Lawful Intercept Capability for the Government of Iraq

Statement of Work

18 August 2011

1 Introduction

This Statement of Work (SOW) involves purchasing and installing a Lawful Intercept (LI) capability for the Government of Iraq (GOI). The capability shall include: providing installation, system engineering, system administration, terminal operations support, and mentoring/training Iraqi system operators. The solution should include a disaster recovery feature/configuration that would replicate (backup) the server and database storage at a physically separate facility. LI will provide the GOI a powerful communications intelligence tool to assist in combating criminal organizations and insurgencies by supporting evidence-based prosecutions, warrant-based targeting, and intelligence-based operations.

The objective of this effort is to provide a LI capability to the GOI so they can intercept cellular communications (whether voice, data, or Short Message Service (SMS)) in order to disrupt criminal activity, organized crime, and insurgent operations. The installed system will allow LI of communications across all Global System for Mobile Communications (GSM) providers within Iraq. This effort will focus on setting up the system on the three service providers networks (Asia Cell, Zain, and Korek).

1.1 Scope

This project requires the prime Contractor to survey for, design, procure, and implement a new, European Telecommunications Standards Institute (ETSI) compliant LI capability that is integrated with the three national GSM communications providers. The LI system with monitoring stations shall be physically located at the Joint SIGINT Information Center (JSIC) (the monitoring center location) and a second set of backup servers shall be located at the National Information and Investigation Agency (NIIA) Headquarters, both located in Baghdad, Iraq. Portions of the system required to effect collection at the telecommunication service providers may be located outside of the JSIC.

The Contractor shall design, build, and install this LI system for the GOI that is capable of monitoring and storing voice calls, data, and SMS messages from the providers. The overall system shall be sized for the three communication providers specified above but designed to allow future expansion to new providers when required, to include voice and data on Public Switched Telephone Network (PSTN), Code Division Multiple Access (CDMA), and International Mobile Telecommunications-2000 (3G) providers. The system shall be capable of allowing any new service providers to be added.

The Contractor shall provide a complete installation team, followed by a project management/training team to oversee the first year of operations and train operators/analysts to independently operate the system once the Contractor departs the theater of operations. The prime Contractor may use subcontractors for different portions of the project; however, the prime Contractor will be responsible for the overall execution and success of the project.

1.2 Assumptions

- The Contractor shall assume that the GSM providers will cover the cost of activating the LI licenses on their respective GSM Network Elements and provide the appropriate ETSI LI handover interfaces (1, 2 & 3).
- The Contractor shall assume that there is sufficient space at the primary and backup site to install additive equipment. There are primary electric and cooling systems in place at both locations to operate the additive equipment.
- The Contractor shall assume that the makes, models, and manufacturers of the telecommunication and networking equipment used by the providers will be considered proprietary information. The Contractor shall assume that all equipment is European Telecommunications Standards Institute (ETSI) compliant and conforms to LI standards for ETSI compliant equipment.

1.3 U. S. Government Furnished Equipment & Responsibilities

There will be Government Furnished Equipment (GFE) and services.

- Cisco series 3700, 3500, or 2900 switch to facilitate International Zone Fiber Network (IZFN) connectivity. This will be operated and maintained by the U.S. Government.
- Cisco ASA 5500 series for secure transport across the International Zone Fiber Network (IZFN). An ASA shall be provided at all times (Cisco 5500 series or upgrade).
- Remote workstations shall be provided as needed.
- Synchronous Digital Hierarchy (SDH) connectivity into the GSM provider networks and the monitoring center location will be completed outside the scope of this project, and the Contractor shall assume that connectivity is available.

The Government will provide life support for the installation team and the project management team. Life support is defined as billeting on a U. S. Forward Operating Base (FOB) or other U. S. flagged facility in the International Zone and access to meals, MWR facilities, and other amenities available on the billeted facility.

Contractor employees are authorized to utilize US Government transportation both in the International Zone (IZ) and to/from the IZ and Victory Base Complex (BIAP) on a space available basis. If work requirements dictate a Personnel Security Detail shall be provided.

2 Tasks

2.1 Functional Requirements

2.1.1 The Contractor shall ensure the LI system is compliant with relevant ETSI standards governing LI, including, but not limited to ETSI TS 101 331, ETSI ES 201 158, and ETSI TS 101 671.

2.1.2 The system shall have a Lawful Intercept based switch.

2.1.3 The operating software language shall be identified by the contractor.

2.1.4 The LI system shall maintain a database, including identifications in order to build a comprehensive catalog of targets, associates and relationships.

2.1.5 The system shall allow for collected names and numbers to be automatically added to the names/numbers database.

2.1.6 The system shall have a single common integrated desktop Graphical User Interface (GUI) for monitors to access all collected content types from one view.

2.1.7 The system shall be capable of monitoring 5000 targets and support 20% (1000) total simultaneous voice calls. The Contractor shall use general LI traffic assumptions for identifying GPRS (Mobile Data) and SMS volume requirement, and support the identified requirements for each service provider. GPRS and circuit switched data traffic is to be intercepted within each of the 3 service providers.

2.1.8 The LI system shall have the ability to capture and store for at minimum 90 days the following: voice calls, SMS messages, and intercept related information for replay.

2.1.9 The LI system shall be expandable to process voice & data on PSTN, CDMA, and 3G providers.

2.1.10 The LI system shall display data in both tabular and graphical format, as applicable, to include geospatial display of targeted user's location(s) within 100 meters.

2.1.11 The system shall support the use of satellite imagery and other mapping overlays (e. g. Google Earth).

2.1.12 The system shall have the ability to automate workflow procedures.

2.1.13 The system shall provide a method to automate the playback of content with minimal user intervention.

2.1.14 The system shall support user created complex queries that can be shared among other users.

2.1.15 The system shall provide an automatic screen refresh of common fields to allow users to see up to date information every 10 seconds or less.

2.1.16 The LI system shall provide for differing tasking based on privilege levels.

2.1.17 The LI system shall provide a reporting and metrics sub-system which generates custom reports using different metrics input by the user to evaluate system and collection performance.

2.1.18 The LI system shall employ a cryptographic means to guarantee that intercepted content is not tampered with from time of interception to time of trial.

2.1.19 The LI system shall have the ability to perform near real-time monitoring/surveillance on voice calls, SMS messages, and intercept related information.

2.1.20 The LI system shall provide near real time location monitoring of targets, based on Location Area Code (LAC), Cell, or actual Location-Based Service (LBS.)

2.1.21 The LI system shall be able to raise a near real time (less than 10 minutes) alarm if two or more targets come within a user defined distance of each other.

2.1.22 The LI system shall be able to raise a near real time (less than 10 minutes) alarm if the target transitions in or out of a user defined geo-fence area.

2.1.23 The LI system shall be located at the monitoring center location, which serves as the law enforcement monitoring facility.

2.1.24 The LI system shall provide redundant capabilities to avoid single points of failure or data loss; this includes a second set of backup servers located at NIIA Headquarters to be installed.

2.1.25 The Contractor shall ensure the technical solution will integrate into the existing site-specific infrastructure and/or Government, of Iraq Networks, specifically the International Zone Fiber Network/Iraqi National Packet Network (IZFN/INPN) and other partner transport networks as identified by the U.S. Government. Currently there are no other partner transport networks.

2.1.26 The Contractor shall label all telecommunication infrastructure and equipment components to Indications and Warnings (IAW) standards. All labeling shall be in both Arabic and English.

2.1.27 All equipment procured and installed by this project shall be rated to operate at 220 volts/50 Hertz (the Iraqi electrical standard).

2.1.28 The Contractor shall engineer necessary power backup systems, to include Uninterrupted Power Supply (UPS) and generator backup to ensure 24/7 operation of the equipment in an environment with unstable power (1 hour on UPS, indefinitely on generator). The Contractor shall provide backup electric and cooling systems in sufficient quantity to maintain LI functionality at both the primary and backup sites.

LI functionality is defined as keeping the installed LI system and all monitoring stations and equipment associated with collecting LI data operational and running at full capacity.

2.2 Site Survey Requirements

2.2.1 If requested by the contractor a site visit may be conducted during the solicitation period. The actual site visit shall take between 1-2 days to complete.

2.2.2 The Contractor shall accomplish a site survey (phone/written communication is acceptable) of the monitoring center location with the Service Providers listed in the SOW to gather data to establish system design and connectivity to the monitoring center location from the Service Providers.

2.2.3 The Contractor shall obtain or generate any site and facility drawings required for the installation.

2.3 Delivery Requirements

2.3.1 The Contractor shall provide a complete schedule for the equipment design, mobilization, civil works, and commisioning with appropriate milestones to U.S. Government personnel within 2 weeks after contract award and as requested.

2.3.2 A post award conference will be held prior to installation.

2.3.3 The Contractor shall determine how the equipment will be installed in the monitoring center location and at NIIA Headquarters.

2.3.4 The Contractor shall ensure the installation will have minimal or no impact on current operations in the monitoring center and NIIA Headquarters locations.

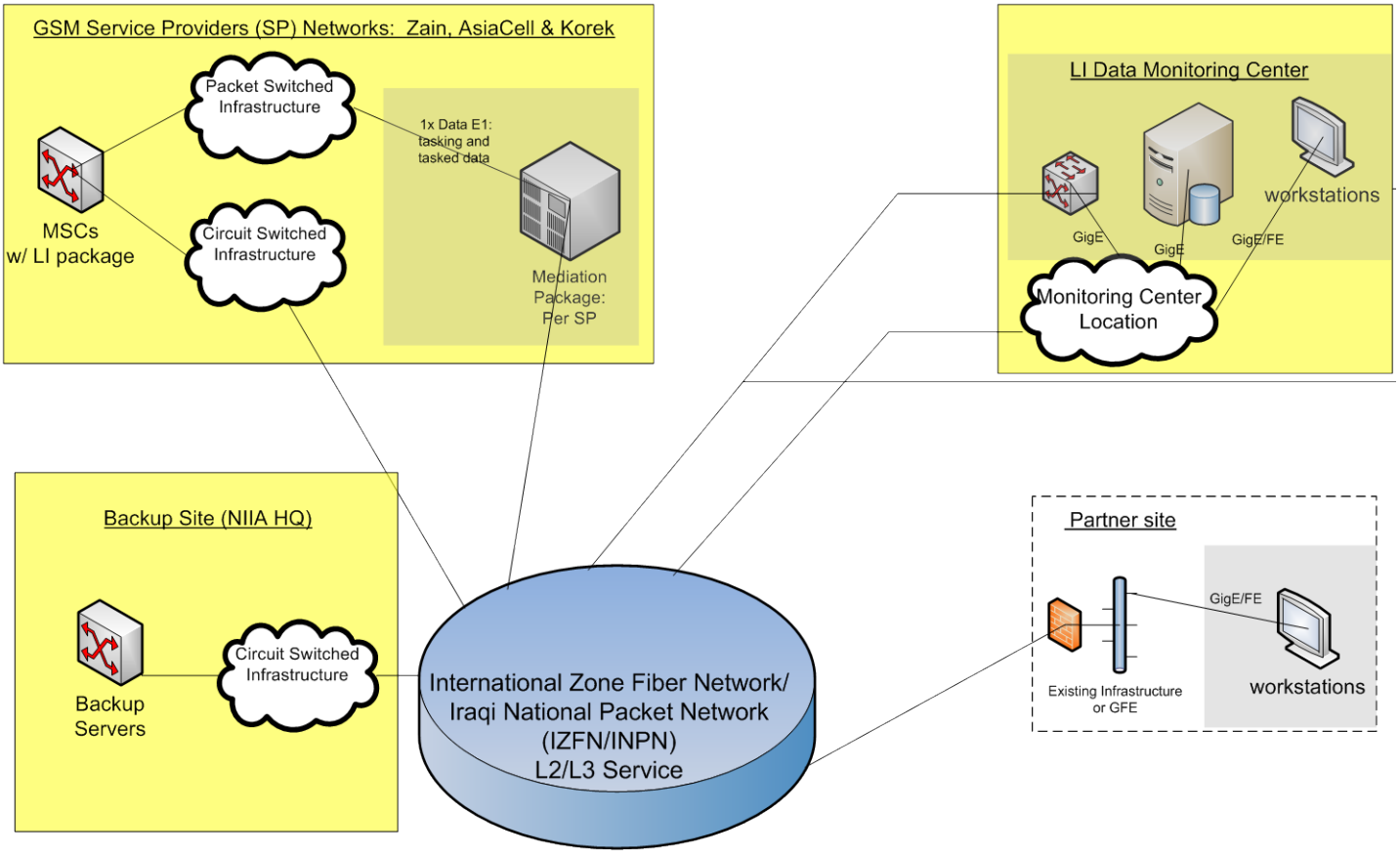
2.3.5 The Contractor shall coordinate planned utility outages with monitoring center location and backup site leadership at least five workdays in advance of the outage if the implementation necessitates disruption of service, (e.g., communications, electrical, or other utilities).

2.3.6 The Contractor shall procure and install the Mediation Package. The Mediation Package may be located at either the provider site in Baghdad, or at the monitoring center location, depending on agreements negotiated between the service providers and the Contractor.

2.3.7 At a minimum, the Contractor shall provide and install components to accept the appropriate number of data & voice E1s from each Service Provider. These will interface with the Mediation Package and the Mediation Package shall interface with the IZFN/INPN for transport to the LI data/monitoring center. The connection to the IZFN/INPN shall be Gigabit Ethernet. All traffic to and from each service provider shall be contracted onto a single GigE connection. The U.S.G. will provide the edge router and firewall to support this connection.

2.3.8 The Contractor shall make provisions for retentions of 60 days of data on hard drive and 90 days of archived data (magnetic or optical disk).

2.3.9 The Contractor shall provide and install all components shown below in Figure 1. The below diagram is an estimate of what is required to develop an LI capability at the monitoring center location.



2.3.10 The Contractor shall identify and supply the necessary components to interface with the IZFN/INPN, the LI data/monitoring center and the backup servers at NIIA Headquarters. Interfaces to the IZFN/INPN from the service providers can be electrical E1s, electrical E3, optical STM-1, or electrical/optical Gigabit Ethernet/Fast Ethernet (GigE/FE). Interfaces to the data/monitoring center location and backup site can be optical STM-1 or optical GigE/FE. Interfaces to the partner sites will be electrical GigE/FE. The U.S. Government shall provide GFE to connect the partner sites to the IZFN/INPN.

2.3.11 The installed LI system shall have the necessary capacity to support connecting each of the three GSM providers at current and projected PSTN, CDMA, and 3G capacity. This includes the necessary storage and processing power within the monitoring center, and enough circuit termination hardware for the E1s, plus any additional needed storage and processing power to support migration to 3G services.

2.3.12 The Contractor shall provide one hundred (100) workstations, but is only responsible for initially deploying ten (10) workstations within the monitoring center location. All equipment, with the exception of the backup server located at NIIA Headquarters, will be located at the monitoring center location even if it not assembled as a workstation.

2.3.13 The Contractor shall provide a consolidated document with all license numbers for software and all international warranties for equipment.

2.3.14 The Contractor shall provide a complete installation report in both Arabic and English.

2.3.15 The Contractor shall provide as-built drawings and documentation for the installation sites. All project documentation shall be provided in PDF format (Arabic and English) 2 weeks after the installation is complete.

2.3.16 The Contractor shall provide technical manuals in both English and Arabic for each equipment item installed.

2.3.17 The Contractor shall provide testing plans and logs for system acceptance.

2.3.18 During the period of performance, the Contractor shall provide a briefing at least once a month to U.S. Government personnel outlining the progress being made on training the Iraqi operators/analysts.

2.3.19 Contractor employees shall provide U.S. Government personnel with cellular phone numbers and email addresses so U.S. Government personnel can contact them to discuss training and technical issues during the period of performance.

2.4 Training Requirements

2.4.1 The Contractor shall submit a rough draft of a training plan in the proposal and a formal copy before installation begins. The training plan shall meet the following performance measures:

2.4.1.1 Defines manning recommendations, to include target skill sets, prior to installation. All personnel shall be experienced telecommunications technicians with 5 years of experience, and prior experience operating and maintaining lawful intercept systems.

2.4.1.2 Trains and certifies monitoring center location staff on day-to-day operations of the system within 1 month of installation completion.

2.4.1.3 Trains and certifies monitoring center location staff on basic system administration (user management, log management, etc) within 6 months of installation completion.

2.4.1.4 Trains and certifies monitoring center location staff on Tier 1 troubleshooting (entails local administration changes and basic operations solutions. Will pertain more to user/customer interactions and basic functionality) within 1 year of installation completion.

2.4.2 The Contractor shall train monitoring center location staff on the provisioning and deployment of the remaining 90 workstations within the monitoring center location or at partner sites.

2.5 Maintenance and Transition Requirements

2.5.1 During the period of performance, the Contractor shall update the installed systems with all applicable, licensed, firmware and software on a monthly basis.

2.5.2 During the period of performance, the Contractor shall respond to any issue/outage of components within two hours of notification and provide direct technical support and oversight during all remedial actions until the system is repaired. Remote and/or onsite support may meet the intent of this requirement.

2.5.3 All equipment/system passwords shall remain on-site at the end of the period of performance.

2.5.4 A warranty for workmanship and materials for all items furnished in accordance with this installation or any modification is required. The warranty shall be for a period of one (1) year from the acceptance of in-country installation and integration or acceptance or the manufacturer's standard warranty, whichever is longer. If the warranty is a commercial warranty and states that the warranty is not in effect within the borders of Iraq, then the working of the warranty shall be amended so that the warranty is extended to include the country of Iraq. Replacement parts and/or equipment shall be readily available during the warranty period to correct all system stoppages within 72 hours.

3 Labor Categories

Post-delivery, the Contractor shall provide a project management team to provide documentation, project status briefings, systems engineering, systems administration, terminal operations support, and mentoring/training Iraqi system operators for a period of one year after installation is complete. There is no required security clearance level for the installation and project management teams. The project management team responsibilities will be:

- Project Manager
    - Duty Schedule – (12 hrs/day x 6 days/week)
    - Qualifications – telecommunications professional with 10 years of experience, and 5 years of specific experience with lawful interception systems.
    - Responsible for interactions with GOI leadership and GSM operators to ensure the system is deployed and operated effectively.
    - Overall responsibility to ensure the system is installed and configured properly, with a specific emphasis on the monitoring center and tasking terminals.
    - Responsible for developing and implementing a training plan to ensure Iraqi operators know how to use the system.
    - Responsible for developing and implementing a training plan to ensure Iraqi engineers know how to maintain the system, and troubleshoot and correct any malfunctions.
- Project Engineer
    - Duty Schedule – (12 hrs/day x 6 days/week).
    - Qualifications – experienced telecommunications technician with 5 years of experience, and prior experience operating and maintaining lawful interception systems.
    - Responsible for ensuring the LI system is installed and configured properly, with a specific emphasis on the mediation system and back-end voice and data flows.
    - Responsible for ensuring the LI system remains operational.
    - On-call 24-7 to address system outages.
    - Responsible for supporting the project manager in implementing the training plan for the Iraqi engineers.
    - Help the Iraqi engineers who will maintain the system and develop a customer service focus.

4 Security

The Contractor shall provide for their employees' transportation and security requirements when transiting from the outside of Iraq to Baghdad International Airport.

5 Period of Performance

The period of performance shall consist of three parts. Equipment delivery shall be within 45 days After Date of Contract (A.D.C.) or sooner. Full system installation and integration shall be within 135 days A.D.C. or sooner. The period of performance for training and project management shall begin the day following full system installation and shall consist of a period of one year.