



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
HEADQUARTERS UNITED STATES ARMY MANEUVER CENTER OF EXCELLENCE  
1 KARKER STREET  
FORT BENNING, GEORGIA 31905-5000

ATZK-TD

19 MAR 2013

MEMORANDUM FOR RECORD

SUBJECT: Family of Improved Forward Looking Infrared (I-FLIR) System Training Plan (STRAP)

1. References:

- a. TRADOC Regulation 350-70, Army Learning Policy and Systems, 6 December 2011.
- b. Concept Development Document (CDD) for the I-FLIR, September 2012.
- c. Army Regulation 350-1, Army Training and Leader Development, 18 December 2009.

2. I hereby approve the I-FLIR Systems STRAP. A copy of this STRAP will be posted to the Central Army Registry within 30 days of the approval date.

3. Point of contact is Mr. Starr Berenbroick, Systems Training Branch, Training Development Division, Directorate of Training and Doctrine at DSN 835-8545, Com (706) 544-8545, or e-mail [starr.berenbroick@us.army.mil](mailto:starr.berenbroick@us.army.mil)



H. R. MCMASTER  
Major General, USA  
Commanding

Improved-Forward Looking Infrared (I-FLIR)  
(version2.0)

Date: 2013-03-22  
MCoE - Infantry & Armor School

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This System Training Plan (STRAP) is preliminary. Front end analysis (mission, task, job) is ongoing. MCoE - Infantry & Armor School will amend and update this STRAP as details solidify.

MCoE - Infantry & Armor School is the proponent for this STRAP. Send comments and recommendations directly to: Starr H Berenbroick

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## 1.0 System Description

- Improved - forward looking infrared (I-FLIR) sensor capability increases the Army's warfighting capabilities by enabling the Warfighter to better see and understand the battlefield during reconnaissance, surveillance, targeting, and security operations. It provides the Warfighter with an increased capability to rapidly detect, recognize, identify, and precisely locate entities at extended distances in all battlefield conditions, beyond the capabilities of the enemy. The interoperability of the system with current and future netted systems enables the immediate reporting of entities locations on the battlefield. This networked capability provides commanders and Warfighters with on time, actionable intelligence within their area of operations; significantly improving their combat effectiveness and survivability in the joint operating environment. Improvements will contribute to meeting the Joint Operating Concept (JOC) of Battlespace Awareness, Joint Integrating Concept (JIC) of Command and Control, and the Joint Functional Concepts (JFC) of Protection and Force Application. It also supports Army platform improvement efforts.
- I- FLIR systems will enhance target acquisition of obscured targets and overmatch enemy countermeasures (such as camouflaged targets, smoke, and electromagnetic interference) and will be a critical element in maintaining warfighting overmatch on the battlefield. Sensors are the eyes of the battlefield, giving commanders timely and accurate information to out-maneuver enemy forces while enhancing force protection and survivability through increased detection, recognition, identification, acquisition range, and improve target location. I-FLIR's higher image resolution enables Warfighters to better distinguish between combatants and non-combatants; helping to understand activities and intent while resulting in fewer misidentifications and fratricide incidents. Additionally, I-FLIR systems provides greater situational awareness and greater combat identification capabilities, enabling Warfighters to improve accuracy/responsiveness in reporting of units Priority Intelligence Requirements (PIRs), reduces fratricide, limit collateral damage, and protect civilian populace. Providing Warfighters with the enhanced ability to see first, understand first, act first, and finish decisively through wide area search, and very long-range target acquisition increases survivability and lethality. I-FLIR system is an integral component of future Joint warfighting concepts and is essential to the Joint Force's ability to dominate all operational environments.
- Initial Operational Capability (IOC). The first ground platform to host the new I-FLIR systems could be the Ground Combat Vehicle (GCV). Projected date for GCV IOC is 4th Qtr FY 2018. The GCV IOC is defined as a battalion - sized unit that successfully passes the initial operational test and evaluation (IOT&E).

## 2.0 Target Audience

- Soldiers, Noncommissioned Officers, and leaders assigned to a Brigade Combat Team (Heavy, Infantry, Stryker), Battlefield Surveillance Brigade (BfSB), Aviation Brigade, Intelligence, Surveillance and Reconnaissance Squadron, and organizations responsible for Base Perimeter Security operations equipped with platforms sporting the I-FLIR system will be trained to conduct full spectrum operations to meet the requirements of the Army in an era of Persistent Conflict.
- To meet that end, crew/operators, leaders, and maintainers will conduct individual and collective training of critical tasks, skills, and knowledge (individual through battalion). Training will be required of all platform drivers, crewman, company grade officers, and platform / system maintainers (system mechanics, fire control and armament repairers, radio operator-maintainers, and signal system support maintainers).
- Initial training for crewman, vehicle commanders, platoon leaders, and Additional Skill Identifier (ASI) producing courses will be conducted at the respective proponent school. Initial maintenance training will be conducted at the Ordnance School and the Maneuver Center of Excellence for affected MOSs. Active Army and Reserve Component (AA/RC) units will conduct sustainment training subsequent to receiving new equipment training.

Target Audience

MOS/ASI/AOC	AR	IN	Avn	FA	ADA	ENG	MP	ORD	SIG	CHE	AME	MI
						R				M	D	
<b>Initial Military Training</b>												
11A Infantry Officer		x										
11B Infantryman		x										
11C Indirect Fire Infantryman		x										
13A FA Officer				x								
13F Fire Support Specialist				x								
14A ADA Officer					x							



94F Computer Detection System Repairer									x			
MOS/ASI/AOC	AR	IN	Avn	FA	ADA	ENG R	MP	ORD	SIG	CHE M	AME D	INT EL

**NCOES**

11B Infantryman (SL 30&40)		x										
11C Mortar Man (SL 30&40)		x										
13F Fire Support Sergeant (SL 30&40)				x								
14S ADA (SL 30&40)					x							
15E30 Unmanned Aircraft System Repairer			x									
15J30/40 OH-58 Armament/Electrical/Avionics Systems Repairer			x									
15R30 Attack Helicopter Repairer			x									
15S40/40 OH-58D Helicopter Repairer			x									
15T30/40 UH-60 Helicopter Repairer			x									
15W30/40 Unmanned Aerial Vehicle Operator			x									
15Y30/40 Armament/Elec/Avionic Systems Repairer			x									
19K Armor Crewman (SL 30&40)	x											
19D Cavalry Crewman (SL 30&40)	x											
12B Combat Engineer						x						
31B Military Police (SL 30&40)							x					



915E Senior Automotive Maintenance WO								x				
913A Armament Systems Maintenance WO								x				
<b>MOS/ASI/AOC</b>	<b>AR</b>	<b>IN</b>	<b>Avn</b>	<b>FA</b>	<b>ADA</b>	<b>ENG</b>	<b>MP</b>	<b>ORD</b>	<b>SIG</b>	<b>CHE</b>	<b>AME</b>	<b>INT</b>
						<b>R</b>				<b>M</b>	<b>D</b>	<b>EL</b>
Functional Courses												
M1A1 Abrams Master Gunner (020-ASIA8)	x											
M1A2 SEP Master Gunner (020-ASIK8)	x											
Bradley Infantry Fighting Vehicle System Master Gunner (M2A3) (010-ASIJ3) I		x										
Mobile Gun System Master Gunner (Transition) (020-ASIR8) (19K)	x											
Stryker Maintenance Repairer (Armament) (643-ASIR4) (91K)								x				
Stryker Maintenance Repairer (610-ASIR4) (91B)								x				
CBRN Recon for Brigade Combat Teams (4K-F19/494-ASIL6)										x		
Mobile Gun System Commander (2E-SIR4/020-ASIR4)	x											
Mobile Gun System Crewman (020-ASIR4)	x											
Stryker Reconnaissance Vehicle Crewman (2E-SIR4/250-ASIR4)	x											
Stryker Maintenance Repairer (Automotive) (4E-AS-R4) (915E)								x				
Stryker Maintenance Repairer (Armament) (4L-AS-R4) (913A)								x				

### 3.0 Assumptions

- There will be no increase in aptitude requirements, force structure, operators, maintainers, or supporters. No additional personnel will be required to support this increment of I-FLIR.
- No new operator or maintainer MOS requirements are anticipated/required for the new I-FLIR systems.
- There will be no course growth associated with institutional training. I-FLIR training will replace current FLIR training while maintaining same number of Program of Instruction (POI) hours and Instructor Contact Hours (ICH).
- No new facilities are required to support this version of the I-FLIR.
- Institutional and unit training documents will require revision and upgrading.
- Training at the institution will begin when Initial Operational Capability (IOC) is complete. Units will sustain training subsequent to receiving New Equipment Training (NET).
- The I-FLIR manufacturer will provide operator/maintainer publications to support operational testing and fielding. The TRADOC proponent, U.S. Army Maneuver Center of Excellence (MCoE), will review instructional materials developed by the manufacturer for content and utility. CoEs which will contribute to this effort include the Aviation CoE (ACoE), Fires CoE (FCoE), Intelligence CoE (ICoE), Sustainment CoE (SCoE), and Maneuver Support CoE (MSCoE).
- The Material Developer will resource the I-FLIR NET Team and the Doctrine, Tactics, and Techniques (DTT) Team requirements to support operational testing, and fielding to the force.
- The Material Developer will resource Training and Doctrine Command's (TRADOC) participation in training development, Integrated Logistic Support Management Team meetings, in-process reviews (IPRs), post-fielding training effectiveness analysis (PFTEA), and contractor training in support of operational testing (OT), Instructor and Key Personnel Training (I&KPT), and NET.
- The Materiel developer will provide training materials in the Training Support Package (TSP) format for distributed Learning (dL) (Computer Based Instruction (CBI), Computer Managed Instruction (CMI), and Interactive Media Instruction (IMI), New Equipment Training (NET), institutional training, unit sustainment training, collective training, and embedded training. These materials will be reviewed and approved by the MCoE in collaboration with the ACoE, SCoE, FCoE, ICoE, and MSCoE prior to release. These materials will be developed using the analysis, design, development, implementation, and evaluation (ADDIE) approach

to training process IAW TRADOC Regulation 350-70 and developed using the Training Development Capability database.

- The Training Support Package (TSP) will be developed concurrently with the system hardware and software, validated prior to and be verified during the Initial Operational Test and Evaluation (IOT&E), be approved by the MCoE in collaboration with the ACoE, SCoE, FCoE, ICoE, and MSCoE, and will be ready for training 6 months prior to First Unit Equipped (FUE).
- Training equipment and materials identified in the NET Plan will be developed and available in time and in sufficient quantity to support test training. Institutional training materials and equipment will be available 12 months prior to any resident course start. Specific tasks to be trained will result from the proponent's (MCoE) review of the contractor-developed Logistic Support Analysis (LSA) data in collaboration with the ACoE, SCoE, FCoE, ICoE, and MSCoE.
- The Combined Arms Training Strategy (CATS) will describe the training resources required to train Brigade Combat Teams (BCT) and the capability of the TADSS in the strategy to support training. Use of this strategy will provide a preliminary DA recognized method to describe and quantify OPTEMPO and STRAC training resource requirements.
- The required resources, such as instructors, training developers, training devices, simulations and simulators, ranges, ammunition, and facilities identified in this document, will be made available to support and maintain I-FLIR training programs in the institution and within operational units.
- Maximum use of advanced instructional technologies will be made to provide Embedded Training (ET), distributed Learning (dL), and interactive media instruction training products - Level III. All dL products must be sharable content object reference model (SCORM) compliant
- ET will be an integral part of the I-FLIR training strategy for crew/operator and leader development within the institution and operational Army (AA/RC). ET will complement, but not replace standalone training devices (Advanced Gunnery Training System (AGTS), Close Combat Tactical Trainer (CCTT)).
- If a fully embedded training capability is found to be technologically infeasible or too costly, a suite of TADSS, both appended and stand-alone, will be required.
- Web based training products (IMI) must be compatible with the approved Army Learning Management System (ALMS).

## 4.0 Training Constraints

Constraints related to Manpower and Personnel Integration (MANPRINT) are for the most part still to be determined. Additional efforts will be made during the system development and demonstration phase, and as this system matures, more details will be added.

Constraint Type	Probable Impact	Mitigating Efforts
<b>Manpower</b>		
New Equipment Training	Insufficient number of instructors to conduct NET	Increase student to instructor ratios, increase training timeline
Institutional Training	Insufficient number of instructors to train the annual load	Increased reliance on contract instructors, increased student to instructor ratios
Doctrine&Tactics Training	Insufficient number of instructors to conduct DTT	Increased reliance on Virtual-Net
<b>Personnel</b>		
Personnel Capabilities	TBD	
Total number of personnel to be trained	Small training load will not produce instructor requirements to train a course	Slip course start dates, develop functional courses, use mobile training teams, go to two shifts
<b>Budgetary</b>		
Budgetary	Restricted vehicle movement (OPTEMPO) and Live fire	Increased reliance on ET and stand-alone TADSS
<b>Equipment</b>		
Training equipment availability	Students will not receive training on live vehicles	Increased reliance on TADSS for gunnery, maintainer, and maneuver training

Equipment density	Student to equipment ratios can't be met or maintained	Decrease class size, increase frequency, conduct two shifts
<b>Command Guidance</b>		
Unit and command-unique requirements	TBD	
ARFORGEN		
<b>Facilities</b>		
Training facility requirements	Training will not be supported as planned	
Maintenance facilities		
Ranges / Training Areas		
<b>System Safety</b>		
Safety hazards and restrictions	TBD	
Noise abatement requirements	TBD	
<b>Environmental</b>		
Environmental requirements	TBD	
<b>Support Services</b>		
Contractor support	System's failures degrade or halt training	CLS on TADSS, ET, and system maintenance
<b>Human Factors Engineering</b>		

Training constraints requiring resolution are:

(1) Providing embedded and stand-alone training devices that train or support the training of individuals, crews, maintainers and leaders. This includes both system and non-system TADSS.

(2) Providing training devices and other essential training products to the training centers and schools in time to prepare Soldiers, Warrant Officers and Officers for initial system fielding. These devices and products must maintain interoperability with the current force training systems.

(3) Delivery of technical information and data to satisfy training requirements for the unit sustainment training, institutional training, and self-development training. This includes the hardware, software, and communications systems that support the analysis, management, and development, distribution, and delivery of training, all of which are enablers of the Training Support System (TSS).

(4) Timely delivery of training support products that support Unit Set Fielding (USF) and include, but are not limited to, individual and collective Training Support Packages (TSP), multimedia course materials, dL courses and lessons, and other training material and products needed to train one or more individuals or collective tasks.

(5) Funding the costs of vehicle operation and OPTEMPO miles to support live training events. Live training events can be supplemented by use of TADSS, but sole use of TADSS and ET to sustain Soldier and unit readiness will not be acceptable.

(6) Funding the cost of live fire with the primary weapon system (due to the expected high cost of ammunition, kinetic energy, chemical energy (CE), or smart ammunition). Inexpensive training rounds or simulation must be available to permit requisite live fire sustainment and meet proficiency qualification standards for most live fire engagements.

## 5.0 System Training Concept

- General. The I-FLIR and Combat Identification Visual Training (CIVT) program requires knowledge of the vehicles characteristics, capabilities and limitations. Leadership training oriented toward the employment I-FLIR equipped platforms begins with new equipment training (NET) during fielding and is leveraged by incorporating operational and training lessons learned into institutional and unit sustainment training programs. The Soldier is the centerpiece behind development of the CIVT so I-FLIR training will focus on activities and exercises to help the Soldier use the system to enhance situational awareness, lethality, mission command, survivability, mobility, and sustainability. Platform specific new equipment training (NET) will include I-FLIR tasks which will be trained on the platform in a live and virtual environment (I-FLIR capabilities will be trained using the host platforms embedded training capability).
- Concept. Prior to I-FLIR platform institutional fielding, training will be analyzed, designed, and developed in accordance with (IAW) the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) process outlined in TRADOC Regulation 350-70. Key components of the I-FLIR and CIVT training strategy are: (1) Generating Force; (2) Operating Force; (3) training support products; (4) training devices; and (5) simulations, ranges, and targetry. The goal of the training strategy is to develop units employing I-FLIR equipped platforms / systems effectively on the battlefield. Operator NET (OPNET) will be developed by the Manufacturer with PM-FLIR, MCoE, and AvnCoE oversight. Field Level Maintenance NET (FLMNET) will be developed by the Manufacturer with PM-FLIR and the SCoE oversight. NET will be conducted by contractors under the supervision of the PM-FLIR and the variant proponent until NET has been completed.
- Institutional Training. Institutional training for the generating force includes incorporating I-FLIR tasks and the Combat Identification Visual Training program into existing programs of instruction (POIs) and training for I-FLIR crews/operators and maintainers. The impact on institutional training will not be fully realized until platforms, incorporating I-FLIR (GCV, Abrams, BFV, Stryker, JLTV, ASV, Kiowa Warrior, Apache Block III, UH-60M, Raven and Puma, and fixed or aerial observation platforms), are fielded. I-FLIR operator, maintainer, leader, and support personnel training will be conducted within the live, virtual, and constructive training domains while using a variety of training aids, devices, simulations, and simulators, gaming, to stimulate learning.
- Unit Training. Sustainment training for the operating force will be supported

by a combination of stand-alone training aids, devices, simulators, and simulations (TADSS). Sustainment training for platforms incorporating I-FLIR and CIVT skills, knowledge, and attributes will be supported by Training Support Packages (TSP) provided to the unit following NET along with I-FLIR training aids. I-FLIR training programs will be designed to minimize the impact on operational tempo and live firing consistent with unit readiness and based on DA Pam 350-38, Standards in Training Commission.

- Maintenance Concept. The systems will be supported by the Army's two level maintenance system, Field and Sustainment maintenance. Field level maintenance is primarily repair and return to user tasks while Sustainment maintenance consists of off-system repair and return-to-supply tasks.
- The training concept for AA and RC units is the same. Conducting new equipment and replacement qualification training for the RC may require additional time beyond the normal two-week annual training periods generally performed by the RC.

### **5.1 New Equipment Training Concept (NET)**

- When approved by a validated Capabilities Production Document (CPD), the materiel developer will provide a New Equipment Training Team (NETT). The NETT will provide Operator/Crew training, field maintenance and sustainment level maintenance training to active army and reserve component Combined Arms Battalions receiving combat platforms sporting the I-FLIR. Operator/Crew and maintainer training will be conducted at designated fielding sites per the Fielding Plan of each affected system. The strategy of conducting maintenance training at the fielding site will depend upon the cost and quantity of training aids required.
- The material developer will provide an exportable New Equipment Training Test Support Package (NETTSP) that will support NET for crew/operator, maintainer, leader, and unit sustainment training. The NETTSP will be developed concurrently with each applicable systems hardware/software, approved by MCoE, SCoE, FiresCoE, MSCoE, AvnCoE, IntelCoE, validated during operational testing and evaluation (IOT&E), and in place when system fielding begins. The NETTSP package will include a complete set of digitized training materials that include Interactive Electronic Technical Manuals (IETMS), task list, Program of Instruction, Lesson Plans, Student Guides, embedded training and a web based Interactive Media Instruction (IMI) Distributed Training Vehicle (IMI DTV) package on the operation and maintenance of the I-FLIR and CIVT. The embedded training and IMI DTV will be used in conjunction with the NET Fielding TSP to

facilitate unit sustainment training. The web-based program will continue until all applicable Army units (active army and reserve component) are fielded and personnel are trained.

- Leader Training (DTT) will be presented as part of NET and in conjunction with test events required for development of I-FLIR. DTT will be presented to the unit being fielded prior to, or immediately following OPNET, at the designated fielding site. Training may be presented using a dL, IMI format to reduce fielding time.

## **5.2 Displaced Equipment Training (DET)**

Not applicable.

## **5.3 Doctrine and Tactics Training (DTT)**

The US Army Maneuver Center of Excellence, is the training proponent and responsible for the development of Doctrine and Tactics training. MCoE will develop DTT through the review of applicable operational concepts and identify the need for such training to the Material Developer (PM FLIR) for inclusion within the NET PLAN (NETP). DTT will be presented as part of NET and in conjunction with test events required for development of the I-FLIR. DTT will be added to applicable Doctrinal manuals during the normal documented update period.

## **5.4 Training Test Support Package (TTSP)**

The Maneuver Center of Excellence (MCoE) is responsible for the development of a TTSP to support the training of test player personnel participating in operational testing. Organizations contributing to the TTSP include the ACoE, ICoE, FCoE, SCoE, and MSCoE. I-FLIR will be fielded IAW the USF process. The TTSP will reflect those Warfighting systems available for NET. There will be minimal changes, as approved by the proponent, in equipment or software in the period between the NET and the initial IOT&E. PM FLIR will provide updated instructional material and instruction to accommodate all changes. There will be a freeze on all hardware and software changes six months prior to IOT&E. Training developers from each proponent CoE will compile the TTSP after receipt of the NETTSP from the materiel developer and the contractor. The TTSP will consist of the following items:

- Initial submission will include:
  - Latest approved STRAP

- Test training certification plan.
- Training data collection requirements.
- Test Resource Support.

Final Submission will include:

- Latest approved STRAP.
- Training schedule.
- POI for operator, maintainer, and leaders.
- List of training devices and embedded training components.
- Ammunition, targets, and ranges for training.
- Combined Arms Training Strategies (CATS) with the Army training and evaluation program draft mission training plan or changes to existing military training plans.
- Target audience description.
- Draft Soldiers' training publications (STPs) or changes.
- Lesson plans.
- Critical task list.
- Field manuals (FM) or changes to FMs.

An informational copy of the approved TTSP will be forwarded to the Army Training Support Center (ATSC).

## **6.0 Institutional Training Domain**

### **6.1 Institutional Training Concept and Strategy**

General. The institutional training strategy for the I-FLIR system will depend on the density of systems fielded and the number of trained operators / crewmen needed to sustain units equipped with the system. Prior to the fielding of I-FLIR equipped platforms / systems, institutional training will be analyzed, designed, and developed IAW the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model and incorporated into TRADOC Schools for initial entry (to include transition training), and professional development courses. The I&KPT instructional materials that are produced, and used by the contractor will serve as the baseline for these training programs. Training will consist of programmed instruction and training for vehicle / system operators and maintainers. A mix of conventional training technologies (media, simulators, simulations) will support

## I-FLIR training.

- Concurrent with the development, testing, and fielding of I-FLIR, TRADOC institutional training will be developed and integrated into TRADOC Schools for initial entry, functional, and professional development courses. It will be based upon the I&KPT and NET training support packages developed and taught by the contractor. I-FLIR fielding will require integration training in TRADOC schools. The task analysis prepared by the contractor will serve as a guide in accomplishing this conversion. Institutional training will instill soldier and leader awareness of I-FLIR, its role in unit command and control, and its similarities and dissimilarities to other command and control systems already present in units. Individual I-FLIR training will consist of programmed instruction, practical exercises and training for operators, crews, and maintainers of organizations equipped with the system. I-FLIR instruction will be supported by a mix of conventional training methods, simulations, and simulators. Information on I-FLIR characteristics and differences from current FLIR systems will be integrated into combat, combat support and combat service support TRADOC schools where proponent units have I-FLIR integrated into their TO&E equipment.
- Changes to the institutional programs will be identified through review of Logistic Support Analysis (LSA), review of contractor developed training and technical material, and use of the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) process. Changes to tactics, techniques, and procedures for affected platforms must be integrated into existing resident and nonresident courses, instructional materials, and other distributed training products. These changing techniques and procedures will require detailed analysis and an extensive training development effort to alter professional development courses and structured unit training exercises in live, constructive, and virtual environments. Structured training support packages must be developed to support simulations that are similar to the Virtual Training Program (VTP) and those provided as part of the Force XXI Training Program.
  - U.S. Army Armor School (USAARMS). The USAARMS will integrate I-FLIR awareness and operator training into selected initial entry courses for 19D and 19K One Station Unit Training (OSUT), and AOC 19 Armor - Basic Officer Leader Course. Professional Military Educational courses include the AOC 19, Maneuver Captain's Career Course (MC3) 19D and 19K ALC, and 19D and 19K Senior Leader Course (SLC) will also receive familiarization and employment training on how I-FLIR changes the tank gunnery. The Maneuver Pre-Command Course (PCC) will include I-FLIR familiarization and the impact it has on the HBCT gunnery training program. I-FLIR training will also be offered through one of more functional courses designed to train Soldier's on the host platform.

- U.S. Army Infantry School (USAIS). I-FLIR training at the USAIS will be offered through one or more functional courses designed to train Soldier's on the host platform. Attendees will include the gunner, vehicle commander, and maintainers, on orders to a Ground Combat Vehicle or Heavy Brigade Combat Team. Additional instruction on I-FLIR, its employment, and other tactical considerations will be taught in the professional development officer and NCO courses. Practical exercises and simulation training should integrate I-FLIR and engagement techniques within a structured training exercise. MC3 and Infantry Maneuver PCC should include familiarization, advanced gunnery techniques, and the impact on platform gunnery and gunnery training program.
- U.S. Army Field Artillery School (USAFAS).
- U.S. Army Intelligence School (USAICS).
- U.S. Army Engineer School (USAES).
- U.S. Army Air Defense School (USAADASCH).
- U.S. Army Aviation Center of Excellence. (USAACES).
- U.S. Army Military Police School (USAMPS).
- U.S. Army Chemical School (USACBRNS).
- U.S. Army Ordnance School (USAOS).
- U.S. Army Signal School (USASigS).

Operator Training. Vehicle / system operators will receive CIVT during Initial Military Training (BCT/AIT). Crewmen will receive system specific, task based I-FLIR training in live and virtual environments, reinforced with simulations and simulators. Leaders will reinforce platform specific, task based training using gunnery trainers (AGTS, BATS, C-AGTS), and combat tactical trainers (CCTT, CATT, AVCATT).

Maintainer Training. Organizational (field level maintenance) maintenance for I-FLIR equipped platforms and systems will be conducted by the SigCoE and SCoE. Schools will incorporate critical tasks into their respective Programs of Instruction. Training may be hands-on, delivered in a virtual environment or a combination of both.

- Sustainment Center of Excellence.
- Signal Center of Excellence.

### **6.1.1 Product Lines**

#### **6.1.1.1 Training Information Infrastructure**

All training products and courseware design will be in accordance with the Total Army Training System (TATS) distributive learning program standards and standardized design tools. Individual training courses and materials developed to support the I-FLIR and CIVT will be developed and implemented as TATS courses/products.

#### **6.1.1.1.1 Hardware, Software, and Communications Systems**

The Training Development Capability database (TDC) will be used by all training developers, government and contract, to develop and store I-FLIR and CIVT tasks, training support packages (TSP), programs of instruction (POI), Soldier training products (STP), and other training materials.

#### **6.1.1.1.2 Storage, Retrieval, and Delivery**

Training products will be stored on the Reimer Digital Library (RDL) and within the Training Development Capability (TDC) database. The distributed learning (dL) repositories and the Army Learning Management Systems (ALMS) will house dL products for use within the institution, unit sustainment, and self-development.

#### **6.1.1.1.3 Management Capabilities**

Information and training management capabilities include: the Digital Training Management System (DTMS), the Army Learning Management System (ALMS), the Individual Training Resource Management (ITRM) System, and the Resident Institutional Training Management (RITM) program.

#### **6.1.1.1.4 Other Enabling Capabilities**

In addition to the capabilities described above, other Army capabilities include: Army Knowledge Online (AKO), Joint Training Information Management System (JTIMS), Command, Control, Communications, and Computers Intelligence, Surveillance, Reconnaissance (C4ISR), Global Information Grid (GIG), and Lifelong Learning.

#### **6.1.1.2 Training Products**

- Institutional training products (TSPs, lesson plans, POIs, distributed

learning products, task analysis, etc) will be developed in accordance with (IAW) TR 350-70, in the TDC database and format, and will be Sharable Content Objective Reference System (SCORM) compliant.

- I-FLIR and CIVT training must be integrated into current and future programmed simulators to maintain training continuity.

#### **6.1.1.2.1 Courseware**

Multimedia products must be task based, with data entered into the TDC database, and support sustainment training upon fielding of the I-FLIR. Products are to be tagged at the task level of detail in compliance with the Advanced Distributed Learning initiative. Web-based training that is compatible with and can be stored on the Reimer Digital Library and also compliant with SCORM and the Army Training Information Architecture (ATIA) is preferred.

### 6.1.1.2.2 Courses

Course Name	Course Number
<b>Operators</b>	
Armor Basic Officer Leader-Branch	2-17-C20
Abrams Armor Crewman	020-19K10
Cavalry Crewman	19D10-OSUT
Mobile Gun System Crewman	020-ASIR4 (19K)
Stryker Reconnaissance Vehicle Crewman	2E-SIR4/250-ASIR4
IERW OH58(R) TRACK Pilot	2C-15A/SIA3/152D
IERW UH-60M Pilot	2C-15A/SIB2/153D
IERW UH-60A/M Pilot	2C-15A/SIB2/3/153D/M
IERW AH-64D Pilot	2C-15A/SID5/152H
Unmanned Aerial Vehicle Operator	102-15W10
Unmanned Aerial Vehicle Operator	080-15W30-C45
Unmanned Aerial Vehicle Operator	080-15W40-C46
<b>Maintainers</b>	
Signal Support Systems Specialist	101-25U-10
M1A1 Abrams Tank System Maintainer	611-91A10
M1A1 Abrams Tank System Mechanic ALC	611-91A30-C45
Fire Control Repairer	113-91G10
Track Vehicle Mechanic	611-91H10
Tracked Vehicle Mechanic ALC	611-91H30-C45
CMF 91/94 Ordnance SLC	091-6-91-C46
Armament Repairer	643-91K10
Armament Repairer	091-91K10 (R)
Armament Repairer Supervisor ALC	643-91K30

Armament Repairer	643-91K30-C45 (91K)
Armament Repairer ALC	091-91K30-C45 (91K)
Stryker Systems Maintainer	610-91S10 (P)
Stryker Systems Maintainer ALC	610-91S30-C45 (91S)
Stryker Systems Maintainer SLC	610-91S40-C46 (91S)
Bradley Fighting Vehicle Systems Mechanic ALC	611-91M30-C45
M2/M3 BFV System Maintainer	611-91M10
Bradley Fighting Vehicle System Mechanic ALC	091-91M30-C45
Armament Repairer ALC	643-91K30-C45 (91F)
Armament Repairer ALC	643-91K30-C45 (91G)
Radio/COMSEC Repairer	101-94E10
Radio/COMSEC Repairer ALC	101-94E30-C45
Computer Detection System Repairer	198-94F10
Computer Detection System Repairer ALC	198-94F30-C45
Unmanned Aerial System Repairer	600-15E10
Unmanned Aerial System Repairer ALC	600-15E30-C45
Armored Security Vehicle - Field Level Maintainer	ASV-FLM
OH-58D Armament/Electronics/Avionics Systems Repairer	602-15J10 (OH-58D)
OH-58D Armament/Electronics/Avionics Systems Repairer	602-15J30-C45
OH-58D Armament/Electronics/Avionics Systems Repairer	602-15J30-C45 (MOD)
OH-58D Armament/Electronics/Avionics System Repairer	600-15J40-C46
AH-64D Attack Helicopter Repairer	600-15R20/30 AH-64D (T)
AH-64D Attack Helicopter Repairer ALC	600-15R30-C45 (AH-64D)
AH-64D Attack Helicopter Repairer ALC	600-15R30-C45 (AH-64D MOD)
AH-64D Attack Helicopter Repairer Supervisor SLC	600-15R40-C46
OH-58D Helicopter Repairer	600-15S10 (OH-58D)
OH-58D Scout Helicopter Repairer Supervisor ALC	600-15S30-C45 (OH-58D)

OH-58D Scout Helicopter Repairer Supervisor ALC	600-15S30-C45 (OH-58D) (MOD)
OH-58D Scout Helicopter Repairer Supervisor SLC	600-15S40-C46 (OH-58D)
UH-60A/L Helicopter Repairer	600-15T10
UH-60 Helicopter Repairer	552-15T10 (R)
UH-60 Helicopter Repairer Supervisor SLC	600-15T30-C45
UH-60 Helicopter Repairer Supervisor SLC	600-15T30-C45 (MOD)
UH-60 Helicopter Repairer Supervisor ALC	600-15T40-C46
AH-64D Armament/Electronics/Avionics Systems Repairer	646-15Y10
AH-64D Armament/Electronics/Avionics System Repairer Supervisor ALC	646-15Y30-C45
AH-64D Armament/Electronics/Avionics Systems Repairer	646-15Y2/3 (T)
AH-64D Armament/Electronics/Avionics System Repairer ALC	646-15Y30-C45
AH-64D Armament/Electronics/Avionics Systems Repairer ALC	646-15Y30-C45 (MOD)
AH-64D Armament/Electronics/Avionics System Repairer Supervisor SLC	646-15Y40-C46
<b>Leaders</b>	
Maneuver SLC (Infantryman)	0-11/19-C46 (Infantryman)
Maneuver Captain's Career Course	2-7/17-C22
Armor Crewman Advanced Leader's Course	020-19K30-C45 (19K)
Armor Crewman Advanced Leader's Course	171-19K30-C45 (19K)
Maneuver SR LDR (Armor Crewman)	809-0-11/19-C46 (19K)
Maneuver SR LDR (Armor Crewman)	0-11/19-C46 (19K)
Maneuver SLC (Indirect Fire Infantryman)	0-11/19-C46 (11C)
Infantry Pre-Command-Bradley Fighting Vehicle	2G-F79/010-F21
Infantry Pre-Command - Stryker Armored Vehicle	2G-F93/010-F29
Maneuver Pre-Command	2G-F108
Cavalry Scout ADV LDR	250-19D30-C45 (19D)

Cavalry Scout ADV LDR	171-19D30-C45 (19D)
Maneuver SR LDR (Cavalry Scout)	809-0-11/19-C46 (19D)
Maneuver SR LDR (Cavalry Scout)	0-11/19-C46 (19D)
Army Reconnaissance	2E-F137/521-F2
CBRN ALC	494-74D30-C45
CBRN SLC	494-74D40-C46
Mechanized Leader (M2A3)	2E-F201/010-F25
<b>WOES</b>	
Senior Automotive Maintenance Officer WO Advance Course	4-9-C32-915E
Armament Systems Maintenance WO Basic	4E-913A
Armament Systems Maintenance WO ADV	4-9-C32-913A
Automotive Maintenance WO Basic	4L-915A
Automotive Maintenance WO ADV	4-9-C32-915A
152H - AH-64D Attack Pilot	4D-SQIE (AH-64D) (152H)
152H - AH-64D Attack Pilot	4D-SQIG (AH64D) (152H)
152H - AH-64D Attack Pilot	2C-F183/SQIC (AH-64D/MOI)
152H - AH-64D Attack Pilot	2C-F197/SQIC (AH-64D)
153M - UH-60M Pilot	4D-SQIG (OH-58D/R)
152H - AH-64D Attack Pilot	2C-192/SQIC (AH-64D)
Aviation Maintenance Technician	4D-151A
Tactical Unmanned Aircraft System Operator WO	2G-15U
Aviation Maintenance Technician WOAC	2-1-C32-151A
152D - OH-58D Pilot	4D-SQIE (OH-58D)
152D - OH-58D Pilot	2C-F191/SQIC (OH-58D/R/MOI)
152D - OH-58D Pilot	2C-F197/SQIC (OH-58D/R)
IERW UH-60M Pilot	2C-F190/SQIC (UH-60M/MOI)
IERW UH-60M Pilot	2C-F196/SQIC (UH-60M)

Aviation Maintenance Technician	4D-SQIG (UH-60M)
Bradley Fighting Vehicle (BFV) Technician (915E)	4L-F6 (915E) RC
Stryker Maintenance Repairer (Armament)	4E-ASIR4 (913A)
Stryker Maintenance Repairer (Automotive)	4L-ASIR4 (915E)
M1A1 Main Battle Tank Maintenance Officers (915E)	4L-F5 (915E) (RC)
<b>Functional and ASI</b>	
Abrams Master Gunner Course (M1A1)	020-ASI-A8
Abrams Master Gunner Course (M1A2 SEP)	020-ASI-K8
Abrams MBT Tank Commander Certification Course (TC3)	2E-S13J020-ASI-K4
Mobile Gun System Master Gunner (Transition)	020-ASI-R8 (19K)
Mobile Gun System Commander	2E-SIR4/020 ASIR4 (19K)
BFV System Master Gunner (M2A3)	010-ASIJ3 (11B)
BFV A3 System Maintainer	643-ASIB9 (91M)
Stryker Maintenance Repairer (Armament)	610-ASIR4 (91K)
Stryker Maintenance Repairer	610-ASIR4 (91B)
Bradley Fire Support Vehicle (BFIST) Operator	250-ASID3
UH-60 Helicopter Repairer	600-ASIA9
Unmanned Aircraft System Operator (Shadow)	102-ASI7D (15W)
Unmanned Aircraft System Operator (Hunter)	102-ASI7E (15W)
Unmanned Aircraft System Operator (ERMP)	102-F127 (15W)
CBRN Recon for BCT	4K-F19/494-ASIL6
<b>Mobilization</b>	

### 6.1.1.2.3 Training Publications

Field Manuals	Publication Date

FM 3-20.15, TANK PLATOON	2/22/2007	
FM 3-20.21, HEAVY BRIGADE COMBAT TEAM (HBCT) GUNNERY	9/3/2009	
FM 3-20.21, CHG 1, CHANGE 1 TO FM 3-20.21	5/31/2010	
FM 3-20.151, THE MOBILE GUN SYSTEM PLATOON	11/22/2005	
FM 3-20.151, THE MOBILE GUN SYSTEM PLATOON (INCL CHG 1)	11/22/2005	
FM 3-20.151, CHG 1, CHANGE 1 TO FM 3-20.151	4/4/2007	
FM 3-21.21, THE STRYKER BRIGADE COMBAT TEAM INFANTRY BATTALION (INCL C-1)	4/8/2003	
FM 3-21.94, THE STRYKER BRIGADE COMBAT TEAM INFANTRY BATTALION RECONNAISSANCE PLATOON	4/18/2003	
FM 3-22.3, STRYKER GUNNERY	3/9/2006	
FM 3-04.126, ATTACK RECONNAISSANCE HELICOPTER OPERATIONS	2/16/2007	
FM 3-04.140, HELICOPTER GUNNERY (INCL CTrHG 1)	7/14/2003	
FM 3-04.140, CHG 1 CHANGE 1 TO FM 3-04.140	4/17/2006	
FM 3-04.155, ARMY UNMANNED AIRCRAFT SYSTEM OPERATIONS	7/29/2009	
FM 3-34.22, ENGINEER OPERATIONS - BRIGADE COMBAT TEAM AND BELOW	2/11/2009	
FM 3-34.170, ENGINEER RECONNAISSANCE	3/25/2008	
<b>Soldier Training Publications</b>		
STP 17-19D1-SM, SOLDIER'S MANUAL,	10/1/2009	

CALVARY SCOUT, MOS 19D, SKILL LEVEL 1		
STP 17-19D2-SM, SOLDIER MANUAL FOR MOS 19D, CAVALRY SCOUT, SKILL LEVEL 2	10/6/2009	
STP 17-19D3-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE, MOS 19D, CAVALRY SCOUT, SKILL LEVEL 3	1/28/2010	
STP 17-19D4-SM, SOLDIER'S MANUAL, MOS 19D, CAVALRY SCOUT, SKILL LEVEL 4	1/28/2010	
STP 17-19K1-SM, SOLDIER'S MANUAL M1A1 AND M1A2 SEP ARMOR CREWMAN MOS 19K SKILL LEVEL 1	1/13/2011	
STP 17-19K2-SM, SOLDIER'S MANUAL M1A1 AND M1A2 SEP ARMOR CREWMAN MOS 19K SKILL LEVEL 2	7/21/2010	
STP 17-19K3-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE M1A1 AND M1A2 SEP ARMOR CREWMAN MOS 19K SKILL LEVEL 3	1/10/2011	
STP 17-19K4-SM, SOLDIER'S MANUAL M1A1 AND M1A2 SEP ARMOR CREWMAN MOS 19K SKILL LEVEL 4	2/21/2011	
TC 3-20.21-1, INDIVIDUAL AND CREW LIVE-FIRE PREREQUISITE TESTING	7/21/2010	
STP 7-11B1-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE, MOS 11B, INFANTRY, SKILL LEVEL 1	8/6/2004	
STP 7-11B24-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE, MOS 11B, INFANTRY, SKILLS LEVEL 2, 3, AND 4	8/6/2004	
STP 1-15M13-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE FOR MOS 15M, UH-1 HELICOPTER REPAIRER, SKILL LEVELS 1, 2, AND 3	10/26/2004	
STP 5-00B14-SM-TG, MOS 00B, DIVER, SKILL LEVELS 1/2/3/4, SOLDIER'S MANUAL AND TRAINER'S GUIDE	12/2/2002	

STP 5-12B1-SM, SOLDIER'S MANUAL, MOS 12B, COMBAT ENGINEER, SKILL LEVEL 1	10/18/2002	
STP 5-12B24-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE, MOS 12B, COMBAT ENGINEER, SKILL LEVELS 2/3/4	3/28/2003	
STP 5-21D12-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE, MOS 21D, DIVER, SKILL LEVELS 1/2	4/30/2007	
STP 5-21D34-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE MOS 21D DIVER SKILL LEVELS 3/4	5/20/2010	
STP 19-31B1-SM, SOLDIER'S MANUAL, MOS 31B, MILITARY POLICE, SKILL LEVEL 1 (INCL C-1)	12/5/2007	
STP 19-31B1-SM, Change 1 Change 1 to STP 19-31B1-SM	3/11/2009	
STP 19-31B24-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE FOR MOS 31B, MILITARY POLICE, SKILL LEVELS 2/3/4	2/26/2007	
TM 3-39.31, ARMORED SECURITY VEHICLE	8/20/2010	
STP 9-91A14-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE FOR ABRAMS TANK SYSTEM MAINTAINER MOS 91A SKILL LEVEL 1, 2, 3, and 4	5/20/2010	
STP 9-91AII-OFS, SOLDIER'S MANUAL AND TRAINER'S GUIDE, OFFICER FOUNDATION STANDARDS (OFS), MAINTENANCE AND MUNITIONS MANAGEMENT (91A), COMPANY GRADE OFFICER'S MANUAL	10/23/2007	
STP 9-91H14-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE MOS 91H/91X, TRACKED VEHICLE MECHANIC, SKILL LEVELS 1, 2, 3, AND 4	3/1/2011	
STP 9-91M14-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE FOR M2/3 BRADLEY	5/20/2010	

FIGHTING VEHICLE SYSTEM MAINTAINER MOS 91M SKILL LEVELS 1, 2, 3, AND 4		
STP 9-94H14-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE, TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT (TMDE) MAINTENANCE SUPPORT SPECIALIST, MOS 94H, SKILL LEVELS 1-4	2/26/2007	
STP 9-94K13-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE, MOS 94K, APACHE ATTACK HELICOPTER SYSTEMS REPAIRER, SKILL LEVELS 1, 2, AND 3	12/7/2007	
STP 8-68W13-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE, MOS 68W, HEALTH CARE SPECIALIST SKILL LEVELS 1, 2 AND 3 (INCL C-1)	4/15/2009	
STP 11-25U14-SM-TG, SOLDIER'S MANUAL AND TRAINER'S GUIDE, MOS 25U, SIGNAL SUPPORT SYSTEMS SPECIALIST, SKILL LEVELS 1, 3, AND 4	2/23/2010	
<b>Training Circulars</b>		
TC 7-9, INFANTRY LIVE-FIRE TRAINING	9/30/1993	
TC 7-21, STRYKER DRIVER TRAINING	12/1/2006	
TC 1-228, AIRCREW TRAINING MANUAL, OH 58-A, KIOWA HELICOPTER	6/13/2006	
TC 1-238, AIRCREW TRAINING MANUAL, ATTACK HELICOPTER, AH-64A	9/23/2005	
TC 1-248, AIRCREW TRAINING MANUAL, OH-58D, KIOWA WARRIOR	4/12/2007	
TC 1-251, AIRCREW TRAINING MANUAL ATTACK HELICOPTER AH-64D (INCL CHG 1)	9/14/2005	
TC 1-251, CHG 1 CHANGE 1 TO TC 1-251	5/28/2007	
TC 1-600, UNMANNED AIRCRAFT SYSTEMS COMMANDER'S GUIDE AND AIRCREW	8/23/2007	

TRAINING MANUAL		
TC 1-611, SMALL UNMANNED AIRCRAFT SYSTEM AIRCREW TRAINING MANUAL	8/2/2006	
TC 3-04.7, ARMY AVIATION MAINTENANCE	2/2/2010	
TC 3-17, COMBAT IDENTIFICATION (CID) TRAINING INTEGRATION	11/6/2007	

#### **6.1.1.2.4 Training Support Package (TSP)**

- PM - FLIR will produce TSPs to support Instructor and Key Personnel Training (I&KPT) and NET.
- Proponent training developers will ensure that new tasks are developed IAW TRADOC Regulation 350-70 via the Training Development Capability tool.
- Proponent schools will produce a Training Test Support Package (TTSP) for affected MOSs and AOCs.
- Service schools and Centers of Excellence will coordinate with the PM - FLIR for the development of Individual and Collective TSPs which will be designed to support effective training for operators, maintainers, and leaders within the institution.

#### **6.1.1.3 TADSS**

System specific TADSS will not be developed to support I-FLIR training. TADSS proponents, in conjunction with the TADSS materiel developer, must consider the necessity of integrating I-FLIR functionality into their collective training devices and simulations. Of immediate interest for upgrade are virtual simulators such as the Close Combat Tactical Trainer (CCTT), the Reconfigurable Vehicle Tactical Trainer (RVTT), Stryker Mobile Gun System (MGS) Advanced Gunnery Training System (AGTS), Stryker MGS Table Top Advanced Gunnery Training System (MGS TAGTS), Stryker Embedded Training System, Abrams and Bradley Embedded Training Systems, the Abrams Conduct of Fire - Advanced Gunnery Training System (C-AGTS) and Bradley Conduct of Fire Trainers (COFT-E), the Advanced Gunnery Training System (AGTS), the Bradley Advanced Training System (BATS), and system specific driver trainers (Abrams, Stryker, etc). I-FLIR functionality must also be added to the Abrams and Bradley HOTs and desktop trainers.

I-FLIR functionality must be explored to facilitate Modeling and the development of virtual, constructive, and gaming systems to promote training across the three training domains.

##### **6.1.1.3.1 Training Aids**

Not Applicable

##### **6.1.1.3.2 Training Devices**

Not Applicable

### 6.1.1.3.3 Simulators

The following simulators must be analyzed and upgraded to support increased functionality provided by the I-FLIR system.

Description	NET	Institution				
		Armor	Infantry	Aviation	Field Artillery	ADA
Abrams Advanced Gunnery Training Systems (AGTS)		X				
Bradley Advanced Gunnery Training System (BATS)		X	X			
Abrams Conduct of Fire - Advanced Gunnery Training System (C-AGTS)		X				
Bradley (M2/M3A2) Conduct of Fire Trainer (COFT-E)		X	X		X	X
Stryker Mobile Gun System (MGS) Advanced Gunnery Training System (AGTS)		X				
Stryker MGS Table Top Advanced Gunnery Training Systems (MGS TAGTS).		X				
AH-64 Longbow Crew Trainer (LCT)				X		
MQ-1 Institutional Mission Simulator (IMS)				X		
Abrams - Hands-on		X				

Turret Trainer						
Bradley - Hands-on Turret Trainer		X				
Modeling for Constructive Training and Gaming		X	X	X	X	X

#### 6.1.1.3.4 Simulations

The following simulations must be analyzed and upgraded to support increased functionality provided by the I-FLIR system. PEO-STRI must consider the need or impact of Modeling for use by constructive and g

Description	NET	Institution					
		Armor	Infantry	Aviation	Field Artillery	ADA	MP
Maneuver:		X					
Abrams CCTT		X					
Bradley CCTT							
AVCATT				X			
Embedded Training:							
Abrams Embedded Training Capability	X	X					
Bradley Embedded Training Capability	X	X			X	X	X
Stryker Embedded Training Capability	X	X					
Ground Combat Vehicle Embedded Training Capability	X						



#### **6.1.1.3.5 Instrumentation**

I-FLIR systems shall be integrated into Combat Training Center (CTC) instrumentation as applicable. Live Force-on-Force (FOF) training at home station, local training areas, maneuver CTC, and deployed training sites shall be required to validate the ability of units to employ I-FLIR within the force.

#### **6.1.1.4 Training Facilities and Land**

I-FLIR equipped platforms (GCV, Abrams Tank, BFV, Stryker, JLTV, ASV, Kiowa Warrior, Apache Block III, UH60M, Raven, Puma, Persistent Surveillance Systems, and LRAS3 Lite) will conduct training using the same ranges, training areas, and classrooms as currently used during institutional training. Additional capabilities offered by I-FLIR, example cooperative engagements, will require new TTP, doctrine, and range requirements.

##### **6.1.1.4.1 Ranges**

- The integration of I-FLIR with its new capabilities, example - cooperative engagements, will require new TTP, doctrinal updates, and gunnery tables which will have an impact on the design of current multi purpose range complex (MPRC) and digital multi purpose range complex (DMPRC).
- Ranges required to support institutional training on I-FLIR equipped platforms include the following:
  - 17859, Digital Multipurpose Training Range (DMPTR).
  - 17860, Digital Multipurpose Range Complex (DMPRC).
  - 17863, Tank/Fighting Vehicle Stationary Gunnery Range.
  - 17864, Multipurpose Training Range (MPTR).
  - 17865, Automated Multipurpose Training Range (MPTR).
  - 17866, Tank/Fighting Vehicle Platoon Battle Run (TABLE XI AND XII).
  - 17867, Multipurpose Range Complex-Light (MPRC-L), Automated.
  - 17868, Multipurpose Range Complex-Heavy (MPRC-H), Automated.
  - 17954, Wheeled Vehicle Drivers Course.
  - 17955, Tracked Vehicle Drivers Course.
  - 17997, MOUT Collective Training Facility (Large).

#### **6.1.1.4.2 Maneuver Training Areas (MTA)**

Maneuver Training Areas required to support institutional training on I-FLIR equipped platforms include the following:

- 17710, Maneuver/Training Area, Light Forces.
- 17720, Maneuver/Training Area, Heavy.

#### **6.1.1.4.3 Classrooms**

Classrooms required to support institutional training on I-FLIR equipped platforms include the following:

- 17120, General Instructional Building.
- 17132, General Item Repair Instructional Building.
- 17133, Vehicle Maintenance Instructional Building.
- 17136, Automation-Aided Instructional Building.
- 17139, Covered Training Area.
- 17211, Simulator Building (Non-Motion-Based) (AGTS, CCTT, EST 2000).

#### **6.1.1.4.4 CTCs**

The use of Combat Training Centers does not apply to the Institutional Training Domain.

#### **6.1.1.4.5 Logistics Support Areas**

Logistics Support Areas required to support institutional training on the I-FLIR system include the following:

- Storage and staging areas for training products and systems, both classified and unclassified.
- Training Support Centers.

#### **6.1.1.4.6 Battle Command Training Centers (BCTC)**

MTCs are a vital component of Home Station Training. MTCs must be leveraged to

insure battalion and especially company and below collective or leader training for cooperative engagements is trained and reinforced.

#### **6.1.1.5 Training Services**

The institutional training domain requires the following management, acquisition, and general support services in order to implement the training concept and system training strategy.

##### **6.1.1.5.1 Management Support Services**

- Information management services:
  - Reimer Digital Library (RDL).
  - Courseware management services.
  - University of Mounted Warfare.
  - ACCP management.
  - TATS-C management.
  - Multimedia courseware management.
  - Distributed learning (dL) management.

Requirements management services:

- TADSS requirements documentation.

Devices management services:

- Fielded devices inventory/sustainment and management.
- Logistics Support Concept: Operator maintenance for the TADSS shall be performed by assigned instructors/operators (I/O). All other maintenance will be performed by the contractor under a contract logistics support (CLS) contract for the entire TADSS life cycle. The materiel developer in coordination with PEO STRI will be responsible for planning, programming, budgeting, and executing CLS support IAW AR 700-17. CLS contracts will require that repair parts peculiar to the TADSS be acquired by their contractor prior to delivery. Provisioning of parts for TADSS will be performed by the contractor. Technical data and publications will be required for all TADSS-particular items, and operator manuals will be prepared IAW MIL-M-7298.

Configuration management and upgrades/modifications of the TADSS, including

hardware/software, will be the responsibility of the material developer for the life cycle of the TADSS system. TADSS changes will be incorporated concurrently with changes to the actual system, to ensure that the TADSS simulates the correct function in response to the performance of selected tasks. A New Equipment Training (NET) program will be developed by the contractor for each TADSS as a Train-the-Trainer or Train the I/O course of instruction. The CLS package must be available for testing prior to initial operational capability (IOC).

Communicative technologies management:

- Department of the Army Multimedia/visual.
- Information Production and Distribution Program (DAMPIDDP) management.
- Electronic Multimedia Information Capability (EMIC) management.
- Visual information /Training Support Center VI/TSC management.

#### **6.1.1.5.2 Acquisition Support Services**

Acquisition support services are required for dL XXI contract management services

#### **6.1.1.5.3 General Support Services**

General Support services are required for:

- Distribution and replication services.
- Video production services.
- TADSS development, procurement, distribution, and sustainment.
- Model development for constructive and gaming simulations.

#### **6.1.2 Architectures and Standards Component**

##### **6.1.2.1 Operational View (OV)**

- The Institutional Architecture begins with the New Equipment Training Test Support Package (NETTSP) developed by the Program Manager. The NETTSP contains instruction on performing operator and maintainer tasks on I-FLIR as well as any TTP developed by the institution's Combat Developer/Training Developer, associated with the employment of the new item. The NETTSP is handed off to the institution(s), where the Directorate of Training and Doctrine, in the case of the Maneuver Center of Excellence (MCoE), provides the package to

their Training Development Division for refinement and development of the training support system used in the institution.

- Training Development Division, DODT, will use the NETTSP to revise existing POIs for USAARMS and USAIS. Soldier Training Products will be developed, given to Course Management Branch, the distributed Learning (dL) element, for media formatting, and then made available for Self-Development training. Collective Training products will be developed or updated, incorporating TTP, and revising any CATS.
- The Doctrine Division, Directorate of Training and Doctrine, MCoE, will incorporate the developed TTP in the updates to Armor and Infantry BCT doctrinal manuals.
- Institutional training on I-FLIR equipped platforms will begin with the completion of FUE (Ground Combat Vehicle, 4th Qtr FY 2019).
- PM FLIR will transfer the NETTSP to the Maneuver Center of Excellence (MCoE), and CoEs working in collaboration with MCoE. They include: Aviation Center of Excellence (ACoE), Sustainment Center of Excellence (SCoE), Fires Center of Excellence (FCoE), Maneuver Support Center of Excellence (MSCoE), and Signal Center of Excellence (SigCoE).

#### **6.1.2.2 Systems View (SV)**

Within the LVC&G-Integrated architecture, I-FLIR equipped platforms will interact as a live entity, conducting maneuver and live fire digital gunnery, with virtual and constructive TADSS in a seamless, synthetic environment. The goal is to produce a multi-grade, multi-echelon training events that maximize leadership opportunities and increases the frequency of each student's experience in all types of training.

#### **6.1.2.3 Technical View (TV)**

The I-FLIR equipped platforms will support system-to-system compatibility with the following:

- Joint Technical Architecture - Army (JTA-A).
- Common Operating Environment (COE).
- Installation Information Infrastructure Architecture (I3A).
- High Level Architecture (HLA).

- Army Training Information Architecture (ATIA).
- Common Training Instrumentation Architecture (CTIA).
- Live, virtual, Constructive-Integrated Architecture (LVC-IA).
- Gaming
- Standards and specifications for TSS components and subcomponents (e.g., standards and specs for ranges, targetry, classrooms, etc.).
- Sharable content object reference model (SCORM).

### **6.1.3 Management, Evaluation, and Resource (MER) Processes Component**

- MER process components, both internal and external drivers, guide the development, maintenance, and sustainment of the TSS and are described below.
- A post-fielding training effectiveness analysis (PFTEA) will be conducted by the proponent, approximately 1-year following FUE, to determine if the I-FLIR and CIVT self development training strategy is adequately supported. Resourcing the training support system enablers will fall upon the PM-FLIR for resourcing.

#### **6.1.3.1 Management**

- Where possible the I-FLIR systems and CIVT will use facilities and support infrastructure currently required by the host platform. Training development will focus on producing products that are capable of being used both in the institution and in the operational training domain and focused only on combat critical tasks.
- Students and instructors will be asked to routinely evaluate training events and products to determine how best to improve the quality and efficiency of instruction and training events to provide the best quality training with the least expenditure of resources.

##### **6.1.3.1.1 Strategic Planning**

The development and fielding of the I-FLIR systems and CIVT supports Army Transformation, Army Modernization, and Training Transformation and is consistent with the guidance found in:

- National Defense Strategy.
- Joint Vision 2020.

- The Army Plan and other Service Plans.
- Future Force documentation.
- TRADOC supporting plan to the Army Transformation Campaign Plan (ATCP).
- TSS Strategic Plan (when published).
- TSS Program Strategy Formulation (guidance to be published).

#### **6.1.3.1.2 Concept Development and Experimentation (CD&E)**

Not Applicable

#### **6.1.3.1.3 Research and Studies**

Not Applicable

#### **6.1.3.1.4 Policy and Guidance**

The documents listed below apply to the design, procurement, and use of the I-FLIR system:

- AR 350-1 and AR 350-38.
- TRADOC Regulations 350-70 and 71-20.
- TRADOC Pamphlet 71-20.
- Command Training Guidance.
- Training Doctrine Manuals (FM 7-0, 7-1).
- LOGSA Pamphlet 700-3, Total Package Fielding.

#### **6.1.3.1.5 Requirements Generation**

This STRAP supports the CDD to which it is attached.

#### **6.1.3.1.6 Synchronization**

The fielding of I-FLIR equipped platforms, systems, and CIVT must be synchronized with ongoing programmed upgrades to the Abrams tank, Bradley Fighting Vehicle, Stryker, design and development of the Ground Combat Vehicle, JLTV, Persistent Surveillance Systems, and UAVs.

#### **6.1.3.1.7 Joint Training Support**

### **6.1.3.2 Evaluation**

Unresourced. TRADOC policy no longer resources Post Fielding Evaluation Teams from the schools. However, given sufficient funding, a post-fielding training evaluation will be conducted to ensure I-FLIR and CIVT trained Soldiers meet operational requirements. An evaluation team may observe unit operations and sustainment training and conduct interviews, surveys and complete questionnaires to determine if the proponent is meeting the training needs of the force. If funding is not available, other methods such as mail-out questionnaires/surveys, TNET, and/or telephonic interviews will be used to gather needed data. The results of these visits or surveys will be provided to the appropriate training development organization and will serve as a basis for updating and revising institutional, unit, and individual training strategies, programs, instructional materials, and products. All training follow-up evaluations must be directed and supported by the Commandant/Assistant Commandant of each proponent school.

#### **6.1.3.2.1 Quality Assurance (QA)**

QA plans will be used IAW each installation's QA plan. Each QA Office (QAO) will use proven techniques to determine the quality of training provided by the institution. External evaluations will focus on the use of tasks trained, the proper application of those tasks, and identification of tasks not trained but needed. Internal evaluations will focus on the presentation of the tasks at the institution, the course content, and the presentation of material by the instructor. QAO will be responsible for conducting any Post Fielding Training Effectiveness Analysis (PFTEA). Observations will be reported to respective DOT for corrective actions.

#### **6.1.3.2.2 Assessments**

As part of the evaluation phase of the SAT process, Post Fielding Training Effectiveness Analysis (PFTEA) will be conducted. The purpose of this PFTEA will be to determine how effectively and efficiently is the institution at meeting user training requirements for the I-FLIR system and CIVT. The findings will be used to provide lessons learned information on the training development effort associated with future weapon systems and/or product improvement.

- Other assessment tools will be used to include:
- Training evaluation and analyses.
- Monthly status reports.

#### **6.1.3.2.3 Customer Feedback**

The following tools will be used collect customer feedback:

- Electronic media for surveys, help desks, collaboration.
- Interviews.
- Questionnaires.

#### **6.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)**

The Maneuver Center of Excellence will leverage the Center for Army Lessons Learned (CALL) and the Battle Command Knowledge System (BCKS) databases for new TTPs as well as conducting face to face interviews with units/individuals returning from theater to ensure training programs and instruction remain current and relevant.

#### **6.1.3.3 Resource**

Life cycle cost. Life cycle or total ownership costs are expressed in threshold and objective values in the base year and dollar-level used. They are simply stated as FY 12 dollars.

Program Affordability. The affordability includes:

- The funding required by fiscal year over the fiscal year to date (FYDP) for RDTE, procurement and sustainment (operations and support, manpower, etc.).
- The dollars are partially programmed and the remaining are reasonably expected to be available.
- The remaining unfunded requirement (UFR).
- DOTMLPF costs outside the program (APB) - none.
- Source of funding. I-FLIR is funded in the EE-PEG.

PM FLIR accounted for \$2.5M per year in Operations and Maintenance Army (OMA) dollars for I-FLIR training, (CIVT (ROC-V)). No specific dollar amounts were designated for TADDS in Procurement Army (PA) funding. The rationale being that a B-Kit simply must only interface with the platform A-Kit which includes TADDS support from the platform PM. The appropriate platform PM will develop this as part of system integration with the A-Kit and TADDS training will be done as a system at the platform level accounting for TADDS training and funding.

## **7.0 Operational Training Domain**

### **7.1 Operational Training Concept and Strategy**

The sustainment of individual, crew and unit skills (collective training) will be based on the use of live, virtual, constructive, and gaming training. Unit training to sustain individual and collective task/skill proficiency will be based on optimizing the use of emerging (embedded training) technology with-in the host platform. Embedded Training (ET) associated with I-FLIR will be achieved using the Combat Identification Visual Training capability.

Live FOF training may employ embedded sensors and a multiple mode laser. FOF training will be reinforced in the close combat tactical trainer and combined arms tactical trainer (AVCATT) while FOT training is exercised and practiced in a system specific gunnery training system (Abrams- Advanced Gunnery Training System (AGTS) or COFT-AGTS, Bradley Advanced Gunnery Training System (BATS), the Stryker MGS Advanced Gunnery Training System (AGTS) and Stryker MGS Table Top Advanced Gunnery Training System (MGS TAGTS). I-FLIR will include a high fidelity Combat Identification Visual Training (CIVT) training capability which will be embedded on the host platform. CIVT will provide a crew/operator sustainment training capability for the recognition of combat vehicles. A companion CIVT mobile application will be available for off platform training. Commanders will validate the ability of their unit to employ their combat platform (Abrams, BFV, GCV, Stryker, CROWS equipped platforms, fixed and rotary wing aircraft within the force and to support sustainment training and mission rehearsal needs. Training will be conducted by unit commanders in accordance with revised Combined Arms Training Strategy (CATS) / Mission Training Plan, Standards in Training Commission (STRAC), Technical Manuals, Soldiers Manuals, and Field Manuals.

#### **7.1.1 Product Lines**

Input from the TSS estimate was used for each applicable product line supporting operational training.

##### **7.1.1.1 Training Information Infrastructure**

Hardware, software, communications systems and other enabling capabilities that support operational training are identified below.

###### **7.1.1.1.1 Hardware, Software, and Communications Systems**

[See paragraph 6.1.1.1.1.](#)

#### **7.1.1.1.2 Storage, Retrieval, and Delivery**

[See paragraph 6.1.1.1.2.](#)

#### **7.1.1.1.3 Management Capabilities**

[See paragraph 6.1.1.1.3.](#)

#### **7.1.1.1.4 Other Enabling Capabilities**

[Refer to paragraph 6.1.1.1.4.](#)

#### **7.1.1.2 Training Products**

Operational training is the same as for institutional training with the exception that POIs and resident course training will not be used within units. Individual and collective / crew tasks will be trained to both the active army and reserve component organizations. There will be no difference in training content between active army and reserve components.

##### **7.1.1.2.1 Courseware**

Courseware which provides skills, knowledge, and attributes to I=FLIR operators and maintainers will be developed and made available through the Army's Distributed Learning (dL) portal.

##### **7.1.1.2.2 Courses**

TATS courses - TBD.

##### **7.1.1.2.3 Training Publications**

[Refer to paragraph 6.1.1.2.3.](#)

#### **7.1.1.2.4 TSP**

Refer to paragraph 6.1.1.2.4.

#### **7.1.1.3 TADSS**

See paragraph 6.1.1.3 for a discussion on TADSS requirements.

##### **7.1.1.3.1 Training Aids**

Not Applicable

##### **7.1.1.3.2 Training Devices**

Not Applicable

##### **7.1.1.3.3 Simulators**

See paragraph 6.1.1.3.3 for a discussion on Simulators.

##### **7.1.1.3.4 Simulations**

See paragraph 6.1.1.3.4 for a discussion on Simulations.

##### **7.1.1.3.5 Instrumentation**

Instrumentation is system specific requirement and is contained in the appropriate System Training Plan (STRAP).

#### **7.1.1.4 Training Facilities and Land**

Must support platform specific ( see paragraph 2.0 , Target Audience) training requirements that support live, virtual, and gaming domains.

##### **7.1.1.4.1 Ranges**

Ranges required by systems equipped with the I\_FLIR sensor system include:

- 17859, Digital Multipurpose Training Range (DMPTR).
- 17860, Digital Multipurpose Range Complex (DMPRC).

- 17861, Tank/Fighting Vehicle Scaled Gunnery Range (1:30 and 1:60).
- 17862, Tank/Fighting Vehicle Scaled Gunnery Range (1:5 and 1:10).
- 17863, Tank/Fighting Vehicle Stationary Gunnery Range.
- 17864, Multipurpose Training Range (MPTR).
- 17865, Automated Multipurpose Training Range (MPTR).
- 17866, Tank/Fighting Vehicle Platoon Battle Run (TABLE XI AND XII).
- 17867, Multipurpose Range Complex-Light (MPRC-L), Automated.
- 17868, Multipurpose Range Complex-Heavy (MPRC-H), Automated.
- 17901, Combined Arms Collective Training Facility (CACTF).
- 17997, MOUT Collective Training Facility (Large).

#### **7.1.1.4.2 Maneuver Training Areas (MTA)**

[Refer to paragraph 6.1.1.4.2](#) for a discussion on MTAs.

#### **7.1.1.4.3 Classrooms**

- 17119, Organizational Classroom.
- 17140, Army Reserve Center Building.
- 17142, National Guard/Reserve Center Building.
- 17180, National Guard Readiness Center.

#### **7.1.1.4.4 CTCs**

- Mission Command Training Program (MCTP).
- Combat Maneuver Training Center (CMTC).
- Joint Readiness Training Center (JRTC).
- National Training Center (NTC).

In addition to the CTCs identified above, the following list of ranges is provided in order to identify technical and safety specifications:

- 17859, Digital Multipurpose Training Range (DMPTR).
- 17860, Digital Multipurpose Range Complex (DMPRC).
- 17864, Multipurpose Training Range (MPTR).

- 17865, Automated Multipurpose Training Range (MPTR).
- 17866, Tank/Fighting Vehicle Platoon Battle Run (TABLE XI AND XII).
- 17867, Multipurpose Range Complex-Light (MPRC-L), Automated.
- 17868, Multipurpose Range Complex-Heavy (MPRC-H), Automated.
- 17901, Combined Arms Collective Training Facility (CACTF).
- 17997, MOUT Collective Training Facility (Large).

#### **7.1.1.4.5 Logistics Support Areas**

- Storage and staging areas for training products, systems, and fielding of new equipment, both classified and non-classified.
- Training Support Centers.

#### **7.1.1.4.6 Battle Command Training Centers (BCTC)**

MTCs are a vital component of Home Station Training. MTCs must be leveraged to insure battalion and especially company and below collective and leader training for cooperative engagements is trained and reinforced.

#### **7.1.1.5 Training Services**

Services required within the operational training domain include management support, acquisition support, and general support.

##### **7.1.1.5.1 Management Support Services**

[Refer to paragraph 6.1.1.5.1](#) for a discussion on Management Support Services.

##### **7.1.1.5.2 Acquisition Support Services**

Not Applicable

##### **7.1.1.5.3 General Support Services**

Not Applicable

#### **7.1.2 Architectures and Standards Component**

### **7.1.2.1 Operational View (OV)**

[See paragraph 6.1.2.1](#) for a discussion on the Operational View.

### **7.1.2.2 Systems View (SV)**

Within the LVCG-IA architecture, I-FLIR equipped platforms will interact as a live entity, conducting maneuver and live fire digital gunnery, with virtual and constructive TADSS in a seamless, synthetic environment. The goal is to produce multiple training events that maximize leadership opportunities and crew interaction.

### **7.1.2.3 Technical View (TV)**

TV for the Institutional training and Operational training domains are the same, [see paragraph 6.1.2.3](#).

## **7.1.3 Management, Evaluation, and Resource (MER) Processes Component**

### **7.1.3.1 Management**

[See paragraph 6.1.3.1](#).

#### **7.1.3.1.1 Strategic Planning**

[See paragraph 6.1.3.1.1](#).

#### **7.1.3.1.2 Concept Development and Experimentation (CD&E)**

Not Applicable

#### **7.1.3.1.3 Research and Studies**

Not Applicable

#### **7.1.3.1.4 Policy and Guidance**

[Refer to paragraph 6.1.3.1.4](#).

#### **7.1.3.1.5 Requirements Generation**

[See paragraph 6.1.3.1.5.](#)

#### **7.1.3.1.6 Synchronization**

[See paragraph 6.1.3.1.6.](#)

#### **7.1.3.1.7 Joint Training Support**

[See paragraph 6.1.3.1.7.](#)

#### **7.1.3.2 Evaluation**

##### **7.1.3.2.1 Quality Assurance (QA)**

[Refer to paragraph 6.1.3.2.1.](#)

##### **7.1.3.2.2 Assessments**

[Refer to paragraph 6.1.3.2.2.](#)

##### **7.1.3.2.3 Customer Feedback**

[Refer to paragraph 6.1.3.2.3.](#)

##### **7.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)**

[Refer to paragraph 6.1.3.2.4.](#)

#### **7.1.3.3 Resource Processes**

Resources required to support operational training are contained in the Combined Arms Training Strategy (STRAC) and Standards in Training Commission (STRAC) guidance.

### **8.0 Self-Development Training Domain**

## **8.1 Self-Development Training Concept and Strategy**

This strategy applies to AA/RC enlisted, noncommissioned officer, warrant officer, and commissioned officer. The Program Manager will develop and field a web-based self-development course for system operators (gunners and vehicle commanders). The I-FLIR based CIVT capability will include training and testing to support the Skill Level 1 for vehicle identification.

### **8.1.1 Product Lines**

#### **8.1.1.1 Training Information Infrastructure**

Self-Development training products will be planned, prepared, and developed IAW the following operational and technical Architectures

as applicable: Global Information Grid (GIG), ATIA, High Level Architecture (HLA) for simulations, and Common Training Instrumentation Architecture (CTIA). I-FLIR self-development products will leverage web-based technology to interface with the training infrastructure via the Tactical Internet (TI), a subnet of the TI or other secure network. All training materials developed by the MATDEV will be developed in the Training Development Capability (TDC) database. The MATDEV will be provided TDC as Government Furnished Software (GFS). All self-development products will be SCORM compliant.

##### **8.1.1.1.1 Hardware, Software, and Communications Systems**

Current hardware, software and communications systems will support the delivery of Self-Development products.

##### **8.1.1.1.2 Storage, Retrieval, and Delivery**

Training products will be stored on the Reimer Digital Library (RDL) and within the Training Development Capability (TDC) database. The distributed Learning (dL) repositories and the Army Learning Management Systems (ALMS) will house products used for self-development. Maneuver Center of Excellence proponent courseware will be maintained and available to soldiers through the Army Learning Management System (ALMS).

### **8.1.1.1.3 Management Capabilities**

See [paragraph 6.1.1.1.3](#) for information pertaining to Management Capabilities.

### **8.1.1.1.4 Other Enabling Capabilities**

See [paragraph 6.1.1.1.4](#) for information pertaining to Other Enabling Capabilities.

## **8.1.1.2 Training Products**

### **8.1.1.2.1 Courseware**

A level three interactive web based training product will be available through all online military knowledge centers.

### **8.1.1.2.2 Courses**

Level three courses (courseware) to be developed by the Product Manager include:

- Combat Identification Visual Training
- OPNET
- FMNET
- Leader NET

### **8.1.1.2.3 Training Publications**

A list of training publications, that will require updating to support I-FLIR systems, [is contained in paragraph 6.1.1.2.3](#).

### **8.1.1.2.4 Training Support Package (TSP)**

- A TSP to support the design/development of a web based IMI training package for the Combat Identification Visual Training will be developed/updated by the materiel developer. The TSP will include modeling for the constructive and gaming environment.
- The I-FLIR will also require updates to existing TSPs that address new or revised

functionality and training capabilities for the following systems:

- Abrams M1A2 SEP v2
- BFV
- Stryker
- Ground Combat Vehicle - IFV
- JLTV
- ASV
- Apache Block III
- Kiowa Warrior
- UH-60M
- Puma
- Raven
- CROWS
- Ground Surveillance System

### **8.1.1.3 Training Aids, Devices, Simulators and Simulations (TADSS)**

See paragraph [6.1.1.3](#) for TADSS.

#### **8.1.1.3.1 Training Aids**

Not Applicable

#### **8.1.1.3.2 Training Devices**

Not Applicable

#### **8.1.1.3.3 Simulators**

Not Applicable

#### **8.1.1.3.4 Simulations**

Not Applicable

#### **8.1.1.3.5 Instrumentation**

Not Applicable

#### **8.1.1.4 Training Facilities and Land**

Not Applicable

#### **8.1.1.5 Training Services**

##### **8.1.1.5.1 Management Support Services**

Management support services will include information management services, courseware management services, requirements management services, and communicative technologies management services. These services will be managed by Maneuver Center of Excellence, as requested.

##### **8.1.1.5.2 Acquisition Support Services**

[See paragraph 6.1.1.5.2.](#)

##### **8.1.1.5.3 General Support Services**

General Support services are required for Distribution and replication services.

#### **8.1.2 Architectures and Standards Component**

##### **8.1.2.1 Operational View (OV)**

Information pertaining to the self-development training domain is contained in [paragraph 6.1.2.1.](#)

##### **8.1.2.2 Systems View (SV)**

Not Applicable

##### **8.1.2.3 Technical View (TV)**

Not Applicable

#### **8.1.3 Management, Evaluation, and Resource (MER) Processes Component**

A post fielding training assessment will be conducted by the proponent to determine if the I-FLIR self-development training strategy is adequately supported approximately 1-year following FUE. Resourcing the training

support system enablers will fall upon the PM for FLIR.

### **8.1.3.1 Management**

The staff training estimate in support of I-FLIR self-development training will focus on the most efficient use of existing resources

and precisely identify and quantify any expected shortfalls. Training development will focus on producing products that are

capable of being used both in the institution and in the operational training domain and focused only on combat critical tasks. Students

will be asked to evaluate training events and products, on a routine basis, to determine how best to improve the quality and efficiency of

instruction and training events to provide the best quality training with the least expenditure of resources.

#### **8.1.3.1.1 Strategic Planning**

[See paragraph 6.1.3.1.1](#) for a discussion on Strategic Planning requirements.

#### **8.1.3.1.2 Concept Development and Experimentation (CD&E)**

Not Applicable

#### **8.1.3.1.3 Research and Studies**

Not Applicable

#### **8.1.3.1.4 Policy and Guidance**

For a discussion on Policy and Guidance [see paragraph 6.1.3.1.4](#).

#### **8.1.3.1.5 Requirements Generation**

This STRAP supports the CDD to which it is attached.

#### **8.1.3.1.6 Synchronization**

Support for the Self-Development Training Domain will come from products designed and developed for the Institutional and Operational Training Domains.

### **8.1.3.1.7 Joint Training Support**

Not Applicable

### **8.1.3.2 Evaluation**

Self-Development Domain evaluation will consist of self-assessment and examination results of training lessons, where applicable.

#### **8.1.3.2.1 Quality Assurance (QA)**

#### **8.1.3.2.2 Assessments**

As part of the evaluation phase of the SAT process, a Post Fielding Training Effectiveness Analysis (PFTEA) will be conducted. The purpose of this PFTEA will be to determine how effectively and efficiently I-FLIR is meeting user training requirements. The findings will be used to provide lessons learned information on the training development effort associated with the self-development training domain.

#### **8.1.3.2.3 Customer Feedback**

Feedback from Soldiers using Self-Development products will be collected using electronic media, ALM and Warrior University help desk, and on-line interviews.

#### **8.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)**

Centers and Schools will leverage the lessons learned database maintained by the Center for Army Leadership (CAL) as well as conducting face to face interviews with units/individuals returning from theater to ensure training programs and instruction are current/relevant.

### **8.1.3.3 Resource Processes**

Resources to support self-development training are imbedded in [paragraph 6.1.3.3](#).

**A Milestone Annex**

<b>TRAINING DEVELOPMENT MILESTONE</b>		PAGE 1 OF 1 PAGE		REQUIREMENTS CONTROL
<b>SCHEDULE - SHEET A</b>		S		SYMBOL
SYSTEM: I-FLIR	ACAT: III	OFFICE SYMBOL: ATZB-TDT-N	AS OF DATE: 29 Nov 2011	
POINTS OF CONTACT	NAME	OFFICE SYMBOL	TELEPHONE	
MATERIEL COMMAND	John P. Parker	PM FLIR	(703) 704-0727	
TRADOC PROPONENT				
TCM:				
CD:	Martin Plummer	ATZB-CIK	(706) 626-7844	
TD:	Starr Berenbroick	ATZB-TDT-N	(706) 544-8545	
ATSC:	CPT Joseph L. Jackson	ATIC-DSM	(757) 878-0557	
SUPPORTING PROPONENTS:				
Aviation CoE:	Robert Story	ATZQ-TDT-N	(334) 255-9655	
Sustainment CoE:	Tim Durbin	ATCL-TS	DSN: 539-1206	
Fires CoE:	Richard Van Horn	ATSF-DE	(580) 442-4280	
Signal CoE:	Catherine Collins		(706) 791-6918	
Military Police	Dan O'Brian	(573) 563-8178		
ITEM	DATE	RESPONSIBLE AGENCY/POC	TELEPHONE	
MNS:				
SMMP:				
MRD:	Steven Peralta	ATZB-CIK	(706) 626-0982	
ILSP:				
TTSP:	Starr Berenbroick	ATZB-TDT-N	(706) 544-8545	

QQPRI :

BOIP :

NETP :

COMMENTS :

Individual Training



5. Digitized camera-ready copy (CRC) submitted.

6. Subcourse material ready for replication/distribution.

**Field Manuals (FMs)**

Milestone:

Date

1. Requirements identified.

2. Draft FM changes validated.

3. FM outlines approved.

4. FM coordinating draft completed.

5. Print/digitization request initiated.

6. Approved digitized CRC submitted.

7. Replication/distribution completed.

**Army Training Literature**

Note: Includes the Soldiers' Manual (SM), Trainers' Guide (TG), and CATS/MTPs products.

Milestone:

Date

1. Analysis completed.

2. Draft SM, CATS / MTP, and TG.

3. ATSC staffing.

4. Digitized/CRC submitted.

5. Replication/distribution completed.

**Interactive Multimedia Instruction (IMI)/Distance Learning**

Milestone: \_\_\_\_\_ Date \_\_\_\_\_

1. Requirements identified and submitted for approval.

2. Requirements approved by ATSC and TRADOC.

3. Resources identified.

4. Courseware developed and validated.

5. Master materials to ATSC for replication and distribution.

6. Replication/distribution completed.

**Training Effectiveness Analysis (TEA)**

(Conducted in-house, by contract, Training Development and Analysis Activity [TDAA], TRADOC Analysis Center [TRAC], or Program Manager [PM])

Milestone: \_\_\_\_\_ Date \_\_\_\_\_

1. TEA during

capabilities development.

2. TEA updated for Milestone Decision Review A.

3. TEA updated for Milestone Decision Review B.

4. TEA updated for Milestone Decision Review C.

5. Post-Fielding TEA (PFTEA) planned.

**Army Visual Information  
Production and  
Distribution Program  
(DAVIPDP)**

Milestone:

Date

1. High risk tasks and jobs identified.

2. Storyboards validated.

3. DAVIPDP requirements submitted to ATSC.

4. Requirements approved by DA.

5. Production initiated.

6. Replication/distribution completed.

**Training Aids, Devices,  
Simulators, and  
Simulations (TADSS)**



2. Identification of construction requirements completed.

3. Construction requirements submitted to MACOM.

4. Requirements validated and updated.

5. Supporting requirements identified and availability coordinated.

6. Installation and other construction requirements submitted to MACOM.

7. Refined construction requirements and range criteria forwarded to MACOM, IMA, Chief of Engineers

8. Construction initiated.

**Training Ammunition**

Milestone:

Date

1. Ammunition identified.

2. Initial ammunition requirements validated.

3. Requirements included in the ORD.

4. Ammunition item developed.

- 5. Validation and test completed.
- 6. Ammunition requirements identified in the ITP.
- 7. Requirements provided to installation/MACOM manager.
- 8. Requirements included in DA Pam 350-38.
- 9. Production entered.

**Training Equipment**

- |            |      |
|------------|------|
| Milestone: | Date |
| 1.         |      |
| 2.         |      |

**Training Services**

- |                                |      |
|--------------------------------|------|
| Milestone:                     | Date |
| 1. Contractor Logistic Support |      |
| 2. Contractor NET Support      |      |
| 3. Contractor DET Support      |      |

<b>TRAINING DEVELOPMENT MILESTONE SCHEDULE - SHEET B</b>				PAGE 1 OF 1 PAGES				REQUIREMENTS CONTROL SYMBOL							
SYSTEM: I-FLIR															
TRAINING PACKAGE ELEMENT/PRODUCT															
LEGEND:	MILESTONES BY QUARTER														
	FY13			FY15				FY17				FY18			
	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Individual Training Plan	x														
Course Administrative						x									
Resident POI to TOMA										x					
Instructor & Key Personnel Training													x		
Resident Training Start															x
First Unit Equipped															x
NOTE: Identify <b>TRAINING DEVELOPMENT MILESTONES</b> . TRADOC FORM 569-1-R-E provides a detailed list of typical training development products required to support system training integration.															
COMMENTS: FUE will receive the Ground Combat Vehicle (GCV) in an Infantry Fighting Vehicle (IFV) configuration in 4QFY18.															

## B References

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- 2008
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v1.2 Army - TRADOC	No Comments	0	0	0	0	0	0	-
G-3/5	Submitted							
2012/04/03 -								
2012/05/03								
v1.2 Army - TRADOC	No Comments	0	0	0	0	0	0	-
Command Safety Office	Submitted							
2012/04/03 -								
2012/05/03								
v1.2 Army -	No Comments	0	0	0	0	0	0	-
TCM-Transportation	Submitted							
2012/04/03 -								
2012/05/03								
v1.2 Army - TCM-SBCT	No Comments	0	0	0	0	0	0	-
2012/04/03 -	Submitted							
2012/05/03								
v1.2 Army - TCM-Live	No Comments	0	0	0	0	0	0	-
2012/04/03 -	Submitted							
2012/05/03								
v1.2 Army - TCM dL	No Comments	0	0	0	0	0	0	-
2012/04/03 -	Submitted							
2012/05/03								
v1.2 Army - TCM ATIS	Document	0	0	0	0	0	0	-
2012/04/03 -	Accepted As							
2012/05/03	Written							
v1.2 Army -	No Comments	0	0	0	0	0	0	-
Space&Missile Defense	Submitted							
Command								
2012/04/03 -								
2012/05/03								
v1.2 Army - SIGCoE -	No Comments	0	0	0	0	0	0	-
Signal School	Submitted							
2012/04/03 -								
2012/05/03								
v1.2 Army - SCoE	No Comments	0	0	0	0	0	0	-
2012/04/03 -	Submitted							
2012/05/03								
v1.2 Army - PM-UAS	No Comments	0	0	0	0	0	0	-
2012/04/03 -	Submitted							
2012/05/03								
v1.2 Army - PEO-STRI	0	2	0	0	2	0	0	0







v1.1 Peer - FCoE - Field Artillery 2012/01/11 - 2012/02/10	4	3	1	4	3	0	0	0	1	
v1.1 Peer - Combined Arms Center 2012/01/11 - 2012/02/10	No Comments Submitted			0	0	0	0	0	0	-
v1.1 Peer - CAC-T; Training Management Dir 2012/01/11 - 2012/02/10	No Comments Submitted			0	0	0	0	0	0	-
v1.1 Peer - ATSC 2012/01/11 - 2012/02/10	No Comments Submitted			0	0	0	0	0	0	-
v1.1 Peer - AMEDD Center&School 2012/01/11 - 2012/02/10	No Comments Submitted			0	0	0	0	0	0	-

Key	
Completed Review with Comments	
Completed Review, No Comments	
Active Review Occurring	