Yes CSI TriSano™ allows the system administrator to define new disease conditions If this disease condition is part of group of diseases a disease-specific form such as 'Foodborne Illness Form' can be created and assigned to more than one disease

1.3.4.1.2 System must allow the system administrator to define new disease condition questions and group these questions into disease-specific questionnaires without vendor involvement.

Yes. One of the key features of CSI TriSano™ is the Form Builder This feature allows a system administrator to define new disease specific questions as part of a disease-specific questionnaire or form without involvement from Collaborative Software Initiative. Each of these forms can be for a single disease a group of diseases (e g , foodborne illnesses), or all diseases. One of our customers has created more than 80 disease-specific forms and contributed them to the project. See Addendum B for a further description of the CSI TriSano™ Form Builder

1.3.4.1.3 System must allow the system administrator to define attributes associated with disease questions. At a minimum, these attributes must include:

- ***Value auditing (e.g., tracking of old and new values)***

Yes CSI TriSano™ Form Builder supports multiple versions of a given form CSI TriSano™ Form Builder has functionality that displays meta data on the form and the various published versions of the form

- ***Required fields***

Yes CSI TriSano™ Form Builder will support required fields with availability in CSI TriSano™ 2 1 in Q4, 2009

- ***Data types (alphanumeric, numeric)***

Yes CSI TriSano™ Form Builder supports single line text multi line text drop down select list, radio buttons, check boxes date and phone number data types.

- ***Acceptable discrete values (e.g., Yes or No) or a valid value range (0-24)***

Yes. CSI TriSano™ Form Builder supports Yes or No via drop down select list radio buttons check boxes and will support valid value range with availability in CSI TriSano™ 2.1 in Q4 2009.

- ***User roles/role groups that can view the question***

Collaborative Software Initiative

21 July 09

Ms Roberta Wagner CPIM
Buyer Supervisor
Purchasing Division
Department of Administration
State of West Virginia

Subject: Collaborative Software Initiative, Inc Response to Request for Quote No EPH90097

Reference: Request for Quote No EHP90097

Dear Ms Wagner,

Collaborative Software Initiative, Inc. (CSI) is pleased to respond to your Request for Quotation No EHP90097 to provide a Public Health Information Network (PHIN) compliant electronic disease surveillance system to the State of West Virginia You will find included with this cover letter a detailed response to the requirements set forth in this RFQ Also, Addendum's B and D include additional information about our solution

Collaborative Software Initiative is proposing CSI TriSano™, our citizen-centric surveillance and outbreak management application for infectious disease, environmental hazards, and bioterrorism attacks It allows local, state and Federal entities to track, control and ultimately prevent illness and death CSI TriSano™ not only meets the needs of public health, but has the flexibility to be implemented anywhere to support needs for data collection data export for analysis, data interpretation and data dissemination To learn more about CSI TriSano™ we encourage you to visit: http://csinitiative.com/products/trisano/overview/

CSI TriSano™ is provided as an annual subscription, including enterprise features, a commercial software license and support This proposal is valid for a period of 90 days

Collaborative Software Initiative, Inc looks forward to providing the State of West Virginia this critical system to help protect the health of its citizens Please contact me if you have any questions

Sincerely,

Lori Williams-Peters

Lori Williams-Peters
Corporate Development Officer
Collaborative Software Initiative, Inc
1 SW Columbia Street, Suite 640
Portland OR 97258

RFQ No EHP 90097

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

VENDOR OWING A DEBT TO THE STATE:
West Virginia Code §5A-3-10a provides that: 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 owed is an amount greater than one thousand dollars in the aggregate

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:
If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the ***West Virginia Code***. The vendor **must** make said affirmation with its bid submission. Further, public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the ***West Virginia Code*** and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the ***West Virginia Code*** may take place before their work on the public improvement is begun.

ANTITRUST:
In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:
Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

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. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf.

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

Vendor's Name: Collaborative Software Initiative, Inc.

Authorized Signature: _____ Date: July 21, 2009

AGREEMENT ADDENDUM

WV-96
Rev. 10/07

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

1 **DISPUTES** - Any references in the agreement to arbitration or to the jurisdiction of any court 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. **SIMILAR SERVICES** - 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 to a certain dollar amount or to the amount of the agreement is hereby deleted. Limitations on special, incidental or consequential damages are acceptable. 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. Agency agrees to pay Vendor for services rendered or goods received prior to the effective date of termination.

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. **INSURANCE** - 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. **CONFIDENTIALITY:** -Any provision regarding confidentiality of the terms and conditions of the agreement is hereby deleted. State contracts are public records under the West Virginia Freedom of Information Act.

21 **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

Spending Unit: _____

Signed: _____

Title: _____

Date: _____

VENDOR

Company Name: Collaborative Software Initiative, INC.

Signed: Signature upon award

Title: _____

Date: _____

ATTACHMENT
P.O.# EHD90097

This agreement constitutes the entire agreement between the parties, and there are no other terms and conditions applicable to the licenses granted hereunder

Agreed

Signature upon award
Signature Date

Signature Date

Title

Title

Collaborative Software Initiative, Inc.
Company Name

Agency/Division

Rev 09/08

State of West Virginia

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with ***West Virginia Code***, §5A-3-37. (Does not apply to construction contracts). ***West Virginia Code***, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the ***West Virginia Code***. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1. ____ **Application is made for 2.5% resident vendor preference for the reason checked:**
Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

____ Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

____ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or,**

2. ____ **Application is made for 2.5% resident vendor preference for the reason checked:**
Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

3. ____ **Application is made for 2.5% resident vendor preference for the reason checked:**
Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

4. ____ **Application is made for 5% resident vendor preference for the reason checked:**
Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or,**

5. ____ **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or,**

6. ____ **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Collaborative Software Initiative, Inc. Signed: [signature]

Date: July 21, 2009 Title: Chief Financial Officer

*Check any combination of preference consideration(s) indicated above which you are entitled to receive.

1.0 Bid Quotation Sheet

West Virginia WVEDSS Bid Quotation Sheet

Qty	Description	Unit Cost	Total Cost
1 ea	Software Application		
	CSI TriSano™ 1.0 annual subscription with no charge upgrade to CSI TriSano™ 2 0 annual subscription	3 cents per citizen based on 2008 census	$54 434
160 hours	Technical Services	$120 per hour plus travel and expenses	$19,200 plus travel and expenses
	Implementation Planning		
	Intallation		
	Configuration and Customization		
	Documentation Development		
40 hours	On-Site Training	$2000 per day plus travel and expenses	$10,000 plus travel and expenses
	Documentation (in paper and electronic form)		included in annual subscription
1 ea	System Installation Manual		
1 ea	System Administration Manual		
1 ea	User Manual		
1 ea	Data Dictionary		
1 ea	Entity Relationship Diagram		
	Software Maintenance		included in annual subscription
	Year 2		
	Year 3		

Technical Support		included in annual subscription
Year 2		
Year 3		
Total for Year 1 - CSI TriSano™ 1 0/2 0 Year 1 (license, annual subscription technical services training software maintenance and technical support as described above)		$83,634 plus travel and expenses
Total for Year 2 - CSI TriSano™ 2 0 (annual subscription software maintenance and technical support based on 2008 census)		$54 434
Total for Year 3 - CSI TriSano™ 2 0 (annual subscription software maintenance and technical support based on 2008 census)		$54 434
Grand Total for 3 years as described above		$192 502

1.3.1 System Performance

1.3 Responsibilities of the Vendor

1.3.1 System Performance

1.3.1.1 Response time for any user request should be an average of less than eight (8) seconds; target response time is less than one (1) second. A maximum response time for transactions involving certain long running processes (e.g. reports and exports) should have a target response time of less than two (2) minutes. These requirements must be met in the worst-case scenario - a 128Kb/sec integrated services digital network (ISDN) connection.

Yes. CSI TriSano™ provides response time average of less than eight (8) seconds and maximum target response time of long running transactions of under two (2) minutes. With the included CSI TriSano™ AVR component (data warehouse, reporting, and analysis), reports and exports run in a separate environment from the CSI TriSano™ Core (the transaction system). Performance of an application depends on many factors such as the configuration of the personal computer, network connection to the internet, server performance, and application configuration that are outside the control of Collaborative Software Initiative or CSI TriSano™

1.3.1.2 The system interface should appear the same across all internet connection speeds.

Yes. The CSI TriSano™ web-based interface is consistent across all internet connection speeds.

1.3.1.3 All data field validations should be verified within the user's browser without sending data to the server.

Due to the level of sophistication of the configurability provided by the CSI TriSano™, data field validation is verified at the server. However, CSI TriSano™ utilizes Ajax where appropriate to ensure a good user experience

1.3.1.4 A minimum of 250 concurrent users must be supported by the application software.

Yes. CSI TriSano™ supports more than 250 concurrent users.

1.3.1.5 A minimum of 10,000 disease investigations per year must be supported by the application software.

Yes. CSI TriSano™ supports more than 10 000 disease investigations per year

1.3.1.6 When there is a new system update, the fully tested update should be delivered within 30 days.

Yes. When there is a new system update, a fully tested update will be delivered within 30 days

1.3.2 Security

1.3.2 Security

1.3.2.1 System must retain an access log of when a user logs on, logs out, or his/her session times out. This text log will contain the user's account identifier ID, date, time of logon/logout/timeout, and activity type (log in, log out, time out). This log must be stored in Comma Separated Value (CSV) format and easily accessible for analysis by the system administrator.

This capability is handled by a security system outside CSI TriSano™. CSI TriSano™ integrates with various security systems such as but not limited to CA SiteMinder

1.3.2.2 System must support strong password functionality that can be configured by the system administrator. These capabilities include the length of passwords, types of characters required (numbers, symbols, uppercase letters, lowercase letters), the password change interval in days, and the user password expiration notification in days.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems, such as but not limited to CA SiteMinder

1.3.2.3 Must use Advanced encryption standard (AES) or other industry standard of data security through strong encryption, minimum of 128-bit, in all external communication.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems, such as but not limited to CA SiteMinder

1.3.2.4 System must monitor and report any unauthorized access attempts to the system administrator.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems, such as but not limited to CA SiteMinder

1.3.2.5 System must support multiple user account status options to minimally include: 'Inactive or locked', 'Active', and 'Must change password upon next login. System should provide an audit log of access changes.

This capability is handled by a security system outside CSI TriSano™. CSI TriSano™ integrates with various security systems such as but not limited to CA SiteMinder.

1.3.2.6 System must alert users to an expiring password based on the user password expiration notification set by the administrator and prompt the user to change their password in advance of expiration.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems, such as but not limited to CA SiteMinder

1.3.2.7 System must allow users to change their own password after successfully logging into the application and enforce strong password functionality as discussed in 1.3.2.2.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems such as but not limited to CA SiteMinder

1.3.2.8 System must support a 'forgotten password' functionality that requires the user to enter their email address account ID. If the ID exists as a valid account that is not inactive or locked, the system will then generate a new, random password that will be e-mailed to the user for a single use. The system will force the user to change this password after successfully logging in.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems such as but not limited to CA SiteMinder

1.3.2.9 System must allow the system administrator to restrict user account access by system function (query, export, report, etc.), disease condition, facility, and/or jurisdiction. System should provide an audit log of access changes, e.g.: who granted user access, what type of access, user name, date of creation and modification.

Yes CSI TriSano™ is built using configurable Roles and Privileges. CSI TriSano™ has privileges for query, export, and report and many others Administrator can create Roles that include Privileges. Users are granted Roles in Jurisdictions Specific disease condition security and facility security are not currently included but are planned for 2 1 in Q4 2009 CSI TriSano™ logs security changes

1.3.2.10 The vendor will provide system upgrades, patches and other changes to the application via a secure(login/password) file transfer protocol FTP site that can be accessed only by West Virginia technical staff to obtain appropriate files and documentation.

Yes Collaborative Software Initiative will provide West Virginia with a secure file transfer protocol site to obtain appropriate files and documentation.

1.3.2.11 Any configurations required for the system to be installed and to run on the West Virginia test/training and production databases will be built into the source code provided by the vendor. West Virginia staff will not modify installation and/or configuration files provided by the vendor for either environment.

Yes Collaborative Software Initiative will provide configurations and other installation documentation to West Virginia as part of the source code package. West Virginia staff will not need to modify installation and/or configuration files provided by Collaborative Software Initiative for either the test/training or production databases

1.3.2.12 The vendor will provide "back out" procedures in the event a version of the application needs to be uninstalled by West Virginia Staff.

Yes Collaborative Software Initiative will provide "back out" procedures to West Virginia in the event a version of CSI TriSano™ needs to be uninstalled as part of the CSI TriSano™ Runbook

1.3.2.13 System must store all passwords in Advanced encryption standard (AES) or other industry standard encrypted format.

This capability is handled by a security system outside CSI TriSano™ CSI TriSano™ integrates with various security systems such as but not limited to CA SiteMinder

1.3.2.14 System must not use schema owner or privileged user (SYS, SYSTEM, etc) to connect to the database.

Yes CSI TriSano™ does not use the schema owner or privileged user to connect to the database An application user is used that has the minimal access required for application logic/ETL (extract/transform/load) logic The ETL process does have privileges to create tables etc due to the design constraints driven by the flexibility of the CSI TriSano™ Form Builder

1.3.2.15 System must use least privileged user to connect to database. The user utilized to connect to the database for configuring strong password parameters should not be the same user connecting to the database for other administrative processes and that should not be the same user connecting to the database for update, or the user connecting to the database for query, etc.

CSI TriSano™ uses the least privileged owner to connect to the database. CSI TriSano™ does not store passwords as it utilizes a security system, such as but not limited to CA SiteMinder CSI TriSano™ Core uses the same user to connect to the database for query update and administrative purposes. CSI TriSano™ AVR is a separate subsystem from CSI TriSano™ Core and uses different database users

1.3.2.16 System should be tested to mitigate the Top 25 Most Dangerous Programming Errors as developed by SANS (SysAdmin, Audit, Network, Security) Institute/Mitre Coporation. This may be found in the attached 2009 CWE/SANS (Common Weakness Enumeration) Top 25 Most Dangerous Programming Errors or on-line at http://cwe.mitre.org/top25 . Generate reports detailing any security issues from the top25 list.

Yes CSI TriSano™ has been tested against the Top 25 Most Dangerous Programming Errors as developed by SANS (SysAdmin Audit, Network Security) Institute/Mitre Coporation

1.3.2.17 There should not be any structured query language (SQL), either static or dynamic, executed on any web page. All queries, inserts and updates should be handled by passing parameters to stored procedures. If not explain how you will safeguard against SQL injection attacks.

Yes There is no static or dynamic SQL executed on any web page. CSI TriSano™ Core is based on Ruby on Rails (and runs on top of Java) CSI TriSano™ follows the Ruby On Rails Security Guide which addresses SQL injection attacks.

1.3.3 Data Validation

1.3.3 Data Validation

1.3.3.1 All dates including but not limited to onset date, report date, date of death, etc. provided in the course of a disease investigation should be equal to or greater than the birth date.

Yes All appropriate dates in CSI TriSano™ are equal to or greater than the birth date.

1.3.3.2 After input validation and before leaving the current data entry screen, the system should clearly indicate to or

warn the user of any missing or incorrect required data specific to the screen.

Yes. CSI TriSano™ provides error messages to the user for any missing or incorrect required data specific to the screen.

1.3.3.3 Any specific disease question validations specified by the system administrator (see 1.3.4.1.3).

Yes. The CSI TriSano™ Form Builder allows an administrator to create disease-specific forms with questions and the system will perform validation checks on these questions

1.3.3.4 Measurement units must always be displayed for any question that expects a user response keyed in a specific measurement system.

Yes. Measurement units are displayed for questions that expect a user response for a specific measurement system. In addition help text can be defined for any entry field that is part of the CSI TriSano™ system. For questions added using the Form Builder measurement units can be displayed for any question and put in the help text for that question as well

1.3.4 System Administration Functions

1.3.4 System Administration Functions

1.3.4.1 Disease Condition Management

1.3.4.1.1 System must allow the system administrator to define new disease conditions and disease groupings (e.g., foodborne) without vendor involvement.

Yes. CSI TriSano™ allows the system administrator to define new disease conditions. If this disease condition is part of group of diseases a disease-specific form such as 'Foodborne Illness Form' can be created and assigned to more than one disease

1.3.4.1.2 System must allow the system administrator to define new disease condition questions and group these questions into disease-specific questionnaires without vendor involvement.

Yes. One of the key features of CSI TriSano™ is the Form Builder. This feature allows a system administrator to define new disease specific questions as part of a disease-specific questionnaire or form without involvement from Collaborative Software Initiative. Each of these forms can be for a single disease, a group of diseases (e.g., foodborne illnesses), or all diseases. One of our customers has created more than 80 disease-specific forms and contributed them to the project. See Addendum B for a further description of the CSI TriSano™ Form Builder

1.3.4.1.3 System must allow the system administrator to define attributes associated with disease questions. At a minimum, these attributes must include:

- ***Value auditing (e.g., tracking of old and new values)***

Yes. CSI TriSano™ Form Builder supports multiple versions of a given form. CSI TriSano™ Form Builder has functionality that displays meta data on the form and the various published versions of the form

- ***Required fields***

Yes. CSI TriSano™ Form Builder will support required fields with availability in CSI TriSano™ 2.1 in Q4 2009

- ***Data types (alphanumeric, numeric)***

Yes. CSI TriSano™ Form Builder supports single line text, multi line text, drop down select list, radio buttons, check boxes, date, and phone number data types.

- ***Acceptable discrete values (e.g., Yes or No) or a valid value range (0-24)***

Yes. CSI TriSano™ Form Builder supports Yes or No via drop down select list, radio buttons, check boxes and will support valid value range with availability in CSI TriSano™ 2.1 in Q4, 2009

- ***User roles/role groups that can view the question***

Yes. CSI TriSano™ will support roles/role groups that can view the question with availability in CSI TriSano™ 2 1 in Q4 2009

- ***User roles/role groups that can respond to the question***

Yes. All roles that have the 'update_event" privilege can answer questions with support for roles/role groups that can respond to the question with availability in CSI TriSano™ 2 1 in Q4 2009.

- ***Context sensitivity (questions are only presented based on responses to previous questions)***

Yes. Follow up questions are supported An answer to a question can result in more than one follow up question and a question that resulted from a follow up can have additional follow up questions.

- ***Date range during which the question is effective and visible to user***

Yes. Date ranges for questions are handled by support for multiple versions of forms.

1.3.4.2 General Functions

1.3.4.2.1 System must be able to show the number of concurrent users accessing the system at any given time and the maximum number of concurrent users since the system was started in a graphical interface available to the system administrator.

Yes. CSI TriSano™ ships with Zabbix, a powerful system and application monitoring and trending solution that manages these demands for you Zabbix is highly configurable Some of the items contained in the default configuration provided with CSI TriSano™ Enterprise Edition include:

- Monitor memory, cpu, and disk usage and view that usage over time
- Alert IT staff when server utilization becomes too high
- Monitor and alert IT staff if there is an outage with your CSI TriSano™ application

See zabbix com for more information.

1.3.4.2.2 System must be able to broadcast instant messages to users about the system problems or general announcements. These messages must be displayed in the application to all active users whenever their session refreshes the browser screen.

Yes Users with administrative rights can configure messages that are displayed to users

1.3.4.2.3 System must support a "message of the day' (MOTD) functionality configurable by the system administrator to alert users of upcoming events immediately after user login.

Yes Users with administrative rights can configure messages that are displayed to users

1.3.4.2.4 Code and data validation tables will be used whenever possible to facilitate the maintenance of and changes to system operation. West Virginia technical staff should be able to perform most configuration and administrative tasks without any programming. A minimal level of technical expertise should be required for customization and maintenance, (e.g., changes to disease questionnaires, changes to look up tables, changes to reports, etc.)

Yes CSI TriSano™ provides a web-based administration capability that will allow West Virginia technical staff to perform most configuration and administrative tasks without any programming This capability allows the administrator to manage users, diseases, routing queues, CDC exports disease-specific forms, and other items without programming Other changes such as changes to reports and other customization require minimal technical expertise

1.3.4.2.5 The vendor will provide all system installation and related technical documentation - one copy in both paper and electronic formats with rights for state to reproduce and or modify for specific users.

Yes Collaborative Software Initiative will provide all system installation and related technical documentation in both paper and electronic formats with rights for West Virginia to reproduce and or modify for specific users

1.3.4.3 Geography and Facility Management

1.3.4.3.1 System must allow the system administrator to define public health jurisdictions including multi-county jurisdictions and regional county aggregations without vendor involvement.

Yes. CSI TriSano™ allows the creation of counties and jurisdictions. Jurisdictions can have an unlimited number of counties. Regional county aggregations can be defined as jurisdictions and include counties.

1.3.4.3.2 System must allow the creation of non-geographic entities to represent private facilities such as hospitals.

Yes. CSI TriSano™ allows the creation of non-geographic entities to represent private facilities.

1.3.4.3.3 System must allow assignment of users to non-geographic entities that can share cases within the entity.

Yes. CSI TriSano™ allows the assignment of users to jurisdictions with support for non-geographic entities such as hospitals that can share cases within the entity with availability in CSI TriSano™ 2.1 in Q4 2009.

1.3.4.3.4 System must allow a designated administrator for geographic and non-geographic entities to manage the user accounts assigned to those entities.

Yes. The CSI TriSano™ administration facility allows an administrator to manage all users of the system. CSI TriSano™ 2.1, available in Q4 2009, will have an additional class of administrator that can only manage the accounts in the geographic and non-geographic entities the administration account is assigned to.

1.3.4.4 User and Role Management

1.3.4.4.1 System must support the ability to list user accounts and sort this list in ascending and descending order by user ID (e-mail address), account status (active, inactive, etc.), and user role at a minimum.

Yes. A system administrator may sort user accounts by user id and account status. Since a user can have more than one role in more than one jurisdiction, sorting by role is not included.

1.3.4.4.2 System must allow a user (ID) to consist of an e-mail address. User id and/or e-mail address should not be the primary key and/or foreign keys to any table.

Yes. A CSI TriSano™ user id can consist of an email address. The user id is not the primary key. Primary keys are system generated.

1.3.4.4.3 System must support the ability to export the list of user account IDs, account status, and user roles in a (CSV) formatted file.

Yes. CSI TriSano™ Core User accounts are included in the data warehouse and a report can be created to export them to CSV.

1.3.4.4.4 System must allow the system administrator to define new role groups or role classes without vendor involvement. For example, one class of roles could be "Public Health" and another "Private Sector".

Yes. CSI TriSano™ provides support for the system administrator to define new user roles.

1.3.4.4.5 System must allow the system administrator to define new user roles without vendor involvement.

Yes. CSI TriSano™ allows the administrator to define new user roles through an easy-to-use web interface.

1.3.4.4.6 System must allow the system administrator to assign system rights and privileges to user roles and/or role groups without vendor involvement.

Yes. CSI TriSano™ allows the administrator to assign privileges to user roles through an easy-to-use web interface.

1.3.5 General System Functions

1.3.5 General System Functions

1.3.5.1 System must guide the user through the desired process by suggesting next steps.

Yes. The CSI TriSano™ tabbed interface guides the user through the process of creating a new event or updating an existing one. The field level help, integrated disease forms, and context sensitive questions can be used to enhance this capability further.

1.3.5.2 System must allow flexibility in the order in which participant data are entered and allow the user to save screen data that maybe not have all fields completed.

Yes Users can enter data in any order they wish CSI TriSano™ allows the user to save screen data that does not have all fields completed

1.3.5.3 The user interface must use industry standard navigational methods and offer the user the option of using the mouse, keyboard, or menu navigation.

Yes CSI TriSano™ uses industry standard navigational methods The user can navigate with the mouse, keyboard, or menus A CSI TriSano™ user can choose between a tabbed or non-tabbed interface and can define keyboard shortcuts for commonly performed tasks

1.3.5.4 Navigation through each field on a screen must be consistent and in the order of presentation.

Yes Navigation through fields on the CSI TriSano™ screen are consistent and in the order of presentation

1.3.5.5 Fields on input screens should be entirely visible. The system must avoid forcing the user to scroll to see additional information. If the user is forced to scroll to see additional information, there must be instructions on the screen prompting them to do so.

Yes CSI TriSano™ provides both a tabbed and non-tabbed user interface The tabbed interface minimizes the amount of scrolling that user must do Whenever a user needs to scroll to see all the questions or other information this is noted by the presence of a scroll bar on the right side of the screen

1.3.5.6 System must clearly indicate to the user what fields are required. Required fields must be configurable by the system administrator.

Yes CSI TriSano™ shows required fields in a different color on the screen

1.3.5.7 System should use attention-focusing features, such as color and highlights, whenever possible.

Yes The CSI TriSano™ user interface uses attention-focusing features such as color and highlights for required fields and validation errors

1.3.5.8 System must maintain the same "look and feel" across modules, both in screen and menu design.

Yes CSI TriSano™ maintains the same 'look and feel' across modules both in screen and menu design

1.3.5.9 System should minimize the use of pop-up boxes for input of additional information.

Yes CSI TriSano™ does not use pop-up boxes for input of additional information

1.3.5.10 The screen elements must include descriptive text on the screen or through the use of "tool tips" that appear when the user hovers over a symbol, icon, or button.

Yes CSI TriSano™ supports field-level help for every field in the system, whether it is a 'core' data field that ships as part of the product, or a data field added as part of a disease-specific form This field level help is accessed by hovering over a ? icon next to the date entry field

1.3.5.11 The user interface should carry critical investigation information from screen to screen, e.g., patient name, when possible.

Yes CSI TriSano™ carries critical investigation information, such as patient name or contact name and patient name from screen to screen

1.3.5.12 The user interface will present drop down boxes for selection lists. Lists should be searchable through the use of initial characters.

Yes CSI TriSano™ uses drop down boxes for selection lists These boxes are searchable through the use of initial characters CSI TriSano™ also uses a type ahead search capability for fields that support a list of values that are unknown This feature help ensure data integrity and minimizes duplicates

1.3.5.13 Tabs on tab panels should not re-arrange as the user selects a tab. Placement of tabs should reflect the workflow.

Yes The tabs on the CSI TriSano™ events do not rearrange as a user selects a tab The placement of the tabs reflects and supports the workflow

1.3.5.14 System will have an on-line help for all functional areas. The on-line help should be context sensitive, in that it directs the user to the documentation pertaining to the current screen. The on-line help should be searchable by word

or phrase. On-line help is context sensitive.

Yes. CSI TriSano™ provides on-line help for all functional areas It is searchable by phrase or work

1.3.5.15 All screens must provide the user with a cancel function, which will take the operator back to a menu or other convenient point. If information has been entered onto the screen, the user will be presented with an option to save the information, if possible.

Yes All CSI TriSano™ screens allow the user to return to the user's dashboard as well as menus and other functions of the product. If the user has entered data that has not been saved the system prompts the user with a message and an option to save the information before continuing

1.3.5.16 System will be highly configurable by the system administrator. The system administrator must be able to design, develop, and implement new functionality and features without vendor-based assistance or hard coding by the vendor. West Virginia modifications and custom configurations must be maintained if a new version or upgrade is deployed.

Yes. The CSI TriSano™ license/subscription agreement addresses this. In addition, the CSI TriSano™ Form Builder provides the system administrator with the ability to customize the user experience with additional disease specific requirements Custom configurations are maintained with patches and upgrades

1.3.5.17 System must be based on a visual model manager for easy configuration changes without source code changes.

Yes CSI TriSano™ is highly configurable and is designed to not require source code changes (although this is permitted with the CSI TriSano™ license) CSI TriSano™ takes a different design philosophy than the visual model manager approach favoring an approach that consists of management tools and the Form Builder This approach has proven successful in getting CSI TriSano™ deployments up and running quickly

1.3.6 Disease Investigation Functionality

1.3.6 Disease Investigation Functionality

1.3.6.1 Address Functions

1.3.6.1.1 System must collect and store patient address separately from investigation address.

Yes The CSI TriSano™ Form Builder can be used to collect and store patient address information separately from investigation address

1.3.6.1.2 System must automatically attempt to assign cases to a defined jurisdiction based on the stored patient address, unless an alternate investigation address is specified. If an alternate investigation address is supplied, the system must assign the case to a defined jurisdiction based on the investigation address.

CSI TriSano™ provides an easy to use routing capability to allow system users to route cases or contacts of cases to a jurisdiction based on either the patient address or an alternative investigation address that is part of a disease form. Access to cases and contacts may also be granted to other jurisdictions via routing as well (e g jurisdiction of residence vs jurisdiction of investigation)

1.3.6.2 Aggregate Case Collection Capabilities

1.3.6.2.1 System must support the reporting of aggregate case counts for certain conditions identified by the system administrator by jurisdiction.

Yes CSI TriSano™ AVR supports the reporting of aggregate case counts for certain conditions identified by the system administrator by jurisdiction as well as other measures

1.3.6.2.2 System must allow jurisdiction staff to enter and edit current and previous aggregate case counts as needed.

Yes. Meta data tables and data can be added to the data warehouse with current and previous aggregate case counts for report generation. Currently this approach is used to bring population data into the data warehouse.

1.3.6.3 Auditing Capabilities

1.3.6.3.1 System must support strong auditing controls. The investigation audit log must track the following events: view, export, modify (with old and new values for all questions where value auditing has been enabled), report, NETSS (The National Electronic Telecommunications System for Surveillance) export, and CDC (Centers for Disease Control and Prevention) electronic message with the associated user ID, date, and time that the event occurred. Migrate the NETSS export as the NETSS legacy data format specifications will be replaced with PHIN Message Mapping Guides as they become available.

Yes. Administrative notes are created for event creation, edit, routing, contact creation, contact to morbidity event conversion, extra-jurisdictional view, and ELR lab event matching. Currently, old and new value difference where value auditing has been enabled and NETSS export is not captured. NETSS legacy data format specifications will be replaced with PHIN Message Mapping Guides as they become available.

1.3.6.3.2 System must provide access to the audit log in a graphical user interface within the system that permits sorting by any field header, printing, and exporting in (CSV) format.

Yes. The audit log is available in the graphical user interface and permits sorting by administrative, clinical, or all note types. Optional printing is supported for administrative Notes and clinical notes. CSV export of the audit log is supported by CSI TriSano™ AVR.

1.3.6.3.3 System must provide a mechanism to mask audit entries created by public health users from non-public health users.

CSI TriSano™ provides clinical and administrative notes. Users may mask administrative notes by selecting only clinical notes. Masking of public health from non-public health users will be added in CSI TriSano™ 2.1 available in Q4, 2009.

1.3.6.4 De-Duplication of Patients and Investigations

1.3.6.4.1 System must provide automated patient de-duplication functionality to users with appropriate permissions. This function must identify potential duplicate patients and allow the authorized user to choose values from each duplicate patient record to be merged into a new patient record. The system will not automatically merge patients without user review and approval.

Yes. CSI TriSano™ supports merge, purge, and de-dupe of people.

1.3.6.4.2 System must be able to unmerge any patient records that were previously merged, maintaining the data integrity and history of each.

Yes. CSI TriSano™ supports unmerge of people.

1.3.6.4.3 System must provide automated de-duplication logic to identify investigations that may be for the same patient and disease condition. An authorized user will be presented with a list of possible duplicate investigations for manual review. The user will determine which investigation should replace another.

Yes. CSI TriSano™ has the following features that provide similar capability:

- Duplicate prevention for creation of morbidity events
- Soft delete
- Shallow copy (demographics only)
- Deep copy (demographics, clinical, reporting, labs, notes, disease forms)
- Contact creation search

1.3.6.4.4 System must be able to reverse any previous investigation replacement, maintaining the data integrity and history of each.

Yes. CSI TriSano™ supports the following features that provide this capability:

- Soft delete
- Shallow copy (demographics only)
- Deep copy (demographics, clinical, reporting, labs, notes, disease forms)

1.3.6.5 General Capabilities

1.3.6.5.1 System must provide a way to create non-human cases to support investigations (e.g., rabies, West Nile) that may originate with an animal.

Yes. Any disease condition, such as rabies or West Nile, can be defined within CSI TriSano™ The integrated Form Builder component can be used to extend the capabilities for disease-specific questions One CSI TriSano™ customer uses it for Lead Surveillance.

1.3.6.5.2 System must track legacy question data and make this data available to end users. For example, if a question on a specific disease questionnaire is replaced or dropped, the old question and its associated responses must remain available for query, export, and reporting purposes when accessing data for a timeframe during which the legacy data was relevant.

Yes. CSI TriSano™ maintains legacy question data in the system If a question on a specific disease questionnaire is replaced or dropped, the old question and its associated responses remain available for query export and reporting purposes when accessing data for a timeframe when the legacy data was relevant.

1.3.6.5.3 System must provide integrated e-mail alerting and notification functionality with triggers for time, jurisdiction, and disease condition(s). Authorized users should only receive alerts for cases to which they have access. The alert e-mail must not contain any sensitive information including patient name, address, or disease condition.

Yes CSI TriSano™ will provide this function with availability in CSI TriSano™ 2 1 in Q4 2009

1.3.6.5.4 The system must provide a warning to a user upon investigation submission if the user will lose access to the case for any reason (out-of-jurisdiction investigation address, user is unauthorized for disease condition, etc.).

Yes A user will not lose access to a case upon investigation submission. When a case or contact in CSI TriSano™ is routed to another jurisdiction, the system displays a message to the user if they no longer have access to the case or contact During routing the user can request that they continue to have access to the case or contact.

1.3.6.5.5 System must allow any list presented to the user to be sorted in ascending or descending order by any displayed field by clicking the column header.

Many of the list presented within CSI TriSano™ can be sorted in ascending sequence

1.3.6.5.6 System must allow any presentation list to be exported in (CSV) format.

Yes Using the CSI TriSano™ search and export facilities and data warehouse component, any information that is part of a presentation list can be exported in CSV or used as the basis of a report chart or analysis.

1.3.6.5.7 System must support multiple case status options including, at a minimum:

- ***Confirmed***
- ***Not a Case***
- ***Probable***
- ***Suspect***
- ***Unknown***

Yes CSI TriSano™ supports multiple case status options at both the local and state levels for the following:

- Confirmed
- Not a Case
- Probable
- Suspect
- Unknown
- Chronic carrier
- Discarded

1.3.6.5.8 System must support multiple levels of public health investigation. This includes, at a minimum:

- ***private facilities (such as hospitals and laboratories)***
- ***local public health***
- ***regional public health***
- ***state public health***

Yes CSI TriSano™ supports levels of public health investigations through configurable jurisdictions Private facilities are currently considered as jurisdictions until they explicitly named as private facilities in CSI TriSano™ 2.1 in Q4 2009

1.3.6.6 Notes and File Attachments

1.3.6.6.1 System must allow users to attach files of any type to investigations. The maximum file size accepted cannot be less than one (1) megabyte.

Yes CSI TriSano™ allows users to attach files to case or contact investigations The maximum file size is greater than 1 MB

1.3.6.6.2 System must allow users to create investigation notes with a minimum length of 2,500 characters.

Yes CSI TriSano™ allows the creation of investigation notes that can be longer than 2,500 characters

1.3.6.6.3 System must allow the administrator to mask inappropriate investigation notes or attachments that were maliciously or mistakenly attached to an investigation without vendor involvement.

Yes Users can delete attachments Notes can be ~~struck through~~ but not deleted due to legal requirements in some states

1.3.6.6.4 System must provide a way to mask notes and attachments created by public health users from non-public health users.

Yes Currently users either edit an event or not. All notes have a system generated user name attached to them Masking of public health from non-public health users will be added in CSI TriSano™ 2.1 available in Q4 2009

1.3.6.7 Printing Capabilities

1.3.6.7.1 System must provide the user with a method of producing a complete printed version of the case investigation with all notes and the filenames of any attachments.

Yes CSI TriSano™ provides printing capability for a case, contact or any other event. The complete printed version contains all notes and all filenames of any attachments There are several print options that allow users to print all of a case, sections, case contacts etc

1.3.6.7.2 System must provide the user with a method to print a completely blank disease questionnaire for field data collection.

Yes CSI TriSano™ provides a user with a method to print a completely blank disease questionnaire for field data collection

1.3.6.7.3 The user should be able to print a case investigation, even if the data entry is incomplete.

Yes CSI TriSano™ permits printing a case investigation even if data entry is incomplete

1.3.6.7.4 System must be able to generate printed correspondence that can be sent to the following:

- ***a physician requesting more data about subject***
- ***a subject requesting more data***
- ***a local health department or other entity requesting more data about subject***

Yes A configurable Letters/Correspondence enhancement is available in CSI TriSano™ 2.1 in Q4 2009

1.3.6.8 Spatial Visualization

1.3.6.8.1 System must provide integrated address standardization, cleaning, and geocoding functionality to accurately map physical addresses to latitude/longitude coordinates.

Yes CSI TriSano™ includes a geocoding feature to verify addresses and update latitude/longitude coordinates

1.3.6.8.2 System must provide integrated, Web-based geographic information system (GIS) data visualization/mapping functionality to the end user.

Yes. CSI TriSano™ provides integrated web-based data visualization/mapping functionality to the end user. The geocoding and mapping capabilities of CSI TriSano™ can map a patient's address a patient's and all contact's addresses, or all addresses of events that meet a set of search conditions specified by the user

1.3.6.9 Query Capabilities

1.3.6.9.1 System must provide an integrated query ability to find, at a minimum, matching investigations by patient name, jurisdiction, facility, disease condition, disease group, investigation status, disease onset date, disease report date, and case status.

Yes. The CSI TriSano™ search and AVR facilities provide an integrated query ability to find matching investigations by patient name, jurisdiction facility disease condition disease group investigation status disease onset date disease report date and case status among many others

1.3.6.9.2 System must provide an integrated disease question query to find matching investigations by using criteria based on disease questions. For example, if a disease questionnaire asks the question "Please select all symptoms below: Diarrhea, Vomiting, Fever, and Trouble Breathing", the user should be able to query that questionnaire for all cases that exhibited vomiting.

Yes All the information from the CSI TriSano™ base system and the forms created using the CSI TriSano™ Form Builder are stored in the data warehouse so that user may query on any combination of the data they want. In the example given a user could query and find all cases that exhibited vomiting.

1.3.6.9.3 The results of any query must be exportable in (CSV) format.

Yes. In CSI TriSano™ Core the result of any query can be exportable in CSV format CSI TriSano™ AVR supports export to CSV, Excel PDF RTF (Word) and HTML.

1.3.6.9.4 System must allow users to define and store custom queries for easy re-use.

Yes, CSI TriSano™ AVR provides the capability to define and store custom queries for re-use

1.3.7 Reports and Data Export

1.3.7 Reports and Data Export

1.3.7.1 Centers for Disease Control and Prevention (CDC) Exports

1.3.7.1.1 Systems must produce a CDC National Electronic Telecommunications System (NETSS) compatible file for weekly transmission to the CDC. This would include core and extended record data for specific conditions and the calculation of the correct Morbidity and Mortality Weekly Report (MMWR) week and year based on established CDC algorithms. Please request a copy of the NETSS Record Layout manual, if needed. Migrate the NETSS export as the NETSS legacy data format specifications will be replaced with PHIN Message Mapping Guides as they become available.

Yes CSI TriSano™ produces a CDC National Electronic Telecommunications System (NETSS) compatible file for weekly transmission to the

CDC, including core and extended record data for specific conditions and the calculation of the correct MMWR week and year based on established CDC algorithms. CSI TriSano™ comes pre-configured with data pre-loaded for CDC export and is configurable via the CSI TriSano™ Administration Console and Form Builder

1.3.7.1.2 System must be able to produce NETSS deletion and verification records as appropriate. System must migrate to meet the needs of the new PHIN message mapping guides as they become available

Yes CSI TriSano™ can produce NETSS deletion and verification records as appropriate CSI TriSano™ will migrate to PHIN message mapping guides as they become available.

1.3.7.1.3 System must allow the administrator to define the MMWR week used for the NETSS export as the report date - date that the investigation was entered into the system. Migrate all NETSS functionality as the NETSS application and legacy data format specifications will be replaced with PHIN Message Mapping Guides as they become available.

Yes CSI TriSano™ allows the administrator to define the MMWR week used for the NETSS export date as the report date – date that the investigation was entered into the system

1.3.7.1.4 System must produce electronic messages that are compatible with finalized CDC messaging guides for specific disease conditions. See http://www.cdc.gov/phin/resources/guides.html.

Yes CSI TriSano™ will produce electronic messages that are compatible with finalized CDC messaging guides for specific disease conditions with availability in CSI TriSano™ 2 1 in Q4 2009

1.3.7.2 General Report and Export Functions

1.3.7.2.1 System must have an extendable report functionality that allows for the addition of new reports.

Yes CSI TriSano™ has extendable report functionality that allows for the addition of new reports.

1.3.7.2.2 System must allow the system administrator to create standard "canned" reports that can be made available to users.

Yes CSI TriSano™ allows the system administrator to create standard 'canned" reports that can be made available to users

1.3.7.2.3 System will restrict access to reports based on user roles.

Yes CSI TriSano™ reports can be restricted to reports by user roles

1.3.7.2.4 System must provide screen preview and printer options for all reports.

Yes. CSI TriSano™ provides screen preview and printer options for all reports

1.3.7.2.5 System will provide the capability to apply suppression rules for minimally aggregated data.

Yes. CSI TriSano™ is capable of the application of suppression rules for minimally aggregated data as users can create their own reports via web based ad hoc reporting or rich pixel perfect report designer

1.3.7.2.6 System must provide for the selective export of disease question data by an individual user, restricted by the user's privileges, in (CSV) text formats for further analysis in third party tools.

Yes. CSI TriSano™ provides for the selective export of disease question data by an individual user restricted by the user's privilege in CSV text and other formats

1.3.7.2.7 System must export data and data field names in a human readable form based on the disease questionnaire instead of coded values.

Yes CSI TriSano™ exports data and data field names to the data warehouse for access by users in a human readable form based on the disease questionnaire

1.3.7.3 Specific Reports and Exports

1.3.7.3.1 System must support an administrative report that can track timeliness between all levels of investigation a

display the average number of days that have elapsed between investigation levels. This report will allow the user to select all or specific jurisdictions, investigation levels, and an onset/report date range and then display the average number of days by disease condition that an investigation is held at each level.

Yes The CSI TriSano™ AVR supports an administrative report that can track the timeliness between all levels of investigation and display the average number of days that have elapsed between investigation levels The Morbidity Event Data Cube has measures for onset to diagnosis onset to report onset to investigation start etc

1.3.7.3.2 System must also export the specific date data used to calculate for number of days specified in 1.3.7.3.1 for further analysis. For example, an epidemiologist should be able to specify an onset/report date range, disease condition(s), and jurisdiction(s) and then be presented with a data export in (CSV) format containing the last date that each investigation level handled the case in a line listing with other variables including, at a minimum, investigation ID.

Yes The data in this report can be exported in CSV format for further analysis

1.3.7.3.3 System must provide a "line listing" report that can provide all patient demographic information, disease condition, onset and report date, jurisdiction, region, investigation status, and case status in CSV format.

Yes CSI TriSano™ AVR can provide a 'line listing' report with all patient demographic information, disease condition onset and report date jurisdiction region investigation status and case status This report can be exported in CSV and other formats

1.3.8 Electronic Laboratory Reporting (ELR)

1.3.8 Electronic Laboratory Reporting (ELR)

1.3.8.1 Systems must be capable of importing Health Level 7 (HL7) 2.3.x and 2.5.x messages.

Yes CSI TriSano™ is capable of importing HL7 2 3 x and 2 5 x messages

1.3.8.2 System must be easily modifiable to accept future HL7 versions as they are adopted and approved by the CDC.

Yes CSI TriSano™ will support future HL7 versions as they are adopted and approved by the CDC

1.3.8.3 System shall parse all required and any optional data fields as defined by the CDC implementation guidelines at http://www.cdc.gov/phin/resources/guides.html.

Yes CSI TriSano™ supports core data for ELR consisting of LOINC, SNOMED and HL7 and will support the implementation guidelines in CSI TriSano™ 2 1 planned for Q4 2009

1.3.8.4 Systems must process all messages received, even if these messages are in HL7 batch format.

Yes CSI TriSano™ supports HL7 batch format

1.3.8.5 Systems must support Logical Observation Identifiers, Names and Codes (LOINC) and Systematized Nomenclature of Medicine (SNOMED) code assignments by individual facility.

Yes CSI TriSano™ supports LOINC and SNOMED code assignments

1.3.8.6 Systems must support local code assignments by each facility.

Yes CSI TriSano™ supports local code assignment and assumes that an integration tool like Mirth or Orion Rhapsody does message normalization

1.3.8.7 Systems must allow the system administrator to view, modify, and remove LOINC, SNOMED, and local facility code assignments without vendor intervention.

Yes. CSI TriSano™ allows the system administrator to view modify and remove LOINC SNOMED and local facility code assignments without vendor intervention

1.3.8.8 System must possess logic to identify problematic HL7 messages and present these for human review without detriment to system stability. The system will notify a designated user or users if a message cannot be parsed and hold the message in a separate queue for viewing to determine and resolve the problem, if possible. For example, messages

that do not comply with HL7 syntax or have missing or unrecognized LOINC, SNOMED, or local facility codes should be manually reviewed.

Yes CSI TriSano™ can identify problematic HL7 messages and present them for human review without detriment to system stability.

1.3.8.9 System must possess logic to identify ELR messages that could be associated with existing investigations. An authorized user will be able to view these messages and process them as the start of a new case investigation or append them to an existing case as a secondary laboratory report.

Yes CSI TriSano™ can identify ELR messages that could be associated with existing investigations An authorized user will be able to view these messages and process them as the start of a new case or append them to an existing case

1.3.8.10 System must identify duplicate ELR messages and send a notice to a designated user or users that a message has been received and is awaiting manual disposition.

Yes Duplicate ELR messages are held in the ELR Management staging area and are clearly identified Notices will be sent to designated users in CSI TriSano™ 2.1 available in Q4 2009

1.3.8.11 System must be able to send a notification to the message sender through Public Health Information Network Messaging System (PHINMS) that messages were received and parsed or rejected.

Yes. CSI TriSano™ accepts ELR messages through a simple HTTP interface Through integration, PHINMS can be configured to send a notification to the message sender through PHINMS indicating that messages were received and parsed or rejected

1.3.8.12 System must be able to poll folders to retrieve ELR messages.

Yes CSI TriSano™ accepts ELR messages through a simple HTTP interface Through integration PHINMS can be configured to receive messages and then post them to CSI TriSano™

1.3.8.13 System must integrate with CDC's PHINMS and Rhapsody/Message Subscription Service (MSS) for message receipt and acknowledgment.

Yes. CSI TriSano™ accepts ELR messages through a simple HTTP interface PHINMS or Rhapsody can be configured to receive messages and then post them to CSI TriSano™

1.3.8.14 System must retain a log of all ELR transactions and the ultimate result of the transaction (successfully imported, error, manual review), etc. This log will be readily available in (CSV) format to the system administrator for review and analysis.

Yes. CSI TriSano™ retains a log of all ELR transactions and the ultimate result of the transaction.

1.3.8.15 System must allow alerts to be generated informing appropriate users that new cases have been received via ELR.

Yes CSI TriSano™ 2 1 will generate alerts informing appropriate users that new cases have been received via ELR and be available in Q4 2009

1.3.8.16 Once an HL7 message is processed, information from this message must automatically populate the appropriate disease questionnaire for that disease condition with all available information.

Yes CSI TriSano™ supports core data for ELR consisting of LOINC, SNOMED, and HL7 CSI TriSano™ 2 1 will automatically populate the appropriate disease questionnaire for that disease condition with all available information in Q4 2009

1.3.8.17 System must only display ELR message content to those users who are approved to view that content based on disease condition restrictions (e.g., a user authorized to view foodborne disease conditions should never be able to view a tuberculosis lab report even if its associated with a patient that also has a foodborne condition).

Yes. CSI TriSano™ supports jurisdictional restrictions Disease condition restrictions will be supported in CSI TriSano™ 2 1 available in Q4 2009

1.3.9 Installation and Training

1.3.9 Installation and Training

1.3.9.1 The vendor will provide planning and implementation services as necessary.

Yes Collaborative Software Initiative will provide 160 hours planning and implementation services as requested in the RFQ. Additional planning and implementation services if necessary. are available from Collaborative Software Initiative charged on an hourly basis plus travel and living

1.3.9.2 The successful vendor must demonstrate the ability to import legacy NETSS data into the system.

Yes CSI TriSano™ provides a Web API that can be used to import legacy NETSS data into the system

1.3.9.3 The vendor must provide a mechanism to import and map existing WVEDSS data into the new system.

Yes CSI TriSano™ provides a Web API that can be used to import and map corresponding WVEDSS data into the new system

1.3.9.4 The vendor will train 25 state and regional personnel in system administration and user functions. A training room facility with computer workstations will be provided on site.

Yes Collaborative Software Initiative will provide 40 hours of on site training as requested in the RFQ This time can be used to train 25 state and regional personnel in system administration and user functions

1.3.9.5 The vendor must provide detailed installation, administration, user manuals a data dictionary and an entity relationship diagram one copy of each in paper and electric formats with rights for the state to reproduce and or modify based on need.

Yes Collaborative Software Initiative will provide this documentation as specified in the RFQ

1.3.10 Maintenance and Technical Support

1.3.10 Maintenance and Technical Support

1.3.10.1 Provide annual maintenance support services to include all necessary software patches/fixes, updates due to changes in legal requirements, and any increased functionality brought about by the above. Maintenance costs should be included in the proposal for the first year and provided separately for years two and three.

Yes. Collaborative Software Initiative will provide annual support services to include all necessary software patches/fixes and any increased functionality brought about by the above As requested in the RFQ Collaborative Software Initiative has included maintenance costs for each of the first three years

1.3.10.2 Provide technical support services for the system to DSDC personnel. Technical support should be included in the proposal for the first year and provided separately for years two through three by year. Telephone support services shall be provided within 4 business hours, Monday through Friday 8:30 am to 5:00 pm Eastern Time, excluding United States federal holidays.

Yes Collaborative Software Initiative will provide technical support services to DSDC personnel. As requested in the RFQ technical support costs for each of the first three years are included in the proposal

1.3.11 Compatibility

1.3.11 Compatibility

1.3.11.1 Provide a system that uses a three-tier design that separates the Web-based user interface, application logic, and database components.

Yes. CSI TriSano™ uses a three-tier design that separates the web-based user interface application logic and database components

1.3.11.2 Utilize Hewlett Packard 64-bit Itanium-based system hardware running 64-bit Microsoft Windows Server and/or HP-UX.

CSI TriSano™ is known to run on all major Linux distributions (eg Novell SLES) Solaris and OS X CSI will test on HP-UX post award if an operating system currently supported by CSI TriSano™ is not an option

1.3.11.3 Utilize Oracle database software in a real-time clustered environment.

CSI TriSano™ supports PostgreSQL in a Highly Available configuration utilizing Bucardo. PostgreSQL is a very capable database that is popular in Public Health around the world due to its deployment flexibility and cost PostgreSQL is similar to Oracle in feature and function and often replaces Oracle or complements Oracle

1.3.11.4 Utilize Apache Tomcat or Oracle Application Server software.

Yes. CSI TriSano™ utilizes Apache Tomcat

1.3.11.5 Utilize Microsoft IIS or Apache Webserver.

Yes. CSI TriSano™ utilizes Apache Webserver

1.4 Other Vendor Requirements

1.4 Other Vendor Requirements:

1.4.1 The vendor must provide detailed evidence of other related experience with PHIN-compliant electronic disease surveillance/ELR systems and additional capabilities in providing the required services. The vendor must provide details of the background of the company/organization, the size and location of the company/organization, and the experience, capabilities, and resources of the company/organization which qualify and enable them to complete the project.

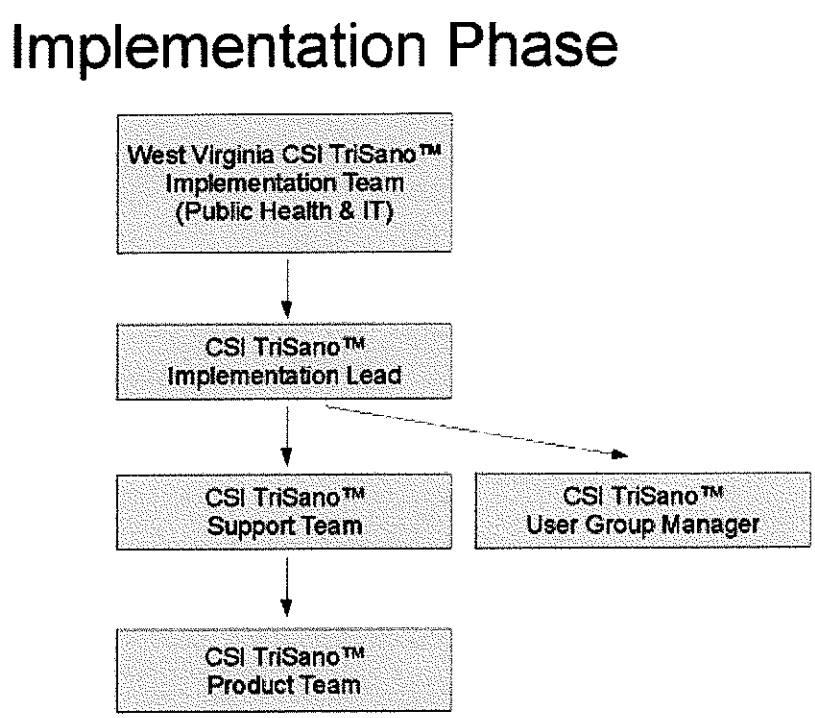
CSI TriSano™ was deployed in January 2009 across Utah, including Utah Department of Health, Department of Technology Services, thirteen local health departments and twenty-nine counties protecting the public's health by preventing avoidable illness and premature death.

CSI TriSano™ has been designed and developed by Collaborative Software Initiative to meet CDC Public Health Information Network (PHIN) security and privacy standards CSI TriSano™ meets state and local public health agency surveillance and epidemiological needs, including receiving or entering disease reports, case investigations, case management (including treatment, prophylactic treatment, or vaccination; contact identification assessment and management; and follow-up to assess outcomes), outbreak investigation and management analysis and visualization of the data and reporting to CDC or other public health agencies

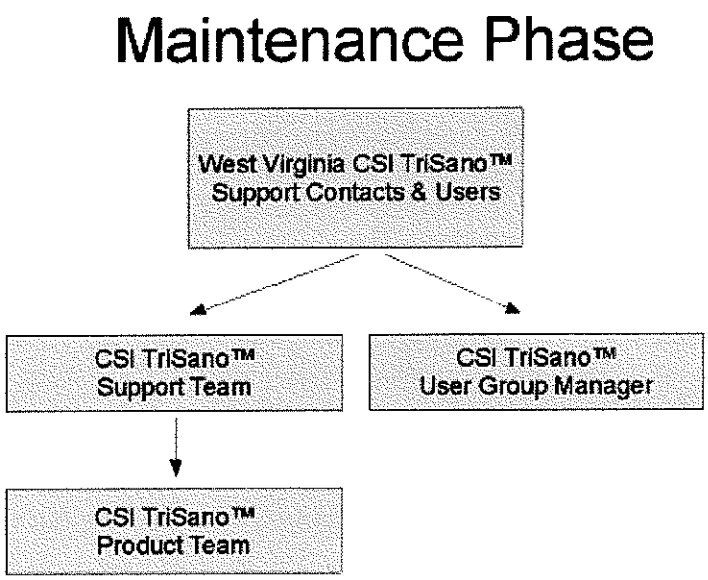
Collaborative Software Initiative was founded in 2007 by Stuart Cohen, a veteran IT executive and former chief executive officer at the Open Source Development Labs. CSI introduces a market-changing process that applies collaborative methodologies to building and delivering software at a fraction of the cost of traditional methods CSI is a privately held company headquartered in Portland, Oregon with employees located throughout the United States. CSI's combined technical experience includes over 150 years of providing both development and support expertise to mission critical systems including but not limited to surveillance and outbreak management application with the State of Utah, multinational online banking at Credit Suisse, Foreign Exchange and money transfer at Bankers Trust flight test systems for the US Navy, trading communications at the New York Stock Exchange, power generation at Consolidated Edison, property and casualty insurance at Liberty Mutual, EHR development at Noteworthy Medical Systems email development and support at AOL

1.4.2 The vendor must provide a functional organizational chart indicating the proposed project structure. The vendor should provide job descriptions and resumes for the key project staff and any other staff who will work on any part of this contract, specifying experience with the vendor and relevant education, experience, and training. The vendor should describe the process if any key project staff is replaced.

Implementation Phase



Maintenance Phase



The process for replacing key project staff is clearly understood and documented by CSI. The leaders for any of our projects are backed by their

colleagues who not only provide coverage for CSI s customers when they are not available (vacations, illness, travel, etc.) but provide depth of expertise and multiple hands. Collaborative Software Initiative brings substantial expertise in the underlying technologies of CSI TriSano™. As previously described, CSI s combined technical experience includes over 150 years of providing both development and support expertise to mission critical systems including but not limited to surveillance and outbreak management application with the State of Utah, multinational online banking at Credit Suisse, Foreign Exchange and money transfer at Bankers Trust, flight test systems for the US Navy, trading communications at the New York Stock Exchange, power generation at Consolidated Edison property and casualty insurance at Liberty Mutual EHR development atNoteworthy Medical Systems email development and support at AOL.

See Addendum C for detailed resumes.

1.4.3 The vendor must provide at least three (3) vendor references from similar projects within the past three (3) years that include a description of the work performed for each reference.

Dr Robert Rolfs

State Epidemiologist

State of Utah

CSI TriSano™ development implementation deployment and support

Brian Hatch

Epidemiologist

Davis County

CSI TriSano™ deployment and support

Thomas Schreffler

Principal Software Engineer

Tervela, Inc

CSI FeedHandler development implementation deployment and support

1.4.4 The vendor must provide a proposed work plan, discussing its approach to providing the products and services required to fulfill the terms of this RFQ. The work plan must demonstrate a clear grasp of the overall project and services to be provided with specific action steps that will guarantee the successful provision/completion of the project.

CSI TriSano™ is a highly configurable product The details of the full work plan to deploy CSI TriSano™ into production depend on several factors such as the details of the current WVEDSS deployment, State of West Virginia Public Health and IT time availability, skills etc There are a number of resources that will help the State of West Virginia including:

- 160 hours of Technical Services provided per RFQ request that include
  - Implementation Planning
  - Installation
  - Configuration and Customization
  - Documentation Development
- CSI TriSano™ Planning and Implementation Guide
- TriSano™ Community Implementation Plans
- TriSano™ Community Form Builder Forms

The details of the plan CSI envisions can be found in sections 1 4 7 and 1 4 8 below

1.4.5 The vendor must use a formal and documented project management method to develop the work plan that includes the tasks, completion criteria for the tasks and a comprehensive project plan.

Yes. Collaborative Software Initiative has adopted and uses a formal and documented project management method and the supporting tools to develop the work plan that includes the tasks completion criteria for the tasks and a comprehensive project plan

1.4.6 The project management method must provide the State with a means of determining if the statement of work is being accomplished as scheduled with acceptable deliverables.

Yes Collaborative Software Initiative s project management method will provide the State with a means of determining if the statement of work is being accomplished as scheduled with acceptable deliverables.

1.4.7 The vendor must provide a schedule of proposed project milestones, tasks and deliverables to support each

phase of the project.

Phase I: Software acquisition and if necessary tweaking of current hardware/network/software.

Phase II: Vendor on-site to work with state staff to system installed and do state personnel train the trainer (administration, configuration and usage)

Phase III: User acceptance testing done by Infectious Disease and Epidemiology Program (IDEP) staff, regional epidemiologists, Information System Manager II (ISM-II) and others. After system usage and any necessary minor system adjustments are done, signoff occurs and projects transitions into maintenance.

Phase IV: Maintenance

Scheduled of Proposed Project Milestones are as follows:

Phase	Estimated Duration	Milestones/Deliverables
Phase I	1 month	• State of West Virginia acquires software and tweaks hardware/network/software OR CSI configures West Virginia SaaS environment
Phase II	2 months	• CSI completes train the trainer classes (Month 2) • CSI and State of West Virginia completes CSI TriSano™ installed in required envrionments (Month 2) • State of West Virginia completes CSI TriSano™ Form Builder form design/development using community contributed forms as a starting point (Month 3) • State of West Virginia completes CSI TriSano™ AVR ad-hoc report design/development (Month 3) • CSI Support addresses any defects discovered in Phase II (Month 3)
Phase III	2 months	• User acceptance testing complete (Month 4) • Minor system adjustments complete (Month 5) • Production release complete (Month 5) • Maintenance Transition complete (Month 5)
Phase IV	2 years, 7 months	• State of West Virginia: Ongoing CSI TriSano™ Form Builder form design/development for emergent diseases/conditions • State of West Virginia: Ongoing CSI TriSano™ AVR ad-hoc report design/development as new reports needed • CSI: Fufill subscription (Level 1-3 support knowledge base, deliver support patches QA deliver 2 X upgrades)

1.4.8 The work plan must list all tasks needed to accomplish the statement of work. The tasks to be included are:

Project management

- West Virginia will provide project management
- CSI will provide a CSI TriSano™ West Virginia Implementation Lead who will work with the West Virginia CSI TriSano™ Implementation Team and coordinate with other CSI resources such as CSI TriSano™ Support Team and CSI TriSano™ User Group Manager

Project status review

- West Virginia will be responsible for project status review
- CSI will participate in project status review via the CSI TriSano™ West Virginia Implementation Lead and a CSI TriSano™ West Virginia Account Manager

Change management

- West Virginia will be responsible for project change management
- CSI will provide patches for defects identified by West Virginia
- CSI will provide 2 X upgrades

Application development

- CSI provides the CSI TriSano™ product

- CSI provides the CSI TriSano™ Web API that West Virginia may integrate with
- CSI will advise West Virginia as part of the the 160 hours of Technical Services provided per RFQ request
- West Virginia will provide integration application development
- West Virginia will be permitted to view and alter the CSI TriSano™ source code per the terms of the subscription license
    - Assistance in making changes are billed under a consulting agreement
    - West Virginia s source code changes to CSI TriSano™ will not be supported unless it executes and delivers to CSI the CSI Contributor Agreement and CSI accept the contribution and releases it for use by others in a patch or release

Programming and unit testing

- CSI programs and unit tests CSI TriSano™ (including the CSI TriSano™ Web API)
- West Virginia will program and unit test integration components

System testing

- West Virginia will be responsible for System testing
- CSI will resolve all agreed upon issues identified in CSI TriSano™ during System testing

User acceptance testing

- West Virginia will be responsible for User acceptance testing
- CSI will resolve all agreed upon issues identified in CSI TriSano™ during acceptance testing

Technical documentation

- CSI provides technical documentation for CSI TriSano™ including
    - Administration Guide
    - Implementation Guide
    - Runbook
    - Knowledge Base
    - Online technical notes
- West Virginia will provide Technical documentation for the West Virginia implementation

Technical training and skills transfer

- CSI will train and advise West Virginia as part of the the 160 hours of Technical Services provided per RFQ request

Transition plan

- West Virginia will be responsible for Transition plan
- CSI will advise West Virginia as part of the the 160 hours of Technical Services provided per RFQ request

Data conversion

- West Virginia will be responsible for data conversion

Data exchanges

- West Virginia will be responsible for data exchanges
- CSI provides CSI TriSano™
- CSI provides a Web API that West Virginia can integrate with
- CSI will advise West Virginia as part of the the 160 hours of Technical Services provided per RFQ request

Capacity planning

- West Virginia will be responsible for capacity planning
- CSI will advise West Virginia as part of the the 160 hours of Technical Services provided per RFQ request
- CSI will advise West Virginia as part of the subscription agreement

Change control process

- West Virginia will be responsible for the change control process
- CSI will provide patches for defects identified by West Virginia
- CSI will provide 2 X upgrades

Service level agreement methodology and review process

- West Virginia will provide Service level agreement for its users
- CSI will meet the Service level agreement outlined in the subscription agreement

On-going support during the warranty period

- CSI will meet the Service level agreement outlined in the subscription agreement

System issues reporting and resolution period

- West Virginia will be responsible for issues with integration, technical infrastructure etc.
- CSI will meet the Service level agreement outlined in the subscription agreement

Risk Management

- West Virginia is responsible for risk management
- CSI will advise West Virginia as part of the the 160 hours of Technical Services provided per RFQ request

1.4.9 The vendor must provide an unlimited user license to the State of West Virginia for the use of the electronic disease surveillance system. This license will allow unlimited use of the system by ALL system users at no charge. A copy of the proposed license agreement shall be provided prior to award.

Yes Collaborative Software Initiative will provide a license to the State of West Virginia Department of Health and Human Resources for the use of CSI TriSano™ as a part of the annual subscription agreement. CSI TriSano™ is priced based on state population, not the number of CSI TriSano™ users The CSI TriSano™ license allows unlimited use of the system by all system users at no charge CSI shall provide a copy of the proposed license agreement to the State of West Virginia prior to award

1.4.10 The vendor must provide a mechanism whereby all system source code is the property of or can be accessed by the State of West Virginia. Vendor shall include a description of the source code ownership/access provision, prior to award.

Yes The CSI TriSano™ license includes a source code provision CSI shall provide a copy of the proposed license agreement to the State of West Virginia prior to award

3.0 Vendor's Bid Quotation

3.0 Vendor's Bid Quotation

3.1 The vendor will include all costs necessary for all services and products pursuant to the terms of contract broken down by project milestones proposed in 1.4.6.

All costs necessary for all services are included on the Bid Quotation Worksheet

3.2 The vendor will provide separate annual maintenance and technical support costs.

The CSI TriSano™ annual subscription charge includes both annual maintenance and technical support costs

3.3 The vendor will document all third party software that is required for the successful completion of the project as an addendum to the bid (software tools, reporting tools, etc.). Although the DSDC may already have licenses for these software products, please provide a complete list.

See Addendum A for the complete list of third party tools required for a successful completion to the project

Addendum A to RFQ EHP90097 - Required third party software

Addendum A to RFQ EHP90097

The purpose of this addendum to is highlight all third party software that is required for the successful completion of this project.

Required third party software

Required third party software includes:

- Java
- PostgreSQL
- Apache Webserver
- Apache Tomcat
- Zabbix
- Puppet (Reductive Labs)

- Any client that can run either Mozilla Firefox 2 (or above) or Microsoft Internet Explorer 7 (or above) is supported
- Any major Linux distribution (eg, Novell SLES)
- Any web-based security subsystem (eg CA SiteMinder)

Addendum B to RFQ EHP90097 - Additional Information on solution

Addendum B to RFQ EHP90097

Additional Capabilities of CSI TriSano™

The purpose of this addendum is to further highlight to the State of West Virginia additional capabilities of CSI TriSano™ not set forth in RFQ EHP90097.

CSI TriSano™ includes many additional features that have not been discussed as part of our response to the State of West Virginia RFQ EHP90097 These include:

- **Support for events other than a case or CMR** - CSI TriSano™ supports contact events, encounters with patients and place exposures for patients. There can be multiple of each of these entered for a patient
- **Form Builder support for all event types** - The CSI TriSano™ Form Builder supports all event types Disease-specific forms, or questionnaires, can be created for any event type to support a single disease, a group of diseases, or all diseases In addition, these disease-specific forms can be created for a single jurisdiction or for all jurisdictions
- **Elevation of a contact to a case** - CSI TriSano™ supports elevating a case to a contact. All the information entered for the contact is used to update the newly created CMR The relationship between the contact that has been elevated to a CMR and the original patient is maintained
- **Contact Routing** - In addition to routing a CMR, CSI TriSano™ supports routing a contact to another jurisdiction or within a jurisdiction
- **Tasks and Repeating Tasks** - CSI TriSano™ allows a user to create tasks for a CMR or a contact A user may assign a task to themself or another user depending on their role A task can be a single task or a task that repeats daily weekly monthly or yearly for a specified time period.
- **Routing Queues** - In addition to routing a CMR or contact to an individual CSI TriSano™ supports the routing of a CMR or contact to a queue The system administrator can defined any queues needed. A queue is specific to a jurisdiciton.
- **CSI TriSano™ includes a user feedback feature** - Every screen in CSI TriSano™ includes a link for the user to provide feedback on CSI TriSano™ directly to Collaborative Software Initiative and the CSI TriSano™ development team This feedback is not meant to replace the normal CSI TriSano™ support structure but to enhance it
- **Availability of diseaes-specific forms** - CSI TriSano™ is supported by a strong user community at www.trisano org. More than 80 disease-specific forms have been donated to the community and are available for use with CSI TriSano™
- **Integrated Data Warehouse with Analysis, Visualization and Reporting capability** - CSI TriSano™ provides an integrated data warehouse complete with extraction/transformation/load capabilities from the CSI TriSano™ transaction system For analysis, visualization and reporting CSI TriSano™ provides an ad hoc query tool a sophisticated report designer and an OLAP component

CSI TriSano™ Form Builder

The CSI TriSano™ Form Builder is a unique feature to a disease surveillance and outbreak management system

CSI TriSano™ includes a powerful and flexible Form Builder component that allows public health officials to extend the capabilities of CSI TriSano™ by capturing additional information for existing or new public health situations. The Form Builder can be extremely useful during a disease outbreak, such as the recent H1N1 influenza virus It allows public health professionals to respond faster to quickly emerging or changing health events by putting the power of customization in their hands.
It allows you to capture additional information for each of the different event types maintained in CSI TriSano™, including:

- Cases, or CMRs
- Contacts
- Encounters
- Place Exposures

The Form Builder provides the ability to add additional questions to the existing CSI TriSano™ web-based tabbed interface Unless otherwise specified questions added using the Form Builder will appear on the Investigation tab for the event (CMR Contacts, etc). Questions can also be added:

- To existing tabs of the event, such as Demographic Clinical or Laboratory
- Before or after existing questions on a tab
- As follow up questions that appear based on the answer to a previous question or an existing question

Forms can be simple to very complex In fact, many current hardcopy disease investigation forms can be simplified when automated within CSI TriSano™ since repetitive data only needs to be entered once and optional information is requested only when required In addition help text can

be added to any question created using Form Builder to guide the investigator. With CSI TriSano™ and the Form Builder everyone sees a complete, accurate and up to date view of an investigation
In addition forms can be:

- Defined for:
  - One or more diseases
  - One or all jurisdictions
- Activated or Deactivated
- Copied
- Added to event occurrences that already exist in the system
- Removed from event occurrences
- Exported to another CSI TriSano™ system
- Imported from another CSI TriSano™ system

The Form Builder includes a library that can be used to store frequently used questions and answers, or value sets These can be retrieved as needed when working with forms. The use of the library feature provides consistency and standardization between forms speeds the development of new forms and leads to faster response to new health situations

Alternative Pricing Structure:

In addition to the pricing proposal detailed in this RFQ Collaborative Software Initiative offers CSI TriSano™ as Software as a Service (SaaS)

Addendum C to RFQ EHP90097 - Detailed Resumes

Evan Bauer

460 8th Street
Brooklyn, NY 11215
o: +1 718.369 3928
m: +1.646.641 2973
eb@evanbauer.com

Technology executive architect, strategist and trouble-shooter Committed to creating revenue and improving business and technical operations through the discovery and application of innovative technology and best practices Proven expertise in mission-critical systems, enterprise architecture grid computing, database, OLTP, email web technology, and mobile computing Accomplished writer, speaker, and teacher for both business and technical audiences Experience across industries in management consultant, and analyst roles with deep knowledge of financial services IT Hands-on technical skills in programming and system administration that are critical for technology leadership assessment and due diligence

Collaborative Software Initiative (2007 - present)
Chief Technology Officer, co-founded this organization to create and support new open source projects meeting the needs of vertical industry groups First projects for BITS FISAP (financial services) and UT-NEDSS (public health) utilize a new methodology blending open source and agile/lean development practices

Evan Bauer Information Technology (ebIT) 2002 - 2007
Provide advisory services to Global 500 corporations and investors in technology companies as well as product and go-to-market strategy consulting to leading-edge technology startups Consult on technology architecture, financial services applications, product design network security, technology aspects of compliance, and IT management Clients include: Allegis Capital, Blackstone, Citigroup, Francisco Partners, FT Ventures Fujitsu, HP, Partech, Pequot Capital, Platform Computing, Principia Partners, Starvest, and Sumitomo Trust Bank Publish and speak regularly at conferences and guest lecture at universities on open source technologies and methodologies

- **Sona Mobile Inc. (2005 - 2006):** Contracted as Managing Director, Product and Technology Operations responsible for product management, technology delivery, customer service and platform strategy Reduced operations costs 38% in nine months Created product, support, and QA processes, and developed new channel product lines Customers and partners included NYSE Alcatel SugarCRM HSBC Citigroup, SMI, Cingular, BMC RIM, and Vodafone
- **Robert Frances Group (2002 - 2005):** Principal Research Fellow – contracted to provide syndicated research on system software, IT management, and technology strategy. Published whitepapers on open source technology and economics Delivered projects for: HSBC (DR/BCP) Dow Jones NSTAR United Technologies IBM HP Pfizer and Novell

Credit Suisse First Boston 1999 - 2002
Chief Technology Officer, Global InfrastructureSenior technical architect in the office of the CIO for a 4,000 person, $1.7BB/year IT department Adviser to both CIO and investment bankers on IT products and companies Focused on improving security and availability of systems as well as reducing costs through the use of Linux and open source technologies

- Coordinated the rationalization of CSFB s global systems and networks integrating the DLJ acquisition and architect for key components of a new data and processing architecture
- Lead due diligence and advisory support for CSFB s Technology-related businesses from Investment Banking to Venture Capital Deals supported secured $20m in revenue during 2001 and 2002

- Led the adoption of Linux and other open source software deploying both commodity and enterprise-class hardware ROI on initial projects within 3 months, 78% reduction in hardware costs provided first year savings of $5MM on the first 3 projects Platform developed is now the standard at CS.
- Designed and led implementation of a new high-availability architecture for application and database servers Platform had zero minutes of end-user down-time in its first 22 months of deployment
- Implemented a CEO-level program to leverage CSFB's IT resources in support of banking business in Technology and Telecommunications

Director Global Information Technology/Global Web Services

- Led the design and implementation of CSFB's global web hosting capability from firewalls through web application deployment Built a four-continent team of 60 professionals providing platform engineering and 24x7 follow-the-sun support for 80 e-commerce applications and more than 1,000 intranet sites and applications Public web availability improved from 97% in May 1999 to 99 9% in May 2000.
- Led re-architecture of Global Loans system that enabled the Syndicated Finance Group to increase transactions by 100% and advance 2 positions in the league tables.
- Designed and implemented improved product interfaces between PeopleSoft GL and Sybase ASE that are now standard with both products to implement CSFB's global general ledger.

Bankers Trust Company 1997 - 1999 (also 1994-1996)

Principal Technology Architect, Global Operations Technology (GOT)

- Led the team responsible for both technical architecture and infrastructure support for all Cash Trading (MM/FX) and derivatives businesses as well as the back office systems for all securities trading.
- Led implementation of London-based packages for securities lending and securities trading.
- Managed rollout of GOT Y2K and EMU upgrades in NY and London By accelerating Y2K remediation and integrating project with EMU saved more than $1 25m in labor costs
- Designed and managed division-wide system availability project that reduced service-disrupting outages by over 82% in 1998 resulting in achievement of 99 97% scheduled uptime.

Giga Information Group 1996 - 1997
Vice President and Senior Research Advisor

- Published on database, data warehouse transaction processing and web infrastructure technical issues as well as enterprise technology strategy
- President's Club Award Top Research Analyst 1996; Research Achievement Awards Q1-2 1997

Bankers Trust Company 1994 - 1996
Vice President, Client/Server Engineering

- Database architect for Global Reference Database project including customer master consolidation
- Designed and implemented infrastructure for FXPCA – industry leading FX processing platform
- Led engineering and rollout of standard UNIX and OpenVMS database platforms for OLTP and BI

Digital Equipment Corporation 1986 - 1994
Principal Consultant Database Systems Engineering 1992 - 1994Senior Consultant NY District / Database Systems Technical Support Group 1986 - 1992

- Technical lead on customer projects that produced revenues of over $120,000,000 Troubleshooter for major integration projects. Design focus on database administration Project manager for both the VLDB Performance Testing and the "Lights-Out Administration" Advanced Development projects.
- Major projects sold and delivered to: Bankers Trust, Bank of NY Con Edison Fleet Bank, Dun & Bradstreet JPMC ITT Bell Atlantic General Electric NBA HBO Pfizer Monsanto and NYC

SEED Software / Mantech / United Telecom / CDC / International Database Systems 1979 - 1984
VP Operations / Midwest Regional Manager / Field Engineer / Member of the Technical Staff

First Pennsylvania Bank, Public Financial Management 1978 - 1979
Research Analyst and Programmer

United States Senate Select Committee on Small Business, 1977
Legislative Assistant / Intern for the Subcommittee on Monopoly Practices
Boards and Community Service
Serve on the Advisory Boards of Neocleus nLayers Blazent Baynote and La Guardia College (CUNY) Member of the Board of Habitat for Humanity NYC

Author of over 100 articles whitepapers and research notes

Alumnus of Wesleyan University and the University of Pennsylvania

Ross Cooperman

75 Prospect Park SW #C9
Brooklyn, NY 11215
412 370 3820 (m)
cooperman@gmail.com
OBJECTIVE

I am an experienced web developer looking for opportunities to work on cutting edge web applications.

SKILLS

Programming languages
PHP, Ruby (including Rails), JavaScript (including Prototype and Script aculo us libraries), Java (primarily J2EE) Perl, C, C++

Operating Systems and Software
Linux (Debian and RedHat-based distributions), Mac OS X (10 3+) Windows (XP and Vista) MySQL, Apache HTTP Server, Apache Tomcat, JBoss, Subversion, Git

Other
(X)HTML and CSS
EXPERIENCE

Senior Developer, Collaborative Software Initiative — August 2007-Present

- Lead a small team of developers working on development of a web applications that assist financial institutions in their evaluation of risk associated with outsourcing IT services
- Gather requirements from customers and work with customers to ensure that their needs are met by our software.
- Coordinate with other members of the organization on internal IT infrastructure projects

Systems Programmer III, University of Pittsburgh, Pittsburgh, PA — 2001-2007
Primary responsibilities consisted of web application development, administration of servers on which those applications were deployed, and development for and administration of the university's incident tracking system (based on BMC's Action Request System) Applications developed include:

- An email processing tool that provides, among other things templates for commonly encountered requests and integration with the university's incident tracking system.
- A document management system providing document storage and retrieval versioning, and tracking of document meta-data
- A project management tool facilitating weekly status reporting on projects in process and tracking of the status of action items resulting from project meetings
- In addition to the above responsibilities I also assisted the university's technology help desk and network operations center in resolving a variety of complex issues

Consultant, Sona Mobile Corporation, — January-July, 2006
Development of a web-based (J2EE) application to administer the interaction between customer relationship management software and a mobile (J2ME) application to manage CRM data This tool was designed to integrate with a variety of CRM systems and at launch was successfully integrated with SugarCRM.
The code for this application was also adapted to manage similar interactions between a mobile conference call management application and conference call systems provided by telecommunications companies.
Both applications were successfully deployed in the JBoss and Apache Tomcat application servers.
EDUCATION
University of Pittsburgh Pittsburgh PA — B S Computer Science 2001

Wallace Matthews

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OBJECTIVE

Interesting and challenging work. Contract or Direct Employment.

I do not need medical coverage (Retired Military) Software engineering is my hobby and my passion. I enjoy the design process at all levels: architecture, detailed design code test quality assurance and customer delivery I am particularly interested in continuing to work on high reliability feed handlers.

SUMMARY

25+ Years of experience in Firmware and applications development
Systems and Communications Operations Support Systems

- Embedded software development using C/C++ (routing connection services resource allocation for multiple protocols including ATM IP SNMP)
- Data Models for Applications
- GUIs in Java, Python, C++
- Complex Algorithms (Dense Mesh Routing, Opaque Delta Compression for huge files and low latency financial feed handlers as examples)
- Connection Services and QoS traffic management for ATM and hybrid switches
- Network and applications management systems
- System tests simulation, and automated regression test suites
- C C++ Java2, Python XML (sax & dom) CVS SQL, ODBC RPC COM Unix Windows Linux wxPython py2exe cherryPy, Sun s Swing Libraries

EDUCATION

MSCS 1979 Boston Univ. GPA 3 90/4 00 Honors List
MSEE candidate 1974-1975 MIT GPA 3.75/4.00 never completed Degree requirements
BSEE 1974 Univ Rhode Island GPA 3.84/4 00 Highest Honors

CAREER HISTORY

Collaborative Software Initiative 1 SW Columbia St Portland Oregon, 97258
Oct 2008-now
Primary Developer of the Arca Multicast feed handler for NYSE stocks. CSI develops open source feed-handlers with open plug in slots for integration with a wide variety of messaging infra-structures including Tervela as their first customer I am currently recasting the Tervela ArcaBook feed handler that I developed at Tervela into one that utilizes the CSI architectural model

Tervela Inc. 43 Nagog Park, Acton Mass
Mar 2007-Oct 2008
Senior Feed Handler Developer

Primary Developer for Itch Version 3 feed handler for NASDAQ including book publication for aggregated and non-aggregated books Primary Developer for ArcaBook Multicast for NYSE stocks. Itch merges udp multicast from 2 feed sources plus a retransmission udp unicast source into a set of books and then publishes differential book updates over the Tervela messaging fabric

ArcaBook Mcast handles all 10 lines of data similar to how Itch functions but uses periodic refresh multicast groups for missing packet recovery

Akorri Inc. 295 Foster Road Littleton Mass
Aug. 2005-Dec 2006
Contractor

Primary Developer for Balance Point s Statistic Manager. It collects raw statistics (using proprietary message passing API) from a variety of collection mechanisms and coerces the data into standard objects which are then written into a mysql database for use by the other product components. BalancePoint is a software tool for application and storage management and the Statistics Manager is a key sub-system of the product BalancePoint uses a C infra-structure on Suse Linux kernel using a mixture of GNU and freeware development tools

Statistics Manager has not had a bug filed on it in 6 months of QA testing and originally thought to be a potential bottleneck for the product and is now known to be an insignificant problem

Developed tools to support a simulator. It simulates a collector that collects configurations and statistics of storage arrays and servers The Simulation collector is a web server written in Python that responds to HTML discovery and statistics requests with xml formatted responses. Discovery responses are extracted from an xml formatted configuration file. Statistics responses are extracted from csv files one line of statistics for each statistics request The tools are GUIs that generate configuration files and csv files for test case scenarios The csv files are created from combinations of waveforms that are created graphically Tools are written in Python for Windows 2000, using wxPython, SQL, XML, cherrypy and py2exe and produce self contained windows executable directories that can be distributed to any windows system simply by copying the executable to the system

Sepaton Inc. 400 Nickerson Road Marlborough Mass
Nov 2003-April 2005
Principle Engineer

Project lead for the site to site backup replication feature during its conceptual and architecture phase Shifted focus to the key component, the binary delta compression algorithm that is called "content aware" in the product literature. The algorithm did efficient binary differencing for files whose upper size limit is terabytes where traditional differencing algorithms are ineffective. Site to site backup replication supports a chain of incremental backups with each of remote site possibly synchronized at different points in the chain Site to Site is C source code for a Linux server environment using GNU development tools Delta Compression is C++ for Linux

Developed 3 Java GUI(s) during my first year at Sepaton for S1000, S2000, & S2100 products.
The S1000 GUI was a local GUI that ran on the S1000 (Linux workstation) itself and was layered over an existing CLI. The S2000 GUI was a prototype for a SAN application server that was not completed The S2100 GUI used an RPC transport between the GUI and the S2100. It was designed to run from any PC that was on the same corporate net as the product.

Developed a manufacturing system test (multi-threaded) that exercised the S2100 Virtual Tape Library (VTL) for hardware failures and could also be used as a regression test for the VTL firmware It used as many threads as there were virtual tapes in the library(s) to exercise the VTL at its performance limits

Persuasions 41 Kinsley Lane Mendon Mass
Oct. 2001 – Nov. 2002
Independent Consultant

Developed a lightweight Relational DataStore for CRI Inc for a Flourescent Polarization reader Also restructured the code set to simplify it and make it more robust Rewrote the x/y/z axis stage positioning algorithm to minimize the time to read a full plate The algorithm supports 96 384, and 1536 well plates The work was done in Python using Standard Libraries and the Wing IDE

Developed a multiple level Dense Mesh Routing algorithm for an optical provisioning in C++

Developed a management module for the CoSine 3500/9500 optical switch for Equant Systems
Equant uses Aprisma's Spectrum product for network management and the Aprisma developed management module was deemed non-functional because it took hours to initialize the system
I developed the architecture and a prototype proxy agent that allowed Spectrum to initialize in minutes and yet provided the required distributed virtual port implementation that Equant needed for their systems installers

Opticom Inc. 200 Brickstone Square Andover Mass
Jan. 2000 – Oct. 2001
Senior Software Architect/Director

Developed the ServiceView component of iView (Opticom's product) 3.0 and 3.1 ServiceView allows a user to define a service (via a formula) as a mesh of applications, communications devices, servers, workstations, communications links, performance agents, including measured performance levels It then monitors their **QoS** and declares a service is up/degraded/down and over a time period aggregate the performance against Service Level Agreements (**SLA**) to determine whether the service meets the **SLA** requirements. Patent applied for the service definition core (20020142910) one of several inventors

Director of Access Module Development (collateral responsibility) The position answered directly to the CTO

Cabletron Systems Inc Durham NH/Rochester NH
Mar. 1993 – Jan. 2000
Senior Architect/Software Engineering

Implemented the Connection Services Firmware for the 9500 ATM Switch This included all the parameter negotiations for **UNI 4.0** Traffic Management and all the resource management for buffer allocations to optimize traffic flow for the **QoS** that most needed it (Patent 6822966) in C++ using cross compilers for Intel Risc micro-processors

Developed a network routing algorithm (Patent 5521910) similar to Djikstra's algorithm (the standard algorithm for most routing protocols including OSPF) that considers multiple independent metrics concurrently with performance similar to Djikstra's (that only considers a single metric). The algorithm has been used for both ATM routing (within PNNI) and LAN switching. Implemented the algorithm in a "SoftSwitch" product (VNS) for value added provisioning of PVC and SVC circuits. In highly meshed networks, the algorithm's inherent path distribution across multiple alternate paths gives it an advantage over Djikstra s algorithm.

Jointly developed a prototype path trace algorithm that led to a highly successful path trace feature (Patent 5675741) The algorithm walked the database of the Spectrum Entity Manager to fill in the connections between Routers found using IETF Route Trace Messages
Helped develop algorithms for provisioning optimal call tapping circuits (Patent 5627819 and 5754532).

Project Leader for VNS 1 1 and 1 2 Lead architect and project leader for VNS 2 0 (40+ people) while personally implementing the BandWidth Management, Buffer Management, Virtual Path capability, and UNI 4 0 traffic management parameter negotiation. Implemented an algorithm for reliably tracking the topology of shared media circuits such as FDDI and Ethernet (Patents 5793362) It monitors the "Found new neighbor" and "Lost neighbor" events from all the stations of multiple circuits and correctly reconfigures them (even when up to 40% of the events get lost) Also assisted in the algorithm definition of 2 interim link tracking algorithms (Patents 5822305 and 5590120). Developed a routing metric to provide optimal distribution of paths across multiple alternate paths in a network using bandwidth availability (6084858) The path with the lowest aggregate ratio of available bandwidth to link bandwidth is chosen for a connection Implementation languages were C++ and Python using ATT s Sable Source Code
Control systems for both UNIX and Windows NT environments.

Digital Equipment Corp Littleton MA
Aug 1986-Mar. 1993
Development Manager - DECmcc

Built DEC's first Enterprise Network Management product(DEC-MCC). Key development manager during the start up and implementation of Version 1 0. During V1.1 and V1.2, managed the development of the GUI and all access modules which integrated various management protocols (SNMP, DEC's NICE CMIP, DEC's RBMS) and devices using them into the management system. Managed the development of a Common Agent which allowed a system to be concurrently managed via SNMP and/or CMIP and implemented on both Ultrix (DEC's UNIX) and VMS

Bolt Beranek and Newman Fawcett St. Cambridge MA.
Aug. 1984 - Aug. 1986
Development Manager Network Management Architecture Group

Original assignment was to refocus Network Management Architecture and the Network Utilities Development Group from maintenance organizations into an integrated fast paced advanced development team utilizing the existing products as a base for future development. The first delivery was a PC based GUI to augment the previous CLI. The second delivery was a detailed architecture for a "next generation" network management product (done under DOD contract) The document detailed the architecture and a development strategy to migrate the Existing NU product to the new architecture and was the base of DOD Network Management purchases from 1985-2000. The third deliverable was to migrate the core of Network Utilities to the new architecture (partially implemented as NU 7.0)

Non Career Accomplishments

- Electronics Technician Chief Petty Officer - US Navy Reserve Retired. Viet Nam Vet
- 5 years on the Finance Committee for the town of Plainville MA (2 years as Chairman)

References

Henk Schalke
former COO Sepaton Inc. hschalke@comcast.net
Wally Scott
VP Engineering Level7 wscott@lvl7.com (919)-865-2940 Home: (919)-469-2057

Paul Marichal
VP Engineering Akorri Inc. pmarichal@akorri.com (978) 431-1200 (work)

Andre Fontaine
Director of QA Akorri. Inc afontaine@akorri.com

Nitin J. Shah

99 Indian Meadow Drive
Northborough, MA 01532
TEL: (508) 393-9233 (H)
: (978) 761-4627 (c)
email: Nitin.Shah@verizon.net

Professional Experience

Collaborative Software Initiative
Oct 2008
Northboro MA

Senior Developer
Develop Feedhandlers for open market data feeds on embedded Linux Platform (SLES 10) Centos Linux

Tervela Inc
April 2006 to Oct 2008
Acton MA

Embedded Systems Architect

- Early member of the startup team. Responsible for the overall architecture, design and implementation of the embedded feed handlers to accept high speed real time exchange feeds from the Option Price Reporting Agency. These feeds are transformed into internal format in real time and then delivered to the interested consumers. Exploited the features of this Linux based Multi core platform to enable it to accept data rates of significant proportions Multiple versions of the platform were targeted with very successful outcome, where this implementation was the only platform that stood up to the famous market data rate overloads Multiple targeted platforms on different number of Opteron Cores were tested to determine the way forward
- Responsible for the first field trials at customers on Wall Street System currently successfully running on trials at major financial institutions.
- Led the team to develop a number of such feeds and the integration of such feeds into the evolving platform

Stargen Inc

May 2005 to April 2006
Tewksbury MA

Principal Software Engineer

- Linux 2.6 embedded driver development for the ASI (Advanced Switching Interconnect) set of new fabric ASIC s. Developed a design for Fabric Event handling strategy. This involved the interrupt handling capability for processing of events in the Switching Fabric managing the ASIC multiple events processing
- Developed the capability to update the SROM of any node in the fabric This could be the ASI bridge host as well as the switches in the network

Raytheon
Dec 2004 to May 2005
Tewksbury, MA
Senior Principal Engineer

- Initial Design work for a SLAMRAAM project phase 2 work

Mindspeed Technologies
April,2004 to Dec 2004
Westborough MA

Consultant

- Responsible for the embedded Linux bring up for the evaluation module developed to show the capabilities of the Mindspeed Traffic Stream Network Processor. Led the Linux effort for the embedded host system Started the software project and delivered the first phase on schedule

Infiniswitch Corporation (startup)/Fabric Networks
Aug, 2001 to Sept 03
Westborough MA

Project Leader/Principal Software Engineer

- Hired to lead a team of 7 for a new 12/24 port Infiniband switch project. Defined the requirements. and the project scope. Specified switch functionality designed and led the implementation. Delivered the switch in 12 months with multiple ASIC spins which allowed the company to create first stream of revenue ($500,000 in a short time)
- Reported directly to the VP of software Hands on management for complete cycle of project from conception to delivery to customers.
- Developed/implemented Linux Kernel based Packet driver designed and ported existing Linux applications, debugged the ASICs; wrote ASIC workarounds
- Drove the switch thru conformance testing and it has been certified as Infiniband compliant by the IBTA. Led the conformance testing at two IBTA plugfests Also responsible for having the switch pass the "IBM Server Proven" program Thus IBM has this product on the approved vendor list allowing the company exposure to the IBM client base.
- Member of a team investigating the next generation switches for 10G ethernet Evaluating existing third party software vendors; L2 and L3 functionality
- Target Processsor PPC405 ; Linux Target OS; C Language Use of RPC; Gdb; CVS

Ignitus Communication LLC (startup)/ Lucent Technologies
April 99 to Aug 01

Principal Software Engineer/ Distinguished Member Of Technical Staff

- Finalized requirements and then designed and implemented the Bellcore GR 253 compliant SONET clocking for the backbone ring. The implementation supports SSM messaging and ring clock recovery on failures as specified by the Bellcore standard. This feature included the management of clocking/timing module
- Designed and implemented the Port Manager which provided the management of all port configurations. The configurations are distributed to all cards in the ISTN node
- Instrumental in defining the IPC communication for the ISTN switch as a part of the infrastructure software
- Responsible for RIO (Dual Ring I/O) redundancy feature integration.
- Defined the requirements and the design of the 1:N redundancy feature for DS1 and DS3 interfaces
- Designed the 1:1 DS1 redundancy feature.
- Target Processors MPC860 MPC750 ; C Language; Clearcase

3Com Corporation
Feb, 98 to Apr,99
Switching Division

Principal Software Engineer

- Produced a functional specification for a VLAN rewrite for the next release Included a number of challenges since the way VLANs

operated internally needed changing.
- Investigated and documented the way VLANs work on the Core Builder architecture. Other work included bug fixes and enhancements to current functionality
- Part of a team that performed VRRP interoperatibility testing with other vendors at UNH lab. Made minor enhancements to the VRRP functionality.
- Target processors MPC860 ; C and C++ languages; Clearcase.

Digital Equipment Corporation
April, 96 to Feb, 98
Network Products Division Littleton MA

Principal Software Engineer

- Evaluated and then project led a new 10/100 Mbits PortSwitch with an aggressive delivery schedule of 3 months
- Project led a new 10 Mbits PortSwitch which supported the 12 Backplane DECHUB LAN's with switched traffic onto those LAN's I made significant contributions to the resolution of ASIC problems with Software workarounds
- Defined the DownLoad strategy for all products within the division This is now incorporated within all new product designs
- Implemented the Inband download for 10 MBit PortSwitch. Designed the Primitive Ethernet Driver on the MC68360 processor
- Target processors include MC68360 MC68332 MC68302; Use of Clearcase

Others

- Led the SNMP effort to provide Dynamic Sets for the Proteon Routers Designed strategy for implementation of the Multiphase dynamic Sets
- Designed and developed the back plane management for the 68360 and the 68040 based Proteon routers within the DECHUB 900.
- Functionally defined, and lead the design and the implementation team for the Network Fault Management of the Fault Tolerant multi-bus networking product. Used CASE tool for functional decomposition at the Foxboro Company
- Awarded a PATENT for the design of the Hierarchical Management with Fault detection and recovery from failures The project involved extensive interfacing with the 802 3 and the 802 4 Fault Tolerant LANs.
- Used extensively the Intel tool set and designed other system components targeted for the Intel 386SX microprocessor the Sun SPARC workstations
- Designed, developed, coded, tested and implemented the Raytheon Operating System shell around the MTOS operating system Kernel targeted for the Motorola 68020 processor for the Nexrad project
- Ported DEC Ethernet drivers for the target Military VAX computers.
- Software Architected the new series of the switching Multiplexors targeted for the Motorola 68000 based hardware. Developed using the "C" language , Motorola assembly language and developed in the UNIX environment Utilized the Tetronix 8560 development system. (Computer and Systems Engineering).
- Developed a real time system to monitor the performance of a printing press Interfaced with customers in the U.K, W Germany and Italy and acted as liaison for special design updates to the product. Designed various other updates ; Web Break Detection and ink consumption monitoring Developed using TI 9900 assembler using TXE4 development systems; PDP 11 macro assembler

Education and Training

B.Sc. Electrical and Electronic Engineering
Major in Communication and Instrumentation
Middlesex University, London United Kingdom (1976)
CASE tools, UML Object Modeling, C, C++, Extensive use of Clearcase PPC architectures Motorola architectures TSP3 Network Processor
Awarded PATENT on work done at Foxboro

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Arlington, VA 22205
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EXPERIENCE

Senior Developer
Collaborative Software Initiative - Portland OR - 2008 – Current

- Develop software solutions for vertical markets in a collaborative environment often spawning open source software
- Adopt agile programming techniques and methodologies such as test-driven development and continuous integration using Hudson
- Lead developer for the CSI QFrame project a robust questionnaire framework and application
- Project languages include Ruby on Rails (RoR), PHP using the Zend Framework and some Perl
- RDBMS for projects thus far include MySQL and PostgreSQL
- Limit system administration overhead by deploying a centralized host configuration management system (Puppet) as well as a system and application monitoring solution (Zabbix)

Anti-Spam Systems Programmer
AOL LLC - Sterling VA - 2005 – 2008

- Maintain code and extend proprietary Spam Complaint (SComp) processing system
- Identify new spammer trends and programmatically respond through proprietary rules-based systems
- Work closely with Mail Development teams and Mail QA groups
- Develop new IP whitelisting system, procedures, and policies
- Lead project and engineer a classification system to appropriately action classes of mail (bulk email, transactional, notifications, etc)
- Re-engineer spam complaint feedback loop system where the originator receives a copy of the email that generated member complaints to promote sender actioning
- Create data transaction system for 3rd party email accreditors Habeas and ISIPP
- Develop web tool GUIs for operations teams using Perl and AJAX frameworks scriptaculous and prototype

Information Security Analyst
VigilantMinds - Pittsburgh PA - 2005 – 2005

- Analyze and respond to information security intrusions
- Research security vulnerabilities, advisories, incidents, and penetration techniques
- Utilize Intrusion Detection Systems (IDS) including Snort BlackICE, and CSA

Network Operations Center (NOC) Engineer
Expedient - Pittsburgh PA - 2004 – 2005

- Proactively monitor and react to various network and systems problems including security response events
- Troubleshoot customer router configuration problems and reconfigure if necessary
- Manage mail, DNS, web and other system services
- Assist customers in over 20 metropolitan cities Customers include Tyco Discovery Channel Blattner Brunner American Express PAIR Networks and many others
- Help Desk Student Analyst/Webserver Administrator
- University of Pittsburgh - Pittsburgh, PA - 2000 – 2004
- Troubleshoot systems problems and answer users' questions pertaining to Windows, Unix (Solaris), Macintosh OS 9/10 Novell ISIS VMS, and telecommunications systems
- Process hostmaster (DNS) requests for two Class B networks
- Administrator of internal web server (Red Hat/Fedora Linux running Apache 2)
- Developed and maintain knowledgebase for help desk as well as other dynamic web pages using Perl and PHP
- Created MacOS 10.2 build for help desk machines using Kerberos authentication with LDAP account synchronization
- Assisted in development of Windows XP build for 20 help desk machines
- Wrote various pieces of documentation and contributed in documentation approval work flow

Production Network Engineering Intern
AOL Time Warner - Reston VA - 2002 (Summer/Winter Break)

- Wrote various network tools using Perl
- Maintained and serviced Cisco/Juniper routers as well as Foundry switches utilizing Gigabit Ethernet and Sonet
- Assisted in maintaining production network DNS zones

Computer Lab Consultant
University of Pittsburgh - Pittsburgh PA - 1999 – 2000

- Monitored over 150 Windows/Mac/UNIX stations in computer lab environment
- Answered variety of users' questions regarding the use of lab machines

EDUCATION

Masters of Science in Computer Science (MS)
George Washington University - Washington DC - April 2010
Currently enrolled
Classes thus far: Advanced Software Paradigms Design and Analysis of Algorithms Computer Architectures Database Systems

Bachelor of Science in Information Science (BSIS)
University of Pittsburgh - Pittsburgh, PA - April 2003
Major QPA 3 8/4 0. Overall QPA 3.4/4 0
Relevant classes: Telecommunications, Internet Construction Database Management Systems Human Computer Interaction Assembly and Computer Architecture, Wireless Communications
Related area in Computer Science

SKILLS

Certifications
Cisco Certified Network Associate (CCNA)

Languages
Java Perl, Tcl PHP C C++ Pascal XHTML XML XSLT JavaScript Assembly (MIPS) SQL Transact-SQL Ruby on Rails (RoR) F# CSS Sass Haml

Software/protocols
Sybase MySQL, PostgreSQL Unix (Solaris) Linux (Red Hat/Ubuntu/SLES), PostFix, Sendmail, Apache, BIND, SNMP, Snort tcpdump iptables Perl POE SMTP SPF DKIM scriptaculous prototype SOLR Lucene Hudson (continuous integration) Puppet Zabbix

Michael J. Herrick

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mike@csinitiative.com (email)

PROFILE

Passionate and collaborative technical leader who always finds a way to deliver exceptional business value

Combination of architecture development process political communication management, and leadership skills result in consistent top 10% performance rating

Broad view of software industry from in depth experience with software product development (open source and proprietary) technology consulting and information technology within small mid-sized and Fortune 100 companies

Professional Experience

Collaborative Software Initiative Portland OR
Nov 2007 – Present

Program Manager (Nov , 2007-Present)
Manging TriSano development team

- Co-managing TriSano product management
- Contributed to development using PostgreSQL RDBMS, Java JRuby Ruby Ruby on Rails and various web technologies (e g , CSS, XML Javascript and Ajax)

Liberty Mutual Group, Portland OR
Sep 2005 – Nov 2007

Architect & Manager, Agency Markets Premium Innovation (Aug , 2007-Nov 2008)

- Led Hopper – Agency Markets Integration Architecture Development and Deployment
- Integration Architecture will be used to integrate Ohio Casualty Group ($1 5B recent acquisition) new Billing System, new Claims System Data Warehouse and all new inter-domain integration

Technologist & Manager, Agency Markets Premium Innovation (Jun 2006-Aug 2007)

- Agency Markets is a $7 5B Business Unit

Management

- Premium Innovation is a specialized high profile team focused on providing future-state technical strategy and strategic software development through direct partnership on critical-priority business initiatives
- Developed team charter and sold concept of team internally to Agency Markets Senior Management
- Recruited and hired all star cross functional team of five
- Responsible for management of team $1.5MM staff and expense budget
- Participated in managing project budgets from $100K to $25MM
- Applied Agile and Lean Software Development techniques to projects
- Managed RedHat JBoss Engineering and Rollout
- Managed Ice Pick – Agency PAR (Performance Availability, Reliability)
- Responsible for vendor relationships organized and attended briefings from Microsoft, Adobe, Novell, MuleSource RedHat EnterpriseDB, and IONA
- Managed Agile Toolset Proof of Concept and Rollout (Consists of Confluence Wiki, JIRA Subversion Bamboo and FIT test framework)
- Took on additional management responsibility with two new direct reports in Spring 2007

Leadership

- Led Yoshi Project – Small Commercial Policy Management Plan B – project resulted in savings of $25MM
- Led Yoshi Project Release 0 & development of the Large System Application Reference Architecture (Adobe Flex JBoss and JavaSpaces)
- Led Doc Ibold – Agency Markets Forms Technology Direction

Open Source Software

- Led Open Source Software Strategy and Evangelism
- Organized Agency Markets OSDL (now Linux Foundation) meetings with Liberty Mutual & pursued partnership for co-developing Magnum – an insurance industry open source project
- Led development of Magnum (open source software vertical app) charter & initial prototype
- Marketed idea internally to senior management

Technologist, Liberty Northwest Distributed Systems (Sep 2005-Jun 2006)

- Liberty Northwest (LNW) is a $500MM Agency Markets operating company
- Responsible for directing the definition, design, development deployment and maintenance of LNW's distributed systems
- Technical decision maker for distributed systems
- Direct work of engineers
- Set technical direction for strategic systems development
- Member of Liberty Mutual Technical Architecture Standards Committee

IsisWorks Corporation, San Francisco CA
Mar 2005 – Sep 2005

Architect & Senior Developer

Product Development

- EAI Manager product maintenance and development
- Competitive analysis & open source software strategy
- Aspira – Commercial Open Source Enterprise Service Bus (ESB) planning and development
- Aspira built on Java 1 5, Spring, and JBoss
- Explored partnership approaches with JBoss and IONA

Liberty Northwest Auto Insurance System Enterprise Service Bus Team Lead

- System creates and renews auto quotes and applications Integrates rules engine, rating engine, Oregon, Idaho and Washington DMV credit check, IBS scoring, and VSE mainframe using asynchronous messaging / event driven architecture
- Designed messaging topology, workflow, and services
- Configured IsisWorks EAI Manager and SonicMQ
- Load testing and tuning
- Java Development
- Mentor less experienced developers

Portland State University Partnership

- Facilitated acceptance into the Portland State Business Accelerator via contacts established at PSU in the Oregon Masters of Software Engineering (OMSE) program

Mentor Graphics Corporation Wilsonville OR
Dec 2001 – Mar 2005

Senior Developer, IT Internet Systems

- Responsible for leading integration efforts, developing software and assisting in charting the architectural course for the IT Internet Systems team and Mentor Graphics IT integration architecture
- Technical Lead/Developer of numerous applications services and system management utilities using Java and NET technology
- Speaker – Sonic Software SOA Conference
- Technical Lead SonicMQ Deployment
- Technical Lead, SOA Platform Selection
- Founder/Participant SOA Forum (IT Management & Developers)
- Founder/Participant Object Oriented Design Patterns Group
- Technical Lead, ClearCase Deployment
- Technical Lead/Developer, AAA – Netegrity SiteMinder Deployment & Integration
- Designer/Developer Mentor Graphics Java Web Framework

eXcelon / C-Bridge (now Sonic Software) Boston MA
Jul 1999 – Oct 2001

Senior Engineer eXcelon J2EE iPlatform Team

iPlatform OverviewThe Platform team was part of the Product Development organization at eXcelon. It was a J2EE Service-Based Architecture product. It consisted of the HIS (Human Interaction Service) SIS (System Interaction Service), ES (Enterprise Service), and WFS (Workflow Service) It integrated with other eXcelon products including an XML database and workflow engine and several OEM products eXcelon iPacks (Vertical Industry Solutions) were implemented on top of the Platform.
iPlatform Contribution

- Technical Lead/Developer Human Interaction Service (HIS), Portal Service
- Developer Core Platform

Principal Consultant

- Developed expertise in the Diagnostic, Define, Design Develop, and Deploy phases of the eXcelon RAPID Methodology Successfully led complex Define Design, Develop, and Deploy projects as the Architect and Technical Lead
- Architect, Motorola PCS – Supply Chain Excellence Diagnostic Architecture Assessment
- Architect/Developer, The Economical Insurance Group B2B Extranet Project
- C-bridge Advanced Technology Team – J2EE Reference Application
- Technical Lead/Developer Air Liquide B2B Portal

Senior Consultant

- Technical Lead/Developer, Firmenich Chem com
- Developer, Firmenich Extranet
- Security Designer/Developer Firmenich Client Infrastructure

Andersen Consulting (now Accenture) Chicago IL
Aug 1997 – Jul 1999

Senior Analyst

- eCommerce Line of Business Developer
- Technology Integration Services (TIS) Americas Collaboration and Knowledge Management Developer & Systems Engineer
- Consulted the Steel Industry and Federal Government

EDUCATION

2004-2005
Certificate in Principles of Software Engineering Oregon Masters of Software Engineering (OMSE)

1993-1997
B.S. in Business Administration, Management Information Systems, University of Dayton
1997 Semester Abroad University of Augsburg Augsburg Germany

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Technical Skills

Languages
Now: Java, Ruby, JRuby
Past: Visual Basic 6 0 Python

Hobbies
Smalltalk Lisp

Databases
Mostly: SQL Server, PostgreSQL
Some: MySQL, Hypersonic SQL, Derby

Editors/IDEs
EMACS, Eclipse, IntelliJ

Frameworks
Rails, Spring, RESTlet, JUnit

Other
HTML, XML, XSLT, Ajax, Javascript, Linux, Windows, Subversion, Perforce, Ant, Maven, Git

Experience

Collaborative Software Initiative
(7/2008 - Present)
Senior Developer
Core developer on TriSano application.

Noteworthy Medical Systems, Inc
(5/2005 - 6/2008)
Lead Engineer

- Makes key design and architecture decisions for the Noteworthy NetPracticeEHR software product
- Leads project teams of up to 4-5 developers
- Mentors Junior Engineers
- Maintains proprietary macro and scripting languages (JMed and Formula)
- Builds and maintains Eclipse plugins to support proprietary scripting languages
- Specific accomplishments:
- Replaced rigid data mapping XML with real time ETL process (built in JRuby) for publishing data to external databases.
- Played a key role in shifting product's architecture to a RESTful service based approach. Built the product's first Spring/RESTlet based service.

Brulant
(6/2004 - 4/2005)
Java Consultant

- Designed and built a Rythmyx based content management system for Huntington Bank ({+}http://huntingtonbank.com+)
- Contributed to the development of Struts based e-commerce sites for ICI Paints

Noteworthy Medical Systems, Inc
(9/2001 - 5/2004)
Content Engineer

- General duties included customizing content to suit specific customers' needs
- Using a proprietary scripting language, developed a complex rules engine for recommending insurance charges based on activity in a patient's chart during a given encounter
- Developed several tools aimed at improving the quality of work produced in proprietary technologies
- FUnit, for example, is a JUnit extension that allows Formula scripts to be unit tested

Brouse McDowell, LPA
(3/1997 - 9/2001)
General IT

- General application and network support
- Built a macro suite for Word that allowed the firm to enforce formatting conventions in all legal documents
- Installed 40 node Novell 4.11 network in firm's Cleveland office.

Open Source Projects

- Contributed patches to JRuby
- Developer on JRuby--Extras project.
- Contributed JNDI support and InterSystems Cache adapter to ActiveRecord-JDBC.
- Developing an Rcov port for JRuby
- Contributed improved Windows support to jline

Education

Kent State University
(1993 - 1995)
Studied Aerospace Engineering Technology

The University of Akron
(1996 - 1997)
Studied Business Information Systems

David Christiansen

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www techdarkside com

Profile

Software developer with over ten years of experience developing valuable software applications using low-overhead, responsive approaches to product delivery

My areas of expertise include:

- Web development in Ruby on Rails
- Testing software, isolating defects, and coordinating fixes
- Project and product management and support

I have used my experience as a software devleoper, tester, and project manager to help others become better by writing about the craft My work has appeared in ComputerWorld, Better Software BizTech Magazine, Redmond Developer News, and the Business Rules Journal I have presented at conferences and symposiums in the United States and Canada and have delivered training on agile project management exploratory testing, and object oriented programming

Experience

Collaborative Software Initiative Portland OR — 2008-Present
Senior Developer
Currently responsible for product and customer support for TriSano and for improving overall application quality Duties include:

- Developing testing, and sharing approaches to automated testing of the TriSano application
- Coordinating problem resolution with the TriSano core development team and TriSano customers
- Providing tier 2 product support to TriSano customers
- Finding defects in the TriSano application and supporting their resolution
- Coordinating and supporting product releases with TriSano customers

Liberty Mutual, Indianapolis, IN — 2002-2008
Project Manager/Principle Software Engineer
Partnered with business sponsor and IT development teams to incrementally build the APOD product line - web applications related to the delivery of policy documents to independent agents Introduced the use of artificial intelligence to automate policy decisions and designed, developed and tested the service oriented architecture

Sprint PCS — 2001-2002
Senior Systems Analyst
Collaborated with application development teams to define and deliver interfaces based on the Sprint PCS service oriented architecture

State of Nebraska NFOCUS Project— 1998-2000
Application Architect
Designed, implemented, and tested the application framework for an automated benefits eligibility determination system based on artificial intelligence technology as a consultant through multiple contracting companies Taught state employees how to design build and test object-oriented software

Bell Helicopter Textron — 1997-1998
Engineer
Used artificial intelligence technology integrated with mechanical design software to automate the design, analysis, and layout of composite (fiberglass, carbon fiber, etc) aircraft parts Implemented software to automatically analyze manufacturing instructions for composite parts and optimize them for cutting efficiency Reduced time to cut parts by 90%

Education

Brigham Young University
Provo UT — B S Mechanical Engineering 1997

George Washington University School of Business
Washington D C — Master's Certificate in Information Technology Project Management 2005

Project Management Institute
Project Management Professional Certification 2005

Skills

Writing (Technical & Creative)
Team Leadership
Working with sensitive information in a secure environment (required at Nebraska, Sprint and Liberty Mutual)
Software design and development
Software Testing
Project Management
Spoken Japanese
Working with Remote Teams
RDMS
Artificial Intelligence/Inference Engines
Ruby on Rails
PostgreSQL 8 3
Java/jRuby
Defining and Designing Projects
Linux & Unix System Administration
XML XSLT
Data Obfuscation
Product Support
Collaborating with Product Users

Edward Copony

Technologist, Software Engineer
ecopony@yahoo.com
503-740-5884

Work Experience

Collaborative Software Initiative Portland OR
January 2008-present

Senior Software Developer

- Developer an open source, Ruby on Rails application for public health
- Core participant in developing the software using lean software development collaborating closely with subject matter experts to turn user stories into working software
- Developing in and deploying to Linux distributions, including Ubuntu and SLES 10
- Utilizing JRuby for the development and deployment runtimes
- Implemented full-text search combining Soundex and Postgres 8 2, and later Postgres 8 3 full-text search support

Liberty Mutual Insurance Group Portland OR
July 2005-January 2008

- August 2006-present: Architecture Services Premium Innovation Team, Technologist
- July 2005-August 2006: Liberty Northwest Applications Principal Software Engineer

Premium Innovation Team
Overview: The Premium Innovation team was a small team focused on innovation, future-state architectures, and high-value projects using agile and lean methodologies The team consisted of a manager/architect, three technologists, and a business analyst. All members participate in all activities: Analysis, planning, architectural decisions, development, and testing The team developed a plans for developing future-state core applications, and executed the plans through its early releases. Initial focus was on insurance policy management, and set-based development on proofs of concept led to a Javaspaces application fronted by Adobe Flex. Development work was done using agile and lean methodologies and practices. The team also led the process of establishing and implementing an enterprise integration architecture for all of Liberty Mutual Agency Markets Early work focused around RESTful web services and Atompub using Restlet Other Premium Innovation efforts included:

- Lead on an IT-wide wiki rollout Responsibilities included product selection infrastructure pre-work rollout planning, and lead on the pilot The IT wiki is now in full deployment
- Participated in planning and proof of concept work on an enterprise document publishing solution Technical work centered around iText and Adobe's LiveCycle publishing tools.
- Participated in analysis planning prototyping and the pitch for an open source vertical application for the insurance industry.

Liberty Northwest Development Team
Designed built and maintained numerous messaging-based services on an Enterprise Service Bus using JMS XML over HTTP and SOAP over JMS
Implemented the business unit's first Ajax-enabled web components.
Sole developer on an overhaul of an existing Hibernate implementation to correct the previous implementation's deficiencies The result was a 35% reduction of SQL queries issued by the core web application.
Used Spring, Struts, JMS and JMX to build a JMS queue management tool that enables business analysts to browse error queues and re-drive/delete messages

Medical Management International Portland OR
March 2005-July 2005

Software Engineer

- Performed new development and maintenance on a Struts-based web application with a small team using Agile development methodologies

Portland Public Schools, Portland OR
August 2002-February 2005

Web Technical Lead and Applications Developer

- Java/J2EE web application architect and developer of web site redesign using Oracle 10g Application Server and Portal. Developed portlets using J2EE design patterns, test-driven development, continuous integration, and mainstream frameworks (Struts JUnit, Hibernate) in order to produce an environment that was conducive to rapid development by both in-house developers and project- based contractors
- Designed and built a build environment using the CruiseControl build server, Ant, CVS, and Junit following the practices laid out in Martin Fowler's article on continuous integration
- Spearheaded a documentation effort that, utilizing wiki technology, included all daily development notes, decision-making paths, and step-by-step documentation of system installs and patching Use of the tool spread out of the development team and into the business realm.
- Supported legacy web environment built with PHP MySQL and PostgreSQL

Apress, Inc., Berkeley, CA
February 2002-August 2002

Web Application Developer

- Designed and built the corporate site and accompanying content management system, including data modeling of all company tables, using PHP MySQL and Apache on Linux. The site was built in three months and the business logic and database layers remain in service today, more than four years after delivery.
- After completion of the web site was invited to co-author a title on developing content management systems on the LAMP platform

The Industry Standard San Francisco CA
April 2000-September 2001

Web Application Developer

- Designed and built a variety of dynamic templates in Tcl and SQL
- Responsible for all JavaScript and DHTML development on the public sites and within its accompanying content managment system
- Developed CSS for all widely used treatments on the site, helping cut page weights in half.
- Served as lead liaison between developers and art designers working to accommodate designs and keep pages light

Sparks com San Francisco CA
May 1999-April 2000

Web Developer Presentation layer

- Wrote XSL stylesheets that received XML from the business layer interpreting the state of the model and catering views accordingly

Sybex, Inc., Alameda, CA
October 1998-May 1999

Editor

Winston-Salem Journal, Winston-Salem, NC
September 1997-August 1998

Copy Editor

Languages/Platforms
Java/Java EE PHP/LAMP Ruby Perl Tcl SQL JavaScript ActionScript Adobe Flex and AIR

Operating Systems
Linux Unix, Windows NT/2000, Mac OS X
RDBMS: PostgreSQL 8 3 and 8.2 MySQL, Oracle 9i/10g
Markup/Web development: HTML CSS DHTML XHTML, XML/XSLT HAML Ajax Prototype Scriptaculous

Adminstration
Apache Tomcat Apache HTTP Server Subversion JBoss Oracle 10g Application Server Oracle Portal OC4J CVS Confluence, Bamboo

Development/Build Tools
Eclipse, Maven, Ant, Rake, CVS Subversion, JUnit, EasyMock,
CruiseControl Bamboo, Cygwin Vi VMWare , Hudson Selenium rspec, TestUnit Firebug

Other
Spring Framework (core DI, Spring MVC, and various templates) Ruby on Rails, WebWork, Struts 1 and 2 SiteMesh, Tiles, JSTL, log4j, Hibernate, OSCache, AjaxTags, GoF and J2EE Design Patterns, JSR 168 Portlet development, JMX, JMS, SonicMQ, WebSphereMQ, Enterprise Service Bus with point to point and pub/sub messaging JINI and JavaSpaces iText Atom Restlet point-to-point TCP/IP communications working with sensitive information in a secure environment

Education

1996 graduate of the University of Virginia B A History GPA of 3 4

Charles R. (Chuck) Kelley

PO BOX 5488
Sun City West AZ 85376
480.797.5850
chuckkelley@usa.net
Professional Focus

Mr Kelley is an internationally known expert in database technology He has over 30 years of experience in the design and implementation of operational/production systems, operational data stores and data warehouses (data marts) Mr Kelley teaches seminars on SQL, Database Internals, Implementing the Data Warehouse, Designing and Implementing the Star Schema from Your Operational System Dating the Data Warehouse, Twelve Characteristics of Successful Data Warehouses, and other database and data warehousing topics Mr Kelley has co-authored or contributed to four books on data warehouse Mr. Kelley has been published in numerous trade magazines on database technology, data warehousing, metadata, master data management and enterprise data strategies He has held internet chats on data warehousing topics and has written a columns on data topics

Experience

February 2007-Present
Excellence In Data LLC
Business Intelligence, Data Warehouse, Database Consultant
Phoenix AZ

- Architected, designed, and developed a financial data warehouse to store historic data for three lines of business (currently) within a major investment company Designed and developed a data mart for client reporting for the alternative asset management group. Designed and developed a data mart for the executive dashboard Designed and implemented a data mart for the Human Resources Compensation project Designed an Enterprise Data Warehouse for combining all the business units into a single view. This view will be for Clients, Marketing, Financial Reporting, Management Reporting, and business risk analysis
- Designed the transaction database for a product to track epidemiology occurrences. This project is using Free and Open System Software (FOSS) following the Agile Development Methodology. Designing the Business Intelligence environment for this product
- Assess Business Intelligence Architectures and provided input into possible changes.
- Reviewed proposals for federal government and provided input on possible changes.
- Prepared and participated an oral presentation for a federal government proposal

January 2003- February 2007
Navigator Systems/Hitachi Consulting
Senior Data Architect
Phoenix AZ

- Architected, designed and implemented a marketing data warehouse and data mart for a regional bank Managed developers on the technical aspects and implementation of our solution.
- Architected and designed a streamlined data flow process for delivering reports to regional Bank Executives and their direct reports on commissions and payments to sales Increased the efficiency of the processing from 20 days to 6 hours
- Designed a work force management data mart to help human resources understand the supply demand cost and skills for a major

consulting company workforce
- Architected and designed a multi-stove pipe data mart environment and created an enterprise data warehouse for a major consulting company internal processes Managed four data modelers and 11 ETL developers

October 1991- January 2003
In Data, Inc and FrontRange Consulting International Inc
President and CTO
Phoenix AZ and Colorado Springs CO

- Worked on the design and implementation of over 45 Data Warehouse/Operational Data Store environments These companies are included in the following industries:
- Retail
- Consumer Package Goods
- Logistics
- Lodging
- Manufacturing
- Education
- Travel and Transportation
- Insurance
- Medical
- Government
- Consulting Organizations
- Computer Vendors (Hardware and Software)
- Redesigned and increased the performance for a large order entry system in the transportation industry
- Lead Architect, Sales & Marketing Data Warehouse for a Retail Convenience Store
- Advisor to Project Leader for Quality Assurance Data Warehouse for a Chemical Manufacturing Company
- Project Leader and Data Modeler/Designer for a Expense Analysis Data Warehouse for an Insurance Company.
- Developed and trained a major database company a large consulting organization and a large hardware manufacturer on the issues of implementing a data warehouse
- Consulted with Database Vendors concerning the requirements of databases in Transaction and Data Warehouse environments
- Contracted to provide a Disk Manufacturer with information concerning disk utilization patterns for Data Warehouse environments.
- Project Leader Chief Technical/Data Architect for a Sales & Marketing and Rent Estimation Data Warehouse for the Federal Government

August 1997-- August 1998
NewTHINK Inc
Principal
Colorado Springs CO

- Team Leader of the team that defined the NewTHINK Enterprise Knowledge Architecture.
- Defined the Database Architecture for College Testing Center Data Warehouse
- Designed the Database for a state of the art internet reservation system for one of the largest motor coach touring companies in the world.
- Developed and delivered in the Asia/Pacific Rim, a 2 day course on Data Warehousing Issues

April 1995 – April 1996
Pine Cone Systems, Inc (now Ambeo, Inc)
Vice President, Development and Co-Founder
Colorado Springs CO

- Pioneered and supervised the development and testing of Products
- Prepared the financials and startup projections.
- Targeted and marketed the products to acquire Venture Capital Funds
- Managed 10 developers

August 1983-- October 1991
Digital Equipment Corporation
Manager of Consulting and Support
Database Systems Group
Nashua NH and Colorado Springs CO

- Worked with leading corporations and vendors providing expert advice and support on the building of their production applications, data warehouses, and products.
- Consulted with Digital's MIS organization on database issues and the development of one of the first data warehouses at Digital
- Developed and trained companies on Digital Database Products
- Liaison to Digital Equipment Corporation User Society (DECUS)
- Consulted with the Digital Marketing Organizations on how to best use Digital products in architectures
- Managed and Lead a team of 5 international consultants responsible for providing top-gun technology and sales support

Digital Equipment Corporation

Mid-Atlantic Region
VAX Information Architecture Consultant
Landover MD

- Responsible for presales and post-sales effort for the VAX Information Architecture (Database Forms TP Monitors Decision Support Systems) for the Mid-Atlantic Region
- Invited to be on the Database Review Board for a major appliance manufacturing company. Was the only non-company representative on the committee
- Developed Excellence In Sales training course

Digital Equipment Corporation
Civilian Agency
VAX Information Architecture Consultant
Landover MD

- Responsible for the presales effort for the VAX Information Architecture (Database, Forms, TP Monitors Decision Support Systems)
- Developed and Implemented systems for Digital Clients – Commercial, Civilian Agency and Department of Defense.
- Developed & delivered training on Information Architecture products

1981-1983
Science Applications, Inc
Database Technologist
Vienna VA

- Designed and Implemented the Database Design for a C3I System
- Developed, Coded, and Implemented the Database access for a C3I System
- Developed the networking environment for the C3I System

1976-1981Planning Research Corporation
Director of Systems Support
McLean VA

- Managed the development and operations of an Automated Property Appraisal System
- Supervised 7 people – Operations and Programming
- Designed and Developed a Logistic System

Planning Research Corporation
Programmer/Analyst
McLean VA Huntsville AL

- Programmed and executed a microfilm production system
- Designed and Implemented part of an Automated Engineering Document Preparation System (AEDPS)
- Designed and Implemented the MIS reports

Books and Columns

2006 Contributor Business Intelligence Implementation: Issues and Perspectives The ICFAI University Press

2003 Contributor The Internet Encyclopedia John Wiley & Sons

2002 Impossible Data Warehouse Situations: Solutions from the Experts Addison Wesley

1992 W. H Inmon and Chuck Kelley. Rdb/VMS: Developing the Data Warehouse John Wiley and Sons

2003-2005, Column: Data Management Strategies, www.itworld.com/nl/db_mgr/
2000 Column: The Value of Data Warehousing www.searchdatawarehousing.com (articles can be found on www.searchdatabase.com)

1991 – 1993, Rdb Magazine, Chuck s Corner, A column on database issues involving DEC Rdb (now Oracle Rdb)
Member of Data Management Review's Ask the Expert Panel (www.dmreview.com) and a member of the Bill Inmon Speakers Bureau (www.billinmon.com)

Awards

1984, 1986
Software Excellence Award, Digital Equipment Corp.

Education

1974--1980
University of Alabama at Huntsville Huntsville, AL

B.S., Business Administration (Concentration in Marketing), 1980
Who's Who Among College and University Students
Delta Chi Fraternity, Founding Father Treasurer
Student Government Ombudsman

Peter Lacey

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{+}http://wanderingbarque.com/nonintersecting+

Experience

Jan 2008 – Present
Collaborative Software Initiative, Portland OR
Senior Developer Newburyport MA

- Part of a small, lean and agile team developing the open source TriSano Public Health Surveillance System ({+}http://trisano.org+) As a leading contributor on this team I make daily use of a host of technologies; the most relevant ones are:
- TriSano is developed in Ruby and utilizes the Ruby on Rails Web framework It is designed to be deployed into a Servlet environment via JRuby running on Linux/Unix (in particular SLES 10)
- TriSano uses PostgreSQL as its RDBMS
- For unit integration and UAT testing we use RSpec For Ajax and browser specific testing we use Selenium

Feb 2004 – Jan. 2008
Burton Group, Midvale, UT
Senior Consultant and Analyst Newburyport MA

- Provide strategic guidance to senior IT management of Global 2000 companies on the architecture and best practices surrounding the design and implementation of mission critical systems Assist technology teams in the evaluation and deployment of critical infrastructure and with the successful implementation of business services and identity management initiatives
- Develop detailed analytical reports on current technology trends and products
- Create and present technical workshops on REST, SOA, SOAP web services, and developing secure applications
- Provide architectural assessments and recommendations on enterprise architecture, service-oriented architecture SDLC processes, operations management, identity management distributed computing, application design, and the use of open source.
- Customers include: CSFB U S. Air Force, Capital One, Cigna Corporate Express, Express Scripts Johns Hopkins University, Sandia National Labs, New York Life, Shell, University of Washington, UCLA, ACE INA, Visa International United Nations U S Treasury National Nuclear Safety Administration, Sherwin Williams, DST, and more
- Successful in all engagements garnering extremely high customer satisfaction

Aug 2002 – Feb 2004
Systinet, Corp. Cambridge, MA
Director of Services and Support

- Oversaw six direct reports providing consulting services and support to Systinet's customers
- Responsible for the project management of consulting engagements the analysis of customer requirements and the development of Systinet's training curriculum
- For key accounts, such as Societe Generale, Progress Software, and Wells Fargo provided technical account management acting as the principal liaison between Systinet and these high-value customers

Director of Systems Engineering

- With two direct reports provided technical expertise to the efforts of Systinet's sales team
- Responsible for managing all technical contact with prospective and existing customers.
- Provided architectural and engineering assistance to customers regarding service-oriented architecture and web services.
- Developed business systems in Java and C++ to prove the value of Systinet's products
- Directly influenced every deal done by Systinet during my tenure
- Worked closely with Product Marketing to refine Systinet's messaging and positioning Created most technical marketing documents and competitive analyses Reviewed all other documents for technical accuracy

Nov 2001 – Aug 2002
Independent Contractor Newburyport MA
Founder

- Solely responsible for all aspects of this consulting business
- Successfully completed three substantial products.
- A complete, web-based, Clinical Trials Management System developed using PHP and PostgreSQL System tracks all non-medical data surrounding the clinical trial phase of the client's drug development process; e g patient enrollment vendor tracking budget tracking,

etc
- A cross-platform, graphical software installer developed in Perl This software supports the complex database installation and upgrade of my client's financial management software
- A web-based facilities auditing system developed using ASP and Oracle. System supports the capture of information regarding public schools that are to be transferred to private management firms

Mar 1999 – Nov. 2001
Cisco Systems, Inc. San Jose, CA
Product Manager Lowell MA

- Product Manager for the Cisco Collaboration Server (CCS) responsible for all aspects of delivering the CCS solution to market
- Gathered and prioritized product requirements, reviewed engineering specifications, coordinated all of the development teams (engineering, QA, and documentation); determined licensing and pricing; coordinated with manufacturing; developed marketing materials; and delivered information to customers partners, and the field sales team.

Systems Engineer / Consultant Chicago IL

- Responsible for installing and customizing the Cisco Collaboration Server product and integrating it with existing telephony systems and the customer's Web presence.
- Responsible for pre-sales presentations, technical training, and account management
- Notable projects include the highly visible Lands' End deployment where I was solely responsible for all aspects of the installation and the customization of Cisco's products. My efforts at Lands' End were instrumental in providing the showcase account for this product and thus to the WebLine (the original developer) acquisition by Cisco
- Similar development was undertaken at GM APAC Customer Services and others

Mar 1997 – Mar 1999
Netscape Communications, Inc Mountain View CA
Systems Engineer / Consultant, Chicago IL

- SE duties consisted of customer education, solution selling, and overcoming objections.
- Consulting duties consisted of installation configuration, and customization of all Netscape products.
- Specialized in the Netscape Application Server (a precursor to today's J2EE environments) and created the initial code base for Boise Cascade and Reliastar.
- Received two Outstanding Performance awards

Apr. 1992 – Mar 1997
Prolifics, Inc New York, NY
Professional Services Engineer Chicago, IL

- Helped build the Chicago office and provided implementation services to our mid-west customers
- Responsible for developing applications presenting the product to all manner of customers training users and developers and rescuing troubled accounts
- Designed, developed and deployed many Prolifics based applications for customers such as the U S Navy Bethlehem Steel Kraft, Allstate Motorola, and more

Apr 1987 – Apr 1992
Trigen Energy, Inc White Plains, NY
Information Technology Manager

- Sole provider of information technology services.
- Instrumental in Trigen's growth from two power plants in 1987 to seven in 1992.
- Installed, configured, and maintained the systems in all power plants and headquarters
- Responsible for deploying networking solution at all locations
- Designed and developed many applications for Trigen most notably a billing system used to prepare and reconcile all invoices for Trigen's customers

Projects

- Maintain a popular technology blog primarily focusing on REST
- In conjunction with Elias Tores, Sam Ruby, and Tim Bray, implemented AtomPub support in WordPress 2 3 (PHP)
- Developed a Ruby utility to mount AtomPub resources as a local filesystem.
- Maintain a popular HOWTO on implementing secure multi-homed SMTP (Postfix) IMAP (Dovecot) LDAP (OpenLdAP) installations

Publications

Trade Journals

- Computer World (Germany),October 2006: Web Service Security Standards
- Secure Enterprise Magazine, December 2005: Securing a Service-Oriented Architecture
- C/C++ User's Journal, May 2004: Web Service Enabling Existing Socket Servers
- Dr Dobb's Journal February 2004: Dynamic Web Service Discovery Using UDDI
- Dr. Dobb s Journal, November 2003: Building Web Services with C++
- DevX com June 2003: Building Web Services with C++

Burton Group Analyses

- XML 2005: Core XML Standards and Their Impact on Business Development
- Web Services Management: Townsman of a Stiller Town – A Market Overview
- Web Services Management: Technology and Standards
- Web Services Management: Product reviews of Actional AmberPoint and SOA Software
- Enterprise Service Bus: What is it?
- XML Schema methodologies and best practices
- REST Easy: A public presentation on understanding and using RESTful web services

Hard Skills

Languages (current): Java, C/C++ Ruby, Perl, PHP, JavaScript, (JRuby)
Operating Systems (current): Unix (Solaris AIX)/Linux (Ubuntu, Red Hat, SLES 10)/OS X Windows
XML and Related Technologies: XML, XML Schema, XQuery XSLT XPath
Web Standards: HTTP, (X)HTML, CSS, SSL/TLS, Ajax
Web Services: REST, SOAP/WS-*, Restlet, HP Systinet Server, Apache Axis
Web Servers Frameworks, and Application Servers: Apache Web Server 1 & 2, Servlet Engines (Tomcat, Jetty) Ruby on Rails PHP J2EE (WebSphere, WebLogic, JBoss)
Databases: Oracle, DB2, PostgreSQL, MySQL
Middleware: CORBA Tuxedo, MQ-Series Tibco Rendezvous, JMS, RMI various SOAP stacks
Collaboration: SMTP, POP/IMAP XMPP Portals Wikis WebLogs CMS
Networking: TCP/IP
Telephony: Avaya G3 ACD, Rockwell Spectrum ACD, CT-Connect
Identity Management: LDAP, Web Access Management, provisioning solutions, meta & virtual directories
Development: Assorted text editors IDEs test frameworks, source code management systems, build systems defect tracking etc

Soft skills

Enterprise architecture; service-oriented architecture
Distributed computing
Systems and application security
Logical and physical data modeling
Application design patterns and best practices
Enterprise identity management
RDBMS design and administration
Software development life cycle
Excellent written and oral communication skills
Working with sensitive information in a secure environment

Education

Pace University, New York, NY
Computer Science Major; 3 63 GPA overall, 4 0 in major

Emilio Mercado

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New York NY 10034
(646) 284-3506
emercado3@gmail com

Professional Experience

Thomson Financial, New York, NY 1/04 – 8/08
Vice President – Institutional Datafeed Products
Managed the firm's datafeed strategy on a global basis Oversaw a team of commercial managers and market specialists Developed product strategy and budget and co-managed P&L for next generation data delivery direct exchange delivery ASP and hosted datafeed solutions

- Managed product launches with the commercial management and product development teams in the U S and internationally
- Worked closely with marketing group to develop integrated product strategies, effective communications campaigns and collateral material targeting hedgefund trading systems
- Worked for the past two years on the development packaging and launch of a new real-time low-latency feed for high performance

trading This datafeed covers 90% of the global trading volume across 45+ exchanges

Achievements:

- Delivered revenue growth at the rate of 25% per annum.
- Co-led the Thomson Financial negotiation team which specified, negotiated and contracted the key technology providers of Thomson's low latency datafeed product (Wombat Financial Software and BT Radianz)
- Restructured the Third-Party Data Redistribution Group $115M annual revenue creating sales rights management contract and policy process and procedure.
- Signed the largest "portal" data distribution contract in Thomson Financial history.
- Member of technology review committee for strategic products Reviewed products such as Solace XML hardware routers as the core of next generation news delivery technology

COESfx, Plainview NY 2002 – 12/03
Chief Technology Officer
Responsible for all technology implementation and integration of a 6/24 start-up Spot Foreign Exchange ECN along with the day-to-day management of all systems Managed development teams coordinating enhancement integration and problem resolution. Managed Quality Assurance and release management

Achievements:

- Defined and developed system management systems
- Specified an deployed all trade order logic for integration into base order matching engine
- Defined and developed operational procedures and correction interfaces as well as web-based trade information and reporting systems

Logiscope Ltd., New York, NY 2001 – 2002
Managing Director, North America
Responsible for product management and marketing for North American-based based clients Developed/executed product and marketing strategy to expand Deal Feed and Live MXL product lines and clients Played key role in development of business strategy planning to increase the outside investment in the firm to execute the acquisition and product line expansion Opened and staffed the New York office. Established and grew third-party relationships and sales channels with major platform and messaging providers Reuters' TIBCO Talarian Smart Sockets SunGard MINT Moneyline and Bloomberg

IXnet, New York NY 1999 – 2000
Vice President – Technology
Designed, specified and implemented strategy for an ASP-managed market data information delivery architecture, IXNet's TIB Online Direct, focusing on the technical, product and pricing strategy while targeting client requirements Played an integral role in software architecture, software management tools, performance metrics, data usage reporting tools, infrastructure and deployment cost metrics, infrastructure software development deployment strategy help desk strategy vendor relationship management and software and consultancy.

- Created the business plan and product plan for TIB Online Direct
- Led the design and specification teams, for the network and software architecture of the product

Bridge Information Systems New York NY 1997 – 1999
Vice President – Strategic Marketing
Held the dual position of Global Product Management and Product Marketing for both datafeed and market data delivery platform products Managed specification/rollout plans and P&L for the products. Defined and implemented vendor-specific integration requirements with Bridge products in Triarch TIBCO, BT and Midas platforms. Presented the Bridge sales force with materials needed to sell our products to both prospective and existing client base Delivered strategic direction plans to major clients

- Managed a staff of twenty (20) Product and Marketing managers. Responsible for BridgeFeed, Telerate Feed, BridgeFeed Broadcast, Triarch Feed Handler and TIBCO Feed Handler, DAC entitlements End-of-Day products MarketVision and Bridge Trading Room System products (BTRS) market data delivery platform products
- Established application developer and integrator relationships for Bridge API s.
- Managed the products feeds and delivery platforms which generated $650 million in revenues two-thirds (2/3) of the total Bridge revenue stream
- Realigned product direction and specifications to meet client (and company) objectives for real-time data delivery as a standalone datafeed product as well as integrated with BTRS system platform and the Reuter TIB and Triarch platform products taking it from fifth (5 th) position to the second (2nd) most widely-deployed datafeed product in the marketplace

Merrin Financial New York, NY 1996 – 1997
Vice President – Client Services
Managed all client-facing groups, and staffed and developed the Engineering group. Defined project management standards/practices to shorten lead time to implement all client orders portfolio custom interface and compliance management systems.

- Oversaw a staff of thirty (30) in Engineering, Help Desk, Project Management, Business Analysis and Interface Development areas
- Redefined the product deployment process and significantly shortened the overall system design and implementation time from nine (9) months to six (6) weeks
- Staffed the new office in London UK.

- Led network specification, design and migration planning for ITN from an X 25 network to an IP network Managed the evaluation of vendor (MCI Sprint AT&T) proposals for the new network

Reuters America, New York, NY 1987 – 1996
Technical Director (Reuters New York District)
Managed day-to-day operations and post-sale support to clients in the NYC area ($400 million annual revenue) Acted as final escalation point in for all technical issues in the Reuters NYC District Maintained and developed relationships with vendors to provide services both internally and to the customer base. Oversaw systems administration group for 900 internal staff positions in NYC. Managed staff of ninety (90) including 6 senior managers, overseeing the following groups: Engineering, Service Technicians Installation Technicians Internal System Administration and Desktop Management and Third-Party Vendor Relations

- Standardized software distribution and configuration management processes for Reuters Triarch market data distribution system
- Principal member of the Reuter product "Triarch Round Table" responsible for reviewing product feature enhancement and next generation product functionality The culmination of these efforts was the design and release of Version 4 the last major release of the product

Open Systems Manager (Reuters Downtown District)
Provided all open system engineering support for Triarch implementations within the district, including planning, staging and on-site implementation Generated all proposals, insuring that they met Reuter technical and profitability guidelines Managed the design of third-party vendor and internal staging facility for Triarch products

- Managed a staff of 25 in pre- and post-sale Engineering, Project Management and Proposals groups.
- Managed the team responsible for the largest Triarch system designed and deployed in North America for 947 positions at Prudential Securities in New York City
- Defined product configuration and network design standards simplifying and shortening systems implementation time by a factor of six (6)

Manager – Open Systems Engineering (Reuters Downtown District)
Delivered turnkey Triarch systems Managed staff of eight (8) engineers, tasked with network design criteria, software distribution, software architecture and the development of acceptance and performance test plans. Played integral role in the network design and implementation for Reuters major client trading floors in North America.

- Pioneered the concept of off-client site staged system implementation and testing for Triarch systems.
- Designed and build facility capable of handing 1 400 workstations and application servers including inventory management software deployment and configuration management

Open Systems Engineer (Reuters Downtown District)
Planned, designed, staged, implemented and tested systems Worked hand-in-hand with key clients, including Bank Julius Baer NatWest USA and Mitsubishi Bank Developed and presented training courses for both clients and internal staff

- Architected the first large scale (75 positions) deployment of the Reuters Triarch market data distribution system in North America at Bank Julius Baer

Engineer (Rich, Inc. division)
Designed and implemented Video Switching Systems and Proprietary Unix Systems (Triarch I)

Education

{*}Hofstra University Hempstead, NY 1982 - 1985*
Bachelor of Science (B S) degree – Computer Science

Industry Proficiencies

Professional Skills: Solid understanding of the market data industry, including offerings from: Bloomberg, Bridge, Moneyline/Telerate, Reuters and Thomson Financial. Proficiency in datafeed and workstation products, cross asset data control, equities, fixed income, money markets, futures foreign exchange, news and commodities Adept at working with trading portfolio management and asset allocation products end-to-end trading and the settlement process (including FX)
In-depth knowledge of Intranet/Extranet networking providers, including: BT/Radianz, Savvis and Global Crossing, along with their corresponding business models Knowledge of enterprise messaging systems for deployment and integration with proprietary products

References available upon request

Patrick Logan

1370 NW 131st Avenue
Portland, OR 97229

Phone: (503) 476-5387
E-mail: patrickdlogan@gmail.com

Agile Open Northwest, 2006-Present ({+}http://agileopennorthwest.org+)

Duties: Treasurer board member and co-organizer of AONW 2007 2008 and 2009

Liberty Mutual Insurance Group, 8/2006-Present, Architect

Duties: Responsible for integration architecture strategy and projects assisting in the acquisition of two large insurance companies (Ohio Casualty and Safeco). Lead design and development of search services across multiple policy and policyholder systems and end-user applications for unified management of multiple agency information systems Lead the definition of architecture processes and evaluations within the company's software development lifecycle Help promote the use of open source software and tools within the company and the insurance industry Previously participated in planning and prototyping a dynamic scalable policy quoting and rating system

Skills: Working with geographically distant and diverse IT organizations Long-range planning and strategic architecture Agile development practices and test automation HTTP/REST web services in Java and the Groovy programming language Jini and Javaspaces for dynamic distributed systems

Intel Corporation, 2000-8/2006, Systems Architect, Agile Coach and Instructor

Duties: Investigate prototype and initial development of Service-Oriented Architectures using Microsoft C#, Java and SAP Netweaver/J2EE systems Establish IT enterprise architecture practices for coordinating large teams and balancing project and enterprise strategies Coach process improvement teams on adopting agile software development practices. Coach, develop curriculum, and teach agile practices to teams in IT and product development across Intel. Work with teams to establish better testing test automation, and continuous integration environments. Lead the integration of several teams designing OLTP, OLAP, and master data management systems using custom development and integrating new SAP R3 finance and accounting systems

Skills: Working with many large teams on incremental process improvement and automation Planning practical long-range strategies and roadmaps Problem solving in complex organizational environments Developing integrations systems using Tibco RV messaging and SAP R3 Designing star schema databases for relational databases (SQL Server, Teradata) Prototyping with several web service tools, JMS tools and HTTP/REST

Gemstone Systems Incorporated, 1996-2000, Senior Software Engineer

Duties: Develop components of a commercial distributed multi-user object-oriented database and application server. Work with customers and consultants to design successful applications using the company's products in OLTP and OLAP scenarios Participate in Java specification processes Prototyping Java APIs for collection classes JMS, and Javaspaces

Skills: Developing a highly-reliable and scalable HTTP-based transaction processing front-end to the application server Developing concurrency resolution mechanisms to reduce multi-user concurrency conflicts. Developing federation mechanisms for scaling-out object-oriented databases Developing integration systems for an object-oriented database and relational databases Programming in C, Smalltalk, and Java for Windows and Unix

Intel Corporation, 1993-1996, Senior Software Engineer
Duties: Develop products for video and application conferencing Participate in establishing international video conferencing standard protocols. Coach teams in object-oriented design Develop finance/accounting applications and integration systems
Skills: Designing maintainable distributed and object-oriented systems. Coaching programmers in object-oriented design Developing custom data integration systems using multiple databases data formats and SAP R3 Programming in C++ and Smalltalk on Windows Win95 and NT

Mitron Corporation (now owned by GenRad Corporation), 1992-1993
Duties: Lead small teams and develop products for printed circuit board manufacturing
Skills: Developing reusable software for a widely diverse customer base. Programming in C and C++ on Windows and Unix

Mentor Graphics Corporation, 1989-1992, Senior Software Engineer
Duties: Lead small teams and develop computer aided design products for the electronics design market

Skills: Developing and supporting commercial products. Working with marketing, sales and customers to balance features and schedules. Designing distributed and object-oriented systems for performance and maintainability. Programming in Pascal and C++ on Apollo Domain OS and Unix workstations

Boeing Computer Services, 1986-1988, Software Engineer
Duties: Develop software for shop floor design, control, and integration of Unix workstations with mainframe MRP systems for internal automated production facilities
Skills: C, Common Lisp, Smalltalk, SQL. Developing distributed systems using PCs, VAX/Unix and Lisp Machines. Artificial intelligence techniques for semantic networks.

Data General Corporation, 1983-1986, Software Engineer
Duties: Develop CAD tools for internal use in designing electronics components.
Skills: C and Common Lisp. Multiple graphics libraries and operating systems

Education:
BSCS, The Ohio State University, 1983

Kris Ledbetter

14040 SW Maverick Ct
Beaverton, OR 97008
503-644-5844
krledbett@hotmail.com
Objective
A position involving technical IT management

Profile

- 30 years working for IBM in a variety of technical, sales and sales management roles.
- More than 25 years working with IBM database, decision support, report writing and business intelligence software, including IMS hierarchical and DB2 relational databases
- Ability to work individually or within a team.
- Strong interpersonal and communication skills
- Organized, highly motivated, and detail-oriented problem solver

Education
B S , Computer Science, Oregon State University

Relevant Experience & Accomplishments
Technical

- Worked with IBM teams to develop integrated hardware, software and services solutions to meet customer needs.
- Worked with many companies including Kaiser Permanente, NIKE, Fred Meyer, Freightliner, Consolidated Freightways, TriMet, PacifiCorp, Oregon Mutual Insurance, First Interstate Bank, Harry and David, Sapient Health Network (now part of WebMD), Multnomah County, State of Oregon and State of Washington to develop and implement relational database or data warehouse applications
- Taught fee-based relational database, SQL language and application development courses
- Selected for eight IBM Systems Engineering Symposiums and two IBM Golden Circles

Management

- Developed territories and quotas for sales specialists and forecasted sales revenue for team
- Developed spreadsheet tools and reports to manage territories and make decisions.
- Integrated new sales team members after acquisition of Informix software company
- Handled personnel issues and hired new sales specialist as required.

Employment
IBM Corporation, Information Technology, Portland

- 1974 to 1979 – IBM Systems Engineer supporting large IT customers, focusing on transaction processing, data management and application development software and solutions
- 1980 to 1992 – IBM Database Specialist supporting customers implementing DB2 and IMS database operational and query/report writing/business intelligence applications and providing fee-based database and application development training to IBM customers in Oregon, Washington, Idaho and California.
- 1993 to 1998 – IBM Data Management Sales Specialist working with customers to utilize IBM database and business intelligence software to implement operational and data warehouse solutions
- 1999 to 2003 – IBM Data Management Sales Manager directing a team of Data Management Sales Specialist in the Pacific Northwest, Northern California and Utah.

- 2004 – IBM DB2 SAP Sales Manager coordinating IBM DB2/SAP implementations in the Western U S

Collaborative Software Initiative Information Technology, Portland
2009 – Technical Director

Matthew Martin

508 NE Jarrett
Portland OR 97211
503.288.6133
matthew@odanrot.com
Profile

Matthew Martin is a artist and designer from Portland OR With 15+ years of design experience in web, identity and print Matthew provides a unique and effective range of design, build and resources for Brand Development Content Creation User Interface Environments and Products

Skills

Detailed spatial and visual concepting
Strong graphic design consistent art direction and effective storytelling
Efficient development, usability and production processes
Understanding of current front-end software and hardware systems
Keen understanding of user experience and product development relationships
Creative problem solving

Tools Process & Languages

Lean & Agile, Ruby on Rails Mac & Linux, Expression Engine, MAMP, PostgresSQL
HTML XHTML CSS Haml, Sass Javascript JQuery, Prototype Ajax

Select Work Experience

Collaborative Software Initiative - Portland OR - 5/08 to Current
Art Director

Hollywood Entertainment Corporation - Wilsonville OR - 2/05 to 11/06
Senior Web Designer

Learning.com - Portland, OR - 2/00 to 12/03
Art Director

Chrome Data Corporation - Portland OR - 8/99 to 2/00
Senior Web Designer

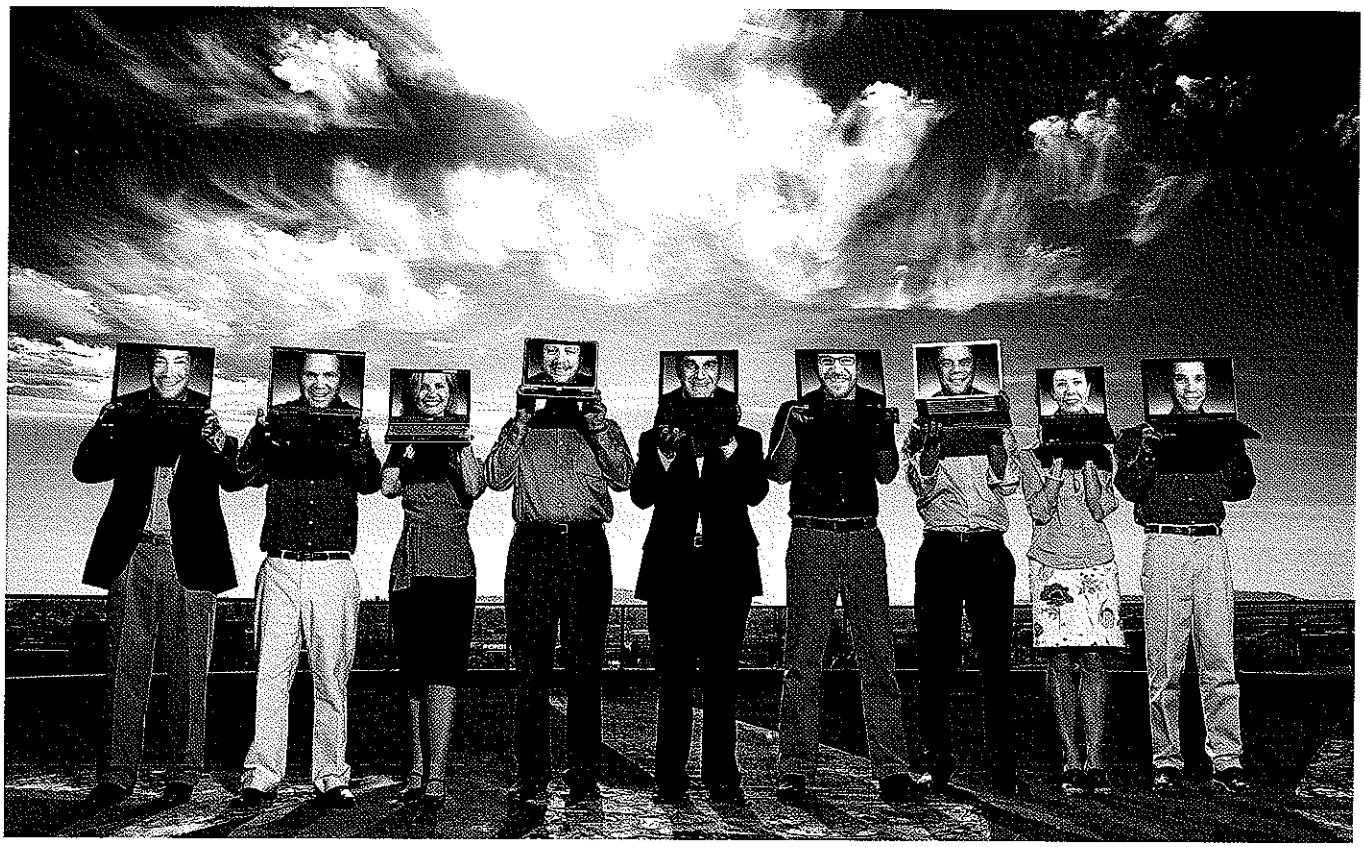
CTLT (ACAL Information Technology) - Pullman WA - 9/95 to 5/96
Graphic Designer

Four Winds * Westward Ho - Orcas Island WA - 6/95 to 8/95, 6/96 to 8/96
Ceramics Instructor

Addendum D: Additional Information

Addendum D to RFQ EHP90097 - Brochures and Press Releases

Brochures and Press Releases begin on the next page.



The mighty few *CSI founder Cohen, center, and his staff stay nimble internally by using open-source software development to access outside resources*

SMALL BUSINESS

Collaborative Contagion. A Portland, Ore., software start-up helps states adapt open source to collect public-health data

BY KATHLEEN KINGSBURY

EVERY DAY MILLIONS OF PARCELS ARE shipped around the world, each tracked with bar codes and databases. Yet what FedEx has long achieved with boxes, few states have mastered when it comes to tracking infectious diseases. "We've used the same system for 15 years," says Dr. Bob Rolfs, Utah's state epidemiologist. "It's so old that we still largely depend on paper charts, faxes and the telephone."

By federal mandate, that antiquated system soon has to be replaced—an upgrade Utah, like many other strapped states, can ill afford. Rolfs' predicament is what Collaborative Software Initiative (CSI), a start-up based in Portland, Ore., was created to solve. The 12-person firm specializes in bringing larger organizations together to build software to address large-scale problems at a reasonable price. Tracking infectious diseases is its latest challenge. "It's all about economies of scale," says CSI founder Stuart Cohen. "We save bigger entities millions of dollars by pooling their resources and hiring us to do the dirty work."

At the heart of what CSI does is the idea that two (or 100) hands are better than one. It's a model very familiar to Cohen, the former CEO of Open Source Development Labs, the nonprofit consortium behind the Linux operating system and the Firefox Web browser. At CSI, launched with $1 million in venture capital, Cohen has again employed open source, allowing clients to adapt the firm's software to meet their needs. But he's monetized part of it. "We don't charge for the actual development," Cohen says. "Instead, companies pay us to service and manage the end product." Cohen expects annual subscription fees to be about 15% of development costs, which range from $250,000 to $3 million.

Since 9/11, the Centers for Disease Control and Prevention (CDC) has been building a national database to detect and monitor outbreaks of measles, tuberculosis and other diseases. But many products designed to help states do so are either too expensive or already outdated.

So CSI and the state of Utah—with help from Novell, its local tech company—have collaborated to assemble 15 core members, including doctors, nurses, epidemiologists and IT experts. Rolfs' staff reached out to local and county health officials to listen to their specific needs and then met regularly with CSI engineers, which let the developers revise the application frequently. "Open source allows us to provide high-quality software releases early and often," says Mike Herrick, the project leader at CSI.

Utah is now testing the resulting product, which should soon be available to all 50 states. Then each state will be able to adapt the product for free but will need to hire CSI to manage its maintenance through contracts that cost up to $450,000 a year. "We wanted to make sure that we build something useful, eventually to connect all states and the CDC," Cohen says.

To date, CSI's biggest customer is Wall Street, which needs data collection for regulatory compliance. Cohen's partner, Evan Bauer, formerly chief technology officer at Credit Suisse, has been using his clout with fellow CIOs to persuade them to work with CSI rather than go it alone. It makes sense, since the same regs apply to all firms. "The dividends have been huge," Cohen says. "Public health is just the next frontier." ■

PHOTO-ILLUSTRATION FOR TIME BY ALIM DRAGULIN

Standard-Examiner

Wednesday, May 13, 2009

Davis County system will be tracking spread of swine flu

By **Loretta Park**

Standard-Examiner Davis bureau
lpark@standard.net

FARMINGTON -- The nation is in the lull before the storm with H1N1 flu, if the disease follows patterns like the 1918 and Hong Kong flu outbreaks, says Davis County Health Director Lewis Garrett.

Davis County is using a new computer system to track diseases, including H1N1 flu, otherwise known as swine flu.

Brian Hatch, the county's health epidemiologist, said the Tri-Sano company created a computer program that allows the county to track in real time what is happening not only in Davis, but also in other counties and the state.

"It was put to good use with H1N1," he said

And if this strain of flu follows the pattern of the 1918 Spanish and 1968 Hong Kong pandemic flus, there will be an increase in cases as well as in severity of cases, Garrett said.

"I don't think it's likely to go away," he said. "The best-case scenario is, it will stay mild "

Garrett and Hatch made presentations at the Davis County Health Board meeting Tuesday in Farmington

The Utah/National Electronic Disease Surveillance System, built by Tri-Sano, would have been helpful when cryptosporidium hit Utah two years ago, health officials said. Statewide, 1,902 cases were reported.

New regulations for those swimming in public pools were implemented, and pools statewide installed filter systems that use ultraviolet light to help keep the water clean

Garrett said health officials criticized themselves for taking weeks before realizing there was an outbreak in Utah County. If they were aware of the outbreak, health officials could have taken steps before it hit other counties, including Davis County.

Dr David Sundwall, executive director of the state's Department of Health, agrees

"No question," he said. "It took about a month to understand the magnitude of the disease in our state "

The computer program is keeping health officials current on what is being reported statewide with H1N1 flu, as well as 78 other diseases

Currently, the reported cases of H1N1 flu virus around the world, not counting Mexico, are mild, Garrett said.

No cases have been reported in Davis County yet, he said

"We sealed off the borders and managed to keep it out of our county," he said, causing board members to laugh

In Utah, 67 confirmed cases of H1N1 have been reported, while 2,618 confirmed cases in 44 states have been reported. Of those, three deaths have been reported in the U.S , according to the Utah Department of Health Web site

Worldwide, close to 5,000 cases have been reported.

Garrett said the novel influenza could arrive in Davis County anytime.

Health officials are concerned how this flu will manifest itself this fall, but hope a flu vaccine will be available to keep the virus at bay.

"It could evolve and roar back more serious than it is now" if it follows the pattern of other influenzas, Garrett said.

When a new or novel virus is spreading, Sundwall said, speculation is common

"I'm currently more concerned about monitoring the spread of the infection," he said

He applauds local health departments and the national Centers for Disease Control and Prevention for quickly identifying the virus and reporting it.

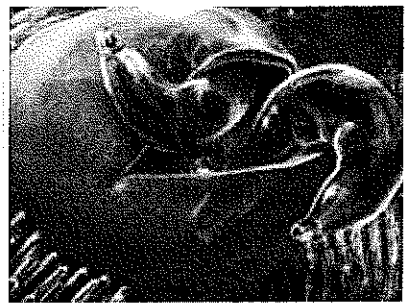
He said Utah is one of 10 states that can test flu samples in its own lab so results are now known in hours instead of days.

New Weapon to Track, Prevent Disease

Last Update: 4/01 3:45 pm

A A A A

Print Story | Share this Story



Cryptosporidiosis or 'Crypto' is a disease that causes severe watery diarrhea and can last for 2-weeks or more

Related Links

- Utah Department of Health

The following information is provided by the Utah Department of Health:

Utah public health officials have a new tool in their arsenal for disease tracking and management. The CSI TriSanoTM system is a secure, shared Web-based database that can make statewide disease information available immediately to the Utah Department of Health (UDOH) and the state's 12 local health departments (LHDs). CSI TriSano replaces the old paper system of reporting infectious diseases like influenza, cryptosporidiosis, Salmonella infections and whooping cough.

Before CSI TriSano, LHDs would enter a case into its own database, then print a hard copy and send it to UDOH. "The cases would trickle in so slowly from around the state it could be weeks or months before we could detect a trend," said State Epidemiologist Dr. Robert Rolfs.

For example, the 2007 pool-borne cryptosporidiosis outbreak sickened hundreds of people along the Wasatch Front before it was detected, and hundreds more before health departments could get preventive measures in place.

But CSI TriSano makes tracking and sharing information happen in real time. As soon as an LHD inputs a case, it can be securely viewed via the Web by the UDOH and those LHDs that will have a role in tracking, investigating and/or managing the case. Officials are confident the system will improve public health's ability to track, control and even prevent infectious diseases statewide.

"Protecting the public against health threats ranging from the recent Salmonella outbreak linked to peanut butter, to an influenza pandemic requires epidemiologists be able to track, investigate and respond to diseases across jurisdictional boundaries in real time," said Rolfs. "We now have the advanced technology that enables us to do that."

CSI TriSano will also electronically transmit disease data to the Centers for Disease Control and Prevention (CDC). The CDC can then use it to monitor health trends across the country.

Work on the project began in November 2007, when the state and software company Novell engaged in a public-private partnership. Utah's LHDs and the Utah Departments of Health and Technology Services, in turn, partnered with Portland-based software company Collaborative Software Initiative (CSI) to develop the system. Fourteen months later, CSI TriSano was launched.

It is the first open source, Web-based infectious disease tracking and management system in the country, providing public health officials with a high-value, low-cost alternative that prevents duplicate, error-prone data entry.

"CSI TriSano facilitates timely disease reporting and reduced paper reporting between local and state public health agencies," said Gary Edwards, health officer for the Salt Lake Valley Health Department. "It will alert us to potential outbreaks as soon as the diseases are diagnosed, and lessen the burden on doctors, nurses and labs."

"We are extremely pleased to see CSI TriSano up and functioning," said Lewis Garrett, director of the Davis

County Health Department. "CSI TriSano is a new and very helpful tool for health departments at both the local and state level to track communicable diseases of public health significance. This replaces a previously time-intensive manual system and allows local and state epidemiologists in Utah to share communicable disease information efficiently. The new system will help identify disease outbreaks quickly so we can notify health care providers and put measures in place to prevent these diseases from spreading in our community."

In addition to infectious diseases, CSI TriSano also tracks cases of child blood lead poisoning, which is helpful in directing public health efforts to prevent the condition. Dr. Rolfs hopes public health agencies will eventually be able to use the system to track other health issues like chronic diseases and reportable injuries.

Add a Comment **(0) Comments**

More Health Stories

- Diet Important for Dealing with Menopause | Video
- Sunburn of the Lungs? Yes! | Video
- Importance of Wearing a Helmet | Video
- Super Foods to Reach For | Video
- H1N1 Forcing Missionary Changes | Video
- Garden Safely | Video

More Stories

Collaborative
Software Initiative

CSI TriSano™ Form Builder

CSI TriSano™ is a citizen-centric surveillance and outbreak management system for infectious disease environmental hazards, and bioterrorism attacks It allows local state and federal health advocates to track control and ultimately prevent illness and death It is the next generation of surveillance and outbreak management software.

The CSI TriSano™ Form Builder

CSI TriSano includes a powerful and flexible Form Builder component that allows public health officials to extend the capabilities of CSI TriSano by capturing additional information for existing or new public health situations The Form Builder can be extremely useful during a disease outbreak, such as the recent H1N1 influenza virus. It allows public health professionals to respond faster to quickly emerging or changing health events by putting the power of customization in their hands.

The Form Builder allows you to capture additional information for each of the different event types maintained in CSI TriSano, including:

- Cases or CMRs
- Contacts
- Encounters
- Place Exposures

The Form Builder provides the ability to add additional questions to the existing CSI TriSano web-based tabbed interface Unless otherwise specified questions added using the Form Builder will appear on the Investigation tab for the event (CMR, Contacts, etc.) Questions can also be added:

- To existing tabs of the event such as Demographic Clinical or Laboratory
- Before or after existing questions on a tab
- As follow up questions that appear based on the answer to a previous question or an existing question

CSI TriSano™

Forms can be simple to very complex In fact many current hardcopy disease investigation forms can be simplified when automated within CSI TriSano since repetitive data only needs to be entered once and optional information is requested only when required In addition, help text can be added to any question created using Form Builder to guide the investigator. With CSI TriSano and the Form Builder everyone sees a complete accurate and up to date view of an investigation

In addition forms can be:

- Defined for:
  - One or more diseases
  - One or all jurisdictions
- Activated or Deactivated
- Copied
- Added to event occurrences that already exist in the system
- Removed from event occurrences
- Exported to another CSI TriSano system
- Imported from another CSI TriSano system

Collaborative
Software Initiative

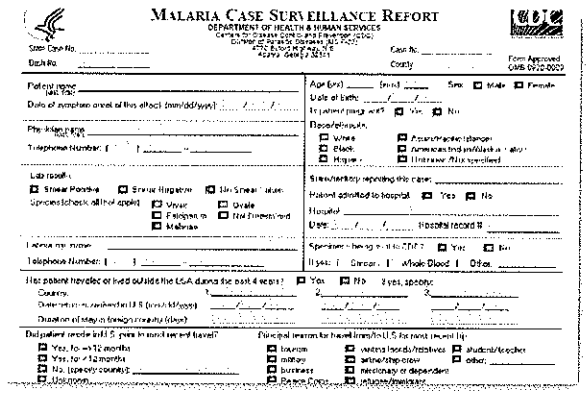
CSI TriSano™ Form Builder

The Form Builder includes a library that can be used to store frequently used questions and answers, or value sets. These can be retrieved as needed when working with forms. The use of the library feature provides consistency and standardization between forms, speeds the development of new forms, and leads to faster response to new health situations

To create, publish and make available a form in CSI TriSano™ involves these steps:

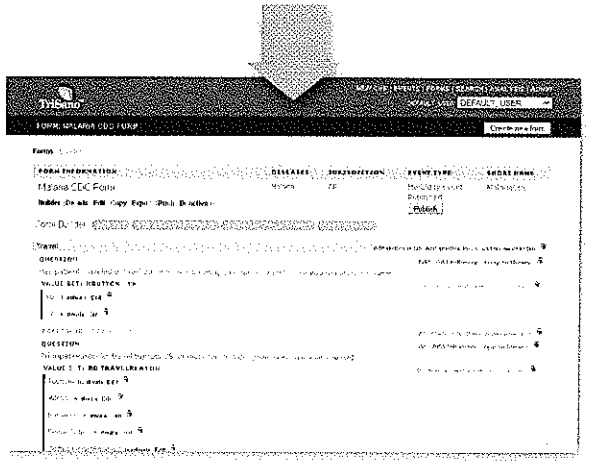
1 Identify Form Elements to be Defined

The CSI TriSano™ application already contains a large amount of demographic, clinical, epidemiological, and other data. So when converting a paper form to be used in CSI TriSano™, it's only additional data that needs to be defined in Form Builder



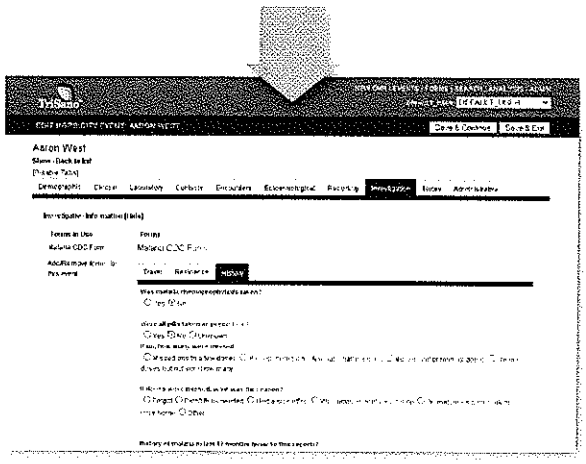
2. Create the Form using Form Builder

This involves first defining basic information about the form such as form name, diseases it applies to and jurisdictions where the form can be used. Then the questions and possible answers for additional information that is not already part of CSI TriSano™ are defined and the location of each question or group of questions within the CSI TriSano™ tabbed interface is specified



3. Publish the Form in Form Builder

This makes the form available in CSI TriSano™ to be used with new events. Optionally, the new form can be added to event occurrences already in the system



CSI TriSano™ Form Builder

Once the form is published and made available to CSI TriSano™ it is automatically assigned to any new event that is created in the system for any disease that the form is to be used with

Creating a Form in Form Builder

The screenshot below shows many of the capabilities of form definition in CSI TriSano™. Below are some of the following options used to design forms and add questions to different parts of a CSI TriSano™ event

Add Tab – allows you to add a tab under the Investigation tab of the event

Add Core Tab Config – allows you to add questions to existing tabs of the event

Add Core Field Config – allows you to add questions before or after an existing field in the event

Open Library – allows you to view questions and value sets that are stored in the library

Edit or **Edit value set** – to edit existing questions or value sets

Add value – to add a possible answer to a value set

Copy to library – to add the question or value set to the library

Add follow up – to add questions that are shown only if a condition is met

Add follow up to tab – to add follow up questions to a tab based on an answer to an existing CSI TriSano™ data field

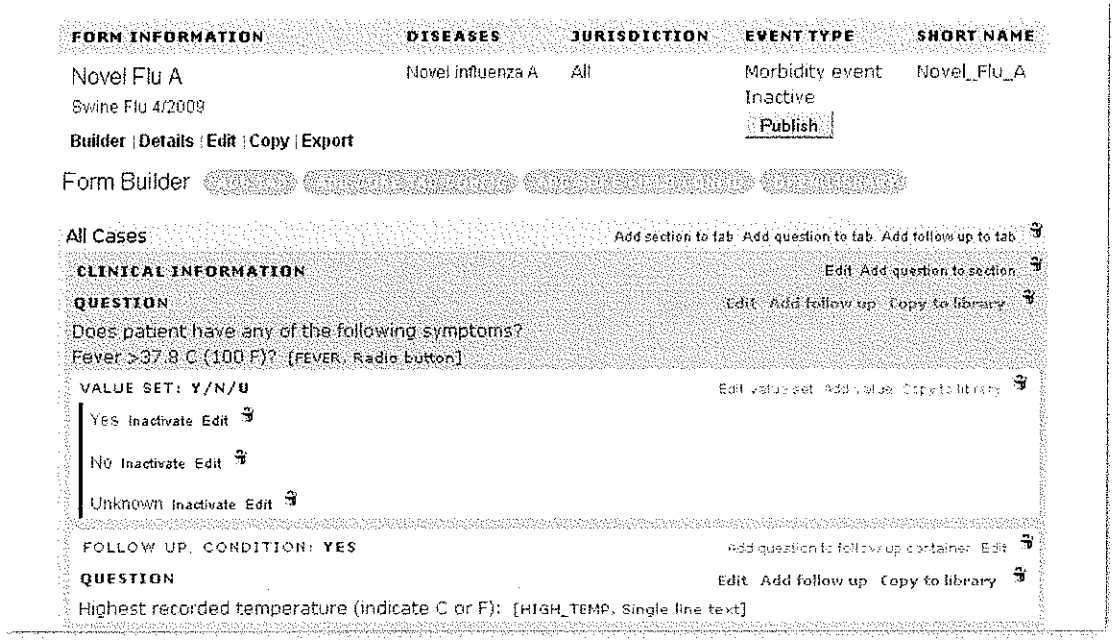
Small trash can icon – is used to delete that part of the form

The **Follow Up Question** 'Highest recorded temperature ..' is an example of a question being displayed if the answer to the question 'Does patient have any of the Fever>37.8C (100 F)?' is **Yes**.

The **Values Sets** are shown under each question Each value set has a name and a set of possible values Some questions don t require a value set such as those that allow free-form text or a date for the answer

The **Publish** button is used to publish the form for use in CSI TriSano™

After the form is published the questions under 'All Cases' will show up under a 'All Cases' tab in the existing CSI TriSano™ Investigation tab



Defining a Form in the CSI TriSano™ Form Builder

Collaborative
Software Initiative

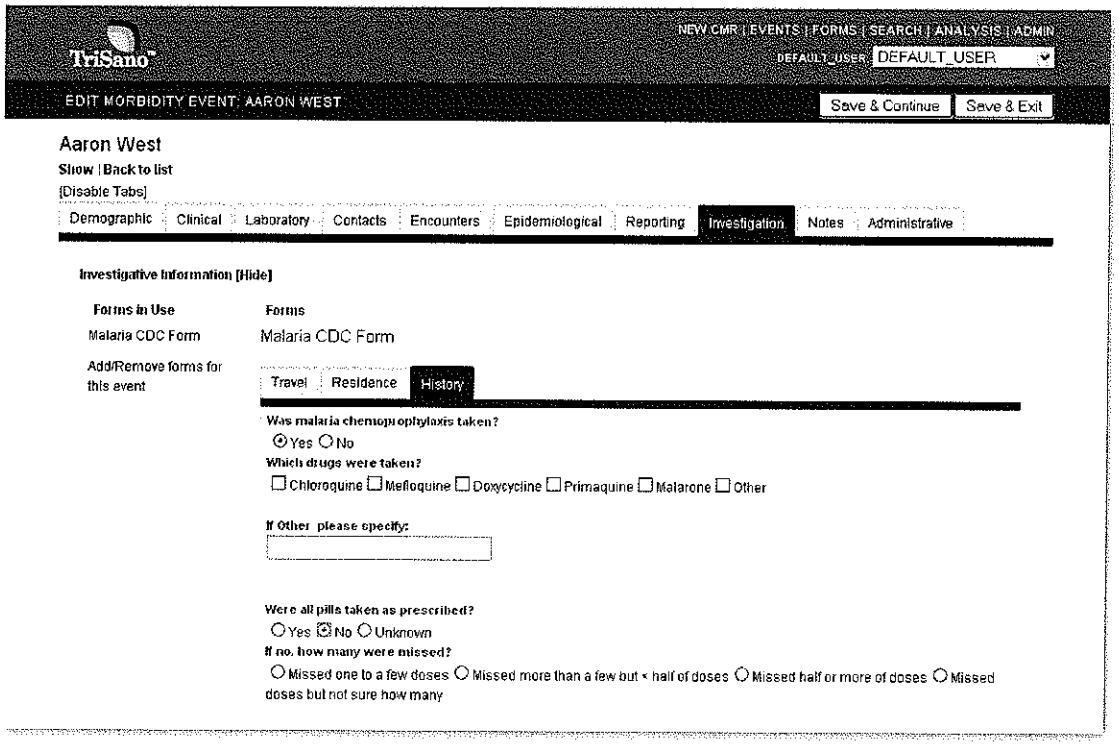
CSI TriSano™ Form Builder

After the form is published, it is available to be used within the CSI TriSano™ system.

Using a Form

In the screenshot below you see three tabs from a form built in the Form Builder added to the Investigation tab of the CSI TriSano™ CMR

In addition the additional event data that is created by forms is automatically extracted transformed and loaded in the CSI TriSano™ Data Warehouse for use with the Advanced Analysis, Visualization and Reporting capability of CSI TriSano™



Form contents integrated in CSI TriSano™ CMR

Collaborative
Software Initiative

About Collaborative Software Initiative

Collaborative Software Initiative (CSI) was founded in 2007 by Stuart Cohen, a veteran IT executive and former chief executive officer at the Open Source Development Labs CSI introduces a market-changing process that applies collaborative methodologies to building and delivering software at a fraction of the cost of traditional methods.

CSI engages the power of community to build project teams, provide the central project management function for developing software collaboratively and delivers high value enterprise software at a lower cost CSI offers the software to a broader base of customers under the open source licensing or Software as a Service (SaaS) models with commercial support

For applications that don't enable competitive advantage or are associated with non-value added activities such as compliance collaboratively developed software allows business managers to maintain individual control and direction over a project while accelerating compliance reducing costs and consolidating project timelines

CSI delivers on this new promise of collaboratively developed software - on time and on budget

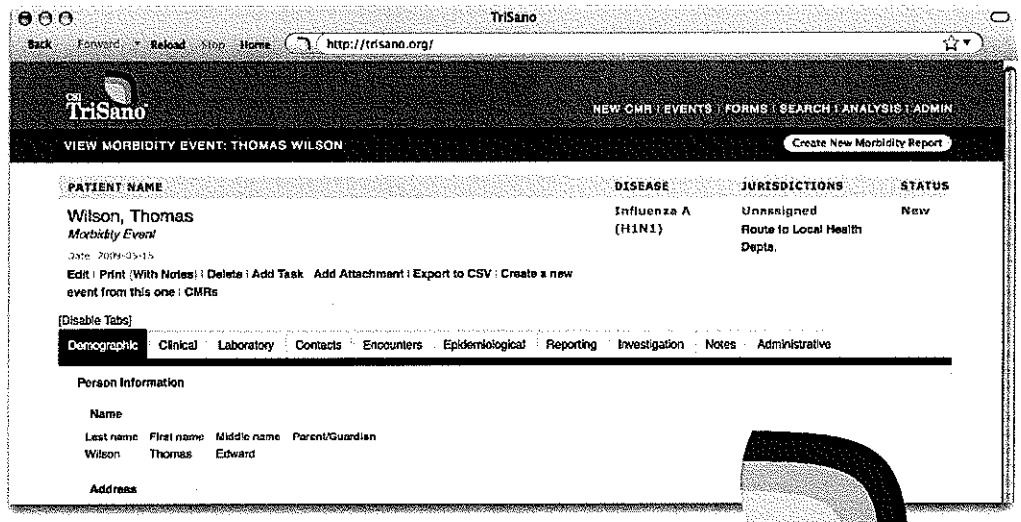
For more information on CSI TriSano™
Please visit
www.csinitiative.com/products/trisano
or contact us at:

Collaborative Software Initiative
1 SW Columbia Street, #640
Portland, OR 97258
info@csinitiative com
Phone: 503 295 7970
Fax: 503 295 7789

Collaborative
Software Initiative

CSI TriSano™ Collaborating for the Good of Public Health

CSI TriSano™ is a citizen-centric surveillance and outbreak management system for infectious disease environmental hazards and bioterrorism attacks It allows local state and federal health advocates to track control and ultimately prevent illness and death CSI TriSano™ functionality can also be implemented anywhere to support needs for data collection data integration data dissemination and data export for analysis Other applications of CSI TriSano™ include surveillance and management of diseases or conditions at hospitals long-term care facilities veterinary facilities home healthcare services schools and prisons



Attributes

- Client centric web application
- Flexible Form Builder
- Role based routing
- Smart Search technology
- User customizable business rules and system configuration
  Diseases, Jurisdictions, Users, Roles, Routing queues, Help, System codes, Export (CDC and CSV)
- Two factor authentication
- PHIN compatible
- HIPAA Security compliant
- Low cost subscription model with commercial support
- Rapid deployment models: on site or Software as a Service (SaaS)

CSI TriSano™

CSI TriSano™ is the next generation of surveillance and outbreak management software It has been built using open source concepts and technology and represents a close collaboration between subject matter experts such as epidemiologists doctors nurses and other public health officials It allows users to manage multiple types of events: a case or CMR, contacts places and encounters

csinitiative.com | 1 SW Columbia Street Suite 640 • Portland OR 97258 USA • Tel: 503-295-7970

Collaborative
Software Initiative

CSI TriSano™ Benefits

Developed in collaboration with subject matter experts CSI TriSano™ provides several important benefits to public health officials for surveillance and outbreak management

Innovation at Low Cost

CSI TriSano™ puts the power of customization in the hands of the users of the system. This reduces the costs of implementation and provides high value by meeting the needs of the users

Ease of Use

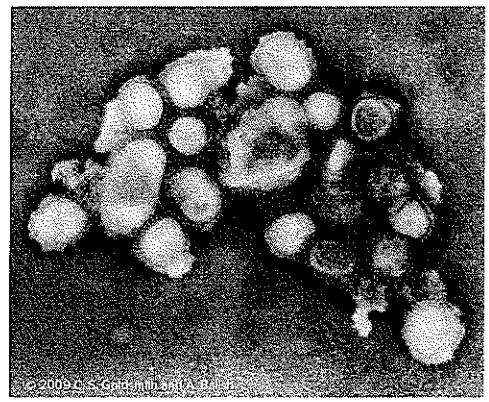
CSI TriSano™ is an easy to use system that provides for the systematic collection of disease surveillance data that has been obtained from public health partners. It was designed in collaboration with epidemiologists and other public health advocates to meet their needs and the needs of the citizens they serve

Timeliness

CSI TriSano™ provides faster access to data so that public health officials can take prompt coordinated action in initiating intervention and providing timely feedback and analysis

Efficiency of Business Workflow Processes

CSI TriSano™ makes business workflow processes more efficient. It allows public health officials in different jurisdictions to share important information contained in a single database electronically with one another. Information can be quickly routed to the proper jurisdiction for investigation and management and securely shared with others



Flexibility

The inherent flexibility of CSI TriSano™ can accommodate changes in information needs such as a new or emerging health incident. This leads to reduced costs in time, personnel and money and the ability to react faster to a public health situation

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CSI TriSano™ Key Features

CSI TriSano™ allows you to manage multiple types of events: a case or CMR (Confidential Morbidity Report) contacts places and encounters.

Case management

Through it's easy to use tabbed interface the user can enter demographic clinical laboratory contact epidemiological and investigation information as part of a case. Notes and tasks can be added including repeating tasks to be completed by the user or by others. In addition, files can be attached to a case. An existing case can be copied with options on how much to copy. Cases can be routed to a queue or an individual. As the case proceeds CSI TriSano™ supports the addition of repeat encounter information and provides longitudinal functionality for managing long term diseases. The flexible CSI TriSano™ Form Builder can be used to gather additional information throughout the investigation of the case.

Contact management

As part of the investigation, contacts can be added to the case and can include demographic clinical laboratory epidemiological and investigative information. CSI TriSano™ s Smart Search technology can be used to find contacts already in the system. Like case management notes and tasks can be added to a contact including repeating tasks to be completed by the user or by others. In addition files can be attached to a contact. Contacts can be routed to a queue or an individual. The Form Builder can be used to add questions to further the investigation. If needed a contact can be elevated to a case while still remaining as a contact of the original patient.

Environmentals

During the investigation place exposures can be added to the case. Each place can be updated with additional information, including questions added through the Form Builder.

Encounters

Encounters with the patient can be added to the case. Each encounter includes the name of the public health official, the location, date and a description. In addition each encounter can be updated with additional clinical laboratory and investigative information, including questions added through the Form Builder.

Analysis and Visualization

The CSI TriSano™ Smart Search technology can be used to search all CMR data using a variety of criteria including full-text name search, Soundex name search, event type, diseases, gender, status, jurisdiction, and date range. The results of the search can be exported to a spreadsheet or other tool for further analysis. The user can customize the export to include only the data needed for analysis.

Export

In addition to exporting for analysis and verification, the CSI TriSano™ administration facility provides support for configuring and running CDC exports.

Additional Features

- Outbreak management
- Advanced Smart Search (People, Events, Places)
- Support for Public Health Data Exchange
- Electronic Lab Reporting (Q2)
- Adv. Analysis, Visualization & Reporting (Q2) (Data warehouse, Ad hoc reporting, Cubed analysis)
- Web Application Programming Interface (Q2)
- Merge, Purge and Deduplication (Q2)
- Geocoding (Q2)
- Collaboration Tools (Q3)
- Public Health Metrics (Q3)

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Summary

CSI TriSano™ is built through the collaboration of subject matter experts in the field of epidemiology, informatics, public health and software development. It has been designed for customization and flexibility in implementation to meet the needs of diverse jurisdictions.

CSI TriSano™'s unique, flexible Form Builder and role-based routing feature are examples of how diverse jurisdictions can customize this application. The flexible Form Builder enables jurisdictions to build targeted forms for their specific needs for multiple jurisdictions or state wide. Public health officials can input data in a standard form or create forms on demand as needed. In addition, role-based routing can be configured to support the unique business processes of the jurisdiction, and cases can routed to the right person based on that person's role/ permission level.

CSI TriSano™ is highly configurable. It allows jurisdictions to define and manage users and their roles, disease information, event routing, and a wide range of system codes.

CSI TriSano™ Commercial Support

CSI TriSano™ goes through rigorous testing by Collaborative Software Initiative developers for bugs, stability, scalability, and security. The commercial support included with CSI TriSano™ provides access to the CSI Support Center offering product support, maintenance, and advice around implementation, migration, configuration, and performance tuning.

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About Collaborative Software Initiative

Collaborative Software Initiative (CSI) was founded in 2007 by Stuart Cohen a veteran IT executive and former chief executive officer at the Open Source Development Labs CSI introduces a market-changing process that applies collaborative methodologies to building and delivering software at a fraction of the cost of traditional methods

CSI engages the power of community to build project teams, provide the central project management function for developing software collaboratively and delivers high value enterprise software at a lower cost CSI offers the software to a broader base of customers under the open source licensing or Software as a Service (SaaS) models with commercial support

For applications that don't enable competitive advantage or are associated with non-value added activities such as compliance collaboratively developed software allows business managers to maintain individual control and direction over a project while accelerating compliance reducing costs and consolidating project timelines

CSI delivers on this new promise of collaboratively developed software - on time and on budget

For more information on CSI TriSano™
Please visit
www.csinitiative.com/products/trisano
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