

INFORMATION PROCESSING SYSTEMS AGREEMENT

11PSX0202

Between

THE STATE OF CONNECTICUT

Acting by its

DEPARTMENT OF ADMINISTRATIVE SERVICES

And

SOUTHERN NEW ENGLAND TELEPHONE COMPANY

D/B/A AT&T CONNECTICUT

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- EXHIBIT 1 – NOTICE TO EXECUTIVE BRANCH STATE CONTRACTORS AND PROSPECTIVE STATE CONTRACTORS OF CAMPAIGN CONTRIBUTION AND SOLICITATION LIMITATIONS
- EXHIBIT 2 – DELIVERABLES DOCUMENT
- EXHIBIT 3 – DELIVERABLES IMPLEMENTATION SCHEDULE
- EXHIBIT 4 – PRODUCT & PRICING SCHEDULE
- EXHIBIT 5 – CASSIDIAN COMMUNICATIONS LETTER

This Information Processing Systems Agreement ("Agreement") is made by and between the **STATE OF CONNECTICUT, Department of Administrative Services** ("DAS"), located at 165 Capitol Avenue, Hartford, CT 06106, and **SOUTHERN NEW ENGLAND TELEPHONE COMPANY D/B/A AT&T CONNECTICUT** ("Contractor"), having its principal place of business at 5 West Service Road, 2nd Floor, Hartford CT 06120.

Now therefore, in consideration of these presents, and for other good and valuable consideration, the receipt and sufficiency of which the parties acknowledge, Contractor and DAS agree as follows:

1. TERM OF AGREEMENT

This Agreement shall become effective upon its approval as to form by the Office of the Attorney General of the State of Connecticut ("Effective Date"), as evidenced by its signature hereon, and shall continue for seven (7) years from the Effective Date. DAS, in its sole discretion, may extend this Agreement for additional terms beyond the original term, prior to Termination or expiration, one or more times for a combined total period not to exceed the complete length of the original term.

2. DEFINITIONS

- a) **Acceptance:** Department's written acceptance of Contractor's Certificate of Acceptance.
- b) **Acceptance Date:** Defined in Section 7.
- c) **ACD (Automatic Call Distribution):** A device or system that distributes incoming calls to a specific PSAP, individual answering point, or group of answering positions. ACD uses a rules-based set of instructions (an algorithm) that determines the best available Telecommunicator or group of Telecommunicators to respond to a given incoming call.
- d) **ALI (Automatic Location Information):** Information that describes the location of the 9-1-1 caller.
- e) **Alteration:** The modification, changing, refashioning, remodeling, remaking, revising or reworking of any part of the System or Deliverable.
- f) **ANI (Automatic Number Identification):** Information that identifies the number or pseudo number of the device making the 9-1-1 call.
- g) **Average Busy Hour:** A time-consistent (i.e. identical) hour of each day during which a PSAP, or a 9-1-1 system, receives the most calls.
- h) **B2 Core:** The NG911 equipment which provides all PSAPs with services. The B2 Core does not include equipment owned by the Department.
- i) **Call:** A request for emergency service from the public received by the PSAP as voice or text message.

- j) **Central Station Service:** A system or group of systems maintained by others from which notifications of emergency conditions are received and retransmitted to PSAPs.
- k) **Certificate of Acceptance:** Written certification of the Contractor setting forth the results of the UAT for each PSAP location and certifying each PSAP meets the Specifications and business and technical requirements of this Agreement.
- l) **Claims:** All actions, suits, claims, demands, investigations, and proceedings of any kind, open, pending, or threatened, whether mature, un-matured, contingent, known or unknown, at law or in equity in any form.
- m) **Composite Geo-coding:** A process that relies on multiple reference data and, in order of best quality, attempts to match the source data in a cascading fashion. If no match is reached in the best quality reference data set, the geo-coder will turn to the next reference data set and attempt to perform the same function and repeat until a match is found which meets the Department's business rules applicable to the reference data.
- n) **Conference Bridge:** A facility that connects multiple callers together.
- o) **Confidential Information:** Any name, number or other information that may be used, alone or in conjunction with any other information, to identify a specific individual including, but not limited to, such individual's name, date of birth, mother's maiden name, motor vehicle operator's license number, Social Security number, employee identification number, employer or taxpayer identification number, alien registration number, government passport number, health insurance identification number, demand deposit account number, savings account number, credit card number, debit card number or unique biometric data such as fingerprint, voice print, retina or iris image, or other unique physical representation. Without limiting the foregoing, Confidential Information shall also include any information that DAS classifies as "confidential" or "restricted." Confidential Information shall not include information that may be lawfully obtained from publicly available sources or from federal, state, or local government records which are lawfully made available to the general public
- p) **Confidential Information Breach:** Generally, an instance where an unauthorized person or entity accesses Confidential Information in any manner, including but not limited to the following occurrences: (1) any Confidential Information that is not encrypted or protected is misplaced, lost, stolen or in any way compromised; (2) one or more third parties have had access to or taken control or possession of any Confidential Information that is not encrypted or protected without prior written authorization from the State; (3) the unauthorized acquisition of encrypted or protected Confidential Information together with the confidential process or key that is capable of compromising the integrity of the Confidential Information; or (4) if there is a substantial risk of identity theft or fraud to the Department, the Contractor, DAS or State.
- q) **Connecticut System Development Methodology (SDM):** The State of Connecticut's standard methodology for defining requirements, designing, constructing and implementing Information Technology (IT) systems.

- r) **Contractor Parties:** A Contractor's members, directors, officers, shareholders, partners, managers, principal officers, representatives, agents, consultants, employees or any one of them or any other person or entity with whom the Contractor is in privity of oral or written contract and the Contractor intends for such other person or entity to Perform under this Agreement in any capacity.
- s) **Corrective Action Plan:** A detailed written plan produced by the Contractor at the request of the Department to correct or resolve Contractor deficiency(ies) identified by the Department in accordance with Section 21.
- t) **CPSSDN (Connecticut Public Safety Services Data Network):** the fiber optic network which will be used to provide the connectivity for the System.
- u) **CPSSDN NOC (CPSSDN Network Operations Center):** The entity which monitors the CPSSDN for performance issues, faults and failures. The CPSSDN NOC will be owned by the Department or will be provided and operated by a contractor under contract with the Department.
- v) **Deliverable:** Any product, whether software, hardware, documentation, license, information, or otherwise, or any service, whether development, integration, administrative, maintenance, consulting, training, data warehousing, operations, support, hosting, or otherwise, or any warranty, that is an element of the Contractor's overall approach and solution to the requirements of this Agreement, whether produced by the Contractor or by a third party as a supplier or subcontractor to the Contractor.
- w) **Deliverable Acceptance Date:** The Acceptance Date for a specific Deliverable.
- x) **Deliverables Document:** Exhibit 2 to this Agreement - Document which sets forth and describes the Services and Deliverables that are to be provided or made available under this Agreement and the specific requirements and terms applicable to those Services and Deliverables.
- y) **Deliverables Implementation Schedule:** Exhibit 3 to this Agreement - Document which itemizes the timing requirements, including phases, dates of completion and Department signoffs, as applicable or appropriate, for specific Deliverables and/or Services to be provided pursuant to the Agreement.
- z) **Demarcation:** The dividing line between the carrier network and the customer premises equipment.
- aa) **Department:** State of Connecticut Department of Emergency Services and Public Protection.
- bb) **DSET (the Division of Statewide Emergency Telecommunications):** a part of the Department of Emergency Services and Public Protection. Formerly known as OSET (the

Office of Statewide Emergency Telecommunications). The terms DSET and OSET may be used interchangeably in this Agreement.

- cc) **E9-1-1 system:** The State of Connecticut's existing 9-1-1 system.
- dd) **ECDC (Emergency Call Distribution Center):** the location where 9-1-1 calls enter the PSDN
- ee) **EMD (Emergency Medical Dispatch):** services mandated by C.G.S. §28-25b(g).
- ff) **ESInet (Emergency Services Intranet):** the private network that connects PSAPs and ECDCs.
- gg) **ESRI:** An international supplier of Geographic Information System (GIS) software and geo-database management applications, used by the Department
- hh) **Failure or failure:** A fault that has escalated to complete cessation of operation of the component or components of the System involved.
- ii) **Fault or fault:** An error condition which affects functionality of the System.
- jj) **Final Certificate of Acceptance:** Written certification of the Contractor setting forth the results of the UAT for the System and certifying the System meets the Specifications and business and technical requirements of this Agreement.
- kk) **Future Proof:** The AT&T Future Proof upgrade package is an add-on to the software technical support included under this Agreement. Future Proof will enable the Department to take advantage of platform changes in the underlying microDATA software, as the operating environment for that software evolves.
- ll) **Geospatial MSAG:** GIS version of the locating database used by NG911 with the capability to locate a call by address, by latitude and longitude, or by a point in a polygon.
- mm) **GIS: (Geographic Information System(s):** A system designed to capture, store, manipulate, analyze, manage, and present all types of geographic data.
- nn) **GIS Standards:** Standards for interfaces, encodings and protocols that enable interoperable geo-processing services, data, and applications, developed by the Open Geospatial Consortium (OGC), the U.S. Department of Homeland Security, such as the National Information Exchange Model (NIEM), and the National Emergency Number Association (NENA).
- oo) **Goods:** For the purposes of this Agreement, all things (i) which are movable at the time that this Agreement is effective and which include, without limiting this definition, supplies, materials and equipment, and (ii) which are provided by Contractor in the Performance of this Agreement.
- pp) **IETF (Internet Engineering Task Force):** Organization that develops and promotes Internet standards

- qq) **Implementation Phase:** The phase in which the System or System modifications are installed and made operational in the production environment.
- rr) **Improvement:** Contractor changes made to Deliverables from time to time either to provide additional functions for Department use or to correct errors and other Performance deficiencies noted by the Department and reported to the Contractor.
- ss) **Individual Answering Position:** Refers collectively to an individual position at which 9-1-1 calls are answered and any equipment located in a PSAP which services the position (e.g: rack-mounted workstation, monitor(s), keyboard, mouse, audio interface(s)).
- tt) **Interrogate a Silent Call:** This occurs when, upon receiving a silent call at the PSAP, the Telecommunicator “challenges” the call by using the TDD/TTY interface to send out an answer message from the PSAP in Baudot.
- uu) **IP (Internet Protocol):** The method of communication used on the PSDN.
- vv) **Key Personnel:** Persons identified by the Contractor as critical to the success of the project.
- ww) **Legacy or legacy:** Use of either term in connection with a System component shall mean of the E9-1-1 system.
- xx) **Legacy 9-1-1 Calls:** Calls transferred to/from PSAPs on the E9-1-1 system while deployment of the System is underway.
- yy) **LNG (Legacy Network Gateway):** The translation point between the TDM/Analog (legacy) networks and the NENA i3 VoIP 9-1-1 network.
- zz) **Level 2 Support:** Contractor provided customer support for issues relating to advanced features and possible product “bugs”, faults or failures.
- aaa) **Licensed Software:** Computer program(s) provided by Contractor in connection with the Deliverables under an agreement where the Department acquires a personal, non-exclusive, non-transferable license (without the right to sublicense) to access and use certain software products and materials but does NOT acquire the licensor’s (1) title to the product nor (2) liability for payment of any tax levied upon the product.
- bbb) **Local Policy Rules:** Rules developed by the Department and/or developed by individual PSAPs that determine where calls are to be delivered, where overflow will route to, including

default and disaster routing and automatic call distribution rules. Local Policy Rules are configurable on both state and local levels, based upon differing layers of administration.

- ccc) **Major Failure:** Any failure attributable to the System which:
- Prevents the delivery of any 9-1-1 calls to the correct designated PSAP, complete with location information; or
 - Prevents the transfer of any received calls to any PSAP within the System, or from the System to the CPSSDN; or
 - Prevents the ability to initiate calls from the System or any PSAP within the System to the PSTN; or
 - Prevents the ability to accept calls from or transfer calls to the E9-1-1 system; or
 - Prevents the ability to accept calls from or transfer calls to any participating NG911 systems; or
 - Prevents the ability to record all calls within the System; or
 - 50% or more Individual Answering Positions are down at any PSAP or 50% or more of the Individual Answering Positions in the System are down, or both.
- ddd) **Manual Query or manual query:** The entry of a telephone number or an address into the System in order to retrieve a subscriber record, instead of the normal method which automatically queries databases based upon a calling party number delivered at the time of a telephone call.
- eee) **Map Layer:** GIS map concept which separates the functional elements stored within a map.
- fff) **Minor Failure:** Any failure other than a Major Failure.
- ggg) **NCC (Network Control Centers):** Refers to the locations, the equipment at the locations, and the software provided under this Agreement which is physically located within the two Tier IV Centers.
- hhh) **NENA (National Emergency Number Association):** a voluntary association that provides 9-1-1 training and promulgates nationally-recognized standards for the configuration and delivery of 9-1-1 calls and 9-1-1 systems
- iii) **NENAI3:** A suite of standards that define the technical and operating parameters of a VoIP-based 9-1-1 system.
- jjj) **NOC (Network Operations Center):** A location owned and operated by the Contractor (along with attendant personnel) which will provide the following services:

- 1) Monitor network performance
- 2) Provide help desk services for the users of the System
- 3) Manage incident response to outages and issues
- 4) Manage communications regarding the System, including outage notifications and notices of escalation
- 5) Provide reports, both real-time and historical, on network parameters and incidents

The NOC will analyze problems, perform troubleshooting, communicate with site technicians and third party network operations centers, and track problems through to resolution. When necessary, the NOC shall escalate problems to the appropriate Stakeholders. For severe conditions that are impossible to anticipate, such as a power failure or a cut optical fiber cable, the NOC will have procedures in place to immediately contact technicians to remedy the problem. The NOC will escalate issues in a hierarchic manner, so if an issue is not resolved in a specific time frame, the next level is informed to speed up problem remediation.

- kkk) **NOC Services:** Means around the clock monitoring, supervisory and help desk services for the System. The NOC will be the first point of contact for PSAP personnel to contact if there is an issue with the System and/or the CPSSDN, and it will coordinate its efforts with the CPSSDN NOC.
- lll) **Perform:** For the purposes of this Agreement, the verb “to perform” and the Contractor’s performance set forth in this Agreement and its exhibits are referred to as “Perform,” “Performance” and other capitalized variations of the term.
- mmm) **Phase 1 Wireless:** The provision of PSAP routing and location services based upon the cell site(s) and cell sector location(s) used for the 9-1-1 call.
- nnn) **Phase 2 Wireless:** The provision of cell phone location services based upon phone-based GPS or tower-based triangulation.
- ooo) **POP (Primary Operation Period):** The days and hours of normal system operations and availability, which is to be 24 hours per day, 7 days a week.
- ppp) **POTS (Plain Old Telephone Service):** Voice grade analog telephone service.
- qqq) **PPM (Prime Period Maintenance):** The days and hours of normal maintenance services and/or technical support, which is to be 24 hours per day, 7 days a week.
- rrr) **Product & Pricing Schedule:** Exhibit 4 to this Agreement - Document which lists the Deliverables and Services available under this Agreement and establishes the component or unit pricing and price schedules for each Deliverable and Service available pursuant to this Agreement.
- sss) **Product Schedule Update:** Update to the Product & Pricing Schedule in accordance with Section 3 of this Agreement to make additional products or services available under this

Agreement or to alter the pricing of products or services listed in the Product & Pricing Schedule.

- ttt) **Project or project:** Development and implementation of the System.

- uuu) **PSAP (Public Safety Answering Point):** A facility, approved by the Department, for the reception of 9-1-1 calls routed by a private branch exchange, in accordance with Connecticut General Statutes §28-25(14)

- vvv) **PSDN:** Also called CPSSDN, the fiber optic network and associated equipment installed by the state for the delivery of emergency services communications.).

- www) **PSTN (Public Switched Telephone Network):** The wired telephone network in use in Connecticut.

- xxx) **Purchase Order:** Document issued by the Department for one or more products, Deliverables or Services in accordance with the terms and conditions of this Agreement.

- yyy) **Records:** All working papers and such other information and materials as may have been accumulated by the Contractor in Performing this Agreement, including but not limited to, documents, data, plans, books, computations, drawings, specifications, notes, reports, records, estimates, summaries, memoranda and correspondence, kept or stored in any form.

- zzz) **RFC (Request for Comments):** A publication of the Internet Engineering Task Force

- aaaa) **Services:** The performance of labor or work set forth in Exhibit 2.

- bbbb) **SIP (Session Initiation Protocol):** An IETF-defined signaling protocol to control voice and video communications sessions over IP connections.

- cccc) **SIP INVITE:** A SIP message used to establish a media connection between user agents.

- dddd) **SIP URI (SIP Uniform Resource Identifier):** Identifies a particular SIP resource such as a user agent or a voice mailbox.

- eeee) **Site:** Location(s) specified by Department where Deliverables are to be installed or Services rendered.

- ffff) **SNMP Traps:** Notifications/alerts generated and transmitted by active network components (e.g. hubs, routers and bridges) to SNMP server(s) whenever important events such as faults or security violations occur. Data contained in SNMP Traps may include configuration and status, as well as statistical information.

- gggg) **Solicitation:** Request for Proposal entitled Next Generation 9-1-1 Emergency Telecommunications System, dated September 29, 2011
- hhhh) **Specifications:** Contractor's published technical and non-technical detailed descriptions of a Deliverable's capabilities and/or intended use.
- iiii) **Stakeholder:** Any person or organization identified on a case-by-case by the Department as having an interest in the System or 9-1-1 related programs of the Department.
- jjjj) **State:** The State of Connecticut, including DAS, the Department and any office, department, board, council, commission, institution or other agency of the State.
- kkkk) **Statement of Work (SOW):** Statement issued in connection with a Purchaser Order for a Deliverable or Service available under this Agreement which sets forth all work requirements for Contractor's Performance in connection with said Purchase Order.
- llll) **System:** Contractor furnished or otherwise supplied Deliverables that collectively and in an integrated fashion fulfills the business and technical requirements of this Agreement. Specifically, the System will function as a Next-Generation 9-1-1 (NG911) system that will utilize the State-provided CPSSDN for 911 call and location data delivery to PSAPs and will be capable of processing 911 emergency calls from devices that transmit voice conversations, text messages, pictures and video in compliance with NENA i3 standards, when such calls are delivered to the ESInet by the TSPs in the future.
- mmmm) **System Acceptance Date:** The Acceptance Date for the System.
- nnnn) **System Deficiencies:** Defect(s) or condition(s) that cause the System, or any part of the System, to fail to fully perform as required under this Agreement. If the System conforms with the requirements of the Deliverables Document and Specifications, but does not fully perform, the cause(s) of such non-performance shall not constitute a System Deficiency.
- oooo) **TCP (Transmission Control Protocol):** Protocol developed to move data between devices.
- pppp) **TDD/TTY:** Telecommunications device for the Deaf/TeleTYpewriter.
- qqqq) **Telecommunicator:** PSAP personnel responsible for the processing of 9-1-1 calls.
- rrrr) **Term:** Seven (7) years commencing the Effective Date plus any extensions as permitted under Section 1 of this Agreement.
- ssss) **Termination:** An end to this Agreement prior to the end of its Term.
- tttt) **Tier IV Data Center:** Defined by the Uptime Institute LLC, also widely referred to as The Global Data Center Authority.

- uuuu) **Trouble Ticket:** Mechanism initiated by receipt of information reporting some type of problem and used to track the detection, reporting, and resolution of such problem.
- vvvv) **TSP (Telecommunications Service Providers):** Telephone service providers such as wired telephone and wireless companies.
- wwwv) **UPS (Uninterruptable Power Supply):** Uninterruptable power supply provides emergency power and filtering to the critical electrical loads within PSAPs.
- xxxx) **User Acceptance Test (UAT):** Test in which the Contractor tests the functionality of a Deliverable with real world scenarios to determine if the Deliverable performs in accordance with the agreed upon Specifications and business and technical requirements of the Agreement.
- yyyy) **VoIP (Voice over Internet Protocol):** Method used to deliver calls over the internet.
- zzzz) **VSAT (Very Small Aperture Satellite Terminal):** A network used for disaster or supplementary connectivity for the System.
- aaaa) **Warranty Period:** As defined in Section 12 of this Agreement.

3. ACQUIRING DELIVERABLES AND SERVICES

- a) Subject to the terms and conditions of this Agreement, Contractor shall sell, transfer, convey and/or license to the Department any duly ordered Deliverable(s) and Services in accordance with the requirements of Exhibit 2 and Exhibit 3, or in accordance with a Statement of Work, if applicable.
- b) All Deliverables and Services available under this Agreement shall be itemized in Exhibit 4 and may be purchased through Purchase Orders. Contractor shall allow governmental entities in the State other than the Department to purchase Goods and Services at the pricing set forth in Exhibit 4.
- c) Any Purchase Order which has been accepted by the Contractor, and any associated Statement of Work, are subject to the terms of this Agreement. Neither party will be bound by any additional terms different from those in this Agreement that may appear on a Purchase Order or other form document issued by either party.
- d) Contractor may supplement Exhibit 4 at any time to make additional products and services available under this Agreement, provided that the effective date of each supplement is stated thereon. Any supplement shall be transmitted to the DAS with a cover letter documenting formal approval of the supplement by a Contractor representative legally empowered to so act. DAS shall evidence its concurrence with the supplement by issuing a Product Schedule Update letter to Contractor.
- e) Notwithstanding any other provision of this Agreement, no material change may be made to the Deliverables set forth in Exhibit 4 that alters the nature or scope of the Deliverables or their intended use. Any change in the Deliverables in Exhibit 4 shall be conditioned upon the new product(s) being of a similar nature and having a similar use as the defined products. An update of the products or the addition of products that are related to or serve similar functions as the products is permissible only with the prior written approval of DAS.

- f) Upon the DAS' receipt of ninety (90) calendar days prior written notice, Contractor may update pricing under Exhibit 4 effective July 1 of any State of Connecticut fiscal year, provided: (1) the Product Schedule Update is transmitted and approved in the same manner as described for supplements in subsection 3.d.; (2) no software license or Deliverable maintenance or service rate is increased within the first year following acceptance of a any Deliverable; and (3) no price increase shall exceed the lesser of (i) two and one half percent (2.5%) or (ii) the average annual percentage increase over the immediately preceding calendar year in the 'Consumer Price Index' – Hartford, Connecticut Average for all Urban Consumers (CPI-U) (All items, 1982-84 = 100) published monthly by the Bureau of Labor Statistics of the United States Department of Labor or, should that index cease to be published, the most comparable index published on a regular basis by the US Government since the later of the date of this Agreement or Contractor's last Product Schedule Update.
- g) Any Deliverable ordered for a fixed price for a fixed period of time prior to the effective date of any pricing increase shall enjoy protection from rate increase during such fixed period of time.
- h) Contractor shall provide a discount on any Product Schedule Update according to the discount, if any, shown on the Product & Pricing Schedule.
- i) The Department is authorized to use any Licensed Software solely for the State's business purposes in connection with the Deliverables. Any such Licensed Software, unless expressly stated otherwise elsewhere in this Agreement, shall be non-exclusive and non-transferable.
- j) No additions to or reductions in the Deliverables, Services or prices for work completed in the Performance of a Purchase Order shall be permitted unless the Department issues a change order in accordance the provisions of Section 5.
- k) The Department shall issue a Purchase Order when acquiring Deliverables or Services under this Agreement and, if appropriate a Statement of Work mutually acceptable to the Department and the Contractor.

4. PROJECT ADMINISTRATOR

The Department shall designate a project administrator (the "Project Administrator"), who may be replaced at the discretion of the Department. The Project Administrator shall have the authority to act for the Department under this Agreement for any Deliverable(s) initially acquired/installed from the Contractor and such authority shall continue to be in effect throughout the term of this Agreement.

5. CHANGE ORDERS

- a) The Department may, at any time, with written notice to Contractor, request changes to Deliverables or Services ordered by Department under this Agreement. Such changes shall not be unreasonably denied or delayed by Contractor. Such changes may include, but are not be limited to, modifications or other changes required by new or amended State and/or Federal laws and regulations relating to functional requirements and processing procedures, or involving the correction of System Deficiencies. Prior to expiration of any Warranty Period, any changes to the Deliverables(s) required due to System Deficiencies, or if the System does not fully perform in accordance with this Agreement, shall be made by Contractor without charge to the Department. Any investigation necessary to

determine the source of the problem requiring the change shall be done by Contractor at its sole cost and expense.

b) A change order request may be issued only by the Department and shall be in writing. As soon as possible after Contractor receives a written change order request, but in no event later than fifteen (15) calendar days thereafter, the Contractor shall provide the Department with a written statement confirming the change has no price impact on the Agreement or, if there is a price impact, Contractor shall provide the Department a written statement explaining the price increase or decrease involved in implementing the requested change.

c) No change order shall become effective until Contractor's receipt of a Purchase Order from the Department.

6. DELIVERY, INSTALLATION & DEINSTALLATION

a) If the Department pursuant to Exhibit 2 or a Statement of Work is responsible for preparing a Site for any Deliverable, Contractor shall in advance furnish Department written instructions and specifications, if any, applicable to the preparation of such Site. If the Department's Site preparation will not be completed as mutually scheduled, the Project Administrator shall notify Contractor as soon as possible, but no less than forty-eight (48) hours prior to the scheduled Deliverable installation date and the parties shall reschedule. If the Department fails to prepare the Site in compliance with Contractor's written requirements, the Department shall be charged for Contractor's reasonable costs incurred to properly prepare the Site, not to exceed \$2,000.00.

b) Department shall in a timely manner allow Contractor access to real property and equipment under the Department's control as reasonably necessary for Contractor to provide the Services. Access rights may include the right to construct, install, repair, maintain, replace and remove access lines and network facilities, as well as use ancillary equipment space within a building as necessary for Department to connect to Contractor's network. Contractor may exercise its access rights only to the extent necessary to Perform. Contractor shall in advance obtain written approval of Department prior to undertaking any of the aforementioned activities. Contractor shall identify in advance any access rights Contractor will require on a continuing basis after System Acceptance and such rights shall be subject to the advance approval of the Department.

c) Contractor shall not be required to remove or dispose of Hazardous Materials, unless such Hazardous Materials have been generated by Contractor's activities or brought on-site by Contractor, and shall have no obligation to perform work at a location that in Contractor's reasonable determination is not suitable for the purpose intended or is not a safe working environment.

d) Contractor shall provide all pre-installation and post-installation Deliverable compatibility system surveys, consultation, reference manuals and onsite operational training to facilitate proper installation and operation of all Deliverables.

e) Contractor represents and warrants that it shall complete installation of the System in accordance with the Deliverables Document and, if attached, in accordance with the Deliverables Implementation Schedule.

f) Department ordered System de-installation, relocation and, or, reinstallation of any System previously installed at a Department Site or Department designated Site shall be at Department's expense according to Contractor's prices then in effect for such services.

7. DELIVERABLE EVALUATION & ACCEPTANCE

- a) Any Deliverable furnished by Contractor under the terms of this Agreement shall be subject to an evaluation and acceptance testing period prior to Acceptance.
- b) The Contractor shall develop a written User Acceptance Test (UAT). The UAT shall be subject to the review and advance written approval of the Department. The Department shall participate with the Contractor in user acceptance testing of network features of the System and the implementation of the System at the first ten (10) PSAP locations. User acceptance testing for the remaining PSAPs shall be conducted solely by the Contractor. Upon successful completion of UAT for the B2 Core and the first ten (10) PSAPs, and for each successfully completed PSAP UAT thereafter, Contractor shall issue the Department a Certificate of Acceptance. The form of the Certificate of Acceptance shall be subject to the advance written approval of the Department. Contractor shall deliver the Certificate of Acceptance to the Project Administrator for review and only upon the Department's concurrence, which shall not be unreasonably withheld or delayed, the Project Administrator shall in writing accept the Certificate of Acceptance.
- c) The Contractor shall Perform UAT on the System prior to Acceptance of the System to determine whether the System performs to the Specifications and fulfills the business and technical requirements of the Agreement. The UAT shall require, as a mandatory minimal requirement, the System operate for a period of at least forty-five (45) days without the occurrence of a Major Failure. Upon successful completion of the System UAT, the Contractor shall deliver to the Project Administrator the Final Certificate of Acceptance for the entire System and only upon the Department's concurrence, which shall not be unreasonably withheld or delayed, the Project Administrator shall in writing accept the Final Certificate of Acceptance. The Department may at its option participate in the System UAT.
- d) The date the Department in writing accepts Contractor's Certificate of Acceptance or Final Certificate of Acceptance pursuant to this section shall be deemed the "Acceptance Date" for each such Deliverable or System.

8. PAYMENTS AND CREDITS

- a) Department shall pay Contractor for the installation and implementation of the System in accordance with the milestone payment schedule in Exhibit 4.
- b) For Deliverables and Services ordered after the System Acceptance Date, the Department shall pay for Deliverables only upon Acceptance of the Deliverable(s) pursuant to Section 7 and receipt of a properly documented invoice from the Contractor. The Department shall pay Contractor within forty five (45) days of the Deliverable Acceptance Date or date of Contractor's properly documented invoice, whichever is the later date.
- c) Payment of Contractor charges for any license term, or license maintenance and support term, shall entitle the Department to use the license, free of any usage charges, at the Department's convenience at any time during the applicable Term.
- d) Contractor may assign any license payments upon prior written notice to the Department and compliance with the requirements of the State's Comptroller's Office concerning such assignments. No assignment of receivables by Contractor shall relieve Contractor of any obligations under this

Agreement without prior written Department consent in each such instance. Notwithstanding any such assignment, Contractor represents and warrants that the Deliverable shall be and remain free of any repossession or any Claims by Contractor or its successors and assigns, subject to the terms and conditions of this Agreement.

e) Contractor shall furnish separate invoices for each Purchase Order and for any Purchase Order issued after the System Acceptance Date, and upon the request of the ordering Department, shall list each license charge, maintenance and support charge or other charge included in each invoice as separate line items, to the extent reasonably practicable.

f) Contractor shall not charge the Department a fee to reinstate licenses or maintenance and support. Contractor shall be entitled to payment of all license, maintenance and/or support fees that would have been paid during or for the reinstatement period, but no separate fees or penalties shall be paid by the Department in order to reinstate any license, maintenance or support.

9. SOFTWARE MAINTENANCE & SUPPORT

a) Upon the expiration of the Warranty Period and subject to the terms, conditions and charges set forth in this Agreement, Contractor represents and warrants that maintenance and support services for any Deliverable shall be provided to the Department as follows:

1. Contractor shall provide such reasonable and competent assistance as necessary to cause the Deliverable to perform in accordance with applicable portions of the Specifications;
2. Contractor shall provide Improvements which may be available to Contractor to any Deliverable; and
3. Contractor shall update any Deliverable, if and as required, to cause it to operate under new versions or releases of the operating system(s) specified in the Deliverables Document.

b) Maintenance and support services shall be provided by the Contractor on an annual basis, invoiced by Contractor in monthly installments. Contractor shall provide Department written notice of renewal not less than forty-five (45) days prior to the expiration date of the then current maintenance and support period. Maintenance and support shall automatically renew for successive twelve (12) month periods unless thirty (30) days prior written notice of termination is provided to the Contractor by the Department before the end of the then current term of maintenance and support services.

c) Contractor shall maintain sufficient and competent support services staff to satisfy the Contractor obligations under this Agreement.

d) Contractor shall have full and free access reasonably necessary to provide required Services, subject to the State's access policies.

e) If any Deliverable becomes not usable due to the computer manufacturer's release and the installation of (1) a new PU operating system or (2) an updated version of the present PU operating system or (3) a change to the present PU operating system and the Contractor is unable to provide changes to the Deliverable to cause it to operate according to Specifications within thirty (30) days of written notification by the Department to Contractor of such failure to operate, any such Deliverable so affected shall have its paid maintenance and support period, periodic-payment license period or limited term license period extended an additional period of time equal to the period of time the Deliverable

was not usable. If, after the expiration of thirty (30) days from the date of said notification, the Deliverable remains not usable, then the applicable license may be terminated at the option of said Department without further obligation or liability.

f) If the Department is current on its maintenance and support payments, Contractor shall provide Department with Future Proof at no additional cost. Specifically, the Department shall be provided future major releases of covered microDATA software. For purposes of Future Proof, a “major release” means an upgrade in features, functionality or performance of the covered microDATA software that microDATA licenses, but which is made available to the customer pursuant to and in accordance with the terms of the Future Proof.

10. HARDWARE MAINTENANCE & SUPPORT

- a) Hardware maintenance and support shall be available at the price set forth in Exhibit 4 commencing upon the expiration of the Warranty Period and shall be renewable on an annual basis.
- b) Department shall be responsible for site work external to, but required for, hardware Deliverable installation and for Contractor maintenance time and material costs of hardware Deliverable repairs necessitated by Department misuse or negligence.
- c) Contractor shall not be responsible for the consequences of any hardware Deliverable repairs, adjustments, or modifications performed by any person not representing Contractor, however, this provision does not preclude Contractor granting approval for such performance by persons not representing the Contractor.
- d) Contractor shall maintain sufficient installed hardware Deliverable support services staff, replacement hardware Deliverable and ancillary equipment to satisfy the preventive and remedial maintenance requirements and Section 11.

11. SYSTEM RELIABILITY

Contractor shall ensure the System meets the System availability and reliability standards set forth in this section. All System availability and reliability standards set forth in this section apply only with respect to the System. By way of example, specifically excluded are the CSSPDN, computer-aided dispatch, logging recorders, UPS and the local PSTN.

a) SYSTEM AVAILABILITY AND RELIABILITY

- 1. The System will maintain a grade of service so that no greater than one (1) call attempt per five hundred (500) call attempts during the Average Busy Hour of the busiest four (4) consecutive weeks, of the preceding fifty-five (55) weeks, will encounter a busy condition.
- 2. The required reliability percentage for the System during any calendar year is ninety-nine point nine-nine-nine percent (99.999%) uptime, defined as the ability to deliver a call properly presented at the ingress demarcation point to an available call taker.
- 3. The System will be able to deliver the call to a call taker in the designated destination call taker group ninety-nine point nine-nine percent (99.99%) of the time unless the call is re-directed due to all call taker busy or ring-no-answer timeouts in the destination call taker group.

4. The System will provide redundant and diverse connections for call originating network interconnections to the ESInet.
5. Individual Answering Positions shall be available ninety-nine point nine percent (99.9%) of the time.
6. For each PSAP, the System will provide two (or more) IP addresses at the NENA i3 demarcation to which calls can be presented for delivery to the PSAP. The supplied LNG or NG911 services shall be able to fail over to an alternate SIP IP address in the event that the IP-based 911 Call Answering System is busy or does not respond correctly to the initial SIP INVITE.
7. All measurements for compliance with this section 11 shall be based on the calendar year.
8. No more than five (5) minutes of unscheduled downtime (a "Major Failure") will occur across the State in any 12 month period.
9. No more than five (5) minutes total of scheduled downtime for an entire PSAP (a "Minor Failure") will occur in any 12-month period.
10. A given instance of System downtime shall start after receipt of notification to the Contractor of a Major Failure or Minor Failure from the CSSPDN NOC, from a PSAP, from the Department, or from the Contractor's own monitoring system(s), and end with notification by the Contractor to the Department and any designee (e.g., the CSSPDN NOC) that such System status has been fully restored to the applicable agreed operational specifications and made ready for 9-1-1 as well as routine use, and upon confirmation of such restoration by the Department.

b) **NETWORK OPERATION CENTER MONITORING AND FIELD REPAIR**

1. The Contractor shall be the first point of contact for trouble resolution at no additional charge.
2. The Contractor shall monitor and provide help desk and Trouble Ticket services on a 24 hours per day, 7 days per week, 365 days per year basis, utilizing the NOC. The NOC shall interface with the CPSSDN NOC in order to coordinate repairs and provide a single point of call for all PSAPs. SNMP used for the management and monitoring of the System shall utilize encryption, verification of message integrity and authentication to provide security for the SNMP system. SNMP Traps used will be in a non-proprietary digital format exportable to outside monitoring services where and when required by the Department, including the interchange with the CPSSDN NOC.
3. Contractor shall also provide the following services::
 - a) Trouble Ticket processing
 - b) Prioritization of core service issues handling
 - c) Dispatch and escalate resources to resolve reported problems
 - d) Help desk services
 - e) Manage and coordinate resources, transportation, and qualified personnel

f) Such other services the Department may reasonably request

4. The Contractor shall provide in-field, on-scene diagnosis, repair and replacement Services on a 24 hours per day, 7 days per week, 365 days per year basis.

5. The Contractor shall generate reports for the Department that include at a minimum the following information: identify any PSAP service visit with description of the problem and the resolution for each; 9-1-1 call volumes based on class of service (as that term is defined by the State Public Utilities Regulatory Authority (PURA)); detail on all Manual Queries to the ALI Database or NG9-1-1 location database; failures which affect 9-1-1 network service; PSAP emergency reroutes; and 9-1-1 call transfers (showing originating PSAP and destination PSAP for each transfer) on a PSAP by PSAP basis.

c) **SERVICE LEVEL RESPONSE TIMES**

1. For any Major Failure, the Contractor shall have one or more qualified field response personnel arrive at the affected PSAP(s) within two (2) hours of Contractor's receipt of notice of the Major Failure.

2. For Minor Failures, upon receipt of notice, Contractor shall respond within one (1) business day or less.

3. Contractor shall act promptly to correct any failure. In the event that a complete failure is prolonged (defined here as a Major Failure which continues more than four hours), the Contractor shall consult with the Department regarding alternatives.

12. TIMING OF WARRANTIES AND MAINTENANCE

Contractor shall provide both a Deliverables and System warranty (collectively, the "Warranties"). The specifics of the Warranties are more particularly outlined in Sections 13 and 14 of the Agreement. The Warranties will remain in effect for one year after the Acceptance Date of the System at the eleventh PSAP (the "Warranty Period"); provided, however, System components installed at any PSAP shall have a Warranty of no less than six months following the Acceptance Date for the System components at that particular PSAP. The Department's obligation to pay for maintenance in full shall commence on the day following the last day of the Warranty Period.

For example, assume (1) the Effective Date of the Agreement is July 1, 2013; (2) the Acceptance Date of the portions of the System installed at PSAPs 1 - 10 is March 1, 2014; (3) the Acceptance Date of the portion of the System installed at PSAP 11 is July 1, 2014; (4) the Acceptance Date of the portion of the System installed at PSAPs 12 - 100 is December 1, 2014; and (5) the Acceptance Date of the portion of the System installed at PSAPs 101 - 111 is March 1, 2015. Based on these hypothetical dates, the following would be true: (1) the Department would commence paying for maintenance to the System on July 1, 2015 (i.e., one year after the Acceptance Date of the portion of the System installed at PSAP 11); (2) the Warranties on the portion of the System installed at PSAPs 1 - 10 would expire

July 1, 2015 (i.e., one year after the Acceptance Date of the portion of the System installed at PSAP 11; note that the portion of the System completed at this point would have Warranties in excess of six months); the Warranties on the portion of the System installed at PSAPs 101 – 111 would expire September 1, 2015 (extending the Warranty period so that this portion of the System would have a 6 month Warranty). (The parties agree that these dates are purely hypothetical and are not intended to be indicative of any aspect of actual implementation.)

13. SYSTEM WARRANTIES

- a) Contractor represents and warrants that the System shall conform to the terms and conditions of this Agreement and Contractor's Specifications, and be free from defects in material and workmanship upon Acceptance of the System by the Department and for a minimum period of the Warranty Period.
- b) Additionally, during the Warranty Period, Contractor shall modify, adjust, repair and/or replace any Deliverable under warranty, at no charge to Department, as necessary to maintain ongoing System reliability according to Section 11.
- c) If the ongoing performance of Contractor's maintenance and support of the System or the performance of the System do not conform to Section 11, DAS shall give Contractor written notice of the same. Contractor shall then have not more than a thirty (30) calendar day period to correct the applicable deficiency and restore the functioning of the System to a level of operation that meets or exceeds the requirements of this Agreement. If during the Warranty Period, any Deliverable or System performance, or service level, continues to fail to meet these specifications, then the Contractor shall be in material default of this Agreement.
- d) In the event of a material default by the Contractor under this section, in addition to any other rights or remedies provided in this Agreement, DAS may, by written notice to Contractor, Terminate this Agreement. If Termination for material breach occurs prior to System Acceptance, the Contractor shall reimburse the Department all monies paid by Department to Contractor under this Agreement.

14. DELIVERABLE WARRANTIES

- a) Unless expressly stated otherwise in this Agreement, Contractor hereby warrants that a Deliverable installed by Contractor, or installed by the Department in accordance with Contractor's instructions, shall function according to the manufacturer's published specifications. If Contractor has modified or customized an off the shelf product, Contractor warrants the Deliverable shall function according to the Specifications on the Acceptance Date for such Deliverable.
- b) Any Deliverable ordered by Department as a result of a change order under Section 5 or by Purchase Order after the System Acceptance Date shall be covered by Warranties for a period of six (6) months after the Acceptance Date of each such Deliverable.
- c) Unless pre-approved by Contractor in writing, Contractor makes no warranty and has no responsibility for (a) installation, maintenance or operation of non-Contractor provided equipment or software or impairment caused by such equipment or software; (b) compatibility of such equipment or software with Contractor provided equipment or software; or (c) modifications, alterations or repairs of equipment or software by persons other than Contractor or its authorized agents or representatives.
- d) Contractor warrants that the Services shall be performed in a professional and workmanlike

manner.

e) Contractor warrants that throughout the Term and for a period of 365 days after the expiration or Termination of this Agreement, whichever is later, all hardware, software and firmware products or each developed, modified or remediated item of hardware, software, firmware (for the purposes of this subsection, collectively referenced as "item") or each Service delivered under this Agreement shall accurately assess, present or process date/time data (including, but not limited to, management, manipulation, processing, comparing, sequencing and other use of date data, including single and multi century formulae and leap years) and properly exchange date/time data when used in combination with other information technology, provided that other information technology not covered by this Agreement provides such data in ISO-8601 (2004) approved format (generally referred to as "date/time compliance warranty").

1. Contractor shall repair or replace any item that fails to comply with the date/time compliance warranty at the expense of Contractor. DAS shall give Contractor written notice upon discovery any such defect.
2. Contractor warrants that any item modified to achieve date/time compliance shall remain unaffected with respect to their functioning or performance except for processing and exchanging time/date data and such modification.

15. PATENT, COPYRIGHT, LICENSE & PROPRIETARY RIGHTS

a) Contractor hereby grants the Department, at no additional cost, rights use any patented, copyrighted, licensed or proprietary software Deliverable solely in the pursuit of its own business interests. The Department shall maintain the confidentiality of any such Licensed Software Deliverable consistent with its privileged nature, and shall not divulge the Deliverable or make it available to any third party, except as may be noted elsewhere in this Agreement or as it may be required under the Connecticut Freedom of Information Act. This obligation survives the expiration or Termination of this Agreement.

b) In the event any software Deliverable becomes the actual or prospective subject of any patent, copyright, license & proprietary rights claim or proceeding, Contractor may, at its discretion:

1. Modify the Deliverable or substitute another equally suitable Deliverable (provided that the performance of the modified or substitute Deliverable equals or exceeds that of the original Deliverable); or
2. Obtain for the State or Department the right to continued use of the Deliverable.

c) Contractor shall have no liability for any infringement claim or proceeding based on the Department's use of a Deliverable for which it was neither designed nor intended and Contractor has provided written notification to said Department of such inappropriate use.

16. CONFIDENTIALITY; NONDISCLOSURE

a) The State shall exercise at least the same degree of care to safeguard any Licensed Software as the State does its own property of a similar nature and shall take reasonable steps to assure that neither the Licensed Software nor any part thereof received by the State under this Agreement shall be disclosed for reasons other than its own business interests. Such prohibition on disclosures shall not

apply to disclosures by the State to its employees or its representatives, provided such disclosures are reasonably necessary to the State's use of the Deliverable, and provided further that the State shall take reasonable steps to ensure that the Deliverable is not disclosed by such parties in contravention of this Agreement. The State's performance of the requirements of this section shall be subject to the State of Connecticut Freedom of Information Act, as amended.

b) The State shall use any Licensed Software only in the pursuit of its own business interests. The State shall not sell, lease, license or otherwise transfer with or without consideration, any such Deliverable to any third party, other than those non-designated third parties that reasonably have need to know and agree to abide by the terms of this section, or permit any third party to reproduce, copy or otherwise use such Deliverable. The State will not create derivative works, translate, reverse engineer or decompile the Licensed Software, in whole or in part, nor create or attempt to create, by reverse engineering or disassembling of the design, algorithms or other proprietary trade secrets of the Licensed Software.

17. PROTECTION OF CONFIDENTIAL INFORMATION

a) Contractor and Contractor Parties, at their own expense, have a duty to and shall protect from a Confidential Information Breach any and all Confidential Information which they come to possess or control, wherever and however stored or maintained, in a commercially reasonable manner in accordance with current industry standards.

b) Each Contractor or Contractor Party shall develop, implement and maintain a comprehensive data - security program for the protection of Confidential Information. The safeguards contained in such program shall be consistent with and comply with the safeguards for protection of Confidential Information, and information of a similar character, as set forth in all applicable federal and state law and written policy of DAS or State concerning the confidentiality of Confidential Information. Such data-security program shall include, but not be limited to, the following:

1. A security policy for employees related to the storage, access and transportation of data containing Confidential Information;
2. Reasonable restrictions on access to records containing Confidential Information, including access to any locked storage where such records are kept;
3. A process for reviewing policies and security measures at least annually;
4. Creating secure access controls to Confidential Information, including but not limited to passwords; and
5. Encrypting of Confidential Information that is stored on laptops, portable devices or being transmitted electronically.

c) The Contractor and Contractor Parties shall notify the Department, DAS, and the Connecticut Office of the Attorney General as soon as practical, but no later than twenty-four (24) hours, after they become aware of or suspect that any Confidential Information which Contractor or Contractor Parties

have come to possess or control has been subject to a Confidential Information Breach. If a Confidential Information Breach has occurred, the Contractor shall, within three (3) business days after the notification, present a credit monitoring and protection plan to the Commissioner of Administrative Services, the Department and the Connecticut Office of the Attorney General, for review and approval. Such credit monitoring or protection plan shall be made available by the Contractor at its own cost and expense to all individuals affected by the Confidential Information Breach. Such credit monitoring or protection plan shall include, but is not limited to reimbursement for the cost of placing and lifting one (1) security freeze per credit file pursuant to Connecticut General Statutes § 36a-701a. Such credit monitoring or protection plans shall be approved by the State in accordance with this Section and shall cover a length of time commensurate with the circumstances of the Confidential Information Breach. The Contractors' costs and expenses for the credit monitoring and protection plan shall not be recoverable from the Department, DAS, any State of Connecticut entity or any affected individuals.

d) The Contractor shall incorporate the requirements of this Section in all subcontracts requiring each Contractor Party to safeguard Confidential Information in the same manner as provided for in this Section.

18. RISK OF LOSS & INSURANCE

a) The State shall not be liable to Contractor for any risk of Deliverable loss or damage while Deliverable is in transit, or while in the Department's possession and control, except when such loss or damage is due directly to the Department's negligence or intentional misconduct. Risk of loss shall be on the State once State has accepted and paid for a Deliverable and has possession of such Deliverable. Nothing in this Section is intended nor shall it be construed, in any manner, as waiving or compromising the sovereign immunity of the State.

b) Throughout the Term, Contractor shall maintain, at Contractor's sole cost and expense, a policy or policies of commercial general liability insurance, including contractual liability coverage, in an amount of \$1,000,000.00 for damages arising out of bodily injuries to, or death of, all persons and injuries to or destruction of property, in any one occurrence, and, subject to an aggregate limit of \$2,000,000.00. Such insurance policy or policies shall include the State and State's officials, agents and employees as additional insureds with regard to Contractor's obligations and performance under this Agreement. Contractor shall provide the State a certificate of insurance evidencing the above coverage upon written request on an annual basis and shall not begin performance of the Services until such a certificate has been provided to the State.

c) All required insurance shall be written on an occurrence basis as opposed to "claims made" basis.

19. DELIVERABLE ALTERATIONS

- a) Alterations of any hardware Deliverable may be made only with the prior written consent of Contractor and/or manufacturer. Such consent shall not be unreasonably withheld or delayed and shall be provided without cost to the Department.
- b) Any and all inventions or improvements to computer programs and/or base software specifically developed by the Contractor and paid for by the State pursuant to this Agreement shall become the property of the State. The State shall retain all ownership rights to any such inventions or improvements. At the time this Agreement is executed by the parties, the State acknowledges the Deliverables as currently configured in Exhibit 2 will not result in the development or creation of any inventions or programs.
- c) If any Deliverable Alteration interferes with the normal and satisfactory operation or maintenance and support of any Deliverable, or increases substantially the costs of maintenance and support thereof, or creates a safety hazard, the Department shall, upon receipt of written notice from Contractor, promptly restore the Deliverable to its pre-altered condition.
- d) Any Alteration of a Licensed Software by the Department without prior written consent of Contractor shall void the obligations of Contractor under Section 9 for the Deliverable. When providing the Department or State with written consent to the Alteration of a Licensed Software, Contractor shall specify which parts of the Deliverable being altered will continue to be subject to Section 9 and which will not.
- e) The State hereby acknowledges and agrees Contractor may develop and market a new or substantially different product that either uses or performs all or part of the functions performed by an installed Deliverable or System developed for the State. Nothing contained in this Agreement gives the State any rights with respect to such new or different product.

20. FORCE MAJEURE

Neither party shall be responsible for delays or failures in its obligations herein due to any cause beyond its reasonable control. Such causes shall include, but not be limited to, strikes, lockouts, riot, sabotage, rebellion, insurrection, acts of war or the public enemy, acts of terrorism, unavailable raw materials, telecommunication or power failure, fire, flood, earthquake, epidemics, natural disasters, and acts of God.

21. LIMITATION OF LIABILITY

- a) Contractor shall not be liable for any indirect, incidental, consequential, punitive, reliance, or special damages, including without limitation, damages for lost profits, advantage savings or revenues, or increased cost of operations.
- b) Damages for any Claims between the parties under this Agreement shall be limited to two (2) times the value of this Agreement.
- c) The limitations set forth in this section shall not apply to: (1) Intentional and willful acts; (2) Contractor's breach regarding Confidential Information; or (3) Contractor's infringement of intellectual property.

22. GENERAL PROVISIONS

- a) Section headings and document titles used in this Agreement are included for convenience only and shall not be used in any substantive interpretation of this Agreement.
- b) If any term or condition of this Agreement is decided by a proper authority to be invalid, the remaining provisions of the Agreement shall be unimpaired and the invalid provision shall be replaced by a provision which comes closest to the intention underlying the invalid provision. Contractor shall comply with the statutes, regulations, Executive Orders and policies incorporated into this Agreement to the extent that such statutes, regulations, Executive Orders and/or policies are applicable to Contractor in connection with its performance under this Agreement.
- c) The failure at any time by either party to this Agreement to require performance by the other party of any provision hereof shall not affect in any way the full right to require such performance at any time thereafter. The failure of either party to enforce or pursue a right or remedy shall not constitute a waiver of the right or remedy itself, unless such a waiver is expressed in writing and signed by a duly authorized representative of the waiving party.
- d) In any case where the consent or approval of either party is required to be obtained under this Agreement, such consent or approval shall not be unreasonably withheld or delayed. No such consent or approval shall be valid unless in writing and signed by a duly authorized representative of that party. Such consent or approval shall apply only to the given instance, and shall not be deemed to be a consent to, or approval of, any subsequent like act or inaction by either party.
- e) The Department shall not remove or destroy any proprietary markings or proprietary legends placed upon or contained within any Deliverable.
- f) Except as may be otherwise provided for in this Agreement, the Department shall not assign, mortgage, alter, relocate or give up possession of any Deliverable to which Contractor retains title without the prior written consent of Contractor.
- g) Contractor represents and warrants that it will not, without prior written consent from the Department, make any reference to the Department or the State in any of Contractor's advertising or news releases. The Contractor may use the State's and/or the Department's name as a specific citation within proposals it submits.
- h) Contractor shall execute any and all documents and take any actions which may be reasonably necessary to perfect the rights granted to the Department in Section 14.
- i) Neither Department nor Contractor's personnel who had substantive contact with personnel of the other in the course of the performance of the services hereunder shall directly or indirectly employ, solicit, engage or retain the services of such an employee of the other party to this Agreement during its term and for a period of one year from the termination or expiration of this Agreement or such longer period as may be required by State statute. This provision shall not restrict the right of either party to solicit or recruit generally in the media.
- j) The Department shall cooperate with Contractor in the performance by Contractor of the services hereunder, including, (i) providing Contractor with adequate working space, equipment and facilities and timely access to data, information, and personnel of the State; (ii) providing experienced and qualified personnel to perform their assigned tasks and duties in a competent and timely fashion; (iii) providing a stable, fully functional system infrastructure environment which will support the Deliverables and allow Contractor and the Department to work productively; and (iv) promptly

notifying Contractor of any issues, concerns or disputes with respect to the services provided by Contractor hereunder. The Contractor shall not be responsible for, among other things, the performance of the Department's personnel and agents, and the accuracy and completeness of all data and information provided to Contractor by the Department for purposes of the performance of the services hereunder.

k) Each of the State and Contractor is an independent contractor and neither of them is, nor shall be considered to be, nor shall purport to act as, the other's agent, partner, fiduciary, joint venturer, or representative.

l) Contractor may (i) provide any services to any person or entity, and (ii) develop for itself, or for others, materials or processes including those that may be similar to those produced as a result of the services hereunder, provided that, Contractor complies with its obligations of confidentiality set forth in Sections 15, 16 and 17.

m) All references in this Agreement to any statute, public act, regulation, code or executive order shall mean such statute, public act, regulation, code or executive order, respectively, as it has been amended, replaced or superseded at any time. Notwithstanding any language in this Agreement that relates to such statute, public act, regulation, code or executive order, and notwithstanding a lack of a formal amendment to this Agreement, this Agreement shall always be read and interpreted as if it contained the most current and applicable wording and requirements of such statute, public act, regulation, code or executive order as if their most current language had been used in and requirements incorporated into this Agreement at the time of its execution. If a change in statute, public act, regulation, code or executive order requires the modification, replacement or other change to the System, Contractor shall provide the Department with written notice of the required changes and any additional cost to Department as a result of the change or changes. If the Department and Contractor are unable to mutually agree on the costs associated with changes under this section, either party may Terminate without penalty.

23. COMMUNICATIONS

a) Unless notified otherwise by the other party in writing, correspondence, notices, and coordination between the parties to this Agreement as to general business matters or the terms and conditions herein shall be directed to:

State: Connecticut Department of Administrative Services
165 Capitol Avenue
Hartford, CT 06106

Contractor: George R. Cummings
5 West Service Rd.
Hartford, CT 06120

b) Details regarding Contractor invoices and all technical or day-to-day administrative matters pertaining to any Deliverable shall be directed to:

Department: The individual specified in the applicable Purchase Order

Contractor: The individual designated by Contractor in their Proposal or as the Contractor may otherwise designate in writing to the Department.

24. ASSIGNMENT.

Contractor may assign all or part of this Agreement to its corporate affiliate, AT&T Corp. Contractor shall provide the DAS and the Department with written notice at least 30 days in advance of any such assignment. Contractor shall also provide DAS with the documentation DAS and the State Comptroller may reasonably need in connection with such assignment.

25. WHISTLEBLOWER PROVISION

This Agreement may be subject to the provisions of Section 4-61dd of the Connecticut General Statutes. In accordance with this statute, if an officer, employee or appointing authority of the Contractor takes or threatens to take any personnel action against any employee of the Contractor in retaliation for such employee's disclosure of information to any employee of the contracting state or quasi-public agency or the Auditors of Public Accounts or the Attorney General under the provisions of subsection (a) of such statute, the Contractor shall be liable for a civil penalty of not more than five thousand dollars for each offense, up to a maximum of twenty per cent of the value of this Agreement. Each violation shall be a separate and distinct offense and in the case of a continuing violation, each calendar day's continuance of the violation shall be deemed to be a separate and distinct offense. The State may request that the Attorney General bring a civil action in the Superior Court for the Judicial District of Hartford to seek imposition and recovery of such civil penalty. In accordance with subsection (f) of such statute, each large state contractor, as defined in the statute, shall post a notice of the provisions of the statute relating to large state contractors in a conspicuous place which is readily available for viewing by the employees of the Contractor.

26. DISCLOSURE OF PUBLIC RECORDS PROVISION

This Agreement may be subject to the provisions of section 1-218 of the Connecticut General Statutes. In accordance with this statute, each contract in excess of two million five hundred thousand dollars between a public agency and a person for the performance of a governmental function shall (a) provide that the public agency is entitled to receive a copy of records and files related to the performance of the governmental function, and (b) indicate that such records and files are subject to FOIA and may be disclosed by the public agency pursuant to FOIA. No request to inspect or copy such records or files shall be valid unless the request is made to the public agency in accordance with FOIA. Any complaint by a person who is denied the right to inspect or copy such records or files shall be brought to the Freedom of Information Commission in accordance with the provisions of sections 1-205 and 1-206 of the Connecticut General Statutes.

27. FORUM AND CHOICE OF LAW

The parties deem the Agreement to have been made in the City of Hartford, State of Connecticut. Both parties agree that it is fair and reasonable for the validity and construction of the Agreement to be, and it shall be, governed by the laws and court decisions of the State of Connecticut, without giving effect to its principles of conflicts of laws. To the extent that any immunities provided by Federal law or the laws of the State of Connecticut do not bar an action against the State, and to the extent that these courts are courts of competent jurisdiction, for the purpose of venue, the complaint shall be made returnable to the Judicial District of Hartford only or shall be brought in the United States District Court for the District of Connecticut only, and shall not be transferred to any other court, provided, however, that nothing here constitutes a waiver or compromise of the sovereign immunity of the State of Connecticut. The Contractor waives any objection which it may now have or will have to the laying of venue of any Claims in any forum and further irrevocably submits to such jurisdiction in any suit, action or proceeding.

28. BREACH

- a) If either party breaches the Agreement in any respect, the non-breaching party shall provide written notice of the breach to the breaching party by overnight or certified mail, return receipt requested, to the most current address the breaching party has furnished for the purposes of correspondence and afford the breaching party an opportunity to cure within thirty (30) days from the date that the breaching party receives the notice (for the purposes of this paragraph, the time period set forth by the non-breaching party shall be referred to as the “right to cure period”). The right to cure period shall be extended if the non-breaching party is satisfied that the breaching party is making a good faith effort to cure, but the nature of the breach is such that it cannot be cured within the right to cure period.
- b) In the event Contractor fails to Perform a material obligation of this Agreement, DAS may in its written notice of breach require the Contractor to prepare and submit a Corrective Action Plan. The Corrective Action Plan shall provide a detailed explanation of the reasons for the failure, the Contractor’s assessment or diagnosis of the cause, and a specific proposal to cure or resolve the material obligation at issue. Contractor shall submit the Corrective Action Plan within five (15) business days following the request for the plan by the Department. The Corrective Action Plan shall be subject to the review and approval of DAS, which approval shall not unreasonably be withheld. Failure of the Contractor to comply with the requirements of this subsection or failure of the Contractor to cure the breach within the mutually agreed upon time frame shall constitute a default. The acceptance of a Corrective Action Plan under this Section shall not excuse the default or any prior defaults, relieve Contractor of its duty to comply with the requirements of this Agreement, or prohibit DAS or the Department from pursuing additional remedies or pursuing alternate approaches to cure the breach.
- c) The written notice of the breach may include an effective Termination date. If the identified breach is not cured by the stated Termination date set forth in the notice of breach, unless otherwise modified by the non-breaching party in writing prior to such date, no further action shall be required of any party to effect the Termination as of the stated date. If the notice does not set forth an effective Termination date, the non-breaching party shall be required to provide the breaching party no less than twenty four (24) hours written notice prior to Terminating the Agreement, such notice to be provided in accordance with Section 29(c).

- d) If the Department or DAS determines the Contractor has not Performed in accordance with the Agreement, the Department may withhold payment in whole or in part pending resolution of the Performance issue, provided that Department notifies the Contractor in writing prior to the date that the payment would have been due.
- e) Notwithstanding any provisions in this Agreement, the DAS may Terminate this Agreement with no right to cure period for Contractor's material breach or violation of any of the provisions in the section concerning Representations and Warranties and revoke any consent to assignments given as if the assignments had never been requested or consented to, without liability to the Contractor or Contractor Parties or any third party.
- f) Termination under this Breach section is subject to the provisions of the Termination section in this Agreement.

29. TERMINATION

- a) Notwithstanding any provisions in this Agreement, DAS, through a duly authorized employee, may Terminate the Agreement whenever DAS makes a written determination that such Termination is in the best interests of the State. DAS shall notify the Contractor in writing of Termination pursuant to this section, which notice shall specify the effective date of Termination and the extent to which the Contractor must complete its Performance under the Agreement prior to such date.
- b) Notwithstanding any provisions in this Agreement, DAS, through a duly authorized employee, may, after making a written determination that the Contractor has breached the Agreement, Terminate the Agreement in accordance with the provisions in the breach section of this Agreement.
- c) DAS shall send notice of Termination via certified mail, return receipt requested, to the Contractor at the most current address which the Contractor has furnished to DAS for purposes of correspondence, or by hand delivery. Upon receiving the notice from DAS, the Contractor shall immediately discontinue all services affected in accordance with the notice, undertake all commercially reasonable efforts to mitigate any losses or damages, and deliver to DAS all Records. The Records are deemed to be the property of DAS and the Contractor shall deliver them to DAS no later than thirty (30) days after the Termination of the Contract or fifteen (15) days after the Contractor receives a written request from DAS for the Records. The Contractor shall deliver those Records that exist in electronic, magnetic or other intangible form in a non-proprietary format, such as, but not limited to, ASCII or .TXT.
- d) Upon receipt of a written notice of Termination from DAS, the Contractor shall cease operations and Services as DAS directs in the notice, and take all actions that are necessary or appropriate, or that DAS may reasonably direct, for the protection, and preservation of the Goods and any other property. Except for any work which the DAS directs the Contractor to Perform in the notice prior to the effective date of Termination, and except as otherwise provided in the notice, the Contractor shall terminate or conclude all existing subcontracts and purchase orders and shall not enter into any further subcontracts, purchase orders or commitments.
- e) The Department shall, within forty-five (45) days of the effective date of Termination, reimburse the Contractor for its Performance rendered and accepted by the Department, in addition to all actual and reasonable costs incurred after Termination in completing those portions of the Performance which the notice required the Contractor to complete. However, other than as set forth in this paragraph, the Contractor is not entitled to receive and the Department is not obligated to tender to

the Contractor any payments for anticipated or lost profits. Notwithstanding the foregoing, if Termination is made pursuant to Subsection 29.a), Department shall pay Contractor for all previously unpaid software, hardware and labor provided or Performed by Contractor from the Effective Date through the Termination Date; however, payment under this subsection shall not exceed the following: \$12,084,198 if Termination occurs prior to the end of year one of the Agreement; \$3,021,050 if Termination occurs from and after year one and prior to the end of year two of the Agreement; \$2,054,314 if Termination occurs from and after year two and prior to the end of year three of the Agreement; \$1,087,578 if Termination occurs from and after year three and prior to the end of year four of the Agreement; and no payment if Termination occurs from and after the end of year four of the Agreement. Nothing in the foregoing shall be construed to require Department make a payment in excess of actual software, hardware or labor delivered or Performed by Contractor. The Department shall not be required to make any payments pursuant to the foregoing unless and until the Contractor has delivered an invoice or invoices evidencing the same, along with any other documentation that the Department may reasonably request. Such invoices and documentation shall be subject to the review and approval of the Department in its sole discretion.

f) Upon request by DAS, the Contractor shall assign to DAS, or any replacement contractor designated by DAS, all subcontracts, purchase orders and other commitments, deliver to DAS all Records and other information pertaining to its Performance, and remove from State premises, whether leased or owned, all of Contractor's property, equipment, waste material and rubbish related to its Performance, all as DAS may request.

g) For breach or violation of any of the provisions in the section concerning Representations and Warranties, DAS may Terminate the Contract in accordance with its terms and revoke any consents to assignments given as if the assignments had never been requested or consented to, without liability to the Contractor or Contractor Parties or any third party.

h) Upon Termination of the Agreement, all rights and obligations shall be null and void, so that no party shall have any further rights or obligations to any other party, except with respect to the sections which survive Termination. All representations, warranties, agreements and rights of the parties under the Agreement shall survive such Termination to the extent not otherwise limited in the Agreement and without each one of them having to be specifically mentioned in the Agreement.

i) Termination of the Agreement pursuant to this section shall not be deemed to be a breach of contract by DAS.

30. REPRESENTATIONS AND WARRANTIES

The Contractor represents and warrants to the State for itself and the Contractor Parties that:

a) if they are entities, they are duly and validly existing under the laws of their respective states of organization and authorized to conduct business in the State of Connecticut in the manner contemplated by the Agreement. Further, as appropriate, they have taken all necessary action to authorize the execution, delivery and Performance of the Agreement and have the power and authority to execute, deliver and Perform their obligations under the Agreement;

b) they will comply with all applicable State and Federal laws and municipal ordinances in satisfying their obligations to the State under and pursuant to the Agreement, including, but not limited to (1) Connecticut General Statutes Title 1, Chapter 10, concerning the State's Codes of Ethics and (2)

Title 4a concerning State purchasing, including, but not limited to section 22a-194a concerning the use of polystyrene foam;

- c) the execution, delivery and Performance of the Agreement will not violate, be in conflict with, result in a breach of or constitute (with or without due notice and/or lapse of time) a default under any of the following, as applicable: (1) any provision of law; (2) any order of any court or the State; or (3) any indenture, agreement, document or other instrument to which it is a party or by which it may be bound;
- d) they are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any governmental entity;
- e) as applicable, they have not, within the three years preceding the Agreement, in any of their current or former jobs, been convicted of, or had a civil judgment rendered against them or against any person who would Perform under the Agreement, for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a transaction or contract with any governmental entity. This includes, but is not limited to, violation of Federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records or property, making false statements, or receiving stolen property;
- f) they are not presently indicted for or otherwise criminally or civilly charged by any governmental entity with commission of any of the offenses listed above;
- g) they have not within the three years preceding the Agreement had one or more contracts with any governmental entity in the State terminated for breach or default;
- h) they have not employed or retained any entity or person, other than a bona fide employee working solely for them, to solicit or secure the Agreement and that they have not paid or agreed to pay any entity or person, other than a bona fide employee working solely for them, any fee, commission, percentage, brokerage fee, gifts, or any other consideration contingent upon or resulting from the award or making of the Agreement or any assignments made in accordance with the terms of the Agreement;
- i) to the best of their knowledge, there are no Claims involving the Contractor or Contractor Parties that might reasonably be expected to materially adversely affect their businesses, operations, assets, properties, financial stability, business prospects or ability to Perform fully under the Agreement;
- j) they shall disclose, to the best of their knowledge, to the State in writing any Claims involving them that might reasonably be expected to materially adversely affect their ability to Perform fully under the Agreement, no later than ten (10) calendar days after becoming aware or after they should have become aware of any such Claims. For purposes of the Contractor's obligation to disclose any Claims to the State, the ten (10) calendar days in the section of this Agreement concerning disclosure of Contractor Parties litigation shall run consecutively with the ten (10) days provided for in this representation and warranty;

- k) their participation in the Solicitation process is not a conflict of interest or a breach of ethics under the provisions of Title 1, Chapter 10 of the Connecticut General Statutes concerning the State's Code of Ethics;
- l) the proposal submitted by Contractor in response to the Solicitation was not made in connection or concert with any other person, entity or proposer, including any affiliate (as defined in the Tangible Personal Property section of this Agreement) of the proposer, submitting a proposal for the same Solicitation, and is in all respects fair and without collusion or fraud;
- m) they are able to Perform under the Agreement using their own resources or the resources of a party who was not a proposer;
- n) the Contractor shall obtain in a written contract all of the representations and warranties in this section from any Contractor Parties and require that provision be included in any contracts and purchase orders with such Contractor Parties;
- o) they have paid all applicable workers' compensation second injury fund assessments concerning all previous work done in Connecticut; they have a record of compliance with Occupational Health and Safety Administration regulations without any unabated, willful or serious violations;
- p) they owe no Connecticut unemployment compensation contributions;
- q) to the best of Contractor's knowledge based on due diligence, they are not delinquent in the payment of any taxes owed, or, that they have filed a State sales tax security bond, and they have, if and as applicable, filed for motor carrier road tax stickers and have paid all outstanding road taxes with the State;
- r) all of their vehicles in the State have current registrations and, unless such vehicles are no longer in service, they shall not allow any such registrations to lapse;
- s) each Contractor Party has vested in the Contractor plenary authority to bind the Contractor Parties to the full extent necessary or appropriate to ensure full compliance with and Performance in accordance with all of the terms and conditions of the Contract and that all appropriate parties shall also provide, no later than fifteen (15) days after receiving a request from DAS or the Department, such information as DAS or the Department may require to evidence, in their sole determination, compliance with this section;
- t) they either own or have the authority to use all the Goods;
- u) the Goods do not infringe or misappropriate any patent, copyright, trade secret or other intellectual property right of a third party; however, Contractor and State are both aware of potential issues concerning Cassidian Communications, U.S. Patent No. 6,744,858, System and Method for Supporting Multiple Call Centers (see attached November 8, 2012 letter attached as Exhibit 5);
- v) the Department's use of any Goods in a manner consistent with this Agreement shall not infringe or misappropriate any patent, trade secret or other intellectual property right of a third party;

w) if they procure any Goods, they shall sub-license such Goods and that the Department shall be afforded the full benefits of any manufacturer or subcontractor licenses for the use of the Goods; and

x) they shall assign or otherwise transfer to the Department, or afford the Department the full benefits of any manufacturer's warranty for the Goods, to the extent that such warranties are assignable or otherwise transferable to the Department.

31. DISCLOSURE OF CONTRACTOR PARTIES LITIGATION

The Contractor shall require that all Contractor Parties, as appropriate, disclose to the Contractor, to the best of their knowledge, any Claims involving the Contractor Parties that might reasonably be expected to materially adversely affect their ability to Perform fully under the Agreement, no later than ten (10) calendar days after becoming aware or after they should have become aware of any such Claims. Disclosure shall be in writing.

32. STATE COMPTROLLER'S SPECIFICATIONS

In accordance with Conn. Gen. Stat. § 4d-31, this Agreement is deemed to have incorporated within it, and the Contractor shall deliver the Goods and Services in compliance with, all specifications established by the State Comptroller to ensure that all policies, procedures, processes and control systems, including hardware, software and protocols, which are established or provided by the Contractor or Contractor Parties, are compatible with and support the State's core financial systems, including but not limited to, accounting, payroll, time and attendance, and retirement systems.

33. CHIEF INFORMATION OFFICER SUBCONTRACT APPROVAL

In accordance with Conn. Gen. Stat. § 4d-32, the Contractor shall not award a subcontract for work under this Agreement without having first obtained the written approval of the Chief Information Officer of DAS or their designee of the selection of the subcontractor and of the provisions of the subcontract. The Contractor shall deliver a copy of each executed subcontract or amendment to the subcontract to the Chief Information Officer, who shall maintain the subcontract or amendment as a public record, as defined in Conn. Gen. Stat. § 1-200.

34. RIGHTS TO AND INTEGRITY OF PUBLIC RECORDS

In accordance with Conn. Gen. Stat. § 4d-34, (a) neither the Contractor nor Contractor Parties shall have any Title in or to (1) any public records which the Contractor or Contractor Parties possess, modify or create pursuant to a contract, subcontract or amendment to a contract or subcontract, or (2) any modifications by such contractor, subcontractor, employee or agent to such public records; (b) neither the Contractor nor Contractor Parties shall impair the integrity of any public records which they possess or create; and (c) public records which the Contractor or Contractor Parties possess, modify or create pursuant to this Agreement or other contract, subcontract or amendment to a contract or subcontract shall at all times and for all purposes remain the property of the State. For purposes of this

section, “public records” shall have the meaning set forth in Conn. Gen. Stat. § 4-33, as it may be modified from time to time.

35. PUBLIC RECORDS AND FOIA

In accordance with Conn. Gen. Stat. § 4d-35, any public record which a state agency provides to the Contractor or Contractor Parties shall remain a public record for the purposes of subsection (a) of section 1-210 and as to such public records, the State, the Contractor and Contractor Parties shall have a joint and several obligation to comply with the obligations of the state agency under the Freedom of Information Act (FOIA), as defined in section 1-200, provided that the determination of whether or not to disclose a particular record or type of record shall be made by such state agency.

36. DISCLOSURE OF PUBLIC RECORDS

In accordance with Conn. Gen. Stat. § 4d-36, neither the Contractor nor Contractor Parties shall disclose to the public any public records (a) which they possess, modify or create pursuant to this Agreement or any contract, subcontract or amendment to a contract or subcontract and (b) which a state agency (1) is prohibited from disclosing pursuant to state or federal law in all cases, (2) may disclose pursuant to state or federal law only to certain entities or individuals or under certain conditions or (3) may withhold from disclosure pursuant to state or federal law. This provision shall not be construed to prohibit the Contractor from disclosing such public records to any Contractor Parties to carry out the purposes of its subcontract. For purposes of this section, “public records” shall have the meaning set forth in Conn. Gen. Stat. § 1-200, as it may be modified from time to time.

37. PROFITING FROM PUBLIC RECORDS

In accordance with Conn. Gen. Stat. § 4d-37, neither the Contractor nor Contractor Parties shall sell, market or otherwise profit from the disclosure or use of any public records which are in their possession pursuant to this Agreement or any contract, subcontract or amendment to a contract or subcontract, except as authorized in this Agreement. For purposes of this section, “public records” shall have the meaning set forth in Conn. Gen. Stat. § 1-200, as it may be modified from time to time.

38. CONTRACTOR’S OBLIGATION TO NOTIFY DAS CONCERNING PUBLIC RECORDS

In accordance with Conn. Gen. Stat. § 4d-38, if the Contractor or Contractor Parties learn of any violation of the provisions of Conn. Gen. Stat. §§ 4d-36 or 4d-37 they shall, no later than seven calendar days after learning of such violation, notify the Chief Information Officer of DAS of such violation.

39. GENERAL ASSEMBLY ACCESS TO RECORDS

In accordance with Conn. Gen. Stat. § 4d-40, the Joint Committee on Legislative Management and each nonpartisan office of the General Assembly shall continue to have access to DAS records that is not less than the access that said committee and such offices have on July 1, 1997.

40. CONTINUITY OF SYSTEMS

- a) This Section is intended to comply with Conn. Gen. Stat. §4d-44, as it may be amended.
- b) The Contractor acknowledges that the System and associated services are important to the function of State government and that they must continue without interruption. Pursuant to Conn. Gen. Stat. §4d-44, as it may be amended, if the work under the Agreement, any subcontract, or amendment to either, is transferred back to the State or to another contractor at any time for any reason, then the Contractor shall cooperate fully with the State, and do and perform all acts and things that DAS deems to be necessary or appropriate, to ensure continuity of state agency information system and telecommunication system facilities, equipment and services so that there is no disruption or interruption in performance as required or permitted in the Agreement. The Contractor shall not enter into any subcontract for any part of the Performance under the Agreement without approval of such subcontract by DAS, as required by Conn. Gen. Stat. §4d-32, as it may be amended, and without such subcontract including a provision that obligates the subcontractor to comply fully with Conn. Gen. Stat. §4d-44, as it may be amended, as if the subcontractor were in fact the Contractor. The Contractor shall make a full and complete disclosure of and delivery to DAS or its representatives of all Records and “Public Records,” as that term is defined in Conn. Gen. Stat. §4d-33, as it may be amended, in whatever form they exist or are stored and maintained and wherever located, directly or indirectly concerning the Agreement.
- c) The parties shall follow the below applicable and respective procedures in order to ensure the orderly transfer to the State the following:
 - 1. facilities and equipment: Unless a shorter period is necessary or appropriate to ensure compliance with subsection (a) above, in which case that shorter period shall apply, the Contractor shall deliver to DAS, F.O.B. Hartford, Connecticut or other State location which the DAS identifies, all facilities and equipment owned by the State related to or arising out of the Agreement, subcontract or amendment, no later than 10 days from the date that the work under the Agreement is transferred back to the State or to another contractor for any reason. The Contractor shall deliver the facilities and equipment to DAS, during its business hours, in good working order and in appropriately protective packaging to ensure delivery without damage. Concurrent with this delivery, the Contractor shall also deliver all related operation manuals and other documentation in whatever form they exist and a list of all related passwords and security codes;
 - 2. software Deliverables created or modified pursuant to the Agreement, subcontract or amendment: Unless a shorter period is necessary or appropriate to ensure compliance with subsection (a) above, in which case that shorter period shall apply, the Contractor shall deliver to DAS, F.O.B. Hartford, Connecticut or other State location which DAS identifies, all Deliverables, no later than 10 days from the date that the work under the SOW or Agreement is transferred back to the State or to another contractor for any reason. The Contractor shall deliver such Deliverables to DAS, during its business hours, in good working order, and if equipment shall be delivered, in appropriately protective packaging to ensure delivery without damage. Concurrent with this delivery, the Contractor shall also deliver all Deliverable-related operation manuals and other documentation in whatever form they exist, if delivery of such manuals and documentation is required by this Agreement or the SOW for such Deliverable, and a list of all Deliverable passwords and security codes; and

3. Public Records, as defined in Conn. Gen. Stat. §4d-33, as it may be amended, which the Contractor or Contractor Parties possess or create pursuant to the Agreement, subcontract or amendment: Unless a shorter period is necessary or appropriate to ensure compliance with subsection (a) above, in which case that shorter period shall apply, the Contractor shall deliver to DAS, F.O.B. Hartford, Connecticut or other State location which DAS identifies, all Public Records created or modified pursuant to the Agreement, Statement of Work, subcontract or amendment and requested in writing by the DAS (provided that Contractor may redact confidential information of Contractor, its personnel or third parties to the extent permitted by applicable law) no later than the latter of (1) the time specified in the section in this Agreement concerning Termination for the return of Public Records and (2) 10 days from the date that the work under the Agreement or Statement of Work is transferred back to the DAS or to another contractor for any reason. The Contractor shall deliver to DAS those Public Records in electronic, magnetic or other intangible form in a non-proprietary format, such as, but not limited to, ASCII or TXT. The Contractor shall deliver to the DAS, during the DAS' business hours, those Public Records and a list of all applicable passwords and security codes, all in appropriately protective packaging to ensure delivery without damage.

d) If the Contractor employs former State employees, the Contractor shall facilitate the exercising of any reemployment rights that such State employees may have with the State, including, but not limited to, affording them all reasonable opportunities during the workday to interview for State jobs. The Contractor shall include language similar to this section in all of its contracts with its subcontractors and applicable Contractor Parties so that they are similarly obligated.

41. TANGIBLE PERSONAL PROPERTY

a) The Contractor on its behalf and on behalf of its Affiliates, as defined below, shall comply with the provisions of Conn. Gen. Stat. §12-411b, as follows:

1. For the term of the Agreement, the Contractor and its Affiliates shall collect and remit to the State of Connecticut, Department of Revenue Services, any Connecticut use tax due under the provisions of Chapter 219 of the Connecticut General Statutes for items of tangible personal property sold by the Contractor or by any of its Affiliates in the same manner as if the Contractor and such Affiliates were engaged in the business of selling tangible personal property for use in Connecticut and had sufficient nexus under the provisions of Chapter 219 to be required to collect Connecticut use tax;
2. A customer's payment of a use tax to the Contractor or its Affiliates relieves the customer of liability for the use tax;
3. The Contractor and its Affiliates shall remit all use taxes they collect from customers on or before the due date specified in the Contract, which may not be later than the last day of the month next succeeding the end of a calendar quarter or other tax collection period during which the tax was collected;
4. The Contractor and its Affiliates are not liable for use tax billed by them but not paid to them by a customer; and
5. Any Contractor or Affiliate who fails to remit use taxes collected on behalf of its customers by the due date specified in the Contract shall be subject to the interest and

penalties provided for persons required to collect sales tax under chapter 219 of the general statutes.

b) For purposes of this section of the Agreement, the word "Affiliate" means any person, as defined in section 12-1 of the general statutes, that controls is controlled by, or is under common control with another person. A person controls another person if the person owns, directly or indirectly, more than ten per cent of the voting securities of the other person. The word "voting security" means a security that confers upon the holder the right to vote for the election of members of the board of directors or similar governing body of the business, or that is convertible into, or entitles the holder to receive, upon its exercise, a security that confers such a right to vote. "Voting security" includes a general partnership interest.

c) The Contractor represents and warrants that each of its Affiliates has vested in the Contractor plenary authority to so bind the Affiliates in any agreement with the State of Connecticut. The Contractor on its own behalf and on behalf of its Affiliates shall also provide, no later than 30 days after receiving a request by the State's contracting authority, such information as the State may require to ensure, in the State's sole determination, compliance with the provisions of Chapter 219 of the Connecticut General Statutes, including, but not limited to, §12-411b.

42. INDEMNIFICATION

a) The Contractor shall indemnify, defend and hold harmless the State and its officers, representatives, agents, servants, employees, successors and assigns from and against any and all (1) Claims arising, directly or indirectly, in connection with the Agreement, including the acts of commission or omission (collectively, the "Acts") of the Contractor or Contractor Parties; and (2) liabilities, damages, losses, costs and expenses, including but not limited to, attorneys' and other professionals' fees, arising, directly or indirectly, in connection with Claims, Acts or the Agreement. The Contractor shall use counsel reasonably acceptable to the State in carrying out its obligations under this section. The Contractor's obligations under this section to indemnify, defend and hold harmless against Claims includes Claims concerning confidentiality of any part of or all of the Contractor's bid, proposal or any Records, any intellectual property rights, other proprietary rights of any person or entity, copyrighted or non-copyrighted compositions, secret processes, patented or unpatented inventions, articles or appliances furnished or used in the Performance, and Claims if any relating to or arising from the Cassidian Communications patent referenced in Exhibit 5. Notwithstanding the foregoing, nothing in this subsection shall be construed in such a way as to lessen or otherwise undermine in any way the immunity of Contractor as a 9-1-1 service provider in the State of Connecticut to the extent afforded by law.

b) The Contractor shall not be responsible for indemnifying or holding the State harmless from any liability arising due to the negligence of the State or any third party acting under the direct control or supervision of the State.

c) The Contractor shall reimburse the State for any and all damages to the real or personal property of the State caused by the Acts of the Contractor or any Contractor Parties. The State shall give the Contractor reasonable notice of any such Claims.

d) The Contractor's duties under this section shall remain fully in effect and binding in accordance with the terms and conditions of the Contract, without being lessened or compromised in any way, even where the Contractor is alleged or is found to have merely contributed in part to the Acts giving rise to

the Claims and/or where the State is alleged or is found to have contributed to the Acts giving rise to the Claims.

- e) The Contractor shall carry and maintain at all times during the term of the Agreement, and during the time that any provisions survive the term of the Agreement, sufficient commercial general liability insurance to satisfy its obligations under this Agreement. The Contractor shall include the State as an additional insured on the policy as respects work under this Agreement and shall provide a certificate of insurance to the Department in a form reasonably acceptable to the Department prior to the effective date of the Agreement. The Contractor shall not begin Performance until the delivery of the policy to DAS and, upon request, the Department. The State shall be entitled to recover under the insurance policy even if a body of competent jurisdiction determines that the State was contributorily negligent.
- f) This section shall survive the Termination of the Agreement and shall not be limited by reason of any insurance coverage.

43. SOVEREIGN IMMUNITY

The parties acknowledge and agree that nothing in the Agreement shall be construed as a modification, compromise or waiver by the State of any rights or defenses of any immunities provided by Federal law or the laws of the State of Connecticut to the State or any of its officers and employees, which they may have had, now have or will have with respect to all matters arising out of the Agreement. To the extent that this section conflicts with any other section, this section shall govern.

44. SUMMARY OF STATE ETHICS LAWS

Pursuant to the requirements of section 1-101qq of the Connecticut General Statutes, the summary of State ethics laws developed by the State Ethics Commission pursuant to section 1-81b of the Connecticut General Statutes is incorporated by reference into and made a part of the Agreement as if the summary had been fully set forth in the Agreement.

45. AUDIT AND INSPECTION OF PLANTS, PLACES OF BUSINESS AND RECORDS.

- a) The State and its agents, including, but not limited to, the Connecticut Auditors of Public Accounts, Attorney General and State's Attorney and their respective agents, may, at reasonable hours, inspect and examine all of the parts of the Contractor's and Contractor Parties' plants and places of business which, in any way, are related to, or involved in, the performance of this Agreement.
- b) The Contractor shall maintain, and shall require each of the Contractor Parties to maintain, accurate and complete Records. The Contractor shall make all of its and the Contractor Parties' Records available at all reasonable hours for audit and inspection by the State and its agents.
- c) The State shall make all requests for any audit or inspection in writing and shall provide the Contractor with at least twenty-four (24) hours' notice prior to the requested audit and inspection date. If the State suspects fraud or other abuse, or in the event of an emergency, the State is not obligated to provide any prior notice.
- d) All audits and inspections shall be at the State's expense.

- e) The Contractor shall keep and preserve or cause to be kept and preserved all of its and Contractor Parties' Records until three (3) years after the latter of (i) final payment under this Agreement, or (ii) the expiration or earlier termination of this Agreement, as the same may be modified for any reason. The State may request an audit or inspection at any time during this period. If any Claim or audit is started before the expiration of this period, the Contractor shall retain or cause to be retained all Records until all Claims or audit findings have been resolved.
- f) The Contractor shall cooperate fully with the State and its agents in connection with an audit or inspection. Following any audit or inspection, the State may conduct and the Contractor shall cooperate with an exit conference.
- g) The Contractor shall incorporate this entire Section verbatim into any contract or other agreement that it enters into with any Contractor Party.

46. CAMPAIGN CONTRIBUTION RESTRICTION

For all State contracts, defined in Conn. Gen. Stat. §9-612(g)(1) as having a value in a calendar year of \$50,000 or more, or a combination or series of such agreements or contracts having a value of \$100,000 or more, the authorized signatory to this Agreement expressly acknowledges receipt of the State Elections Enforcement Commission's notice advising state contractors of state campaign contribution and solicitation prohibitions, and will inform its principals of the contents of the notice, as set forth in "Notice to Executive Branch State Contractors and Prospective State Contractors of Campaign Contribution and Solicitation Limitations," attached as Exhibit 1.

47. EXECUTIVE ORDERS

This Agreement is subject to the provisions of Executive Order No. Three of Governor Thomas J. Meskill, promulgated June 16, 1971, concerning labor employment practices, Executive Order No. Seventeen of Governor Thomas J. Meskill, promulgated February 15, 1973, concerning the listing of employment openings and Executive Order No. Sixteen of Governor John G. Rowland promulgated August 4, 1999, concerning violence in the workplace, all of which are incorporated into and are made a part of the Agreement as if they had been fully set forth in it. The Agreement may also be subject to Executive Order No. 7C of Governor M. Jodi Rell, promulgated July 13, 2006, concerning contracting reforms and Executive Order No. 14 of Governor M. Jodi Rell, promulgated April 17, 2006, concerning procurement of cleaning products and services and Executive Order No. 19 of Governor M. Jodi Rell, promulgated June 19, 2008 concerning use of System Development, in accordance with their respective terms and conditions. If Executive Orders 7C, 14 and 19 are applicable, they are deemed to be incorporated into and are made a part of the Agreement as if they had been fully set forth in it. At the Contractor's request, the Department shall provide a copy of these orders to the Contractor.

48. NONDISCRIMINATION

- a) For purposes of this Section, the following terms are defined as follows:
 - i. "Commission" means the Commission on Human Rights and Opportunities;
 - ii. "Contract" and "contract" include any extension or modification of the Agreement;
 - iii. "Contractor" and "contractor" include any successors or assigns of the Contractor or contractor;

- iv. "Gender identity or expression" means a person's gender-related identity, appearance or behavior, whether or not that gender-related identity, appearance or behavior is different from that traditionally associated with the person's physiology or assigned sex at birth, which gender-related identity can be shown by providing evidence including, but not limited to, medical history, care or treatment of the gender-related identity, consistent and uniform assertion of the gender-related identity or any other evidence that the gender-related identity is sincerely held, part of a person's core identity or not being asserted for an improper purpose;
- v. "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations;
- vi. "good faith efforts" shall include, but not be limited to, those reasonable initial efforts necessary to comply with statutory or regulatory requirements and additional or substituted efforts when it is determined that such initial efforts will not be sufficient to comply with such requirements;
- vii. "marital status" means being single, married as recognized by the state of Connecticut, widowed, separated or divorced;
- viii. "mental disability" means one or more mental disorders, as defined in the most recent edition of the American Psychiatric Association's "Diagnostic and Statistical Manual of Mental Disorders", or a record of or regarding a person as having one or more such disorders;
- ix. "minority business enterprise" means any small contractor or supplier of materials fifty-one percent or more of the capital stock, if any, or assets of which is owned by a person or persons: (1) who are active in the daily affairs of the enterprise, (2) who have the power to direct the management and policies of the enterprise, and (3) who are members of a minority, as such term is defined in subsection (a) of Connecticut General Statutes § 32-9n; and
- x. "public works contract" means any agreement between any individual, firm or corporation and the State or any political subdivision of the State other than a municipality for construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, or which is financed in whole or in part by the State, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees.

For purposes of this Section, the terms "Contract" and "contract" do not include a contract where each contractor is (1) a political subdivision of the state, including, but not limited to, a municipality, (2) a quasi-public agency, as defined in Conn. Gen. Stat. Section 1-120, (3) any other state, including but not limited to any federally recognized Indian tribal governments, as defined in Conn. Gen. Stat. Section 1-267, (4) the federal government, (5) a foreign government, or (6) an agency of a subdivision, agency, state or government described in the immediately preceding enumerated items (1), (2), (3), (4) or (5).

b) (1) The Contractor agrees and warrants that in the performance of the Agreement such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, mental retardation, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such Contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the State of Connecticut; and the Contractor further agrees to take affirmative action to insure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, mental retardation, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by the Contractor that such disability prevents performance of the work involved;

(2) the Contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of

the Contractor, to state that it is an "affirmative action-equal opportunity employer" in accordance with regulations adopted by the Commission; (3) the Contractor agrees to provide each labor union or representative of workers with which the Contractor has a collective bargaining Agreement or other contract or understanding and each vendor with which the Contractor has a contract or understanding, a notice to be provided by the Commission, advising the labor union or workers' representative of the Contractor's commitments under this section and to post copies of the notice in conspicuous places available to employees and applicants for employment; (4) the Contractor agrees to comply with each provision of this Section and Connecticut General Statutes §§ 46a-68e and 46a-68f and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes §§ 46a-56, 46a-68e and 46a-68f; and (5) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor as relate to the provisions of this Section and Connecticut General Statutes § 46a-56. If the contract is a public works contract, the Contractor agrees and warrants that he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works projects.

c) Determination of the Contractor's good faith efforts shall include, but shall not be limited to, the following factors: The Contractor's employment and subcontracting policies, patterns and practices; affirmative advertising, recruitment and training; technical assistance activities and such other reasonable activities or efforts as the Commission may prescribe that are designed to ensure the participation of minority business enterprises in public works projects.

d) The Contractor shall develop and maintain adequate documentation, in a manner prescribed by the Commission, of its good faith efforts.

e) The Contractor shall include the provisions of subsection (b) of this Section in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Connecticut General Statutes §46a-56; provided if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.

f) The Contractor agrees to comply with the regulations referred to in this Section as they exist on the date of this Agreement and as they may be adopted or amended from time to time during the term of this Agreement and any amendments thereto.

g) (1) The Contractor agrees and warrants that in the performance of the Agreement such Contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of sexual orientation, in any manner prohibited by the laws of the United States or the State of Connecticut, and that employees are treated when employed without regard to their sexual orientation; (2) the Contractor agrees to provide each labor union or representative of workers with which such Contractor has a collective bargaining Agreement or other contract or understanding and each vendor with which such Contractor has a contract or understanding, a notice to be provided by the Commission on Human Rights and Opportunities advising the labor union or workers' representative of the

Contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment; (3) the Contractor agrees to comply with each provision of this section and with each regulation or relevant order issued by said Commission pursuant to Connecticut General Statutes § 46a-56; and (4) the Contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records and accounts, concerning the employment practices and procedures of the Contractor which relate to the provisions of this Section and Connecticut General Statutes § 46a-56.

h) The Contractor shall include the provisions of the foregoing paragraph in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor or manufacturer unless exempted by regulations or orders of the Commission. The Contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Connecticut General Statutes § 46a-56; provided, if such Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the Contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.

50. OWNERSHIP OF DATA

Any and all data hosted by Contractor on behalf of the State of Connecticut will remain the sole property of the State and the State shall retain any and all ownership of such data. It is further understood that at no time will Contractor have ownership of any data held within the system.

51. TERMS AND CONDITIONS

Any and all Purchase Orders, Product Schedule Updates, Statement of Works or other documents authorized in connection with this shall be subject to the terms and conditions of this Agreement. Any terms or conditions contained in any such Purchase Order, Product Schedule Update, Statement of Work or other document shall have no force or effect and shall in no way affect, change or modify any of the terms and conditions of this Agreement.

52. WORKERS' COMPENSATION

The Contractor shall maintain Worker's Compensation and Employer's Liability insurance in compliance with the laws of the state of Connecticut, which coverage shall include Employer's Liability coverage with limits of \$100,000 for each accident, \$500,000 for disease, policy limits and \$100,000 for disease for each employee. Contractor may self insure this obligation.

53. ENTIRETY OF AGREEMENT

This Agreement includes the SIGNATURE PAGE OF AGREEMENT. To the extent the provisions of any exhibit or attachment referenced in the Agreement do not contradict the provisions of Sections 1-53 of this Agreement, said exhibits and/or attachments are incorporated herein by reference and made a part hereof as though fully set forth herein. This Agreement, as thus constituted, contains the complete

and exclusive statement of the terms and conditions agreed to by the parties hereto and shall not be altered, amended, or modified except in writing executed by an authorized representative of each party.

THE REMAINDER OF THIS PAGE IS LEFT BLANK INTENTIONALLY

SIGNATURE PAGE OF AGREEMENT

This Agreement is entered into by authority of Sections 4a-2 and 4d-2 of the Connecticut General Statutes.

CONTRACTOR

STATE OF CONNECTICUT,

BY: _____

BY: _____

NAME:

NAME:

TITLE:

TITLE:

Duly Authorized

Department of Administrative Services

Duly Authorized

DATE: _____

DATE: _____

APPROVED AS TO FORM:

BY: _____

Attorney General of the State of Connecticut

DATE: _____



Notice to Executive Branch State Contractors and Prospective State Contractors of Campaign Contribution and Solicitation Limitations

This notice is provided under the authority of Connecticut General Statutes §9-612(G)(2), as amended by P.A. 10-1, and is for the purpose of informing state contractors and prospective state contractors of the following law (italicized words are defined on the reverse side of this page).

CAMPAIGN CONTRIBUTION AND SOLICITATION LIMITATIONS

No *state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor*, with regard to a *state contract* or *state contract solicitation* with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee (which includes town committees).

In addition, no holder or principal of a holder of a valid prequalification certificate, shall make a contribution to (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of State senator or State representative, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

On and after January 1, 2011, no state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor, with regard to a state contract or state contract solicitation with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder of a valid prequalification certificate, shall **knowingly solicit** contributions from the state contractor's or prospective state contractor's employees or from a *subcontractor* or *principals of the subcontractor* on behalf of (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

DUTY TO INFORM

State contractors and prospective state contractors are required to inform their principals of the above prohibitions, as applicable, and the possible penalties and other consequences of any violation thereof.

PENALTIES FOR VIOLATIONS

Contributions of solicitations of contributions made in violation of the above prohibitions may result in the following civil and criminal penalties:

Civil Penalties – Up to \$2,000 or twice the amount of the prohibited contribution, whichever is greater, against a principal or a contractor. Any state contractor or prospective state contractor which fails to make reasonable efforts to comply with the provisions requiring notice to its principals of these prohibitions and possible consequences of their violations may also be subject to civil penalties of up to \$2,000 or twice the amount of the prohibited contributions made by their principals.

Criminal penalties – Any knowing and willful violation of the prohibition is a Class D felony, which may subject the violator to imprisonment of not more than 5 years, or not more than \$5,000 in fines, or both.

CONTRACT CONSEQUENCES

In the case of a state contractor, contributions made or solicited in violation of the above prohibitions may result in the contract being voided.

In the case of a prospective state contractor, contributions made or solicited in violation of the above prohibitions shall result in the contract described in the state contract solicitation not being awarded to the prospective state contractor, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

The State shall not award any other state contract to anyone found in violation of the above prohibitions for a period of one year after the election for which such contribution is made or solicited, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

Additional information may be found on the website of the State Elections Enforcement Commission, www.ct.gov/seec. Click on the link to "Lobbyist/Contractor Limitations."



DEFINITIONS

“State contractor” means a person, business entity or nonprofit organization that enters into a state contract. Such person, business entity or nonprofit organization shall be deemed to be a state contractor until December thirty-first of the year in which such contract terminates. “State contractor” does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

“Prospective state contractor” means a person, business entity or nonprofit organization that (i) submits a response to a state contract solicitation by the state, a state agency or a quasi-public agency, or a proposal in response to a request for proposals by the state, a state agency or a quasi-public agency, until the contract has been entered into, or (ii) holds a valid prequalification certificate issued by the Commissioner of Administrative Services under section 4a-100.

“Prospective state contractor” does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

“Principal of a state contractor or prospective state contractor” means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a state contractor or prospective state contractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a state contractor or prospective state contractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a state contractor or prospective state contractor, which is not a business entity, or if a state contractor or prospective state contractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any state contractor or prospective state contractor who has *managerial or discretionary responsibilities with respect to a state contract*, (v) the spouse or a *dependent child* who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the state contractor or prospective state contractor.

“State contract” means an agreement or contract with the state or any state agency or any quasi-public agency, let through a procurement process or otherwise, having a value of fifty thousand dollars or more, or a combination or series of such agreements or contracts having a value of one hundred thousand dollars or more in a calendar year, for (i) the rendition of services, (ii) the furnishing of any goods, material, supplies, equipment or any items of any kind, (iii) the construction, alteration or repair of any public building or public work, (iv) the acquisition, sale or lease of any land or building, (v) a licensing arrangement, or (vi) a grant, loan or loan guarantee. “State contract” does not include any agreement or contract with the state, any state agency or any quasi-public agency that is exclusively federally funded, an education loan, a loan to an individual for other than commercial purposes or any agreement or contract between the state or any state agency and the United States Department of the Navy or the United States Department of Defense.

“State contract solicitation” means a request by a state agency or quasi-public agency, in whatever form issued, including, but not limited to, an invitation to bid, request for proposals, request for information or request for quotes, inviting bids, quotes or other types of submittals, through a competitive procurement process or another process authorized by law waiving competitive procurement.

“Managerial or discretionary responsibilities with respect to a state contract” means having direct, extensive and substantive responsibilities with respect to the negotiation of the state contract and not peripheral, clerical or ministerial responsibilities.

“Dependent child” means a child residing in an individual's household who may legally be claimed as a dependent on the federal income tax of such individual.

“Solicit” means (A) requesting that a contribution be made, (B) participating in any fund-raising activities for a candidate committee, exploratory committee, political committee or party committee, including, but not limited to, forwarding tickets to potential contributors, receiving contributions for transmission to any such committee or bundling contributions, (C) serving as chairperson, treasurer or deputy treasurer of any such committee, or (D) establishing a political committee for the sole purpose of soliciting or receiving contributions for any committee. Solicit does not include: (i) making a contribution that is otherwise permitted by Chapter 155 of the Connecticut General Statutes; (ii) informing any person of a position taken by a candidate for public office or a public official, (iii) notifying the person of any activities of, or contact information for, any candidate for public office; or (iv) serving as a member in any party committee or as an officer of such committee that is not otherwise prohibited in this section.

“Subcontractor” means any person, business entity or nonprofit organization that contracts to perform part or all of the obligations of a state contractor's state contract. Such person, business entity or nonprofit organization shall be deemed to be a subcontractor until December thirty first of the year in which the subcontract terminates. “Subcontractor” does not include (i) a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or (ii) an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

“Principal of a subcontractor” means (i) any individual who is a member of the board of directors of, or has an ownership interest of five per cent or more in, a subcontractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a subcontractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a subcontractor, which is not a business entity, or if a subcontractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any subcontractor who has managerial or discretionary responsibilities with respect to a subcontract with a state contractor, (v) the spouse or a dependent child who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the subcontractor.

EXHIBIT 2
DELIVERABLES DOCUMENT

I. SCOPE

The Contractor shall deliver, install, and implement the Deliverables and the System in accordance with the terms and conditions of this Agreement.

The System shall be an Internet Protocol (IP) based Next Generation 9-1-1 (NG911) emergency telecommunication system that complies with the following National Emergency Number Association (NENA) Standards: NENA 08-003 v1 Detailed Functional and Interface Specification for the NENA i3 Solution – Stage 3; NENA 08-002 NENA Functional and Interface Standards for Next Generation 9-1-1 Version 1.0 (i3); NENA 08-751 NENA i3 Technical Requirements Document; NENA-04-001 Section 10.4 Software Quality; NENA 58-001 NENA IP-Capable PSAP Minimum Operational Requirements Standard; NENA 58-501 IP PSAP 9-1-1 System Features and Capabilities (references to NG911 system shall mean the System). The System shall operate utilizing the State of Connecticut Public Safety Data Network for voice call delivery, receiving and displaying text messages requesting emergency assistance, as well as photos and videos related to a request for emergency services, and will provide a means to receive 9-1-1 calls originating from the internet. The System shall be implemented at the 104 9-1-1 public safety answering points (PSAPs), Department of Emergency Services and Public Protection Headquarters and at four Connecticut State Police secondary answering points (Troops C, D, F, K).

III. CONTRACTORS REQUIREMENTS

A. SECURITY CLEARANCE

All persons, including subcontracted personnel, working on the delivery, installation, or implementation of the Deliverables or the System in any capacity shall be subject to all applicable Federal, State of Connecticut, Department of Emergency Services and Public Protection, and Department of Administrative Services (DAS) security procedures.

B. PERSONS AUTHORIZED TO WORK ON PROJECT

- 1) Contractor shall certify that all personnel are legally authorized to work on the System, pursuant to State and Federal guidelines, policy, mandates, and statutes, and further attest, under penalty of perjury, that all proposed project staff are one of the following:
 - a) A citizen or national of the United States
 - b) A lawful permanent resident
 - c) An alien authorized to work until all System responsibilities have been fulfilled

- 2) Each individual proposed at any time to perform activities on the System shall be subject to an individual certification of authorization to work on the System. Any individual on the proposed to be on the System team that is eligible to work in the United States under an H1B Visa shall have sufficient time remaining on their Visa to ensure that such individual is able to complete the requirements of this Agreement before their Visa expires. For submitted personnel to be eligible to actively participate in work on the System, they shall be able to successfully pass a U.S. or Canadian background check, and shall complete a State of Connecticut background check. All work shall be completed in the United States or Canada.

C. KEY PERSONNEL

- 1) Contractor shall not make any changes, substitutions, additions or deletions of Key Personnel unless approved in writing advance by the Department, which approval shall not be unreasonably withheld. Key Personnel shall work on the project for the duration of the Agreement, except in the event of resignation or death. In such event, the substitute personnel shall be approved by the Department as aforesaid.
- 2) During the course of the Agreement, the Department reserves the right to approve or disapprove the Contractor's or any subcontractor's staff assigned to the Agreement, to approve or disapprove any proposed changes in staff, or to require the removal or reassignment of any Contractor employee or subcontractor employee found unacceptable by the Department. Replacement of personnel who leave the project shall be made within thirty (30) days. Replacement of any personnel shall be with personnel of equal ability and qualifications and subject to approval by the Department.
- 3) Any Key Personnel assigned by the Contractor tasked with management of the project shall use MS Project for the purposes of reporting project status.

D. COMPLIANCE WITH STANDARDS

- 1) Contractor shall utilize open, non-proprietary standards and be in compliance with the following standards:
 - a) NENA 08-003 v1 Detailed Functional and Interface Specification for the NENA i3 Solution Stage 3
 - b) NENA 08-002 NENA Functional and Interface Standards for Next Generation 9-1-1 Version 1.0 (i3)
 - c) NENA 08-751 NENA i3 Technical Requirements Document
 - d) NENA-04-001 Section 10.4 Software Quality
 - e) NENA 58-001 NENA IP-Capable PSAP Minimum Operational Requirements Standard
 - f) NENA 58-501 IP PSAP 9-1-1 System Features and Capabilities
 - g) Applicable Internet Engineering Task Force Standards (IETF).
- 2) The System shall comply with the following GIS Standards:
 - a) USPS Publication 28 Postal addressing standards, Street Abbreviations.

- b) NENA 57-001B - PSAP Guide to Geographic Information Technology
 - c) NENA 71-501 v1 - Synchronizing GIS with MSAG & ALI
 - d) NENA 71-002 DRAFT - Civic Location Data Exchange Format (CLDXF)
 - e) NENA 70-DRAFT - Provisioning and Maintenance of GIS data to ECRF/LVF
 - f) NENA 02-010 v9 - Data Formats for ALI, MSAG & GIS
 - g) NENA 02-011 v7 - 9-1-1 Data Management
 - h) NENA 02-011A - Excerpt: 9-1-1 Database Administration Software
 - i) NENA 02-013 v3 - Provisioning & Maintenance of MSAG Files to VDBs and ERDBs
 - j) NENA 02-014 v1 - GIS Data Collection & Maintenance
 - k) NENA 02-015 v1 - Resolving ANI/ALI Discrepancies & NRFs
- 3) Additionally, all products, processes and systems supplied that utilize the SIP shall be capable of sending and receiving SIP messages transported by Transmission Control Protocol.
 - 4) If any of the above standards are modified, or additional standards become applicable to the System, Contractor shall provide any software, hardware and/or system re-design as may be required to comply with any such changes. If such changes occur during the implementation of the System, prior to final acceptance of the System, the change order process set forth in the Agreement shall apply. If the System has been fully accepted, additional products and services shall be arranged through Statement of Work(s) and Product Schedule Update(s), as deemed appropriate by Department and DAS. All changes shall be at pricing mutually acceptable to the parties.

E. SYSTEM IMPLEMENTATION

- 1) The Contractor shall conform to the Deliverables Implementation Schedule in Exhibit 3 (Implementation Schedule) to ensure uninterrupted 9-1-1 service to the public during the transition from the existing system to the NG911 system. Time shall be of the essence as to Contractor's Performance of this requirement.
- 2) Contractor shall continue to maintain operation of the existing E9-1-1 system until the new NG911 System is fully operational and the System Acceptance Date has occurred.

F. ASSET TRACKING

- 1) The Contractor shall remove and dispose of the existing E9-1-1 system equipment after cutover to the NG911 system is completed. Disposal of any hard drives shall be done in accordance with the Department's requirements. The Contractor shall document the equipment removal by recording serial numbers/DESPP numbers for asset tracking purposes. The Contractor shall provide a copy of such documentation to the Department.

- 2) The Contractor shall document all NG911 system equipment installed by recording serial numbers and the location for each equipment item for asset tracking purposes. The Contractor shall provide a copy of such documentation to the Department.

IV. SYSTEM NETWORK REQUIREMENTS

A. Connecticut Public Safety Services Data Network (CPSSDN)

- 1) Contractor shall utilize the CPSSDN for the delivery of 9-1-1 calls, text, data and related media to all Connecticut PSAPs and 9-1-1 secondary answering points.
- 2) At those PSAPs where a VSAT satellite connection is provided by the Department, when necessary due to the loss of terrestrial connectivity, the contractor shall use the provided satellite data connection for the delivery of 9-1-1 calls, text, data and related media to the affected PSAPs.
- 3) Contractor shall continuously work with the Department to establish the necessary interfaces, data streams and functionality for appropriate network management and monitoring of the System from a software and hardware perspective.

B. IP Based 9-1-1 Call Answering Standards

- 1) The IP-based 9-1-1 Call Answering portion of the System will utilize SIP as defined in Internet Engineering Task Force IETF RFC-3261 and all applicable related IETF RFCs throughout the System.
- 2) The use of SIP at the System ingress point is mandatory. The System ingress point shall be fully NENA i3 compliant with respect to IP connections, including SIP location conveyance. The demarcation shall be a one-gigabit Ethernet connection, plus a 100 megabit Ethernet connection located at the ECDCs (as such term is defined below) at New Britain and Bridgeport.
 - a) Any use of proprietary or non-SIP based signaling methods in the System shall be disclosed by the Contractor in writing and will be subject to the advance approval of the Department.
 - b) The System shall be capable of communicating Voice-over-IP (VoIP) using the G.711 codec.
 - c) The use of any Time Division Multiplexing (TDM) switching elements in the System shall be disclosed in writing by the Contractor and will be subject to the advance approval of the Department.
 - d) The System shall be upgradable to accommodate new IP-based media including video, text, and graphics as such media becomes accepted for use in public safety. The System shall not require complete replacement of major System components in order to accommodate such upgrades.

C. System Integrator

The Contractor shall serve as the integrator for the delivery, installation, and implementation of the entire System. The Contractor shall identify for the Department an individual who will be the single point of contact for all System issues during its delivery, installation, implementation, and deployment.

D. IPv6 Capability

The System shall be IPv6 capable. The State may, at its option, choose to deploy the entire System utilizing IPv6.

E. Conversion of Circuit-Switched Voice and Signaling to IP

The System shall provide a method of terminating standard PSTN, Centrex, and other standard non-911 telephone circuits at the PSAP or at other locations throughout the ESInet. The circuits shall be converted to SIP and VoIP for delivery through the CPSSDN to specific call takers or call taker groups according to a specified plan. Expected PSTN circuit termination requirements for each site are provided in Attachment 1- System Implementation Locations, attached to and made a part of this Exhibit 2. Change orders may be required during deployment to refine these requirements. Change orders shall be processed in accordance with the Agreement.

F. Security

The Contractor shall protect the System against malicious software which may be accidentally or deliberately introduced, or other security threats that might occur. The System will provide anti-virus detection functions, security firewall functions, and other defensive measures reasonably acceptable to the Department.

G. Routing of 9-1-1 Calls and Location Information to PSAPs

The desired destination PSAP or call taking group for emergency calls presented to the System at the ingress demarcation point shall be identified by a SIP Uniform Resource Identifier (SIP URI). The Contractor shall specify these URIs, with the consent of the Division of Statewide Emergency Telecommunications (DSET), and shall disclose these SIP URIs to the Department. Contractor shall disclose the IP addresses of the SIP proxies or system elements. More than one IP address may be specified to obtain high availability.

H. Call Answering

- 1) The System will permit an authorized call taker, as defined in Local Policy Rules, to select any call waiting to be answered or on hold.
- 2) The System will provide the capability to place a call on hold and display a "time on hold" alert after a predetermined number of seconds (amount of time to be based on Local Policy Rules).
- 3) The System will provide the capability to terminate a call (forced disconnect).

I. ACD Functionality

- 1) The System will provide an ACD function. The ACD functionality will provide PSAP managers the capability to group call takers answering calls affecting the particular PSAP based on characteristics identified by the PSAP managers and control such call taker groups ; and provide Department system administrators with the same capability system-wide.
- 2) The System will allow ACD functionality to dynamically change call processing based upon then current System activity and Local Policy Rules.

J. PSAP SITE Requirements

- 1) The Contractor shall be responsible for providing all hardware and labor required to install the System at each PSAP site, including but not limited to wiring, cabling, workstations, monitors, printers, power distribution strips, back room equipment such as local area network switches, and other components as may be required and as needed to interconnect to the CPSSDN.
- 2) The Contractor shall perform on-site inspections to assure that environmental factors, such as a standard 15A 115 V electrical receptacle at each answering position, a 30 amp 115V back room circuit, adequate air conditioning capacity for an office environment with desktop computers, and an adequate back room ground bus, are satisfactory. UPS power will be supplied by the Department at each PSAP.
- 3) Contractor shall utilize smaller diskless and fanless desktop computers, small keyboard, video and mouse (KVM) devices and/or virtualization of the individual answering position on a rack mounted workstation located in each PSAP equipment room.
- 4) All equipment in the equipment room at a PSAP will fit comfortably in a single 72-inch-high rack, unless written pre-approval for an alternative to such a rack is given by the Department. The existing 9-1-1 equipment shall remain in place until Department acceptance of the completely implemented NG911 System. Collaboration, negotiation, and agreement with local site authorities may be required to facilitate installation. Some PSAPS may have insufficient room for a full-height rack. For those locations, DSET will identify sufficient space within the existing CPSSDN cabinet situated at the PSAP and authorize Contractor to install the NG911 equipment within the CPSSDN cabinet. Contractor shall not charge an additional installation fee for this service.
- 5) Contractor shall provide an equipment list with the make, model, and quantities for the hardware components required to outfit three hundred sixty (360) 9-1-1 workstations to be located amongst one hundred four (104) PSAPs, four (4) Connecticut State Police secondary answering points and DSET. The State retains the right to increase or decrease the number of workstations or locations based on actual needs. The Contractor shall make additional workstations available to approved PSAPs and private safety answering points, as that term is defined in the Department's regulations, and secondary answering points at the terms and pricing available under this Agreement.

K. PSAP Equipment Requirements

- 1) Desktop hardware will be capable of supporting up to four monitors and have a minimum resolution of 1280 x 1024. The Contractor shall offer a range of compatible monitors, all subject to pre-approval by the Department.
- 2) Headsets will be provided for each workstation. The Department shall purchase one headset per equipped position. Additional headsets may be purchased at the terms and pricing available under this Agreement.
- 3) All trackballs or mice will be hard wired.
- 4) All servers and workstation clients will be EIA 310D rack mountable with universal square hole rails.
- 5) System workstations will function as complete call taking positions without requiring separate telephone handsets/instruments.
- 6) The System will allow disaster recovery functionality without requiring a telephone handset/instrument.
- 7) The System will support expansion to a minimum of 500 concurrent active call taker positions.

L. 9-1-1 Call Handling Software Application

- 1) Contractor shall provide documentation for all applications and modules pursuant to SDM requirements.
- 2) Login. The System will provide a single login and functionality associated with the user's default location. The System will support the selection of other locations to facilitate users' ability to access the System at any workstation or PSAP within the CPSSDN. New user login shall not require a reboot or restart of software.
- 3) Call Indicators. The System will indicate incoming emergency and non-emergency calls, both audibly and visually.
- 4) The System will cause emergency calls to provide a different audible and visual signal than the signal for non-emergency calls.
- 5) The System will provide a unique display that identifies each abandoned 9-1-1 call.

M. Call Location Information

- 1) The System will provide a call location information display format capable of displaying a minimum of 1000 characters of location data.
- 2) The System will display the call location information corresponding to the emergency call being processed.
- 3) The System will be able to print a hard copy of the call location information, and clear the call location information.
- 4) The System will be able to redisplay the call location information of the last 100 calls received in the previous two hours.

- 5) The System will have the capability for the call answering position to display the date and time of previous 9-1-1 calls placed from the current telephone number and/or the current call location within the last three years, and display any comments saved to the auxiliary information/comment fields for that record.
- 6) The System will permit manual repeat or rebid of call location information by the action of a single key or mouse click. For automatic rebids, the System will provide a rebid of call location information for wireless 9-1-1 calls, thereby automatically accommodating carrier-specific programmable time thresholds.
- 7) The System will display a call back telephone number and location-based information for abandoned 9-1-1 calls received.
- 8) The System will support the change of the call location information that is displayed when a call is placed on hold, and display the call location information of the new call.

N. Call Information Management

- 1) The System shall have a call management information application to track the incoming calls and provide real time information to the PSAP management personnel.
- 2) The System will provide, but not be limited to: detailed call data, statistical information database communications, and call taker performance. Statistics provided will include, but not be limited to: number of total calls received; number of abandoned calls; number of calls on a call source basis (e.g., wire-line, wireless, VoIP, etc.); number of calls transferred; number of calls on a per position basis; average time to answer; average length of call; average hold time; number of calls with no ANI; hourly call records; and ALI database communications and records statistics that include the number of times no ALI record was found, the number of ALI errors, number of unanswered ALI requests. In addition to these required reports, the System shall provide the ability to create user-defined statistical reports, based upon appropriate administrative privileges. The Contractor shall also provide five (5) additional reports to be identified by the Department at a later date.
- 3) The System will allow tiered access to all 9-1-1 calls, calls data and reports to authorized users, as determined by the Department. Contractor shall provide all application and hardware required to access data and reports at locations to be determined by the Department.

O. Audio Playback

The System will be able to provide immediate playback of the audio portion of the last 20 minutes of all calls received.

P. Manual Query

The System will support a manual query of the location data base, based upon the calling telephone number, address or map location. The System will support an electronic form for reporting of manual queries to the Department. The System will provide the Department the capability to require completion of the electronic form before a manual query can be performed.

Q. Time Synchronization

The System will support synchronization to a master clock source(s) using Network Time Protocol (NTP) V3 as defined by IETF RFC 1305. The Contractor shall provide a network master clock source for the System and any ports necessary to connect the master clock source to PSAP CAD systems.

R. Computer Aided Dispatch (CAD) Interface

The System will provide multiple CAD interfaces in accordance with NENA standards for all call location information data, and capability to transmit call location information to CAD on demand.

S. Additional Data

- 1) The System will support the display of additional data associated with the call, based on the applicable Local Policy Rules.
- 2) The System will support queries of additional data associated with a call from other internal and external systems, such data to include but not be limited to SIP messages, SIP header, call detail record data, floor plans, and medical records data.
- 3) The System will provide a data field of a minimum of 512 characters for use by Telecommunicators to enter data linked to a particular calling subscriber number. The field will be scrollable and shall display a minimum of 80 characters per line. If data has been entered into the field for a particular subscriber number, a pop up window with a flashing symbol shall appear on the 9-1-1 display when a 9-1-1 call is received from said number. A Telecommunicator will be able to access the information in the field with a single “click” or button press.

T. External Databases

The System will utilize web browsers and foreign applications on the call taker’s workstations to permit access to external servers which contain external databases including but not limited to GIS, EMD and hazardous materials databases. The Contractor shall design the System to permit external systems that require specific software to be loaded on the call taker workstation, such as but not limited to National Criminal Information Center (NCIC)/Connecticut On-Line Law Enforcement Communication Teleprocessing (COLLECT) terminal programs.

U. Telephone Functions

The System will display a “time on hold” alert after a predetermined number of seconds, the amount of time to be based on the applicable Local Policy Rules. This alert will notify the Telecommunicator who placed the call on hold and also notify the appropriate supervisor, as identified by the applicable Local Policy Rules.

The System will provided unique audible warning when a call remains unanswered after a predefined number of seconds at a workstation and at the appropriate supervisor position.

The System will provide a visual indication at the original designated PSAP that calls are overflowing. The System will provide a visual indication at the overflow PSAPs or the alternate locations, that they are receiving overflow calls from the original designated PSAP.

The System will provide the capability for automatic call back of all received calls utilizing a single key click or button press.

V. System Alarms

- 1) System alarms will be both audible and visible to PSAP personnel at all active workstations. The audio portion of the alarm may be switched to a silent mode, but the visual indication shall remain on as long as the System alarm condition exists. System alarms annunciating a different condition than the original alarm condition that was silenced will again cause the audible system alarm to reactivate.
- 2) When the fault or failure has been cleared, the System shall return to normal operation

W. TDD/TTY Functionality

- 1) The System will provide integrated TDD/TTY features at every workstation. TDD/TTY calls shall have the same functionality as voice calls and TDD/TTY detection shall be automatic. The entirety of all TDD/TTY conversations shall be logged and retrievable.
- 2) The System will accommodate a minimum of eight (8) pre-programmed messages for TDD/TTY communications with a minimum capacity of 32 characters for each message. Transmitting a pre-programmed message shall require depressing no more than three keys or buttons. The System shall automatically transmit a pre-programmed greeting message utilizing Baudot upon detection of TTY call.
- 3) The System will allow for password protected, pre-programmed TTY/TDD messages to be changed at each workstation.
- 4) The Telecommunicator shall be able to Interrogate a Silent Call. When the silent call interrogation is initiated, the call handling application shall communicate in ASCII format at all standard speeds and shall send the preprogrammed greeting in ASCII. If communication is unsuccessful in ASCII, the call handling application shall send the greeting message in Baudot.

X. Call Conference, Monitor, and Barge-In Capability

- 1) The System will allow two (2) or more Telecommunicators or supervisors, or both, to pick up on the same call, participate in the conversation and receive call back number and location data at their workstation(s). This feature will be activated or deactivated by administration password and may be turned off by the PSAP manager if desired.
- 2) The System will provide silent barge-in capability to allow one or more workstations to participate in an ongoing call without any audio indication to the caller that another workstation has joined in the call.

- 3) The System will provide a visual indicator when the active call is being monitored or when the silent barge-in feature has been activated.

Y. Reporting GIS Location Database Discrepancies

The System will provide the capability for the PSAP to electronically report discrepancies found in the location database.

Z. GIS / Mapping

- 1) The System will provide a GIS map display at each 9-1-1 workstation, based on the State 911 map that is maintained by the Department.
- 2) The map display will indicate the location of a 9-1-1 call based on street address or latitude/longitude.
- 3) The System will display Phase 2 wireless data and provide a Phase 1 coverage cone in the event that Phase 2 data is unavailable. The map will track 9-1-1 caller location changes generated by either an automatic or manual rebid of ALI.
- 4) The System map display will contain all GIS data in North American Datum 1983, State Plane Connecticut, Feet System and will be able to re-project GIS data "on-the-fly" that is not North American Datum 1983, State Plane Connecticut, Feet System. System map display will be modifiable to handle any future projections.
- 5) The System will have the capability to add Map Layers system-wide as required.
- 6) The System will provide the capability to add PSAP Map Layers which contain information specific to a PSAP jurisdiction.
- 7) The System will be capable of geo-coding using, among other things, ESRI-based geo-coders/address locators (e.g., U.S. streets with zone, U.S. streets with Zip, Composite, etc.).
- 8) The System will provide the capability to determine call location based upon composite geo-coding.
- 9) The System will provide 9-1-1 call locations using, among other things, address ranges from street centerlines or "absolute" addresses using address points.
- 10) The System will provide the capability to locate addresses manually using street address, latitude/longitude, landmark, or a linear referencing system.
- 11) The System will provide the capability to determine and display the emergency responders for a given location.
- 12) The System will provide the capability to print or export an image of the map screen.
- 13) The System will provide the capability to search the 9-1-1 databases utilizing user defined characteristics.
- 14) The System will allow the logging of street and address errors, including a map image of the error.
- 15) The System will allow measuring of areas (e.g., polygons, circles) on the GIS map display, measured in square feet, acres, and square miles.

- 16) The System will allow the measuring of distances on the GIS map display in feet or miles, either straight line or by following a path.
- 17) The System will be capable of displaying and manipulating imagery (e.g., orthophotography, oblique imagery, etc).
- 18) The System will be capable of updating, maintaining GIS data, and integrating with ESRI software.
- 19) The System will have the capability to provide updates on changes made to GIS data.
- 20) The System will be capable of utilizing GIS web services, including but not limited to ESRI based web services, for call location and mapping.
- 21) The System will have the capability to make changes to the GIS data fields and schema, based upon administrative privileges.

AA. Integration of PSAP Administrative Telephone Lines

- 1) The System will have the ability to receive and originate administrative calls over ten digit telephone lines that can either be remotely terminated at another ESInet site or that have been terminated at the PSAP location.
- 2) The Contractor shall coordinate with the administrative telephone system providers for each PSAP to accomplish the integration of non-911 circuits into the PSAP 911 workstations.

BB. NIEM Compliant Interfaces

The System will be compliant with National Information Exchange Model (NIEM) interfaces for CAD systems and the exchange of information with emergency responders.

CC. Display of Disability Information

The System will display available personal disability information for a person or persons at the calling location in a format pre-approved by the Department.

DD. Audio Interface

The System will support two types of audio interfaces. Type one audio interface will be provided by the Contractor via a six-wire 310 connector “supervisor” jack that directly connects to the PC audio interface. Type two will be a six-wire connection consisting of audio and “positive off hook indication” (means an indication that the Telecommunicator at a particular Individual Answering Position is engaged in a call on the System). Type two connections will be located at either the Individual Answering Positions or the PSAP equipment room, location to be determined by the Department for each PSAP.

EE. Local Logging Recorder Interface

- 1) The System will provide a local logging recorder connection, with both analog and digital interfaces for each Individual Answering Position.

- 2) The System will have the capability to optionally generate an outward "beep" tone on selected audio call sources at fifteen second intervals.

FF. Voice quality standards

The IP-based 9-1-1 Call Answering portion of the System will provide voice communications channels from the ingress demarcation point to the human call taker. The channels will obtain a Mean Opinion Score (MOS) of 4 or higher per International Telecommunications Union (ITU) publication P.862. Talker echo over these channels will not exceed "acceptable" levels per ITU G.131.

GG. Audio Call Bridging / Transfer Capabilities

- 1) The IP-based 911 Call Answering portion of the System will be fully capable of call conferences, transfers within and across the entire System, between any and all call taker groups, and/or to external POTS telephone lines. Transfers and conferences to parties within the System will copy call data, including location data, to all parties participating in the call. The call transfer process will be a "conference" type of transfer, meaning voice channels remain connected during the transfer process, except for brief (defined as sub-second) interruptions when audio path switching operations occur. Adding parties to a conference will not impact the audio quality or audio levels as perceived by the parties involved.
- 2) The call transfer and conference capabilities will include but not be limited to, mute the 9-1-1 caller, conduct private conferences, have various parties drop out or add on to the conference, within the maximum number of parties in a conference, and limitations of the system.
- 3) The System will have the capability to move calls to a Conference Bridge on demand.

HH. Monitoring of the System

Contractor shall provide full-time monitoring of the System and its operation with Level 2 Support or higher.

II. NG911 Services Network Requirements

- 1) As a part of the System, the Contractor shall provide location-based Emergency Call Routing Function (ECRF), Emergency Services Routing Proxy (ESRP), Location Verification Function (LVF), Policy Routing Function (PRF), Border Controllers (security devices), LNGs (Legacy Network Gateways), monitoring, management, and security functions. All NG911 functionality described in this paragraph will be located at the New Britain and Norwalk Network Control Centers. The System will be redundant and load-balancing.
- 2) All 9-1-1 circuit-switched voice and signaling received from the selective routers or from non-IP-based call originating networks will be converted into Session Initiation Protocol (SIP) and Voice-over-IP (VoIP), and will comply with NENA i3 specifications.
- 3) Contractor shall install and operate at least two Tier IV Data Centers which comply with TIA 942, "Telecommunications Infrastructure Standard for Data Centers", Revision 5 (2010),

Appendix "G". Such Tier IV Data Centers will belong to the Contractor, but must be physically situated within the State at a location determined by the Contractor..

- 4) Contractor shall manage the interconnection of emergency call originating networks to the NG911 Services, including setting forth the terms, conditions, procedures, processes for interconnection and exchange of information between the other carrier's networks and systems. The terms and conditions shall be established with prior written consent of the Department. The terms, conditions, procedures, or processes shall follow applicable Connecticut Public Utilities Regulatory Authority telecom rules and practices, NENA recommended practices, and applicable US telecommunications law.
- 5) The Contractor shall ensure that the System will provide connectivity between the NCCs and Emergency Call Distribution Centers (ECDCs), (aka host aggregation sites) at New Britain and Bridgeport.
- 6) Internal IP network(s) provisioned in the course of fulfilling the requirements of this section will be secure, not directly accessible from the public internet and shall be protected against malware and malicious attack.
- 7) The Contractor shall provide interconnection with various networks that may include service providers who will deliver emergency calls to the NCCs via IP connections, and may include emergency calls delivered via the public internet. The Contractor shall provide firewalls, session border controllers (SBCs), security appliances and additional protective measures to ensure security.
- 8) The Contractor shall provide and manage the interconnection of third party networks that provide location and call back information for wireless and VoIP 9-1-1 callers, such information to be displayed at the PSAP when a call is received.
- 9) The Contractor shall block malicious software or activities from entering the System across the Demarcation.
- 10) Legacy 9-1-1 calls entering the System at the LNG will require queries to the E9-1-1 ALI Data Management System, and will be utilized to obtain location information for Legacy 9-1-1 calls. The Contractor shall arrange the installation of redundant legacy ALI connections at each data center.
- 11) The 9-1-1 selective routers located at legacy 5ESS facilities in New Britain and Norwalk, Connecticut will not be utilized for 9-1-1 call routing in the NG911 System. Contractor may choose, at its own discretion and expense, to continue to operate these switches as 9-1-1 trunk aggregation sites for legacy call originating networks, but no other 9-1-1 functions will remain in these switches once deployment of the NG911 System is complete.
- 12) The legacy ALI location data management system will remain only to provide location information for wire-line telephones in legacy networks. Calls will be delivered to the NG911 system only in NENA i3 compliant formats. The Contractor shall provide a method to receive location information from telephone companies at the time a 9-1-1 call is made and deliver that location information to the System.
- 13) Contractor shall ensure all emergency call originating networks will connect to the two host aggregation sites in order to interconnect to the Connecticut NG911 system. All of the NG911 services will reside on server hardware located at these aggregation sites. Emergency

calls shall utilize the IP infrastructure of the CPSSDN to transmit voice (and eventually other media) to the PSAPs, with location data and other available call-associated information.

- 14) The ECRF (as defined below) function of NG911 requires the development and maintenance of a GIS database that contains the jurisdictional boundaries of the PSAP, fire, police, EMS, and other emergency responders. The GIS system shall also accurately plot or geocode the civic (street) address for all addresses that reside in the ALI system. The development and maintenance of the data in the GIS system is not the responsibility of the Contractor. The Contractor shall house copies of the database on elements of the System. Utilizing industry standard and open GIS protocols, the Contractor shall establish a working relationship and GIS data exchange process with the Department.

JJ. Conversion of Circuit-Switched Voice and Signaling to IP

- 1) All 9-1-1 circuit-switched voice and signaling received from the TSPs shall be converted into IP (SIP) at the CPSSDN aggregation sites. These conversions will be performed by LNG(s).
- 2) The Contractor shall provide NG911 functionality as described below:
 - a) A Protocol Interworking Function (PIF) (see NENA 08-003) is a sub-function of an LNG. The PIF will convert ISDN or Signaling System 7 (SS7) 9-1-1 trunks to SIP.
 - b) LNGs will create location-by-value SIP messages (PDIF-LOs embedded in SIP messages).
 - c) The LNG will support rebids (re-queries) of location information, either with SIP UPDATE methods (for location-by-value) or alternately via an LIS server (for location-by-reference).
 - d) IP 9-1-1 PSAPs will be capable of receiving 9-1-1 and administrative calls from legacy PSAPs and transferring 9-1-1 and administrative calls to legacy PSAPs during the transition phase of the System. The Contractor shall be responsible for providing and provisioning ports, gateways and/or other equipment required to satisfy this requirement.

KK. Border Control Function

The System will provide a Border Control Function (BCF), which will provide a secure entry into the CPSSDN for incoming emergency calls. The BCF will include a firewall, admission control, as well as other security mechanisms to prevent deliberate or malicious attacks on PSAPs or other entities connected to the CPSSDN. Optionally, the BCF will provide anchoring of session and media. The BCF will provide secure entry for calls presented via external IP networks.

LL. Emergency Call Routing Function (ECRF)

- 1) The Contractor shall provide a geographically diverse Emergency Call Routing Function (ECRF), located in New Britain and Norwalk at the NCCs. The ECRF will be used to implement the Location-to-Service-Translation protocol (LoST) as set forth in RFC-5222. The ECRF shall receive both location information (either civic address or geo-coordinates) and service request type as part of a LoST query and use this information to provide a SIP

URI as the LoST response. The LoST response shall be usable to route an emergency call toward the appropriate destination. The SIP URI response shall identify the PSAP, emergency service provider, or a next-hop Emergency Services Routing Proxy (ESRP).

- 2) The ECRF will utilize the Department-provided NG911 GIS database. The GIS database shall be used to route a call to the correct PSAP, and also to subsequently route the call to the correct responder. The Contractor shall provide the Department with the capability of automatically updating the records.

MM. Policy Routing Function (PRF)

- 1) The Contractor shall provide a Policy Routing Function (PRF). 9-1-1 calls will be routed to the appropriate PSAP via the CPSSDN based on the requirements of the Department. The System will provide the Department with the capability to dynamically modify Local Policy Rules in order to react to changes in call volume and reroute calls as deemed appropriate by the Department.
- 2) The PRF will support manual, automatic or dynamic call congestion control permitting rerouting of calls in response to higher than normal call volume. The PRF will permit only authorized personnel (persons to be identified by the Department) to make PRF database changes over the CPSSDN network. The System must keep a log of all PRF database changes.
- 3) The PRF will use a state of knowledge, such as PSAP registration state or time of day, and the Local Policy Rules for a PSAP to make a route determination. The PRF may be a subcomponent of the Emergency Services Routing Proxy (ESRP).

NN. Emergency Services Routing Proxy (ESRP)

The Contractor shall provide an ESRP for emergency calls. The ESRP shall query the ECRF via the LoST protocol, and query the PRF, to determine the call destination based on location and applicable Local Policy Rules.

OO. Location Information Server (LIS) Function

- 1) Contractor shall provide a LIS function for any Legacy Network Gateways (LNGs) that perform SIP location conveyance included in the System.
- 2) The LIS will accept Http-enabled Location Delivery (HELD RFC 5985) queries and return PIDF-LO formatted location responses in accordance with NENA i3 (08-003) requirements.
- 3) The LIS will obtain legacy locations from the legacy AT&T ALI Data Management System.
- 4) Contractor shall not be responsible for providing LIS servers external to the CPSSDN. Contractor shall be responsible for providing access between external LIS servers and the CPSSDN through the BCF. The Contractor shall establish interconnection requirements with prior written consent of the Department.

PP. Location Validation Function (LVF)

- 1) The Contractor shall provide a Location Validation Function (LVF) as part of the System. The System will use the LVF to validate location against the Geospatial MSAG. Pre-validation of the location information shall ensure that the calls can be routed to the appropriate PSAP and that emergency services shall be dispatched to the correct location.
- 2) Authorized personnel, to be identified by the Department, shall be permitted access the LVF from the public internet without compromising the CPSSDN or ESInet security. The LVF will utilize the same GIS database that is utilized by the ECRF. The System will keep a log of all LVF users and queries.

QQ. Training

- 1) The Contractor shall provide NG911 training for personnel of the Department, PSAPs, and secondary and private safety answering points approved by the Department, all as more particularly set forth in paragraphs 2 and 3 below. All training materials and documentation are subject to the approval of the Department prior to use.
- 2) The Contractor shall provide administrator training for the NG911 System. The training will be a minimum 6 hours in length and conducted at a central location within the State. The dates, times and locations of such trainings are subject to the prior approval of the Department.
- 3) The Contractor shall provide user training to users of the System. The training will be a minimum 4 hours in length and be conducted at locations within the State. The dates, times and locations of such training classes are subject to the prior approval of the Department. The Contractor shall conduct a sufficient number of training classes to ensure that all required personnel are trained prior to the installation and activation of the System. Notwithstanding the foregoing, during the installation and activation period for the System, Contractor shall provide no less than 60 classes of 25 or less students, in each case with two or more classes being held at the same time. Contractor shall be responsible for providing sufficient AV equipment, NG911 equipment, and any other equipment necessary to conduct hands on training.

RR. System Design Document

Prior to commencement of implementation of any portion of the System, Contractor shall provide to Department for its acceptance a design document, in a form mutually acceptable to the parties, for the purpose of confirming that the System will physically and functionally meet the expectations and requirements of the Department. The Department shall have the opportunity to review and approve such design document, such approval not to be unreasonably withheld, conditioned, or delayed.

ATTACHMENT 1 - System Implementation Locations

104 PSAPs 4 CSP Secondary Answering Points & OSET

<u>PSAP</u>	<u>Address</u>	<u>Town</u>	<u>Zip</u>	<u>PSTN Lines</u>
Ansonia PD	2 Elm St.	Ansonia	06401	9
Avon PD	60 West Main St.	Avon	06001	22
Berlin PD	240 Kensington Rd.	Berlin	06037	15
Bethel PD	49 Plumtrees Rd.	Bethel	06801	17
Bloomfield PD	785 Park Ave.	Bloomfield	06002	1
Branford PD	33 Laurel St.	Branford	06405	18
Bridgeport FD	30 Congress St.	Bridgeport	06604	36
Bristol PD	131 North Main St.	Bristol	06010	15
Brookfield PD	63 Silvermine Rd.	Brookfield	06804	0
Canton PD	4 Market St.	Collinsville	06022	9
Cheshire PD	500 Highland Ave.	Cheshire	06410	0
Clinton PD	48 East Main St.	Clinton	06413	16
Colchester ECC	P.O. Box 911	Colchester	06415	14
Cromwell PD	5 West St.	Cromwell	06416	1
CSP Troop E	P.O. Box 306	Uncasville	06382	15
CSP Troop G	149 Prospect St.	Bridgeport	06604	19
CSP Troop H	100 Washington St.	Hartford	06106	13
CSP Troop I	638 Amity Rd.	Bethany	06525	15
CSP Troop L	452-A Bantam Rd.	Litchfield	06759	10
CSP Troop W	Bradley Int'l Airport	Windsor Locks	06096	17
Danbury FD	19 New St.	Danbury	06810	11
Darien PD	Hecker Ave.	Darien	06820	0

Derby PD	125 Water St.	Derby	06418	0
East Hartford PD	497 Tolland St.	East Hartford	06108	1
East Haven FD	200 Main St.	East Haven	06512	16
East Lyme ECC	171 Boston Post Rd.	Niantic	06357	14
East Windsor PD	25 School St.	East Windsor	06088	0
Easton PD	700 Morehouse Rd.	Easton	06612	7
Enfield PD	293 Elm St.	Enfield	06082	14
Fairfield ECC	100 Reef Rd.	Fairfield	06430	30
Farmington PD	1 Monteith Dr.	Farmington	06032	9
Glastonbury PD	2108 Main St	Glastonbury	06033	1
Granby PD	15 North Granby Rd.	Granby	06035	6
Greenwich PD	11 Bruce Place	Greenwich	06836	10
Groton ECC	68 Groton Long Point Rd.	Groton	06340	24
Guilford ECC	31 Park St.	Guilford	06437	10
Hamden Central Comm.	2900 Dixwell Ave.	Hamden	06518	22
Hartford PD	50 Jennings Rd.	Hartford	06120	37
Ledyard ECC	11Lorenz Industrial Parkway	Ledyard	06339	12

<u>PSAP</u>	<u>Address</u>	<u>Town</u>	<u>Zip</u>	<u>PSTN Lines</u>
Litchfield County Dispatch	452 Bantam Rd.	Litchfield	06759	12
Madison PD	9 Campus Drive	Madison	06443	0
Manchester PD	239 East Middle Tnpk.	Manchester	06040	17
Meriden Fire/Emer. Services	50 West Main St.	Meriden	06450	13
Middlebury PD	200 Southford Rd.	Middlebury	06762	0
Middletown Central Comm.	169 Cross St.	Middletown	06457	21
Milford FD	72 New Haven Ave.	Milford	06460	17
Monroe PD	7 Fan Hill Rd.	Monroe	06468	7

Montville Dispatch	89 Fort Shantok Rd	Uncasville	06382	10
Naugatuck PD	211 Spring St.	Naugatuck	06770	11
New Britain ERC	125 Columbus Blvd.	New Britain	06051	9
New Canaan PD	174 South Ave.	New Canaan	06840	9
New Fairfield ECC	302 Ball Pond Road	New Fairfield	06812	0
New Haven ECC	200 Orange St.	New Haven	06502	45
New London PD	5 Gov. Winthrop Blvd.	New London	06320	15
New Milford PD	49 Poplar St.	New Milford	06776	0
Newington PD	131 Cedar St.	Newington	06111	18
Newtown PD	3 Main St.	Newtown	06470	7
North Branford PD	260 Forest Rd.	North Branford	06471	9
North Haven PD	18 Church St.	North Haven	06473	21
Northwest CT Public Safety	28 Cheshire Rd.	Prospect	06712	26
Norwalk PD	P.O. Box 848 Belden Station	Norwalk	06852	14
Norwich PD	70 Thames St.	Norwich	06360	0
Old Saybrook PD	225 Main St.	Old Saybrook	06475	9
Orange PD	314 Lambert Rd.	Orange	06477	17
Plainville PD	27 Neal Court	Plainville	06062	15
Plymouth PD	80 Main St.	Terryville	06786	13
Putnam PD	189 Church St.	Putnam	06260	0
Quinebaug Valley ECC	55 Westcott Rd.	Danielson	06239	5
Redding ECC	96 Hill Rd.	Redding	06896	1
Ridgefield PD	76 East Ridge	Ridgefield	06877	0
Rocky Hill PD	699 Old Main St.	Rocky Hill	06067	22
Seymour PD	11 Franklin St.	Seymour	06483	7
Shelton PD	85 Wheeler St.	Shelton	06484	1

Simsbury PD	933 Hopmeadow St.	Simsbury	06070	8
South Central CT Regional ECC	200 Orange St.	New Haven	06502	51
South Windsor PD	151 Sand Hill Rd.	South Windsor	06074	1
Southbury PD	421 Main St. South	Southbury	06488	0
Southington PD	69 Lazy Lane	Southington	06489	14
Stamford ECC	888 Washington Blvd.	Stamford	06901	15
Stonington PD	166 South Broad St.	Pawcatuck	06379	7
Stratford PD	900 Longbrook Ave.	Stratford	06614	8

<u>PSAP</u>	<u>Address</u>	<u>Town</u>	<u>Zip</u>	<u>PSTN Lines</u>
Suffield PD	911 Mountain Rd.	Suffield	06078	10
Thomaston PD	158 Main St.	Thomaston	06787	0
Tolland County Mutual Aid ECC	56 Tolland Center	Tolland	06084	13
Trumbull PD	158 Edison Rd.	Trumbull	06611	5
University of CT PD	126 N. Eagleville Rd.	Storrs	06268	17
Valley Shore ECC	P.O. Box 497	Westbrook	06498	10
Vernon PD	725 Hartford Tpk.	Vernon	06066	7
Wallingford PD	135 North Main St.	Wallingford	06492	7
Waterbury PD	255 East Main St.	Waterbury	06702	43
Waterford ECC	204 Boston Post Rd.	Waterford	06385	27
Watertown PD	195 French St.	Watertown	06795	0
West Hartford PD	103 Raymond Rd.	West Hartford	06107	1
West Haven ERS	355 Main St.	West Haven	06516	30
Weston ECC	56 Norfield Rd.	Weston	06883	14
Westport PD	50 Jesup Road	Westport	06880	12
Wethersfield PD	505 Silas Deane Highway	Wethersfield	06109	4

Willimantic Switchboard . ECC	13 Bank St.	Willimantic	06226	9
Wilton PD	240 Danbury Road	Wilton	06897	9
Windsor PD	340 Bloomfield Ave.	Windsor	06096	27
Windsor Locks PD	4 Volunteer Drive	Windsor Locks	06716	11
Winsted PD	338 Main St.	Winchester	06098	5
Wolcott PD	225 Nichols Rd.	Wolcott	06716	0
Woodbridge PD	4 Meeting House Lane	Woodbridge	06525	0

CSP Secondary Answering Points

	<u>Address</u>	<u>Town</u>	<u>Zip</u>	
CSP Troop C	1320 Tolland Stage Rd.	Tolland	06084	11
CSP Troop D	55 Wescott Rd.	Danielson	06239	11
CSP Troop F	315 Spencer Plains Rd.	Westbrook	06498	11
CSP Troop K	15 Old Hartford Rd	Colchester	06415	10

OSET

Office of Statewide Emergency Telecommunications	1111 Country Club Rd.	Middletown	06457	10
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EXHIBIT 3
DELIVERABLES IMPLEMENTATION SCHEDULE

TASK NAME	Duration	Resource Name
State of Connecticut - NG 9-1-1 Implementation	448 days	
Initiation	1 day	
AT&T signs contract with the State of Connecticut	1 day	AT&T,State
Milestone Complete	0 days	
Planning	85 days	
Initial Timeline Development	9 days	AT&T
Review Timeline with the State	5 days	State,AT&T
Modify Timeline Based on State Requirements	5 days	AT&T,State
Timeline agreement with the State	4 days	State,ATT
Milestone Complete	0 days	
Order Network	5 days	AT&T
Procure Hardware	25 days	AT&T,mD
AT&T and mD to discuss hardware order	10 days	AT&T,mD
AT&T to provide hardware order (with specs) to MD	5 days	AT&T
mD to review Hardware Order and provide back to AT&T	5 days	mD
AT&T to order hardware	5 days	AT&T
mD to order 3rd party hardware and software	5 days	mD
Develop ESInet Configuration	50 days	AT&T,mD
ESInet Planning and Deployment documentation	4 wks	AT&T,mD
Destination Host sites identified and readied	30 days	State,mD,AT&T
Documentation	40 days	
xSR System Configuration Identified and Documented	30 days	AT&T,mD
Develop ESInet final install work plans	5 days	AT&T,mD
Ready End User materials	5 days	mD
Draft of As Builts	10 days	mD
Network	41 days	
AT&T Network Implementation	2 mons	State,AT&T
SBC's ordered and plans enacted (security)	2 mons	AT&T
Configure Edge Routers	2 mons	AT&T
Develop MOS scores	2 mons	AT&T
Develop Plans	30 days	
Develop Final Training Plans (for AT&T and State of CT personnel)	30 days	AT&T,mD. State
Integration	30 days	AT&T,mD
Test	30 days	AT&T,mD
Cut	30 days	AT&T,mD
Execution	38 days	
Staging	36 days	
Receive Equipment (ESInet)	2 wks	mD
mD software loaded on hardware	5 days	mD
all 3rd party software loaded on hardware	5 days	mD
Stage DAT servers, Replicators, etc.	10 days	mD
xLoST	10 days	mD
Load GIS data	10 days	mD

Certify Staged Equipment	3 days	mD
Ship equipment to AT&T facilities	1 day	mD
Equipment received and connected to network	3 days	AT&T
Remote Site Readiness Certification	2 days	mD
WAN installed	2 days	AT&T
VPN established	2 days	AT&T
Network Validated	2 days	mD
Monitor and Control	358 days	
Install NCC #1 ESInet components	5 days	
SS7 gateways (Groomers) installed	5 days	
Install and Configure Servers	5 days	AT&T,mD
xSR Servers Installed	5 days	
Database servers installed	5 days	
Backups/xMIS	5 days	
XLoST Server installed	5 days	
GIS data refresh with State of CT update process	5 days	
DB connectivity	5 days	
Routing specific rules	5 days	
Certify ECC	5 days	
Install NCC #2 ESInet components	5 days	
SS7 Gateways (Groomers) installed	5 days	
Install and Configure Servers	5 days	AT&T,mD
xSR Servers Installed	5 days	
Database servers installed	5 days	
Backups/xMIS	5 days	
XLoST Server installed	5 days	
GIS data refresh with State of CT update process	5 days	
DB connectivity	5 days	
Routing specific rules	5 days	
Certify ECC	5 days	
System Test (AT&T Lab, Waterbury CT)	30 days	AT&T
Network Interconnect	29 days	AT&T
911 Telephony Install	29 days	AT&T
ESI Net	29 days	AT&T,mD
CPE Call Delivery	29 days	AT&T
Failover Tests	29 days	AT&T
State acceptance of testing	1 day	State
Milestone Complete	0 days	
System Training	90 days	
NOC Support Training	5 days	
ESINet Technical Training	10 days	
System Admin Training	20 days	
End User Training	90 days	
Customer Premise Install - begin with 10 PSAPs	98 days	
Pre-installation Site Surveys for 10 PSAPs	5 days	mD,AT&T
Equipment Procurement	10 days	AT&T,mD
System Staging & Prep	10 days	mD

Network Interconnects	10 days	State,AT&T
Telco Orders Installed	10 days	AT&T
Site Facility & Cable Infrastructure Complete	20 days	AT&T
Equipment Received & Inventoried	5 days	AT&T,mD
911/Telephony Installation	20 days	AT&T,mD,State
System Testing & Validation	5 days	AT&T,mD,State
Cutover Phase	5 days	AT&T
Post Cut Support Phase (Monitoring of 10 PSAP installation)	31 days	AT&T
Milestone Complete (Date monitoring/support phase begins)	0 days	
Customer Premise Install - 96 PSAPS, 4 State Police, 1 OSET	256 days	
Pre-installation Site Surveys for remaining locations	30 days	AT&T
Equipment Procurement	20 days	AT&T,mD
System Staging & Prep	20 days	mD
Network Interconnects	60 days	State,AT&T
Telco Orders	60 days	AT&T
Site Facility & Cable Infrastructure Complete	50 days	AT&T
Equipment Received and Inventoried	30 days	
911/Telephony Installation	58 days	AT&T,State
System Testing & Validation	10 days	AT&T,State
Cutover Phase	4 mons	AT&T
Post Cut Support Phase	30 days	AT&T
Milestone Complete (Date monitoring/support phase begins)	0 days	
Closing - System Acceptance	40 days	
Acceptance Testing Begins	30 days	AT&T,State
Acceptance Testing Complete	1 day	State,AT&T
Final As Builts & Site Documentation Completed	9 days	AT&T
Final System Acceptance Review Meeting	1 day	AT&T,State
Final system acceptance	0.5 days	State,AT&T
Milestone Complete	0 days	
Formal Acceptance/Warranty period begins	1 day	AT&T,State
Develop Lessons Learned	1 day	AT&T
Develop Project Summary	1 day	AT&T

EXHIBIT 4
PRODUCT & PRICING SCHEDULE

A. Milestone Payment Schedule

Department shall pay Contractor \$13,260,635.00 for the installation of the System and associated pre-System acceptance services as set forth and required in Exhibit 2 in accordance with the following milestone payment schedule:

- 1) 25 % non-recurring payment upon completion of AT&T NCC's (Bridgeport and New Britain) and ECDC's (Norwalk and New Britain) with acceptance test according to INEA.
- 2) 25% non-recurring payment upon installation of the System to the first 10 PSAPs (Department to identify the 10 PSAPS).
- 3) 25 % non-recurring payment upon completion of the installation of the System to the remaining PSAPs.
- 4) 25% non-recurring payment upon full System acceptance by the Department.

B. Pricing for Optional Deliverables and Services Acquired after Acceptance of the System

1. New workstation in an existing or new PSAP – the below pricing applies to any new workstation ordered by the Department in excess of the initial 330 workstations:
 - a) Equipment (including rack mounted workstation, monitors, CAT5 extender, PCoIP portal and host card, and additional components) = \$5,550.00.
 - b) Software (including xSR primary ports, x911 call taker, x911 tracker, OS and additional apps) = \$5,756.00.
 - c) Installation (including sourcing, staging, shipping, testing, project management and any miscellaneous materials such as cable) = \$5,000.00.
 - d) Monthly maintenance charge for each workstation = \$351.00.
2. If the Department approves a new PSAP, after the acceptance of the System, the Department shall pay Contractor a one-time, lump sum payment of \$21,460 to prepare the new site for use as a PSAP (the "PSAP set-up fee"). The PSAP set-up fee includes all labor and Goods necessary to make the site capable of supporting PSAP functions and operations. The PSAP set-up fee will not exceed \$21,460.

3. Time and material costs for relocating or modifying existing workstations in a PSAP:

- a) Costs of materials will be charged to Department at the price set in this Exhibit 4, or if not stated in this Exhibit, at mutually agreed upon pricing.
- b) Labor will be charged at \$150.00 per hour, subject to a maximum labor cost to be agreed upon by Contractor and Department prior to the commencement of work.

4. Additional Training:

The Department may request training classes in addition to the training classes required in Exhibit 2. Contractor shall provide additional training classes at a rate of \$600.00 per class. Contractor shall invoice the Department for additional training session(s) at the end of each calendar year.

C. Additional Fees and Costs

The fees and costs for Additional Services and Deliverables available under this Agreement are set forth in the Exhibit 4 Pricing Attachment, attached to and made a part of this Exhibit 4.



Jeffrey A. Wittek
Chief Strategic Officer
(951) 719-2147

jeff.wittek@cassidiancommunications.com

November 8, 2012

Bill Youell
Director
Connecticut Office of Statewide Emergency Communications
1111 Country Club Road
Middletown, CT 6457

Re: Cassidian Communications U.S. Patent No. 6,744,858, System and Method for Supporting Multiple Call Centers

Dear Mr. Youell:

This correspondence is meant to inform you of a recent important event related to Cassidian Communications' U.S. Patent No. 6,744,858, System and Method for Supporting Multiple Call Centers (the "858 Patent"). Cassidian Communications is pleased to report that it has entered into a negotiated settlement with Intrado resolving the ongoing patent infringement litigation. Per the terms of the settlement, Intrado has been granted a license to the '858 Patent.

With this settlement, Cassidian Communications will re-focus its '858 Patent licensing efforts on other routing technology providers it believes are making, using, selling or offering to sell products or services that directly or indirectly infringe the '858 Patent. Those providers include, but are not limited to; microDATA, TeleCommunications Systems, Inc., Solacom, Synergem, NG-911, Inc., INdigital, inetworks, and Frequentis, USA.

This information is provided to help Connecticut Office of Statewide Emergency Communications avoid unknowingly entering into transactions that give rise to the deployment of infringing solutions. Accordingly, we encourage Connecticut Office of Statewide Emergency Communications to ensure that it only deploys solutions procured from properly licensed providers: Cassidian Communications and Intrado. If you have questions regarding the '858 Patent, its scope, its application or our licensing activities, please do not hesitate to contact me.

Sincerely,

Jeffrey A. Wittek

CC: Paula Graham, General Counsel



Headquarters: 42505 Rio Nedo | PO Box 9007 | Temecula, CA 92590 USA | Phone: 951.719.2100 | Toll Free: 800.491.1734 | Fax: 951.296.2727

Gatineau Office: 75 Blvd. de la Technologie | Gatineau, QC J8Z 3G4 Canada | Phone: 819.778.2053 | Fax: 819.778.3408

Franklin Office: 117 Seaboard Lane, Suite D-100 | Franklin, TN 37067 USA | Phone: 615.790.2882 | Toll Free: 800.723.3207 | Fax: 615.790.1329

Richardson Office: 1301 W. President George Bush Hwy., Suite 150 | Richardson, TX 75080 USA | Phone: 469.365.4980 | Fax: 469.365.4991



US006744858B1

(12) **United States Patent**
Ryan et al.

(10) **Patent No.:** US 6,744,858 B1
(45) **Date of Patent:** Jun. 1, 2004

(54) **SYSTEM AND METHOD FOR SUPPORTING MULTIPLE CALL CENTERS**

(75) **Inventors:** Terry S. Ryan, Grant, AL (US);
Randel W. Henry, Huntsville, AL (US)

(73) **Assignee:** TelControl, Inc., Huntsville, AL (US)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 135 days.

(21) **Appl. No.:** 10/056,411

(22) **Filed:** Jan. 25, 2002

Related U.S. Application Data

(60) **Provisional application No.** 60/264,242, filed on Jan. 26, 2001.

(51) **Int. Cl. 7** H04M 11/04

(52) **U.S. Cl.** 379/45; 379/49; 379/265.09

(58) **Field of Search** 379/37-51, 265.01, 379/265.02, 265.05, 265.09

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* cited by examiner

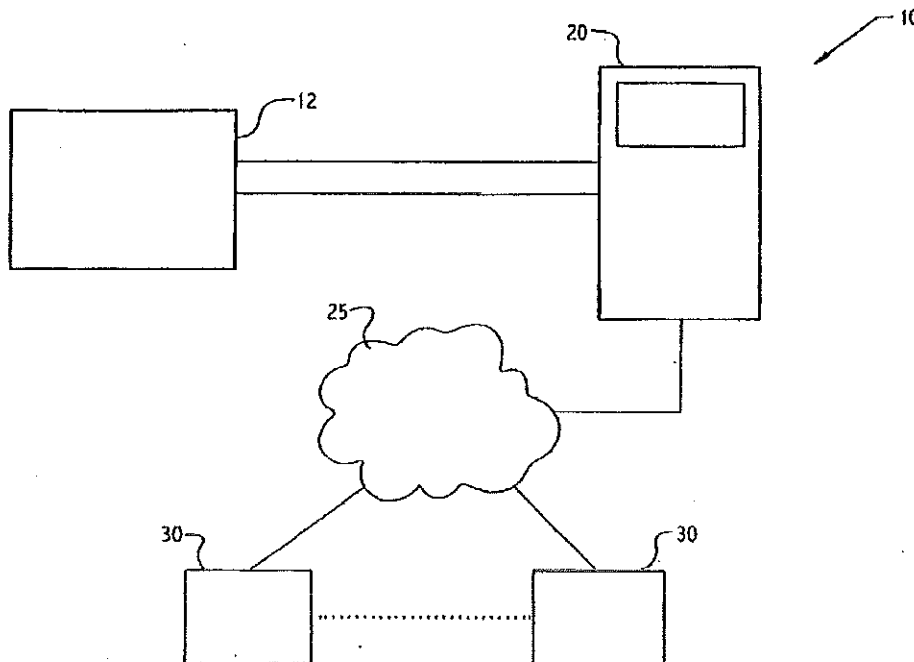
Primary Examiner—Wing Fu Chan

(74) *Attorney, Agent, or Firm*—Lanier Ford Shaver & Payne, PC; Anita S. Damian

(57) **ABSTRACT**

A system and method for routing calls from multiple call centers using remote terminals for receiving incoming calls, a wide area network interfaced with the remote terminals, and a central data manager configured to receive the incoming calls from a communication network and to route them to the remote terminals over the wide area network. The remote terminals enable operators to receive incoming calls and to dispatch personnel in response to the incoming calls. Each of the incoming calls is associated with an automatic number identification identifying a communication device from which the incoming call originated. Additionally, each of the incoming calls is routed over the wide area network to a particular remote terminal based on the associated automatic number identification of the incoming call.

5 Claims, 4 Drawing Sheets



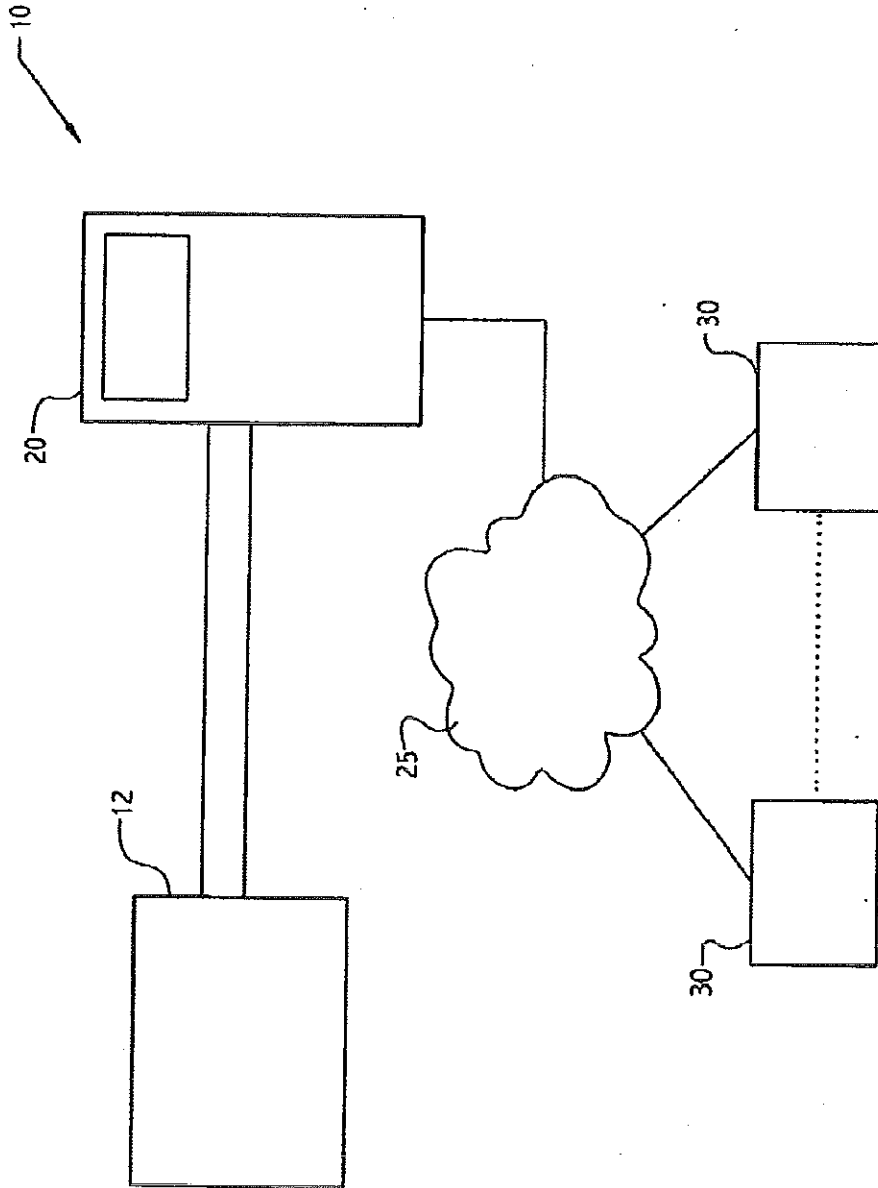


FIG. 1

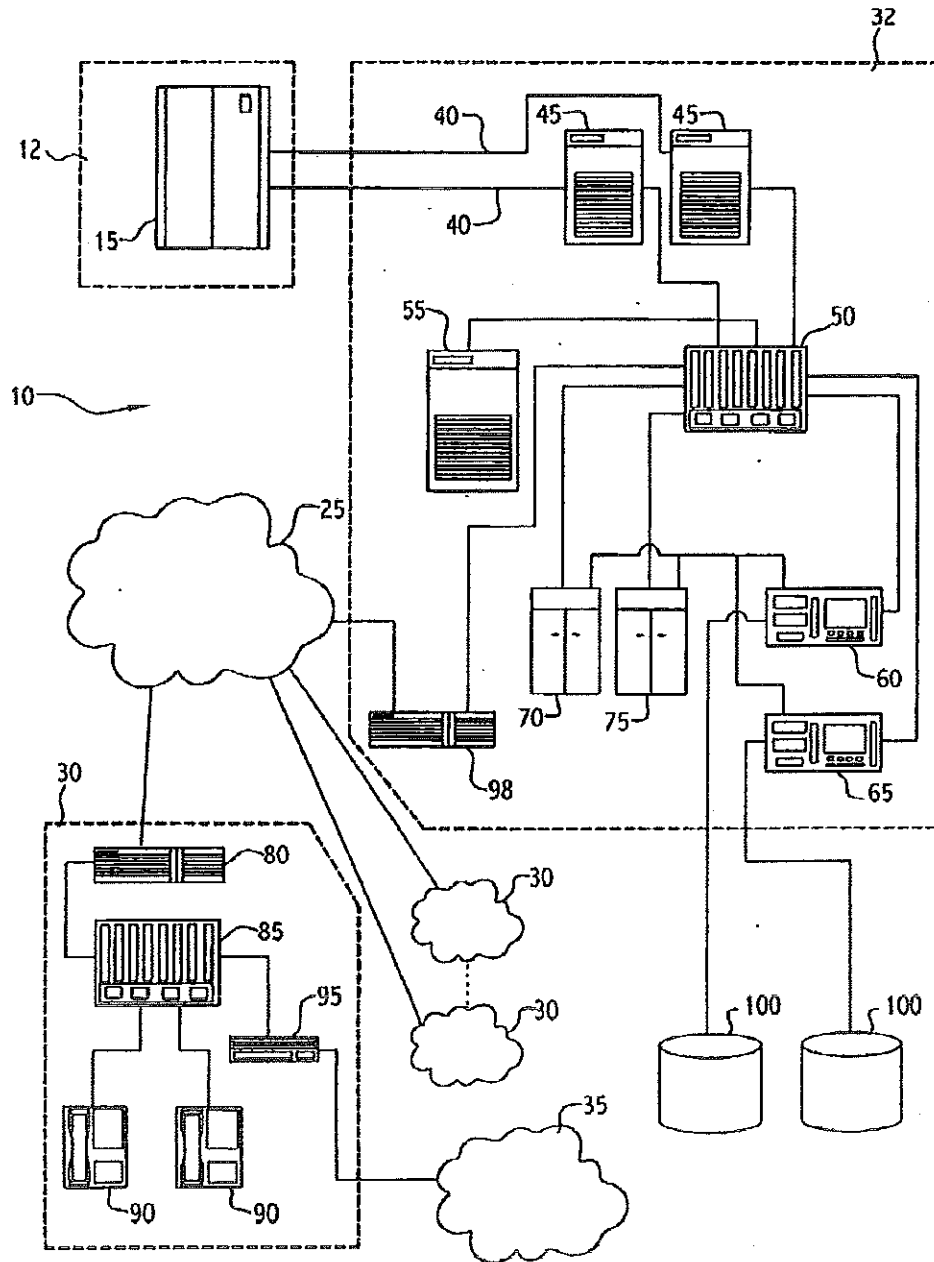


FIG. 2

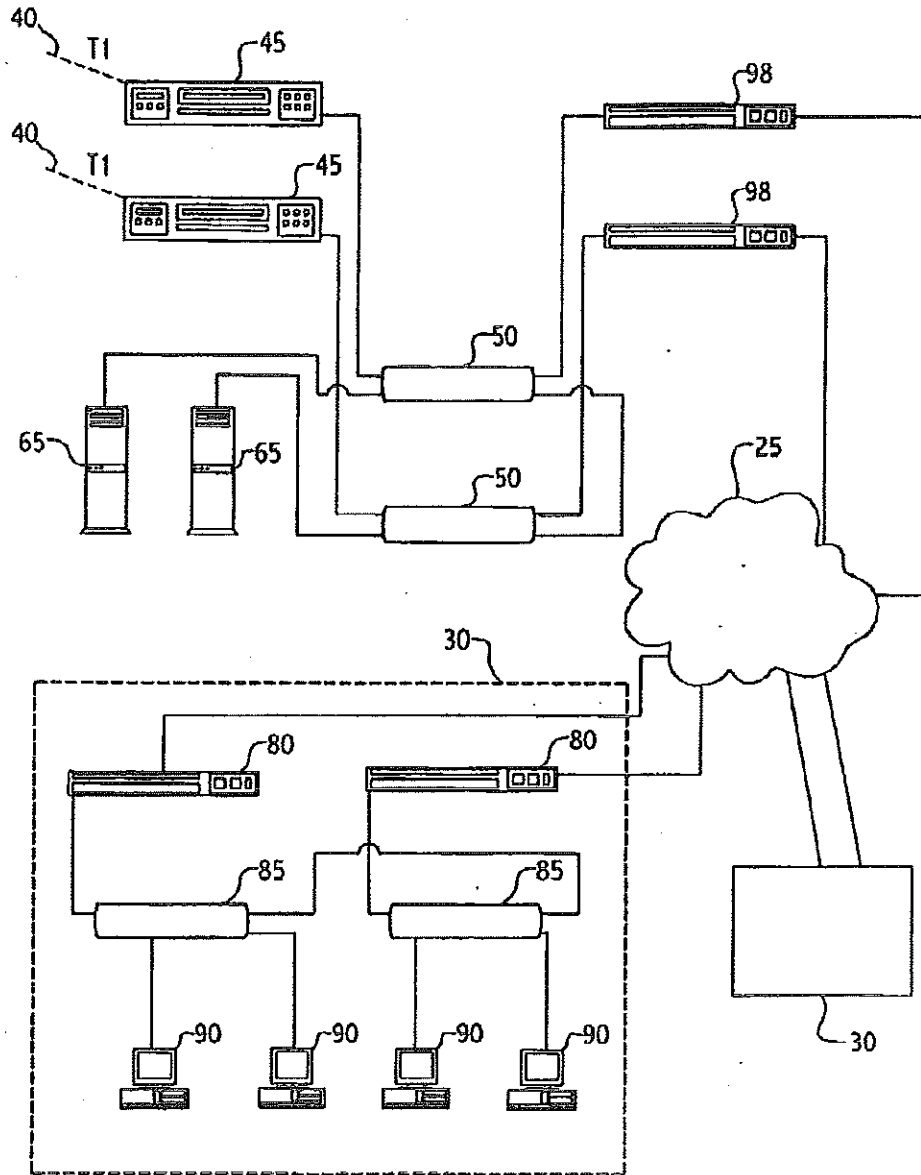


FIG. 3

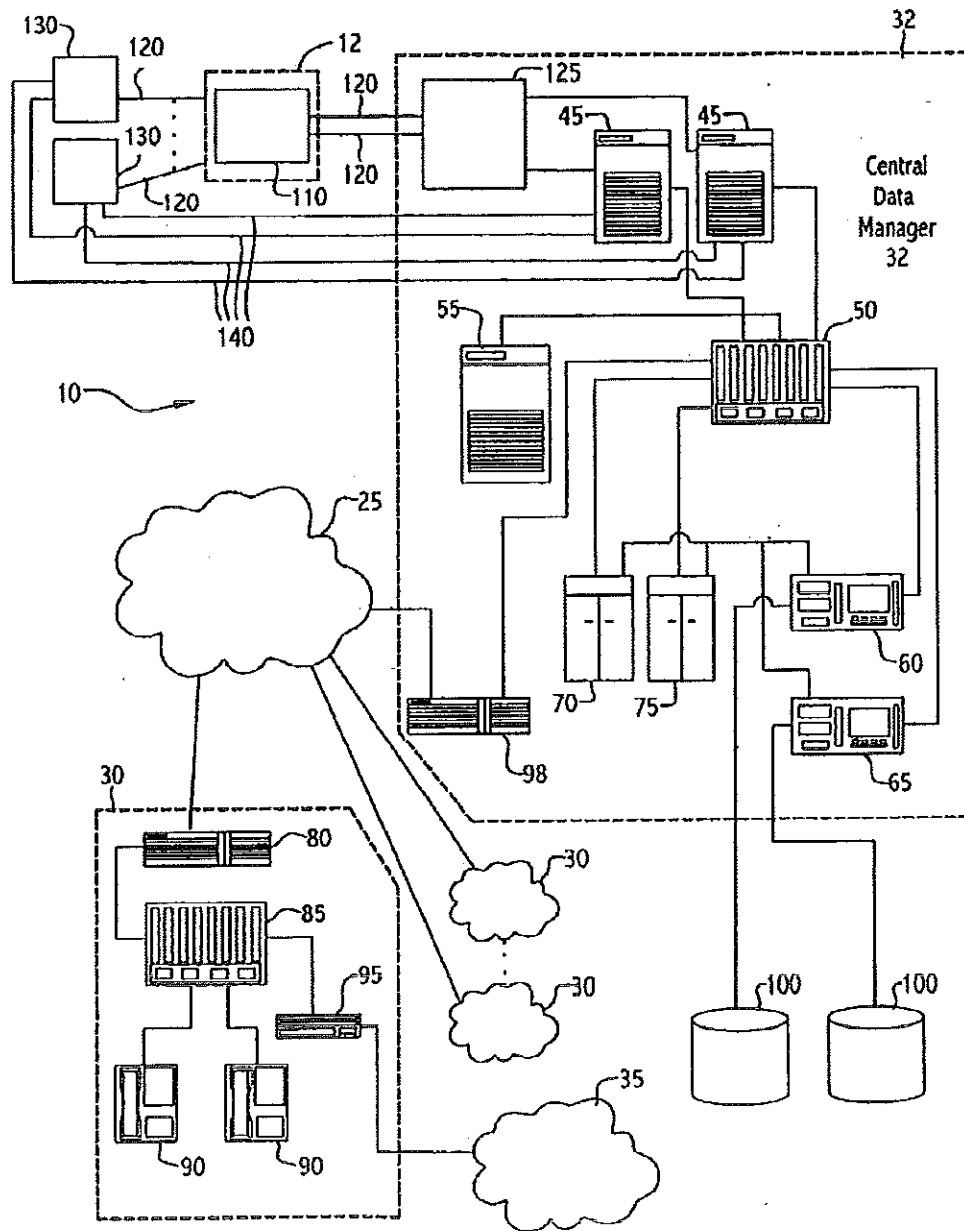


FIG. 4

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SYSTEM AND METHOD FOR SUPPORTING MULTIPLE CALL CENTERS

CROSS REFERENCE TO RELATED APPLICATION

This document claims priority to and the benefit of the filing date of copending provisional application entitled, "SYSTEM AND METHOD FOR PROVIDING SUPPORT TO MULTIPLE CALL CENTERS VIA VOICE AND DATA OVER INTERNET PROTOCOL," assigned Serial No. 60/264,242, and filed Jan. 26, 2001, which is hereby incorporated by reference.

TECHNICAL FIELD OF THE INVENTION

The invention relates generally to a system that provides, manages, and delivers an open, robust and scalable platform that is able to support multiple call centers.

BACKGROUND OF THE INVENTION

Transmission control protocol (TCP) and internet protocol (IP), together TCP/IP, have become the most widely used network protocols in the computer industry. TCP/IP provides error-free delivery of data and is compatible with most computers and operating systems. In addition to transmitting data packets over TCP/IP, voice over internet protocol (VoIP), also known as internet telephony, or making a telephone call over the internet, is becoming more popular. Its popularity stems from its relatively low cost and ease of installation and maintenance. Business organizations are using VoIP more to answer calls, take requests from customers, and apply target services to customers. VoIP offers the opportunity not only to route a call to a particular call center, but it also provides the caller's location information to the call taker. A call center is simply a specific unit of a business organization to which the call is forwarded; call centers may be arranged by geographical location. The particular call center takes the call and provides services to the caller or dispatches a service provider to the caller's location or location specified by the caller.

An organization, such as a provider of an emergency 911 services, really benefits from having calls forwarded as quickly as possible to the appropriate Public Safety Answering Point (PSAP) call center. In addition, providing that call center with the caller's location information provides usually critical information faster and often more reliably than requesting it from a caller.

The caller's location is often determined by Automatic Location Information (ALI). ALI information includes the name, address, and other pertinent information (e.g., agencies that serve that address, such as police, fire department, ambulance) about the calling party. Automatic number identification (ANI) is the telephone number of the calling party. The system that takes the ANI at the call center and interfaces to the ALI database and other external interfaces is often referred to as an ANI/ALI controller. Previous custom has been to have an ANI/ALI controller for each call center.

Although present techniques are capable of providing organizations with information, such as ALI and ANI, about a calling party, improved techniques for providing such information quicker and at a reduced cost are generally desirable.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 depicts a service providing system in accordance with a preferred embodiment of the present invention.

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FIG. 2 depicts a more detailed view of the system depicted in FIG. 1.

FIG. 3 depicts a redundant system in accordance with an embodiment of the present invention.

FIG. 4 depicts an alternate embodiment of the system depicted in FIG. 1.

DETAILED DESCRIPTION OF THE INVENTION

A method and system for providing, managing, and delivering a platform that is able to support multiple call centers is described. FIG. 1 depicts an exemplary service providing system 10, such as an emergency service providing system, in accordance with a preferred embodiment of the present invention. The system 10 is preferably comprised of a communication network 12 (e.g., the Public Switch Telephone Network or PSTN), a secure facility 20, a wide area communication network 25 (e.g., TCP/IP network), and call centers 30. The communication network 12 receives calls destined for one of the call centers 30. In this regard, each call destined for one of the call centers 30 is preferably associated with a particular call identifier or a call identifier of a particular set of identifiers. A call identifier associated with an incoming call may be an identifier dialed or otherwise input by the caller. For example, the call centers 30 may be locations for receiving emergency calls and dispatching emergency service personnel in response to the calls. Such emergency call centers in the prior art are typically identified by a "911" call identifier that informs communication networks to route the calls to such a call center.

Moreover, when the communication network 12 receives a call having a particular call identifier, such as the "911" identifier, and originating from a calling device located in a particular geographic area, the communication network 12 is preferably configured to route the call to the secure facility 20. In this regard, the secure facility 20 and, hence, the call centers 30 of FIG. 1 are preferably utilized for servicing calls only from a particular geographic area or a particular set of geographic areas. Other similar facilities 20 and call centers 30 may be employed to service calls from other geographic areas. Moreover, the network 12 is preferably designed to route calls to the secure facility 20 only if the call originated from an area serviced by the facility 20 and call centers 30.

To determine whether a call originated from the particular geographic area serviced by the facility 20 and call centers 30, the network 12 may analyze the automatic number information (ANI) and/or automatic location information (ALI) associated with the call. In this regard, well known techniques exist for analyzing the ANI and ALI of an incoming call to identify the call as originating from a particular calling device or a particular calling area. Such techniques may be employed by the network 12 to determine whether an incoming call originated from a calling device within an area serviced by the facility 20 and call centers 30. Moreover, if an incoming call originated from such an area and if the incoming call is associated with the particular call identifier referred to above, then the network 12 preferably routes the call to the secure facility 20.

When a call is routed to the secure facility 20, a central data manager 32, which may be implemented in software, hardware, or a combination thereof, processes the call according to techniques that will be described in more detail hereafter and routes the call, over the wide area network 25, to one of the call centers 30 depending on the ANI and/or ALI associated with the call. In processing the call, the

central data manager 32 may convert the call from one communication protocol to another communication protocol, such as voice over internet protocol (VoIP), for example, in order to increase the performance and/or efficiency of the system 10. The central data manager 32 may also gather information to help the call centers 30 in processing the call. There are various techniques that may be employed by the central data manager 32 to enhance the performance and/or efficiency of the system 10, and examples of such techniques will be described in more detail hereafter.

Various benefits may be realized by utilizing a central facility 20 to intercept or otherwise receive a call from the network 12 and to then route the call to one of the call centers 30 via WAN 25. For example, serving multiple call centers 30 with a central data manager 32, may help to reduce total equipment costs. In this regard, it is not generally necessary to duplicate the processing performed by the central data manager 32 at each of the call centers 30. Thus, equipment at each of the call centers 30 may be reduced. As more call centers 30 are added, the equipment savings enabled by implementing equipment at the central data manager 32 instead of the call centers 30 generally increases.

Furthermore, the system 10 is not dependent on any telephone company's switch for controlling the manner in which data is communicated to the call centers 30. In this regard, the central data manager 32 may receive a call from the network 12 and communicate the call to the destination call centers 30 via any desirable communication technique, such as VoIP, for example. Note that enabling VoIP allows voice and data to efficiently travel together over the WAN 25, which is particularly beneficial for emergency service providers.

Data security is another possible benefit of the exemplary system 10 as the central data manager 32 is able to store the data for different network providers associated with network 12 on different partitions. In this regard, the operator of the facility 20 may secure the data utilized by the facility 20 such that a network service provider of the network 12 is unable to access information provided to the secure facility operator by other network service providers. Thus, the network service providers may be more willing to provide the secure facility operator with its information.

FIG. 2 is a more detailed view of an exemplary embodiment of the system 10. Other embodiments of the system 10 are possible. The central data manager 32 is comprised of primary and secondary T1 connections 40, voice over IP (VoIP) gateways 45, a Local Area Network (LAN) hub or switch 50, a call manager (soft switch or gatekeeper) 55, a primary server 60 with a local database, a backup server 65 with a local database, and, optionally, a computer-aided dispatch server 70 and a mapping server 75. The call center 30 is comprised of a router 80, LAN hub or switch 85, virtual phone positions or VoIP telephone sets 90, and a local dial tone (DT) switch 95. The term "call center" is used to refer to the organizational unit of a business/office that receives incoming calls as well as, typically, requests for services.

The DMS 100 Tandem office 15 that is depicted in FIG. 2 is only representative; it could be any 911 Tandem office or local telephone switch or exchange from which the call originates. The Tandem office 15 is a switch or a group of existing switches that is used for the communication network 12 to determine to which call center 30 calls should be routed. For example, when a person dials 911, he will preferably have dedicated circuits, i.e., 911 trunks, going

into a 911 Tandem office. The 911 Tandem office has the responsibility of taking the automatic number identification (ANI) and automatic location information (ALI) from the calling number and determining which Public Safety Answering Point (PSAP) call center that call should be routed to by performing a lookup in the Tandem's database tables and then getting the call switched to that PSAP call center over a dedicated trunk. In the 911 example, the Tandem's database preferably knows not only which PSAP call center serves it, but also which fire department, police department, EMS office, etc., serves that subscriber number. The Tandem 15 contains the database tables that enable it to perform selective routing based on the calling number or ANI. The Tandem 15 passes the information in its database tables on to the central data manager 32 along with the call so that the central data manager 32 knows which call center 30 to transfer the call to. There are multiple dedicated trunks to each call center to provide for redundancy in case one of the trunks fails.

In this particular example, the trunks out of the Tandem office 15 are taken over multiple T1s 40 (for redundancy in case one of the T1s fail) into Voice over Internet Protocol (VoIP) Gateways 45. A T1 is a circuit switch technology circuit that has industry standard signaling.

Note that other types of communication circuits may be utilized in other embodiments. Furthermore, redundant use of communication connections as described herein is desirable but is not a necessary feature of the present invention. The call comes out of the Tandem switch 15 on a specific T1 circuit 40. Each T1 has 24 voice channels and each of those 24 voice channels is dedicated to a specific call center. So, for example, two T1s will have a total of 48 circuits that can be dedicated to 48 call centers. The circuits could serve, for example, 12 call centers with 4 trunks each, for a total of 48 channels, each of which is dedicated to a specific call center. In other words, each trunk or channel is dedicated to a specific call center. The concept is to split those trunks to a specific call center to where half the circuits are on one T1 and the other half are on another T1; or, on a larger system, there will be more than two T1s (but there is always minimum of two T1s for redundancy). So the trunks are split; no more than half of the trunks going to a particular call center will be on one T1, and when a call comes in, the switch knows which call center the call is for.

The VoIP Gateway 45 then converts the T1 circuit switch technology signaling into VoIP signaling. The VoIP Gateway 45 also picks up the ANI and may deliver it to a primary server 60 to make it available for other uses. The VoIP signal then goes through a local area network (LAN) hub or switch 50. That call may then be routed from the LAN hub 50 through a soft switch or gatekeeper or call manager 55, and the call manager 55 then directs that call to a particular call center 30. The central data manager 32 of FIG. 2 also includes a router 98. This router 98 takes the VoIP signal and puts it onto a wide area communication network (WAN) or intranet 25 to make the connection to the appropriate call center 30. There are multiple call centers 30 that are connected to this same network 25.

When the call is presented to a particular call center 30 through a router 80 at the call center 30, the call will ring on a virtual phone or physical VoIP telephone set 90. FIG. 2 depicts two Virtual Phones 90, Position 1 and Position 2. Of course, the invention is not limited to two positions; there will be as many positions as are necessary for the particular call center to handle the traffic, and the number of positions in this concept will not vary from traditional call centers. Both ANI/ALI information (i.e., data) and voice are prefer-

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ably being delivered over the WAN or intranet 25 via the IP protocol on the same feed. In the embodiment shown by FIG. 2, instead of having separate circuits for voice and data, redundant feeds, each of which carry both voice and data (e.g., ANI/ALI) may be used. This redundancy is depicted in FIG. 3.

The call will then proceed through the router 80 in the call center 30 into a LAN hub or switch 85 that is capable of handling voice. When the call rings there, the associated data is also reported back to the central data manager 32 through an IP link into a primary server 60 with local database and/or a secondary, or backup, server 65 with local database. All of this information is delivered over the same WAN or intranet 25 via the call center router 80 to the secure facility router 90 back to the LAN hub 50 in the secure facility into primary server 60 and backup server 65. The data is reported through either a serial link or an IP packet. The data informs the server(s) 60, 65 that the call on this trunk was presented to this call center 30 and that it has been answered. The software that is running on these servers 60, 65 will then deliver the call screen, which includes the ALI (automatic location information) including the name and the address and other pertinent information about that calling party, to the call taker at the call center 30. Out of the call center 30, the local Central Office with dial tone 35 is a line going to the local DT switch 95 and providing dial tone. This represents administrative lines that allow local phone calls to be made without having to go through a wide area network that could possibly be long distance. In other words, a person could simply press a button on a virtual phone 90 that would get a dial tone through the local DT switch 95.

The servers (both primary 60 and backup 65) have the capability to serve multiple call centers 30 on one or various partitions. Thus, this allows the amount of equipment required by each call center 30 to be reduced, thereby reducing total equipment costs. Instead of having an ANI/ALI controller and a primary and backup server at each call center, multiple call centers 30 (i.e., hundreds) in a plurality of locations may be served by a single central data manager 32 at a central site. Multiple servers are preferably used for redundancy and reliability. Redundant circuits to each call center are still recommended, i.e., two or more high speed (e.g., 56K or higher) circuits. The redundant circuit may be a wireless facility or it could be any means for delivering IP, e.g., a connection over a virtual private network or over the internet or a dial-up link. There are various methodologies for transmitting voice and data to a call center over IP. The redundancy, that is, having at least two circuits to the call center, eliminates individual trunk circuits as well as multiple ALI database circuits to a centralized remote database from each call center. In this case, the redundant circuits will serve as many trunks as desired and the only thing that would change is the bandwidth of the pipes that deliver the IP trunking to the call center.

The equipment for a central data manager 32 may exist at multiple facilities for the sake of redundancy, e.g., the Voice over IP Gateway 45 may be physically located in two different facilities miles apart. Likewise, the primary server 60 and backup server 65 might be in two separate facilities miles apart. So if one of the servers were to be out of service for some reason, the other one could pick up the load and continue on. The server controller, which can be implemented in software, hardware, or a combination thereof, is modular such that different modules may be run on different servers. Furthermore, the workload can be distributed. As the workload increases for a particular controller module, that module can be removed and run on another server that has, for example, more horsepower.

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Particular to this invention is the grouping of and inter-connectivity between the equipment in the system. The central data manager 32 that houses the primary 60 and backup 65 servers may also house a computer-aided dispatch (CAD) server 70 and a mapping server 75. CAD and mapping are used, for example, when someone dials 911. In order that the caller can be located within a certain amount of accuracy, CAD/mapping draws a map and pinpoints a location on the map. It may also show the nearest police car to that incident or the nearest ambulance or fire station. Computer-aided dispatch allows the 911 service to dispatch that particular fire department or police car or ambulance to the scene. CAD/mapping can show a particular rescue unit's availability and status, and, for example, when a police car is dispatched to the incident, the police car can be dragged and dropped on the screen onto the incident. Often the emergency service has a need to talk to everyone at the incident, but frequently the fire truck, the police car, and the ambulance are all on different radio frequencies. In this situation, CAD/mapping gives the emergency service a way to click on the incident and, through interfaces, it maintains multiple frequencies on the radio and allows the emergency service personnel to send a simultaneous transmission, rather than having to go through the radio consoles, select all the necessary channels, and then send the message. In other words, the computer interfaces with the radio equipment and allows a single transmission. The CAD/mapping server(s) 70, 75 will be connected so that CAD/mapping services may be provided to any of the call centers 30 over the same connection. Such "common equipment," such as CAD servers, mapping servers, etc., do not need to be purchased and installed for every single call center that is part of the system. Although some call centers may want their own CAD/mapping servers, the multiplicity could easily be eliminated and the system could share a common server for these CAD/mapping services. With this system 10 design, servers 60, 65 in centralized points serve multiple call centers 30 rather than each call center having every piece of equipment at its premise.

Also, rather than necessarily having a server 60 on premise at each call center 30, each call center's information may be placed on a single server 60 in the central controlled environment 20 and simply deliver what a call center 30 needs. For example, when a person logs on to the server 60 for administrative purposes, he will be able to look at the call logs associated with his particular call center 30 without having to look at the call logs for the several other call centers that are sharing the same server 60. Each call center 30 has its own unique call center identification, unique set of speed dials, unique set of agency associations, and other unique information. Each call center 30 or subscriber may have its own database on the central server 60. For instance, in any given area, information about or directions to get to a particular address, instead of simply the address, may be helpful. Every call center 30 preferably has the ability to add, modify, and delete its own information. Previously, databases were not set up to have multiple call centers with each call center accessible by only its own employees. Multiple centers would have had to share a single database which may not be feasible for privacy reasons or inter-agency problems or for whatever reason. But the server 60 of the embodiment shown by FIG. 2 allows for privacy of information via database partitioning. The partitioned database structure allows multiple independent call centers 30 to be served from a single server 60. This includes user interfaces for entering data for each call center 30, such as supporting agencies, speed dial lists, individual telephone

trunk/line interfaces, individual on-premise phone systems as well as reporting software for reporting data to the call center 30.

Normal security and redundancy designs are applicable to this server 60 design. Nothing in the present invention prevents the customary uses of firewalls. Furthermore, if the voice gateways 45 go into two different LAN switches and hubs 50 and those two hubs 50 are tied together with a link, each one also has a connection to either the primary 60 or backup server 65 so that if one hub or switch 50 is lost, the other one is capable of taking the load. In addition, at least two Wide Area Network (WAN) routers 98, 80 may be used on each side for redundancy.

The primary 60 and backup 65 servers have the ability to have local as well as remote databases. For example, a local database can take updates from the telephone company as service orders are processed. If a person moves into a residence and signs up for phone service, if he is a new subscriber in the area, a new record is generated (often called an "insert" record) which contains the subscriber's name, address, telephone number, and Emergency Service Number (ESN), which is something related to 911 that says this address is served by a particular PSAP call center, fire department, police department, EMS service, etc., so if the subscriber dials 911, all of this information is presented. Then this or any other new, modified, or deleted information would be passed on to the primary server 60 typically once a day via a download. The central data manager 32 has the ability to store this database locally on site as well as remotely. This provides for flexibility, for example, for the smaller call centers that do not want to spend money on redundant circuits. Instead, the so-called small site would have the information locally and the redundancy would be in that a single link to off-site server(s) 100 would be used if the primary server 60 local database was out of service. In addition, with the redundant server system of the present invention, the changes from the primary server 60 would be updated to the remote servers 100 as well as to the backup server 65. The result is one shared central data manager 32 that may serve various databases for multiple call centers 30.

The present invention is not limited to public safety answering point call centers. The method and system of the present invention can be used for any organization or service, for example, for dispatching a truck for package and mail pickup or delivery services, taxi or limousine services, food delivery services, plumbing services, floral delivery, etc. It is ideal for, but not limited to, any type of fleet management system, pickup/delivery services, or time-critical service provided at a residential or commercial location. The present invention can be used for receiving and collecting information from a call and then routing the call to the nearest branch office, central office, etc. Any kind of services-oriented business can benefit from the system of the present invention in order to take calls as well as to share a phone system, instead of having a key system and/or private branch exchange (PBX) for each different site. Sharing a common Voice over IP system is a major advantage of the present invention, but in addition, these other products, such as mapping, ALI, and computer-aided dispatch, are beneficial in industries other than public safety and emergency 911 services.

Rather than having to dispatch maintenance people to do upgrades, the server 60 may be maintained with the latest software upgrades at the server level. In addition, training on the usage of the server 60 is offered out of a centralized place, in addition to web-based training over the closed circuit. The server 60 also has the capability to support

multiple remote printers, CAD interfaces, remote databases, and telephone systems from a central site 20.

Having the tandem office 15 is not a necessary feature of the system 10 of this invention. In an alternate embodiment as depicted in FIG. 4, the Tandem office 15 is eliminated and replaced, for example, with an SS7 network 110. In this embodiment, the primary 60 and/or backup 65 servers provide the database lookups and call routing to the appropriate call center 30 based on the ANI/ALI of the calling number. In this embodiment, all of the calls are routed from the SS7 network 110 to the central data manager 32. Connections to the VoIP gateways 45 still exist, but instead of using T1 links 40, the alternate embodiment may use SS7 signaling links 120 to connect the existing SS7 network 110 to the VoIP gateways 45 via an SS7 signaling interface 125. SS7 signaling links 120 are also used to connect the end offices 130 to the SS7 network 110. The end offices 130 have separate voice circuits 140 to the VoIP gateways 45. The Public Switch Telephone Network (PSTN) 12 has multiple types of trunks. SS7 is a type of connection that sends signaling separate from the voice type of signaling 140; for example, it sends the automatic number identification (ANI) and other information over the signaling link channel 120 separate from the voice signal 140. The SS7 network 110 has a connection into every end office 130 that serves a particular geographical area, whether through local dial tone connection, wireless connection, internet service provider, etc. The SS7 signaling links 120 are simply a way to get the calls from each of these end offices 130 on the SS7 network 110 to the servers 60, 65. In addition, the SS7 signaling links 120 provide the ANI and other information to the server 60 so that the server 60 can then process the call to the appropriate call center 30. By using the SS7 network 110 and signaling links 120 (via the SS7 signaling interface 125, VoIP gateways 45, and LAN hub 50), the speed of the call is increased because channel associated signaling with multiple frequencies, which is slower and older technology, is not used. The SS7-delivered information is taken directly and converted to IP. Eliminating channel associated signaling as well as the Tandem is much faster. As soon as the call is received by the server 60, it is immediately dispatched to a phone which rings at the call center 30; an approximate five-to-six second delay is eliminated.

What is claimed is:

1. An emergency services communication system, comprising:
 - a plurality of remote terminals for enabling emergency services operators to receive incoming calls and to dispatch emergency service personnel in response to said incoming calls;
 - a wide area network interfaced with each of the plurality of remote terminals;
 - a central data manager configured to receive said incoming calls and to route said incoming calls to said plurality of remote terminals over said wide area network;
- wherein each of said incoming calls is associated with Automated Number Information and Automatic Location Information data identifying a communication device from which said incoming call originated and wherein each of said incoming calls is delivered over said Wide Area Network to a particular one of said remote terminals by said central data manager based on said associated Automatic Number Information of said incoming call and wherein said central data manager is located in a centralized secure facility with on-site

server capability for analyzing and recording said Automatic Number information and said Automatic Location Information for each of said incoming calls; and wherein said centralized secure facility serves a plurality of Public Safety Answering Points, each of which comprise multiple individual members of said plurality of remote terminals.

2. An emergency services communication method, comprising the steps of:

- providing a plurality of remote terminals;
- providing a central data manager;
- receiving, at said central data manager, incoming calls, wherein each of said incoming calls is associated with an Automatic Number Information and Automatic Location Information data packet identifying a communication device from which said incoming call originated;
- selecting one of the remote terminals based on the Automatic Number Information and Automatic Location Information data associated with said incoming call;
- routing said incoming call from the central data manager to the selected remote terminal over a wide area network thereby enabling an emergency service operator at the selected remote terminal to dispatch emergency service personnel in response to the one incoming call
- wherein said central data manager is located in a centralized secure facility with on-site server capability for analyzing and recording said data for each of said incoming calls; and
- wherein said centralized secure facility serves a plurality of Public Safety Answering Points, each of which comprise multiple individual members of said plurality of remote terminals.

3. A method for handling incoming emergency services calls having both voice and data signals associated with said calls, the method comprising the steps of:

- presenting an incoming emergency call from a remote caller to a central data manager;
- accessing data associated with said incoming call;
- selecting a call center for said incoming call depending on said data associated with said incoming call delivered by digital circuits via voice over IP to said call center; and
- routing the incoming call from said central data manager to said selected call center thereby enabling an emergency service operator at said selected call center to dispatch emergency service personnel in response to said incoming call;
- wherein said central data manager is located in a centralized secure facility with on-site server capability for analyzing and recording said data for each of said incoming calls; and
- wherein said centralized secure facility serves a plurality of Public Safety Answering Points, each of which comprise multiple individual members of said plurality of remote terminals.

4. The method of claim 3 wherein data associated with said incoming call includes both Automatic Number Information and Automatic Location Information data and is transmitted along with said voice signals over an IP network to said selected call center.

5. The method of claim 3 wherein the incoming call is routed to the selected Public Safety Answering Point using voice over IP over a wide area network.

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(12) **EX PARTE REEXAMINATION CERTIFICATE** (6548th)
United States Patent
Ryan et al.

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(45) Certificate Issued: **Dec. 2, 2008**

- (54) **SYSTEM AND METHOD FOR SUPPORTING MULTIPLE CALL CENTERS**
- (75) Inventors: Terry S. Ryan, Grant, AL (US); Randel W. Henry, Huntsville, AL (US)
- (73) Assignee: Tel Control, Inc., Huntsville, AL (US)

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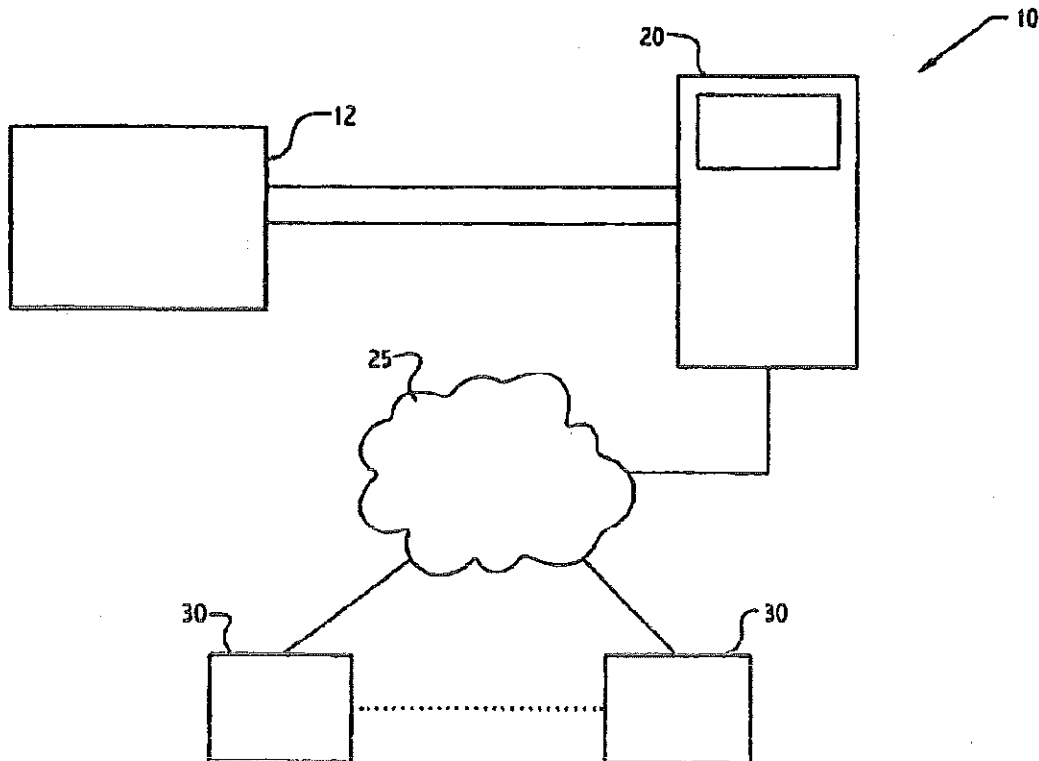
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(57) **ABSTRACT**

A system and method for routing calls from multiple call centers using remote terminals for receiving incoming calls, a wide area network interfaced with the remote terminals, and a central data manager configured to receive the incoming calls from a communication network and to route them to the remote terminals over the wide area network. The remote terminals enable operators to receive incoming calls and to dispatch personnel in response to the incoming calls. Each of the incoming calls is associated with an automatic number identification identifying a communication device from which the incoming call originated. Additionally, each of the incoming calls is routed over the wide area network to a particular remote terminal based on the associated automatic number identification of the incoming call.

Related U.S. Application Data

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H04M 11/04 (2006.01)
 - (52) **U.S. Cl.** 379/45; 379/49; 379/265.09
 - (58) **Field of Classification Search** 379/45,
379/49, 265.09
- See application file for complete search history.



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**EX PARTE
REEXAMINATION CERTIFICATE
ISSUED UNDER 35 U.S.C. 307**

THE PATENT IS HEREBY AMENDED AS
INDICATED BELOW.

Matter enclosed in heavy brackets [] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

Claims 1, 2 and 3 are determined to be patentable as amended.

Claims 4 and 5, dependent on an amended claim, are determined to be patentable.

New claims 6-13 and 14 are added and determined to be patentable.

1. An emergency services communication system, comprising:

a plurality of remote terminals for enabling emergency services operators to receive incoming calls and to dispatch emergency service personnel in response to said incoming calls *said terminals each associated with one of a plurality of call centers;*

a wide area network interfaced with each of the plurality of remote terminals;

a central data manager configured to receive said incoming calls and to route said incoming calls to said plurality of remote terminals over said wide area network, *said central data manager comprising a server having a database that is partitioned such that a first partitioned portion contains first data associated with a particular one of said call centers, so as to maintain privacy of the first data, the partitioned database being configured to serve the plurality of call centers;*

wherein each of said incoming calls is associated with Automated Number Information and Automatic Location Information data identifying a communication device from which said incoming call originated and wherein each of said incoming calls is delivered over said Wide Area Network to a particular one of said remote terminals by said central data manager based on said associated Automatic Number Information of said incoming call and wherein said central data manager is located in a centralized secure facility with on-site server capability for analyzing and recording said Automatic Number information and said Automatic Location Information for each of said incoming calls; and wherein said centralized secure facility serves a plurality of Public Safety Answering Points, each of which comprise multiple individual members of said plurality of remote terminals.

2. An emergency services communication method, comprising the steps of:

providing a plurality of remote terminals *wherein each of the remote terminals is associated with one of a plurality of call centers;*

providing a central data manager *which includes a server having a database that is partitioned such that a first*

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partitioned portion contains first data associated with a particular one of said call centers, so as to maintain privacy of the first data, the partitioned database being configured to serve the plurality of call centers;

receiving, at said central data manager, incoming calls, wherein each of said incoming calls is associated with an Automatic Number Information and Automatic Location Information data packet identifying a communication device from which said incoming call originated;

selecting one of the remote terminals based on the Automatic Number Information and Automatic Location Information data associated with said incoming call;

routing said incoming call from the central data manager [to] by the selected remote terminal over a wide [are] area network thereby enabling an emergency service operator at the selected remote terminal to dispatch emergency service personnel in response to the one incoming call

wherein said central data manager is located in a centralized secure facility with on-site server capability for analyzing and recording said data for each of said incoming calls; and

wherein said centralized secure facility serves a plurality of Public Safety Answering Points, each of which comprise multiple individual members of said plurality of remote terminals.

3. A method for handling incoming emergency services calls having both voice and data signals associated with said calls, the method comprising the steps of:

presenting an incoming emergency call from a remote caller to a central data manager *which includes a server having a database that is partitioned such that a first partitioned portion contains first data associated with a particular one of a plurality of call centers, so as to maintain privacy of the first data, the partitioned database being configured to serve the plurality of call centers;*

accessing data associated with said incoming call; selecting a call center *from said plurality of call centers* for said incoming call depending on said data associated with said incoming call delivered by digital circuits via voice over IP to said call center;

accessing data from a partitioned portion of the database that contains data associated with the related call center; and

routing the incoming call from said central data manager to said selected call center *along with information corresponding to the data accessed from the partitioned portion of the database,* thereby enabling an emergency service operator at said selected call center to dispatch emergency service personnel in response to said incoming call;

wherein said central data manager is located in a centralized secure facility with on-site server capability for analyzing and recording said data for each of said incoming calls; and

wherein said centralized secure facility serves a plurality of Public Safety Answering Points, each of which comprise multiple individual members of said plurality of remote terminals.

6. The emergency services communication system of claim 1 wherein the database is local to the server.

7. The emergency services communication system of claim 1 wherein the database is remote to the server.

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8. The emergency services communication system of claim 1 wherein the database comprises a plurality of databases that are both local and remote to the server;

9. The emergency services communication method of claim 2 wherein the database is local to the server.

10. The emergency services communication method of claim 2 wherein the database is remote to the server.

11. The emergency services communication method of claim 2 wherein the database comprises a plurality of databases that are both local and remote to the server.

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12. The emergency services communication method of claim 3 wherein the database is local to the server.

13. The emergency services communication method of claim 3 wherein the database is remote to the server.

14. The emergency services communication method of claim 3 wherein the database comprises a plurality of databases that are both local and remote to the server.

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