



Sustainable Range Program



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AVAILABILITY | CAPABILITY | ACCESSIBILITY



FASIT Low Bandwidth RF Solutions in a Hardwired World

Joe Smith, Riptide Software

James Todd, US Army, PM TRADE

Introduction

Probably the single most important technical challenge facing the future of live fire target systems is associated with the operations within a wireless environment, whether as the primary infrastructure or as ad hoc add-on devices to an existing range. The restrictions in bandwidth, loss of VHF frequencies, and the desire for better real-time management has resulted in an incompatibility of requirements.

The Army has made significant strides in standardizing to the Future Army System of Integrated Targets (FASIT). While this will result in saving opportunities, the challenges associated with the inclusion of Low Bandwidth RF targets within the FASIT standards has remained elusive.

This article will discuss the past and future solutions for operating FASIT protocols within a restricted low bandwidth RF environment.

Background

How can a range manager provide new and interesting live-fire training opportunities to our soldiers using existing ranges and target standards?

As battle tactics evolve, so must the training that prepares the soldiers. Finding ways to utilize existing training areas for new types of training becomes important during this evolution. It is often necessary

to change certain aspects of an existing training range in order to make it suitable for use in these new training scenarios. This becomes a challenge for range managers who must make do with their existing range facilities and limited budgets. Large-scale construction projects involving trenching and laying cable for new target positions are often too costly and time consuming to undertake.

Historically, range managers have turned to Radio Frequency (RF) controlled target systems and battery power in order to provide additional/new target positions to augment their existing facilities. Due to the difficulties inherent in obtaining frequency spectrum approval, the RF target systems must often operate at frequencies that offer only extremely low bit-rates. This condition severely limits the number of RF targets that can be used and the amount of information that can be exchanged.

FASIT

The Future Army System of Integrated Targets (FASIT) standard is based on the use of modern computer networks and standard IP-based (Internet Protocol) communications, specifically the Transport Control Protocol (TCP). The FASIT standard is also supported by the Targetry Range Automated Control and Recording (TRACR) range control software currently in use at over 100 U.S. Army live-fire ranges around the world. Due to the higher

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data rates required by FASIT and TCP/IP, especially when the target count increases, the low bit-rates provided by data radios operating in the lower VHF/UHF frequency bands become insufficient.

Low Bandwidth Challenge

In order to reap the benefits that RF target systems provide, PEO-STRI has embarked on the design and development of a new communications interface standard. There are a few usage scenarios that come immediately to mind when considering how to best utilize this new communications interface standard.



FASIT RF Targets – In this scenario, target vendors would provide native support for the communication standard in the targets that they build. There are some difficulties with this case, as it requires significant investment by the target vendors to implement. It will also likely require that a specific brand of radio be chosen.



Interface Modules – This would involve the development of hardware to be located at each target pit which would communicate with current FASIT targets and translate between the existing FASIT TCP network interface and the new FASIT low bit-rate interface transmitting over RF. This option is attractive in that it leverages existing FASIT target assets while not requiring additional research and development efforts by target vendors.



Handheld Target Control – The streamlined FASIT messages used in conjunction with multicast (one sender, many receivers) network communications, allows status data for large numbers of targets to be sent from the central control system over standard wireless networks (802.11a/b/n) using only a small portion of the available bandwidth. Target and Scenario commanding can then be achieved using standard web interfaces, resulting in a highly decoupled system capable of being

implemented on a wide variety of handhelds, including tablet-based devices. Prototyping efforts in this area have yielded encouraging results.

Low Bandwidth Approach

The FASIT RF interface is designed from the onset with low bit-rate communication mediums in mind. The FASIT RF message structures are being defined at the bit level, minimizing wasted space, and thus packing as much information as possible into a small number of bytes. This standard is also being written in such a way as not to preclude its use on modern IP-based networks (Ethernet, Fiber, 802.11a/b/n wireless) in order to facilitate mixing target data with other data such as IP video which require significant amounts of bandwidth.

The FASIT Low-Bandwidth interface employs a simple call-response scheme for conversations between the master workstation and downrange targets or handheld target controllers. The master workstation issues a command or status request to a device and that device sends an appropriate response, depending on the type of message that was received. The protocol also employs the concept of “group” commands to allow multiple devices to be issued the same command simultaneously.

Conclusion

Overall, the new FASIT low bit-rate communications standard that is being developed will open up a number of exciting possibilities for live-fire ranges. It will allow for greater flexibility in expanding the capabilities of existing ranges, while keeping costs down and leveraging existing range assets.

The Coming Homestation Training Revolution: Securing a Wedge for Army Aviation

Mr. Ron Moring, SRP Range Development Branch
Article featured in the Army Aviation Magazine

“The next revolution in training our Army must be built around homestation.”

– GEN Martin E. Dempsey

The Need

Simply put, Aviation gunnery has changed but many homestation ranges have not. Ranges that adequately supported gunnery prior to September 2001, now face challenges providing rudimentary Contemporary Operating Environment (COE) venues. Air-Ground Integration (A-GI) has become a key training focus for Brigade Combat Team (BCT) Commanders. Combat Aviation Brigade Commanders synchronously focus on the A-GI support role with their gunnery training focus on dynamic tactics, such as running and diving fire for their Apache and Kiowa Warrior Crews. Door gunnery has significantly gained importance due to lessons learned during combat operations as well.

The newest members of the attack team are Unmanned Aircraft Systems (UAS), which present a unique set of gunnery training requirements. The primary range footprint will require three dimensional targetry, laser scoring, and urban target arrays. Furthermore, advanced, or collective gunnery, will require at a minimum, a three-prong capability for ground, attack rotary wing and UAS cooperative engagements.

Unfortunately, many home station ranges have not grown to support the challenge. The Army is just now building its first Digital Air Ground Integration Range (DAGIR) at Fort Bliss, Texas. The Fort

Knox and Fort Hood DAGIRs are still several years away. The result is most Aviation Master Gunnery face significant challenges in coordinating the required assets to effect a viable gunnery qualification venue. Usually, Range Managers work tirelessly to support the Commander’s intent. After the gunnery, most after action reports highlight the excellent efforts by installation range personnel to make it work. While that is appropriate, these reports rarely address the core reason for all the effort; the primary range was inadequate.

While problems clearly exist, many are working to rectify Army-wide challenges

affecting homestation Aviation gunnery training and qualification. The USAACE Gunnery Branch and the TRADOC Capability Manager for Live training (TCM-LIVE) have effectively teamed since 2005 to define and articulate Aviation gunnery requirements. TCM-LIVE instigated the fielding of 3D steel targets to support diving fire, 3D A-GI villages to provide urban terrain, and is working to provide full scale plastic targets to support Apache/Kiowa Warrior (hover, running, diving), and UAS captive Semi Active Laser (SAL) Hellfire engagement tasks.

Interim Components

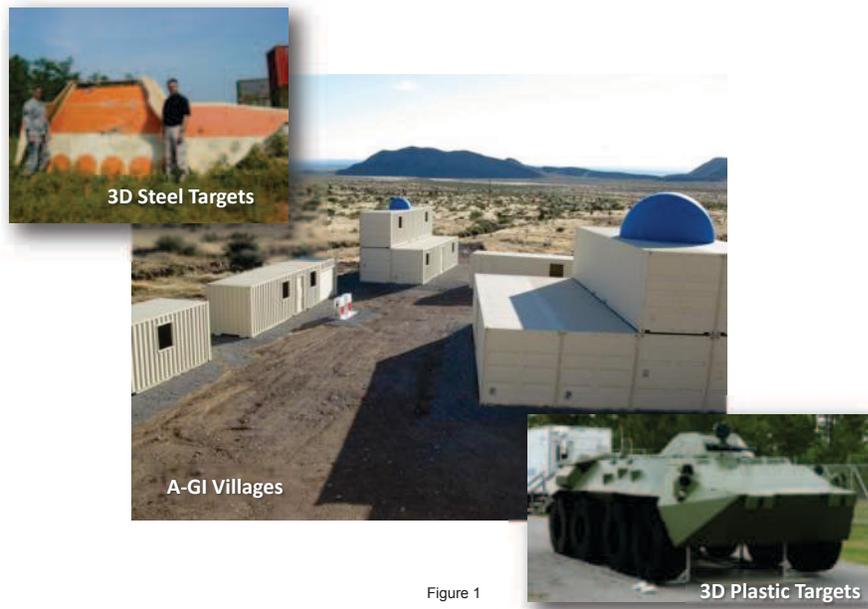


Figure 1

The USAACE Master Gunner successfully briefed requirements at the September 2010 Sustainable Range Program (SRP) Program Manager Review (PMR). Multiple Courses of Action are developed to support homestation gunnery. They include the DAGIR, the Aviation Add-On Package (for existing digital ranges), the Aerial Gunnery Range (a scaled down version of the DAGIR) and the Aviation Homestation Interim Package (AHIP). All of these COAs include a method to provide requisite targetry, urban terrain and importantly, a viable After Action Review (AAR) product for crew debrief. The few precious rounds afforded for qualification and collective training dictates the extracting the maximum training value for each round expended. Much can be accomplished with a viable and robust AAR that includes thru-sight video, scoring, and aircraft data all integrated into one product. Unfortunately, Aviation continues to be relegated to tape review of recorded aircraft media. Enter the Aviation Data Capture Integrated Concept Team (ICT).

The Path

The Data Capture ICT authorized in April 2010 in a CG, TRADOC memorandum that provides the following guidance.

Improve helicopter scoring capability by leveraging the Aviation Tactical Engagement Simulation System (AV TESS) output.

- Develop an interim solution that exploits AV TESS, the Aerial Weapon Scoring System, and recorded through-sight aircraft video to provide a modular homestation live fire AAR capability.
- Develop a future system that, using the interim facility as a base line, provides a modular solution that is common for Combat Training Centers and homestation Force on Force (FOF) and Force on Target (FOT) training.

“We’re working to blur and blend the learning experiences of deployments, education in the schoolhouse, training at home station and training at combat training centers.”

– GEN Martin E. Dempsey

The good news is that the first bullet is accomplished, the second bullet is in work, and the final bullet is in development. A review of multiple program documents confirmed requirements are in place to support the last bullet. The critical task is ensuring multiple agencies posture their programs to be compatible. Multiple system architectures (i.e., Army TESS, the Digital Range Training System, the Home Station Instrumentation Training System, CTC instrumentation) must be compatible the common future platform data collection/transmission device that follows the currently fielded SMart Onboard Data Interface Module (SMODIM).

Compatibility and interdependence is the key focus of the Aviation Data Capture ICT. Stakeholder agencies including

PEO AVN, PM DT, PM LTS, PM ITTS, PM ASH, PM Apache, TCM UAS, TCM R/A, DOS, DOTD (Gunnery Branch) and TCM-LIVE are active participants in this effort. Again, all agree that the requirements are in place and the key is coordination between agencies. A Memorandum of Agreement (MOA) is being staffed that defines the responsibilities of each agency to ensure future training architectures are compatible with a single future platform data collection/transmission device. Further, a key objective is to avoid any component addition on UAS platforms by receiving data directly from the Common Ground Control Stations; avoiding Airworthiness Release and space/weight/power challenges.

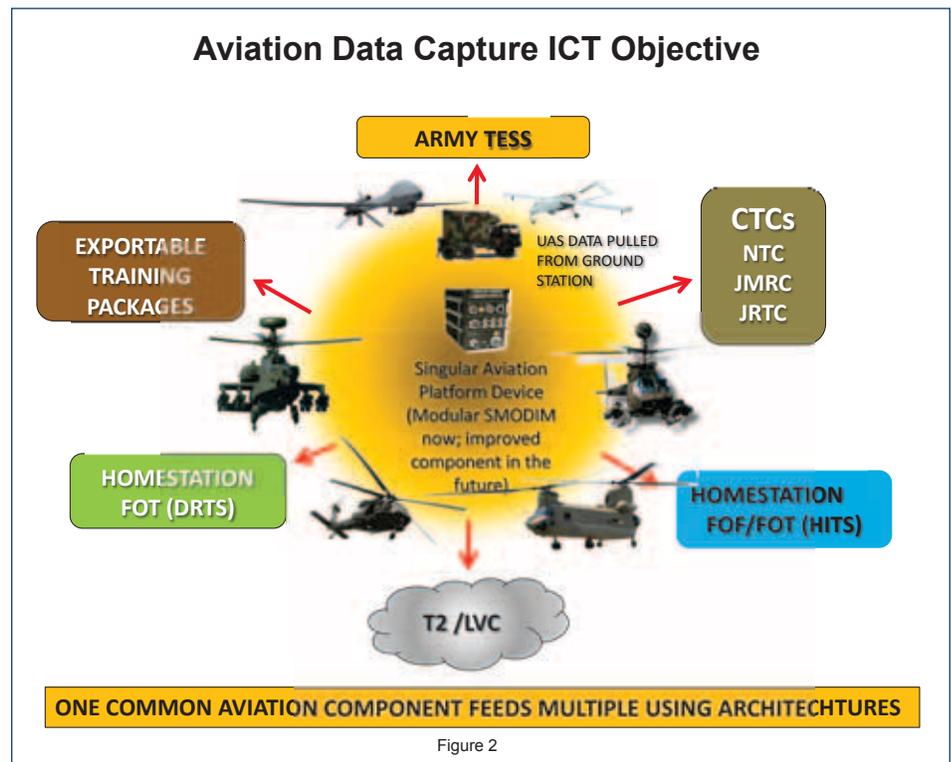


Figure 2

The Crossroads

The next twenty four months are critical. Those curious about how far Aviation gunnery AAR capabilities trail the rest of the Army should visit an Abrams AAR at any new Digital Multipurpose Range Complex (DMPRC). Be assured, those that witness a Digital Range Training System (DRTS) AAR for an Abrams crew will come away with the sober realization that much work remains to bring Apache, Kiowa, and UAS platforms into the fold.

The Data Capture ICT will continue coordination and integration efforts. Work will continue on the stand alone interim modular AAR package. Instrumentation of the Fort Bliss DAGIR will begin in FY12 to include integration of Army aerial manned and unmanned aerial platform data and

scoring. Additionally, TCM-LIVE and the Gunnery Branch are evaluating a regional training concept to maximize the use of currently programmed DAGIRs at direction of CG, USAACE.

How You Can Help

While this work falls to the Gunnery Branch, TCM-LIVE and the Data Capture ICT; unit Master Gunners, S3s, and Commanders can significantly assist with developmental efforts by becoming familiar with The Sustainable Range Program (AR 350-19) and Army Ranges (TC 25-8).

Additionally, articulate your range deficiencies to your chain of command, range managers, DPTMs POCs and your Gunnery Branch. This includes targetry, urban terrain, and AAR challenges. This

will do much to elevate homestation gunnery facility challenges to Army Command (ACOM) and ultimately Department of the Army level.

Ultimately, until range constraints, deficiencies and significant training challenges are elevated to senior leadership and programmers, efforts to improve your ranges and Aviation's place in the Home-station Training Revolution continue to hang in the balance.

COL Jimmy L. Meacham is the DOTD director at Fort Rucker, AL; CW5 Scott Jackson is the proponent master gunner in the Gunnery Branch of DOTD at Fort Rucker, AL; Retired CW5 Ronald C. Morning is Chief of the Range Development Branch with the Training and Doctrine Command's Capability Management Office-Live Training at Fort Eustis, VA.

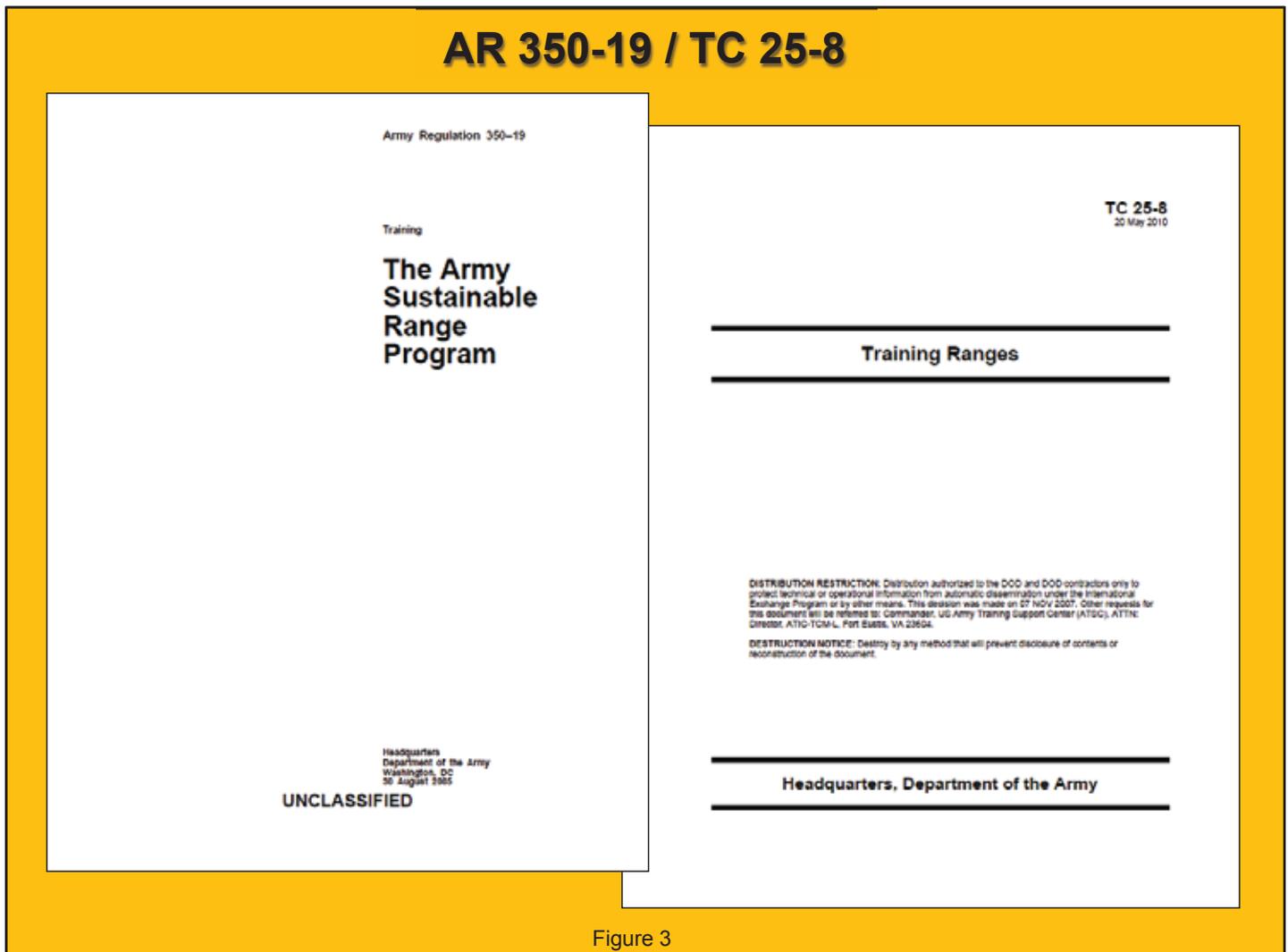


Figure 3

ITAM

Integrated Training Area Management Program

ITAM UPDATE

Mr. Paul Dubois, TCM-L/ITAM

ITAM Headlines

Automated ITAM Plan/Workplan Deployment and Training

The Automated ITAM Plan was deployed this May under the Range Complex Master Plan Tool (RCMP-T). The ITAM plan is based on a planning process that maps Senior Commander Training Needs to ITAM Goals and Objectives. The ITAM Workplan module is then used to build activities (“projects”) to meet the stated objectives. The automated tool establishes relational links between the goals, objectives, and activities along with the activity budget line items (e.g., labor, materials, vehicles, fuel, etc) which will allow automated tracking and reporting of schedules and costs to meet individual objectives and goals. This will allow ITAM installation, Command, and Headquarters offices to budget and report completion of goals and objectives needed to support Commanders training needs.

Two classes lead by the TCM-L ITAM staff and the CALIBRE ITAM Plan support team were conducted to provide process and software instructions to installation and Command ITAM managers and co-



CONUS East ITAM Plan Training, 24-26 May 2011, Hampton, VA.

ordinators. The CONUS East training was held in Hampton, VA, 24-26 May, and CONUS West training was held in Denver, CO, 7-9. Individual Command training was also conducted for USARPAC 14-17 Jun, and USAREUR 28-30 Jun. The primary training objectives for this deployment training was how to use the software, build goals and objectives, and create the FY13 workplan. The FY13 workplans are being rolled up for presentation at the ITAM Program Management Review (PMR) 12-1, 29-31 Aug.

Following this initial deployment, building plans and FY13 workplans, an additional training session will be planned for early calendar year 2012 to provide instructions on workplan execution functions, and one year later in early 2013 on closing out workplans and generating annual reports. At that point the plan and workplan will be fully deployed and operational.

Training slides and practical exercises, tips, and ITAM Plan discussion forum are located on the ITAM Plan page of the ITAM section of the SRP Web Portal.

CONUS East ITAM Plan Training 24-26 May 2011 – Hampton, VA	
Name(s)	Installation
David Goad	Aberdeen, ATEC
Randy Jones, Patrick Jones	AP Hill
Jason Howe, Nathan Eaton	Atterbury
Johnny Markham, Ray Grant	Benning
Amy Wiley	Blanding
George Frank	Bragg
Richard Cox, Drew LeQuick	Butner
Chris Collins	Campbell
Collin Fridley, Jeff Miller	Dawson
Sarah Morrissey	Devens
Jim Ertell	Dix
Tom Lent, Frank Romano	Drum
Tessa Martin-Bashore	Eustis
Jim Windham, Jonathon English	Gordon
Patrick Jordan, Robert Richardson	IMCOM
Jim Moore	Jackson
Scot Serafin, Denis Walls	Knox
Joseph Gilbertson	Lee
Steve Mechels	NGB
Don Knight, Will Ford	Pickett
Raphael Phubus	Puerto Rico
Bob Murphy	Rucker
Jim Cook	SC NGB
Richard Ford, Michael Keasler	Shelby
Drew Brown, Paul Guzman	Stewart
Kelly Pew	West Point

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CONUS West ITAM Plan Training, 7-10 Jun 2011, Denver, CO.

CONUS West ITAM Plan Training 7-9 Jun 2011 – Denver, CO	
Name(s)	Installation
Jerry Paruzinski, Chris Miller	Hood
Tim Christiansen	WSMR
Art Hazebrook	Hunter Liggett
Peter Hill, John Mitchell	Custer
Sara Jones	YTC
Inger Gruhn	Lewis
Chuck Harper, Reed Rider	Yuma
Justin Kretzer, Eric Webb	Sill
Matthew Blanchard	NGB, GIS
Chris Bevis	Leonard Wood
Rusty Savoy, Rick Doom	Carson
Neil McCarthy	DPG
Arthur VanAllen	Benning
Earl Chandler	Grubber
Terry Hoff	McCoy
Donald Applegate Jr.	Camp Roberts
Ruth Sparks	Irwin
Nick Havlik	Bliss
Dustin Kafka, Robert Blaise	Guernsey
Larry Jacobs	Grayling
Brent Friedl	McCoy
Chris Otto	Riley
Elizabeth McKinney	Bullis
Tony Pellitteri	TCM-L
Kittie Stanger	Polk
Brandi McFadden	Camp Mabry
Kevin Korcheck	Stead
Pam Landin	Huachuca

ITAM Sessions at the TSS Workshop

2011 will mark the 20th consecutive year since ITAM has conducted some form of workshop, starting with the LRAM Workshop in 1992, followed by ITAM Workshops, then SRP Workshops, and finally The First Annual Training Support System (TSS) Workshop in 2010. This year marks the second consecutive TSS annual workshop, and ITAM has a full agenda.

Monday, August 15th, will consist of an Integrated Planning session designed to demonstrate the process of documenting training needs, mapping those to SRP and ITAM goals and objectives, then to projects, and the relationships and dependencies of these on other planning such as the Real Property Master Planning (RPMR), the Integrated Natural Resources Management Plan (INRMP) and other related plans as well as the permitting and NEPA associated with each. The session will include representatives from the OACSIM Environmental Division, Master Planning, as well as training representatives from TCM-L. All ITAM coordinators, including LRAM, RTLA, and SRP GIS coordinators, are encouraged to participate. The session will begin at 0900 on Monday, and conclude at 1430. Following this session will be a facilitated ITAM Plan and Workplan user requirement meeting. Again, all ITAM coordinators are encouraged to bring your experiences and suggestions for improving the automated ITAM Plan and Workplan

module. This session will run from 1500-1700.

Tuesday, August 16th, will consist of the TSS and SRP plenary sessions in the morning, followed by an ITAM Program update in the afternoon session, and wrapping the day up with ACOM ITAM breakout sessions. Consult with your ACOM ITAM managers on session presentation or discussion agendas.

Wednesday and Thursday, August 17-18, are the traditional installation-led lesson learned session. However this year the Army Conservation Programs are integrating their sessions into the ITAM breakout. This will allow the ITAM community to have a direct audience and participate in discussions on the relationships between Army Conservation programs and training land management. Of course there are also tracts for LRAM, RTLA, ITAM Planning, and GIS support. Closing out Wednesday will be a 90 minute ITAM-wide panel discussion, similar to that conducted in 2010. The panel will consist of representatives from ACOMs, TCM-L, and DAMO-TRS. The intent is to allow installations to ask questions and lead discussions on issues such as ITAM funding eligibility, manpower, funding outlooks, planning requirements, and reporting. ITAM staffs are encouraged to bring their questions to this panel. Additionally, you may submit written questions or topics via the TSS Workshop registration website (look for “Submit ITAM Panel Topic” button), and at the TSS workshop as well.

In addition to the ITAM breakout sessions, a room will be set up for one-on-one consultations with the CALIBRE ITAM Plan support staff, and TCM-L ITAM staff. This will be by sign up at the workshop. And finally, DAMO-TRS will be available on a sign up basis for one-on-one discussions with installations and Commands to answer questions on funding, policies, manpower, etc. Keep an eye on the TSS Workshop website for announcements and the workshop agendas.

ITAM Playing Cards are Here!

The new ITAM Playing cards are in! Orders can be shipped direct to your installation in case quantities – 144 decks per case. Please provide your requested number of cases, name, physical shipping address, and phone contact to the TCM-L ITAM office, or through the ITAM Page, SRA Support link. Thanks to the Center for Ecological Management of Military Lands (CEMML) for doing such a great layout.

INTEGRATED TRAINING AREA MANAGEMENT (ITAM) PLAYING CARDS



« REMEMBER »



When training lands are damaged, realistic training opportunities are lost. ITAM protects natural and cultural resources for future generations, while supporting the training mission.



<https://srp.army.mil>



SRP GIS UPDATE

SRP GIS Program Headlines

2011 SRP Geospatial Data Strategy Update

The FY11 DAMO-TRS SRP Geospatial Data Strategy Memorandum was approved and signed by DAMO-TRS on 20 May 2011 and submitted to the Execution Commands for action. Guidance from each of the Execution Commands is anticipated within 45 days thereafter.

The 2011 DAMO-TRS SRP Geospatial Data Strategy Memorandum provides a strategy for the funding, collection, and maintenance of geospatial data layers for which DAMO-TRS (SRP) is the proponent. The 2011 DAMO-TRS SRP Geospatial Data Strategy focuses on the update of the previously developed Common Installation Picture (CIP) layers, as well as the development of 13 mission layers, such as firing sites, target sites, range limit markers, etc.

The FY11 DAMO-TRS SRP Geospatial Data Strategy Memorandum, the 2011 SRP Geospatial Data Quality Assurance Plans (QAPs), and related support documents are available on the SRPWeb portal for download under the SRP GIS Guidance page.

SRP GIS Program Support Update

SRP GIS Training

- ESRI Training Plan. The ESRI Training Plan for SRP was finalized in May 2011 and is available on the SRPWeb Portal for download under the SRP GIS Training page. The ESRI Training Plan serves as a guideline for the identification and planning of GIS-based training courses for staff in support of the SRP. The

plan provides ESRI specific training recommendations specific to SRP GIS, Integrated Training Area Management (ITAM), Range Operations, and Range Modernization personnel. Additionally, each section of the document is designed to support individual program goals and objectives.

The training recommendations outlined within the training plan are based on GIS functional areas and the technical skill sets required to effectively and efficiently perform day-to-day GIS related responsibilities in support of the SRP. The training courses listed include a combination of live instructor-led courses, self-paced internet based courses (i.e. virtual campus courses), and recorded seminars.

The ESRI Training Plan is intended to be a dynamic document that will be updated as new ESRI training courses are available and deemed appropriate for SRP personnel and/or updates to the underlying ArcGIS suite of software are released.

- ESRI Virtual Campus Course Training. ESRI Virtual Campus course credits are still available under the annual ESRI Virtual Campus license purchased by the SRP GIS Program. The current license expires in September of 2011. To date, over 100 installation personnel, including SRP GIS Professionals, ITAM Coordinators, LRAM and RTLA staff, Range Control Officers, Range Safety Officers, and Range Schedulers have registered for 250 virtual campus courses. For a list of available courses and/or to request a course access code, send an email to SRPGIS@srp.army.mil.

Installation SRP GIS Pages on the SRPWeb Portal

The SRP GIS Program has recently created a sub-site within the Geographic Information Systems section of the SRPWeb Portal for creating and maintaining Installation SRP GIS Pages. Installation

SRP GIS Pages are intended to be a designated location for SRP supported installations to share installation specific SRP GIS accomplishments, activities, documents, and maps.

Guidance and instructions for creating and editing an Installation SRP GIS Page, as well as uploading and managing Installation SRP GIS related documents, is available within the SRP GIS How-to Manual "How to Create and Edit Installation SRP GIS Pages on the SRPWeb Portal". The instructions provided assume that installation SRP GIS personnel have contacted the SRP GIS Program regarding the development of an Installation SRP GIS Page and that the appropriate Installation GIS Contributor permissions have been assigned.

If you are interested in creating an Installation SRP GIS Page within the GIS section of the SRPWeb Portal, please contact the SRP GIS Program (SRPGIS@srp.army.mil). The "How to Create and Edit Installation SRP GIS Pages on the SRPWeb Portal" document is available for download from the Installation SRP GIS Pages sub-site on the SRPWeb Portal.

SRP GIS Program Technical Tips

SRP Metadata Editor Tool (SMET) Version 1.0

A new version of the SRP Metadata Editor Tool is now available for download from the **SRP GIS Tools** page on the SRPWeb Portal.

NOTE: It is recommended that users make a copy of their Metadata.mdb reference database before uninstalling the old version so as not to overwrite what was previously populated in the Metadata.mdb. Please read to the associated READ ME file (included with the install files) for more information.

The Certificate of Networthiness (CoN) for the SRP Metadata Editor Tool (Version 1.0) was approved on 2 June 2011. The SRP

Metadata Editor Tool CoN is available for download from the **Additional Resources** page on the SRPWeb Portal.

Also available are the SRP GIS How-To Document “How to Use the SRP Metadata Editor Tool (SMET) in ArcGIS 9.3.1” and the SRP GIS Technical Article “SRP Metadata Editor Tool (SMET) 1.0”. Both documents are available for download from the **SRP GIS Guidance** page on the SRPWeb Portal.

Army Geospatial Center (AGC) GeoPDF Update

The Portable Document Format (PDF) is a file format first developed by Adobe Systems for representing documents in a manner that is independent of the original application software, hardware, and operating system used to create those documents. Later TerraGo Technologies, one of Adobe’s business partners, created a plug-in for Adobe Acrobat that allows you to embed a coordinate system and attribute data into the PDF maps you create. By using the TerraGo tools Publisher and Composer you can create and view the Georeferenced PDF. The free Adobe Reader® can be used to view GeoPDF maps, turn layers on and off, query attributes, display

coordinates and create redlines, mark-ups and notes.

Additional Updates

AGC continues to produce GeoPDF versions of its:

- Urban Tactical Planners
- Engineering Route Studies
- Urban Water Graphics
- Country Overviews
- BuckEye GeoPDF Mapbooks
- Cultural Maps
- AGC Library’s non NGA holdings
- Historical Photo Analysis (HPA) reports

See <https://cac.agc.army.mil/Software/Map2PDF-Plug-in.cfm> for list of available products.

DataDoorsWeb: Can produce a GeoPDF file format for Imagery via this easy to use delivery tool http://www.agc.army.mil/operations/programs/aio/TIO_Data_Doors.htm.

USGS GeoPDF State Coverage datasets: AGC has produced for USGS the first 34 State DVD dataset. USGS, NGA, FEMA and AGC will distribute these datasets to the National Guard and First Responders. In time all 50 States, Washington DC, Guam, Puerto Rico, US Virgin Islands and Mariana Islands will be created and posted

to the AGC websites along with access via USGS, NGA, FEMA websites.

U.S. Government Georeferenced PDF Working Group: http://www.agc.army.mil/wg_conference.html

The third U.S. Government Geospatial PDF Working Group Meeting will be held Thursday August 4th, 2011 at the Library of Congress Madison Building’s Mumford Room in Washington DC – check website, Facebook or LinkedIn for more information on the group.

If have or know of any GeoPDFs that are being produced please let me know as we are collecting them up for posting/access to on the AGC websites.

Tentative schedule of where to see and talk GeoPDF:

- July 2011 – ESRI International User Conference – San Diego, CA
- August 2011 – Army Training Support System Workshop – Dallas, TX
- August 2011 – National Guard Association of United States Conference – Milwaukee, WI
- October 2011 – USGIF GEOINT – San Antonio, TX
- October 2011 – National Guard Bureau Joint C4I Conference – Orlando, FL