

**Statement of Work
For
Home Station Instrumentation Training System (HITS)
Live Training Transformation (LT2)
Interim Range System (IRS)**



**U.S. Army Program Executive Office for
Simulation, Training, and Instrumentation (PEO STRI)
12350 Research Parkway
Orlando, FL 32826-3276**

TABLE OF CONTENTS

1.0	SCOPE	1
1.1	Background	1
2.0	Applicable Documents	1
2.1	Department of Defense Standards	1
2.2	Other Government Documents, Drawings, and Publications	1
2.3	Live Training Transformation (LT2) Portal Products	2
3.0	LT2 IRS	2
3.1	Specifications	2
3.2	System Integration	2
3.3	Product Definition Data	2
3.4	Deviations	2
3.5	Electromagnetic Environmental Effects (E³)	2
3.6	Spectrum Compliance	3
3.7	Supportability Analysis and Logistics Management Information	3
3.8	Tools and Test Equipment	3
3.9	Technical Publications	3
3.10	Item Unique Identification (IUID) of Tangible Items	3
3.11	Spares	3
4.0	Programmatic	3
4.1	Post Award Conference	3
4.2	Integrated Baseline Review	4
4.3	Management Reviews	4
4.4	Integrated Master Schedule (IMS)	4
4.5	Program Management	4
4.6	Financial Management	4
4.7	Risk Management	4
4.8	Safety Assessment and Health Hazard Analysis	5
4.9	AT Awareness Training for Contractor Personnel Traveling Overseas	5
4.10	Access and General Protection/Security Policy and Procedures	5
5.0	Information Assurance (IA).....	5
5.1	Implementation	5
5.2	Verification	5
6.0	Fielding	5
6.1	Site Survey	6
6.2	Range Coverage Study	6
6.3	Fielding Acceptance Test Readiness Review (TRR)	6
6.4	Transportation/Shipping	6
6.5	Set Up and Initial Inventory	6
6.6	New Equipment Training (NET)	6
6.7	Fielding Acceptance Test	6
6.8	Warranty	7

7.0 Definitions of the LT2 IRS, and its Components, Assemblies, and Subassemblies7

7.1 The LT2 IRS consists of:7

7.2 Test Kit.....7

7.3 Individual Player Unit Radio7

7.4 Dismounted Installation Kit.....7

7.5 Vehicle Installation Kit.....7

7.6 Battery.....8

7.7 Battery Charger8

8.0 Acronyms8

9.0 Glossary8

**Statement of Work
For
Home Station Instrumentation Training System (HITS)
Live Training Transformation (LT2) Interim Range System (IRS)**

1.0 SCOPE

This Statement of Work (SOW) defines the work efforts for producing, managing, verifying, and fielding of the HITS LT2 IRS, hereafter referred to as IRS.

1.1 Background

The U.S. Army Program Executive Office Simulation, Training and Instrumentation (PEO STRI) has a requirement for producing and fielding the IRS for the Project Manager Training Devices (PM TRADE). IRS will provide the Instrumented Player Unit, Individual and Vehicle installation kits, and range infrastructure for LT2 training systems. The IRS will connect to the current and future LT2 Product Line Exercise Control (EXCON) hardware suites via the LT2 Player Unit <-> CTIA Common Message Set ICD.

2.0 Applicable Documents

The following documents of issue shown on the Document Summary List (DSL) form a part of this SOW to the extent specified herein. In the event of a conflict between documents referenced herein and the contents of this SOW, the contents of the SOW shall be the governing requirement.

2.1 Department of Defense Standards

The following DoD standards are available on the WWW at URL: <http://assist.daps.dla.mil/quicksearch/>

MIL-STD-130N	Identification Marking of U.S. Military Property
MIL-STD-31000	Technical Data Packages
MIL-PRF-49506	Appendix A and B Logistics Management Information
MIL-STD-40051-2A	Preparation of Digital Technical Information for Page-Based Technical Manuals (TMs)

2.2 Other Government Documents, Drawings, and Publications

- a. The following is available on the WWW at URL [http://www.apd.army.mil/AR 25-2](http://www.apd.army.mil/AR%2025-2) Information Assurance
- b. The following are available on the WWW at URL <http://www.dtic.mil/whs/directives/>

DODD 8500.01E	Information Assurance (IA)
DODI 8500.2	Information Assurance (IA) Implementation
DODI 8510.01	DoD Information Assurance Certification and Accreditation Process (DIACAP)
- c. The following is available on the WWW at URL www.acq.osd.mil/dpap/dars/dfarspgi/current/index.html DFARS 252.211-7003 Item Identification and Valuation
- d. The following is available on the WWW at URL <http://jtaonline.disa.mil/VJTA/index.jsp> DISR Department of Defense (DoD) Information Technology Standards
- e. The following are available at Business Opportunities Portal or by request from PEO STRI, ATTN: SFAE-STRI-KOL, 12350 Research Parkway, Orlando, FL 32826.
PEOSTRI Basic Accreditation Manual (BAM) dated 1 Sept 08
PRF-PT-00607 System Specification for the Home Station Instrumentation Training System (HITS) Live Training Transformation (LT2) Interim Range System (IRS)

2.3 Live Training Transformation (LT2) Portal Products

The following are available on the LT2 Portal at URL <https://www.lt2portal.org/>
 Specification Document for the Radio Frequency Identification (RFID) Tag Numbering Plan for the Live
 Training Transformation (LT2) Community, Version 1.0
 ICD Ver. 1.0.2 LT2 Player Unit <-> CTIA Common Message Set ICD

3.0 LT2 IRS

You shall provide the necessary resources, equipment and facilities to fabricate, integrate, deliver, install and test IRSs and perform all tasks as specified herein.

3.1 Specifications

The IRS shall meet the performance criteria specified in PRF-PT-00607.

3.2 System Integration

HITS LT2 IRS Specification PRF-PT-00607 provides the integration requirements between the IRS, TES and the LT2 Product Line.

3.3 Product Definition Data

You shall produce and maintain Product Definition Data (PDD) that accurately and completely depicts the IRS. You shall identify IRS subsystems capable of being procured independently such as towers, trailers, battery charging systems, installation kits and the like; utilize logistics analyses to identify IRS assemblies, and components to be repetitively procured as spares; and determine and document the performance requirements for each of these subsystems, assemblies and components to include the environment in which it must operate, interface and interchangeability characteristics, and methodology for verifying performance. For elements of the IRS developed with Government funding and for modifications to commercial and non-developmental IRS elements you shall develop, produce, and maintain a production level technical data package (TDP) IAW MIL-STD-31000 that provides design, engineering, manufacturing and quality assurance requirements information sufficient to procure or manufacture an interchangeable item that duplicates the physical and performance characteristics of the original product, without additional design engineering effort or recourse to the original design activity. For existing commercial and non-developmental IRS elements you shall develop, produce, and maintain commercial documentation IAW MIL-STD-31000 containing the engineering, and manufacturing information necessary to assemble and integrate these items into the IRS and verify performance. You shall utilize existing commercial drawings, documentation and specifications where possible. You shall obtain document numbers from the Government for the PDD elements you create under this contract. You shall not add prefixes or suffixes to the numbers. All unused numbers shall be returned upon completion of PDD preparation.

3.4 Deviations

You shall not change the IRS baseline – hardware or software – without the government’s permission. You shall provide to the government the justification for the change request, complete cost of the change and impacts if the government chooses not to accept the change.

3.5 Electromagnetic Environmental Effects (E³)

You shall ensure that the system electronic or electrical hardware configuration is not a source of electromagnetic interference (EMI) or a victim of E³ in the intended operational environment in which it is installed or at its

operational locations. You may assert compliance with specification requirements through provision of certificates of compliance and supporting documentation.

3.6 Spectrum Compliance

You shall provide at post award conference all information required for the Application for Equipment Frequency Allocation (DD-1494) to be used by the Government to determine whether or not the proposed system will interfere with other existing systems at training sites. .

3.7 Supportability Analysis and Logistics Management Information

You shall conduct repair level analyses, develop diagnostic, preventative maintenance and repair procedures, conduct facilities analyses, refine hardware and software maintenance and support concepts, and identify support resource requirements including required spares and support equipment.

3.8 Tools and Test Equipment

You shall identify all tools and test equipment required for the-installation, initialization, operation, and maintenance of the LT2 IRS. You shall provide any required unique tools and test equipment not otherwise available at time of fielding. Unique tools and test equipment do not include common hand tools and test equipment.

3.9 Technical Publications

You shall provide technical publications as required to operate and maintain the IRS. The operations and maintenance instructions shall accurately provide the operators and technicians with all the information needed to operate and keep the system in good working order. The instructions shall provide system and subsystem oriented instructions for installation, operation, maintenance, and testing. You shall describe cold start and system initialization processes for each system/subsystem. All tools, test equipment and consumable items required to accomplish any maintenance or installation shall be identified just prior to and as part of the task. Use of COTS manuals is encouraged but you shall review and change the manuals as required. All publications shall reflect the configuration of fielded hardware as documented in the product baseline. (DI-TMSS-80527C)

3.10 Item Unique Identification (IUID) of Tangible Items

You shall implement an Item Unique Identification of tangible items program in accordance with MIL-STD-130N. These requirements apply to developed and commercial items. You shall coordinate with the government and identify UID type, the UID to be used, and items requiring unique identification including embedded subassemblies, components and parts. You shall provide unique item identification or a DoD recognized unique identification equivalent, for all identified items delivered and you shall submit this data to the UID central registry. UID marking of items shall be both machine readable and human readable. (DI-MGMT-81804A)

3.11 Spares

You shall perform an analysis and recommend the range and quantity of spare and repair parts needed to initially support each fielded site under this contract. The list shall be submitted to the government for approval.

4.0 Programmatic

4.1 Post Award Conference

A post award conference shall be held at a mutually agreed to facility within 15 days after contract award. The conference shall introduce key participants with emphasis on top level management of the program, identify points

of contact and discuss both parties understanding of the scope of work, agree on metrics that will be used as management indicators, identify the partnering approach, and other contract issues.

4.2 Integrated Baseline Review

You shall participate with the government in the assessment of program risk and the degree to which the following have been established:

- a. Technical scope of work is fully included and is consistent with authorizing documents.
- b. Project schedule key milestones are identified and supporting schedules reflect a logical flow to accomplish the work.
- c. Resources (budget, facilities, personnel, skills, etc.) are available and are adequate for the assigned tasks.
- d. Tasks are planned and can be measured objectively relative to the technical progress.
- e. Rationales underlying the review are reasonable.
- f. Management processes support successful execution of the project.

4.3 Management Reviews

You shall conduct program reviews as required at your, subcontractor, vendor, or government facilities. A management review will occur approximately one month after each lot award. Tele-conferencing shall be the preferred way to conduct informal working meetings. You are responsible for providing visibility on the progress, performance, and status of major subcontractors.

4.4 Integrated Master Schedule (IMS)

You shall implement and maintain the contract IMS. All contract schedule information delivered or presented at program reviews shall originate from the IMS. The IMS shall address total program activities including activities performed by subcontractors. The IMS shall be updated to reflect accomplished activities and any changes in activity time. (DI-MGMT-81861)

4.5 Program Management

You shall provide the overall management and administrative effort necessary to ensure that the requirements of this contract are accomplished. You shall track program progress utilizing metrics.

4.6 Financial Management

You shall plan, budget, schedule, and control resources allocated to meet requirements of the contract. You shall document and track status of all appropriated funds associated with the contract to include payments, cancellations and invoices against each contract line item and sub line item. You shall identify elements of subcontracted work in the extended Contract Work Breakdown Structure (CWBS) and may propose changes to the CWBS to enhance its effectiveness in satisfying program objectives.

4.7 Risk Management

You shall implement schedule risk management process. You shall:

- a. Identify and inform the government immediately when you will not meet a delivery date.
- b. Develop mitigation plans to meet the delivery date.
- c. Recommend courses of action to the government which will return deliveries to schedule.

4.8 Safety Assessment and Health Hazard Analysis

You shall ensure the safety of the IRS and that equipment is safe for personnel to transport, install, operate, maintain, support and dispose. You shall identify hazards, assess the risk, track hazards, mitigate hazards, verify corrective actions have been implemented and verify hazards have been eliminated or reduced to acceptable risk levels. You shall provide Safety Release documentation for each vehicle platform listed in the IRS Specification paragraph 3.4.2.

4.9 AT Awareness Training for Contractor Personnel Traveling Overseas

All US based contractor employees and associated sub-contractor employees shall receive Government provided area of responsibility (AOR) specific AT awareness training as directed by AR 525-13.

4.10 Access and General Protection/Security Policy and Procedures

All contractor and all associated sub-contractors employees shall comply with applicable installation, facility and area commander installation/facility access and local security policies and procedures (provided by government representative). The contractor shall also provide all information required for background checks to meet installation access requirements to be accomplished by installation Provost Marshal Office, Director of Emergency Services or Security Office. All contractor workforce must comply with all personal identity verification requirements as directed by DOD, HQDA and/or local policy. In addition to the changes otherwise authorized by the changes clause of this contract, should the Force Protection Condition (FPCON) at any individual facility or installation change, the Government may require changes in contractor security matters or processes.

5.0 Information Assurance (IA)

You shall integrate Information Assurance (IA) into your engineering and management processes and ensure operational systems security in accordance with (IAW) DODD 8500.1E, DODI 8500.2, DODI 8510.01(DIACAP), AR 25-2, and the PEOSTRI Basic Accreditation Manual (BAM).

5.1 Implementation

You shall implement Information Assurance to address vulnerabilities and weaknesses inherent to the system being developed. You shall implement all Security Technical Implementation Guides (STIG) and IA security controls, as required for a Platform Information Technology (PIT) system, as directed by the government. You shall develop and deliver to the government, the required DIACAP documentation to accurately represent the system and its functionality, as directed by the government. You shall maintain IAVA & STIG compliance throughout the System Life Cycle. You shall provide to the government software update patches quarterly as required.

5.2 Verification

You shall verify that protective measures appropriately address each specific security requirement. You shall test the system and its security controls using Army approved IA tools to ensure they meet a level of acceptability to the Certification Authority in preparation for certification.

6.0 Fielding

You shall prepare, plan, and execute all fielding activities associated with the IRS. All fielding activities will be included in the Integrated Master Schedule (IMS) and changes to the same will be review by the IPT with final changes approved by the Government.

6.1 Site Survey

You shall participate in site survey(s) at each site at a time agreed upon by the government. The purpose of the survey is to discuss and confirm arrangements for the installation and to provide information on any modifications required at the installation site. You will provide a site survey report to the government documenting all issues within 30 days of the survey. (DI-MISC-81381)

6.2 Range Coverage Study

For each site deployment, you shall provide a coverage analysis study and recommended positions to deploy the IRS. The government shall provide one 20 Km by 20 Km or smaller training area and location of the LT2 EXCON. You shall provide the study at the TRR.

6.3 Fielding Acceptance Test Readiness Review (TRR)

For each deployment of an IRS system, you shall attend the TRR for the LT2 suite as requested by the government. The fielding of IRS and the LT2 suite will be a coordinated effort. The following shall be reviewed during the TRR:

- Evidence that the IRS hardware was produced IAW specifications
- A list of outstanding problem reports.
- Detailed test procedures.
- Resource conflicts
- Range Coverage Study (as required)

The exit criteria for the TRR are the formal Government approval of the test procedures.

6.4 Transportation/Shipping

You shall be responsible for the shipping the LT2 IRS to each fielding site.

6.5 Set Up and Initial Inventory

You shall set up and ensure that the installed IRS is functioning correctly. Afterward you shall assist with the conduct of a joint inspection and inventory of the system. In conjunction with a Government representative and the appropriate third party representative (Training Support Contractor (TSC)/LCCS Contractor), you shall conduct a physical inventory of Spares, Tools and Test Equipment, and consumables. Upon completion of the inventory, representatives shall sign a hardcopy of the inventory using Department of the Army (DA) Form 3161, Request for Issue or Turn-In, to ensure all required items were delivered and a baseline established. The contractor shall take necessary actions to facilitate transition of the system to the Army training support center Property Book Officer (PBO). The contractor shall generate the Department of Army (DA) Form 3161 documents required for the government to transfer the property. Furthermore, the contractor shall also prepare a catalogue of end item, sub systems and non expandable components of sub systems.

6.6 New Equipment Training (NET)

You shall provide NET training for operators and maintainers to the receiving organizations. This training shall be a self-contained course and provide detailed operational and maintenance knowledge of the entire IRS. You shall provide IRS operator and maintenance training manuals. (DI-SESS-81523B, DI-ILSS-80872)

6.7 Fielding Acceptance Test

You shall operate and support the IRS in the acceptance test of the HITS upon deployment to the requisite locations. If a Range Coverage Plan was provided, part of the Acceptance Test is validation of the plan. You shall provide the results of each test to the government. (DI-NDTI-80809B, DI-NDTI-80603A)

6.8 Warranty

You shall provide a warranty report and provide information on items under warranty (DI-SESS-81639)

7.0 Definitions of the LT2 IRS, and its Components, Assemblies, and Subassemblies

7.1 The LT2 IRS consists of:

- One (1) Network Control Center (NCC) (Saab P/N8870050111) .
- Two (2) Deployable Radio Base Station (DRBS) (Saab P/N8870050211) .
- 1162 Individual Player Unit Radio (IPUR) (Saab P/N8849022201). Each quantity of 36 delivered in a Storage Case, IPU (Saab P/N8854109501) with Table of Contents (Saab P/N8875809924).
- 867 IRS Dismount Kit (Saab P/N8849023104). Each quantity of 25 delivered in a Storage Case, Dismount Kit (Saab P/N8854109502) with a Table of Contents (Saab P/N8875809926).
- 295 IRS Vehicle Kit (Saab P/N8849023103) with Cable, MILES XXI Adapter (Saab P/N8849022320). Each quantity of nine (9) delivered in a Storage Case, Vehicle Kit (Saab P/N8854109503) with a Table of Contents (Saab P/N8875809925)
- 1734 Battery, 7.2V Lithium Ion (Saab P/N8870120411). Each quantity of 56 delivered in a Storage Case, Battery (Saab P/N8854109504) with a Table of Contents (Saab P/N8875809923)
- 12 Charger, Battery (Saab P/N8870117801).

7.2 Test Kit

IRS HITS Production Test Package (Saab P/N 8899119103). The Test Kit consists of the minimal IRS equipment needed to perform functional testing of the interoperability of the Saab DAN R5 network interoperability with the HITS EXCON, I-MILES, and the LVC-IA network. At a minimum, the equipment required is an antenna, base station, gateway, four IRS Player Unit Radios (IPUR) and accessory items required to create a functioning network infrastructure to transfer Multiple Integrated Laser Engagement System (MILES) Tactical Engagement Simulation (TES) data to the EXCON.

7.3 Individual Player Unit Radio

Individual Player Unit Radio (IPUR) Individual Player Unit Radio (IPUR) (Saab P/N8849022201). Each quantity of 36 delivered in a Storage Case, IPU (Saab P/N8854109501) with Table of Contents (Saab P/N8875809924). The IPUR meets the requirements IAW the IRS specification paragraph 3.3.

7.4 Dismounted Installation Kit

IRS Dismount Kit (Saab P/N8849023104). Each quantity of 25 delivered in a Storage Case, Dismount Kit (Saab P/N8854109502) with a Table of Contents (Saab P/N8875809926). The IRS Dismount Kit provides the accessories required to install the IPUR on personnel, to include: carrying case, cable to the TES, battery cable, etc IAW the IRS specification paragraph 3.4.1.

7.5 Vehicle Installation Kit

IRS Vehicle Kit (Saab P/N8849023103) with Cable, MILES XXI Adapter (Saab P/N8849022320). Each quantity of nine (9) delivered in a Storage Case, Vehicle Kit (Saab P/N8854109503) with a Table of Contents (Saab P/N8875809925). The IRS Vehicle Kit provides the accessories required to install the IPUR on combat and combat support vehicles, to include: installation brackets/cases, cable to the TES, battery cable (if needed), etc IAW the IRS specification paragraph 3.4.2.

7.6 Battery

Battery, 7.2V Lithium Ion (Saab P/N8870120411). Each quantity of 56 delivered in a Storage Case, Battery (Saab P/N8854109504) with a Table of Contents (Saab P/N8875809923). The Battery, 7.2V Lithium Ion meets the requirements IAW the IRS specification paragraph 3.4.2.1.

7.7 Battery Charger

Charger, Battery (Saab P/N8870117801). The Charger, Battery provides sufficient battery charging capability to charge 100 Dismounted Installation Kit batteries in 48 hours IAW the IRS specification paragraph 3.5.

8.0 Acronyms

BAM – Basic Accreditation Manual
 CTIA – Common Training Instrumentation Architecture
 CWBS – Contract Work Breakdown Structure
 DIACAP – DoD Information Assurance Certification and Accreditation Process
 DoD – Department Of Defense
 DSL – Document Summary List
 E³ – Electromagnetic Environmental Effects
 EXCON – Exercise Control
 GFE – Government Furnished Equipment
 GOTS – Government Off the Shelf
 HITS – Home Station Instrumentation Training System
 IA – Information Assurance
 IAVA – Information Assurance & Vulnerability Alert
 IAW – In Accordance With
 ICD – Interface Control Document
 IMS – Integrated Master Schedule
 IPR – Interim Program Review
 IPUR – IRS Player Unit Radio
 IRS – Interim Range System
 IUID – Item Unique Identification
 LT2 – Live Training Transformation
 MILES - Multiple Integrated Laser Engagement System
 NET – New Equipment Training
 PDD – Product Definition Data
 PEO STRI – Program Executive Office for Simulation, Training, and Instrumentation
 PIT – Platform Information Technology
 PM TRADE – Project Manager Training Devices
 RF ID – Radio Frequency Identification Tag
 SOW – Statement of Work
 STIG – Security Technical Implementation Guide
 TES – Tactical Engagement Simulation
 TRR – Test Readiness Review
 UID – Unique Identification

9.0 Glossary

HITS: Home Station Instrumentation Training System: LT2 Product that provides instrumentation support, command and control, battlefield simulation and After Action Review for Battalion and below live collective training events.