Deployment of TGIS to the RF-ITV Tracking Portal

AMIS successfully deployed the Transportation Geospatial Information System (TGIS) to the RF-ITV Tracking Portal in August. As we told you last month, TGIS is an Esri-based Application Programming Interface (API) that allows maps to be embedded within web applications without the need for browser plug-ins. This means that RF-ITV users will be able to map query results without needing to install additional desktop or browser plug-in software.

With the integration of TGIS, most query results from the RF-ITV Tracking Portal will contain an embedded map which can be toggled on/off with a “Map View” tab or checkbox.

These maps are delivered via integration with the TGIS. When the user logs into the RF-ITV Tracking Portal using their CAC, we pass the user CAC credentials to TGIS and they create an account for each user.

Clicking on the Map View sends the user CAC credentials to TGIS, and brings up the standard certificate selection screen seen below. Once you select your certificate and click on OK, the mapping query runs.

Do not be in a hurry, as the initial map loading takes about 60 seconds. A “please wait” message will disappear once this load has completed. When it finishes you receive this screen.
As with our existing Keyhole Markup Language (KML) exports when viewed in a tool such as Google Earth, clicking on the icon will return data about the item, and of course, the user can drill into the item and see a close-up view.

Let’s go a step further and look at shipment details. In the screen below we have drilled down to the cargo detail level. Note that we now see a “View Map” tab at the bottom of the “Location Tracking” area in the output.

Clicking on that “View Map” button displays a TGIS map within the page showing the position history. Note that the map appears within the same page so that the user does not have to switch screens between the tabular output and the map output. As with Google Earth, the map output shows each location where the RFID tag was read by an interrogator but TGIS does not draw lines between the points. The “Zoom To” link will move the map view to the location where the shipment was located at that time. Clicking on the “Hide Map” tab removes the map. Remember, we are looking at test data in this map view.
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**TGIS is available on both NIPR and SIPR networks. The capability to export map data as “KML” files will remain available.**

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**AMIS Service Desk**

Help is available 24 hours per day/7 days per week/365 days per year

**PLEASE NOTE...the Service Desk should be contacted before any attempt is made to reach an AMIS Field Service Engineer (FSE) in your area.**

If you would like to subscribe to the AMIS ITV Operations and Training Newsletter, or if you have a noteworthy RF-ITV story, lesson-learned, or short article for publication in the newsletter, please submit to AMIS at:

**jerry.d.rodgers.ctr@mail.mil**

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**Ordering PDK and PDK Lite/PDK II**

PDK and PDK Lite have assigned National Stock Numbers (NSN) 5895-01-659-3370 and 5895-01-663-7300, respectively. The PDK and PDK Lite are unit-funded items that will not be centrally-managed nor stocked, and must be procured directly from the manufacturer as a local purchase item, in accordance with guidance from HQDA G-4.

To order the PDK or PDK Lite, customers may utilize the AMIS RFID-IV W52P1J-14-D-0014 contract. Use CLIN 2011BF for Portable Deployment Kit (PDK) w/ label printer. For the PDK Lite with tablet, use CLIN 2011AC. The contract is a de-centralized IDIQ contract, single source award to SAVI Corporation. Units should contact their local Contracting Support Office and follow local purchase request procedures for delivery order execution utilizing the above cited contract.


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**TIPS Write Product Key**

The Total Asset Visibility (TAV) In-Transit Processing Station - Write (TIPS-Write) software version 4.9.0 comes with a product key solution that has been implemented to prevent unauthorized installation and execution of the RF-ITV TAV TIPS Software. In order to install the software, users must call the Service Desk to obtain a product key for installation. Without a product key, the software cannot be installed.
OPERATIONAL Usage and Restrictions:
The PDK and PDK Lite have a commercial Microsoft Operating System and SAVI’s software for reading and writing Active RFID tags. The PDKs are used in austere environments, and they are not accredited to be connected to the NIPRNet.

Note: To order Iridium SIM card follow the instruction at the following link:

Points of Contacts:
Rebecca Heise, Contracting Officer’s Representative (COR), rebecca.u.heise.civ@mail.mil | (703) 806-0332 | DSN (312) 656-0332
Mike Morrissey, Engineer, jerome.m.morrissey.ctr@mail.mil (703) 806-0409, DSN (656)-0409

The Deployment Kit, Radio Frequency Identification, commonly known as the Portable Deployment Kit (PDK) comes with a portable printer and a 5-year warranty. The PDK Lite comes with a tablet and no printer.

Site Analysis: Kaiserslautern De Miesau Staging Facility, KaiserslauternW25

For this month’s analysis we selected KaiserslauternW25 (Device ID T989096AC2DB0), located at Kaiserslautern, Germany. From the RF-ITV Tracking Portal we selected Track > Sustainment Cargo, entered a ‘Write Station ID’ of T989096AC2DB0 and for the ‘Write Date’ selected 23 July through 27 July 2018. This query and criteria produced 65 tagged shipments to analyze. The result of our data analysis is:

- Forty-eight of the 65 shipments were identified based on Port of Embarkation (POE) / Port of Debarkation (POD) codes to be moving ground-to-ground from Kaiserslautern to Germersheim. All 48 of the tagged shipments arrived and were read by RF interrogators at the Europe DLA Distribution Site in Germersheim, Germany. The site is the primary facility and conduit for sustainment materiel distribution in the European theater. It receives/consolidates/segregates shipments from multiple sources and prepares the material for onward movement to Europe and non-Europe customers at final destination. New DLA RFID tags for the consolidated shipments are prepared as necessary and/or the original RFID tag remains with the shipment. The remaining 17 tags, not seen arriving at Germersheim, left Kaiserslautern in route to an airport or seaport to await onward movement to United States for evaluation/repair. These shipments were identified as condition code “F”.

- Using a combination of the KaiserslauternW25 tags left on the original shipment and RFID tags prepared by the DLA Germersheim for the consolidated shipments, we were able to track 27 of 65 shipments to final destination using data from the ITV portal.

- Of the 38 shipments whose arrival at final destination could not be determined/confirmed:
  - By the conclusion of this analysis 13 shipments were awaiting onward movement or transit booking at either the Germersheim or Mainz SDDC container terminal and seven shipments are awaiting onward movement at an airfield (e.g.; Ramstein, Germany; Dover, Delaware and Ali Al Salem, Kuwait). It should be noted that all 20 shipments are for condition code “F” (unserviceable – reparable) equipment.
Eight tags/shipments traveled to final destination sites that were not RFID instrumented (e.g., Lingenfeld, Germany and Drawsko Pomorskie Training Area, Poland), eliminating any chance to determine arrival at final destination using RF-ITV Tracking Portal data.

In three instances shipments were last read/pinged crossing the Germany-Poland boarder at Swiecko, Poland but not read arriving at an RFID instrumented final destination. It would appear there was a separation of tags from shipment at the boarder as the three tags were last read with the exact same date/time stamp at the border.

One RF tag was last read departing DLA Germersheim in route to an RFID instrumented read site and based on other shipments with similar write dates, departure timeframes and destinations, this tag should have had ample time to arrive and be read at final destination. Assumption is the RFID tag was disassociated from the shipment during travel.

Initial review disclosed four tags that were never “Read” moving through the pipeline after the initial write event. However, research of the four Transportation Control Numbers (TCN) revealed that three of the four shipments were consolidated into one shipment of condition code “F” engines that are enroute to the seaport of Antwerp, Belgium. The original three tags should be erased to remove the duplicated data from the RF-ITV Tracking Portal.

Two shipments were last read departing Kaiserslautern and were not read moving in the distribution pipeline after departure. It appears these two tags may have been separated from their shipment. No DLA tag was noted being written based on the TCNs of these two shipments.

All 65 tags properly used valid Consignor and Consignee DoDAACs.

64 tags used valid and proper codes in the POE fields and in the one lone instance the POE field was left blank. Twenty-six of 65 tags properly used valid POD codes. In one instance the field was left blank, and in 48 instances the POD field indicated “401” for the Defense Distribution Depot, Germersheim, Germany (DDDE). However, further research indicated that DLA and TRANSCOM have recently identified the code “401” as “DELETED/DO NOT USE” in the TRANSCOM Reference Data Management (TRDM). The RF-ITV Tracking Portal has been updated, and this information has been shared with the write site POC. Suggestion is to use the In-land “Ground Destination” Code (ILC) of “52J” for shipments to Germersheim.

Excellent commodity data such as Document Number, TCN, National Stock Number (NSN), Nomenclature, Quantity, and Unit of Issue (U/I) were found in all 65 shipments. However, in the vast majority of the shipments generic nomenclature was noted (filter, engine, blade, cable, etc.). Complete commodity data allows users more options for query searches and provides more complete data sharing with other ITV systems.

The Registration page information (Site Details) was checked by verifying that naming convention rules were followed when the device was named. By using Google Earth, the latitude and longitude were plotted and appeared to be correct. Additionally, the point of contact e-mail address and phone number on the registration page were confirmed as correct via the Global Registry.

DoD has directed transition from ANSI 256 active RFID tags to ISO 18000-7 standard tags. We noted the write site had used 100% ISO RFID tags in our data sample.

RF-ITV Tips and Tricks

Operation/Project Tracking Report of Analyzing Operations

Have you ever been asked the whereabouts of your cargo or the route taken from the Port of Embarkation (POE) to the Port of Debarkation (POD)? The RF-ITV Tracking Portal has a report which shows the number of tags that reported at specific interrogators for a specified Operation(s) and within a specified Date Range. This report enables units to track deployments based on Operation Name. Using RFID tags on shipments of supplies and equipment, the RF-ITV system traces the identity, status, and location of cargo from origin to destination.

Note: In selecting an Operation Name for a specific operation, ensure that everyone using that Operation Name spells or abbreviates it exactly the same way. Otherwise, there will be multiple Operation Names for the same operation which will complicate searches.
First, open the RF-ITV Tracking Portal (https://cac.national.rfitv.army.mil). From the main page Tabs locate Report, scroll down to Analysis, then Operation/Project Tracking Report.

Enter the assigned Operation Name and drop down Date Range for querying then click Submit. (The example used will be “Atlantic Resolve”, showing the number of tags reported within specific interrogators route(s).

Click Interrogator Description (at the top of the column), then Count of Unique Tags, to drill down on the location. Clicking on Write Station (Unique Tags 436) the user can analyze the information to determine the cargo route taken to and from the POE to POD.
Interrogator ID T1866DA38639B has a total of 436 operational tags written. Clicking a specific Tag ID will display the cargo route taken from origin to the last read point.

In this example, the tag 18710597211880 was written at HOODW7 and last read at PSTRAZER01.

A wealth of information can be gleaned from the RF-ITV Tracking Portal, information that can be used to analyze operations and trace the identity, status and location of cargo from origin to destination.