pm J-AIT PRODUCT MANAGER JOINT-AUTOMATIC IDENTIFICATION TECHNOLOGY

September 2011

ITV Operations and Training Newsletter

Check out the PM J-AIT website at the new URL: http://www.ait.army.mil to view the latest PM J-AIT contract(s) for AIT and Radio Frequency Identification (RFID) hardware, software, technical engineering services, and maintenance.

Missing License Plate and Commodity Data

Imagine receiving a shipment with blank tags (missing license plate data and/or commodity data) in your warehouse, and a customer needs a particular item right away. Because there is no information on the tag, using a handheld interrogator or searching the ***RF-ITV Tracking Portal*** might not yield the needed information. Conducting a physical search for a particular item in the warehouse could be like trying to find a needle in a haystack!

How Blank Tags Occur

Blank RFID tags, also known as transponders, occur when:

1. Unpopulated tags are inappropriately placed on cargo, containers, or equipment scheduled for movement.
2. Tags are erased for return or reissue, but the batteries are not turned around to deactivate the tags. Then they are shipped for return/reuse and continue to move through the system.
3. Populated tags are not uploaded to the RF-ITV server.
4. No user Quality Assurance (QA) checks are conducted on the ITV server to ensure data is uploaded--this may be attributed to a lack of ITV training.

TIP

To do a quick QA check, just logon to the ***RF-ITV Tracking Portal*** and query a couple of your tag numbers. Take a look at the query results to make sure the information that was uploaded is correct.

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US ARMY PEO EIS PEO Enterprise Information Systems

5. Tags are written and mistakenly uploaded to the “Trainer” RF-ITV Server instead of the National RF-ITV Server. As items or shipments begin to move through the distribution pipeline, these tags are read by active “Read” interrogators which upload the tag read events to the production ITV servers. Since there is no tag data or write event for that tag on the National RF-ITV Server, a blank tag record is thus created.

6. Tags held for reuse or return are placed or staged within range of an interrogator and are being read—this also degrades battery life.

RFID tags that contain no license plate data or tags with no commodity data (e.g., nomenclature or national stock number) undermine the overall creditability of the ***RF-ITV Tracking Portal*** data. This type of tag moving through the system:

- Limits the ability to search for particular items/shipments when doing ***RF-ITV Tracking Portal*** queries
- Makes it impossible to determine the shipment’s origin/designation, not to mention the container’s contents
- Can affect other systems (e.g., Battle Command Sustainment Support System (BCS3)) providing no visibility/tracking of unit moves or sustainment. BCS3 displays these tags as "Undefined RF".

See how your site is doing by looking at the ***RF-ITV Tracking Portal*> ITV Metrics > Data Quality > Missing LP Info** (Figure 1).

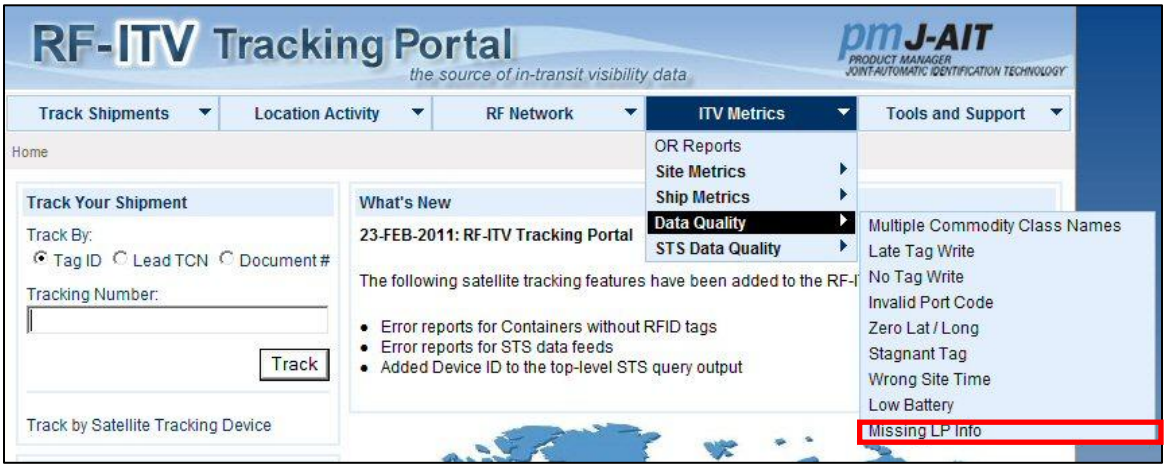


Figure 1

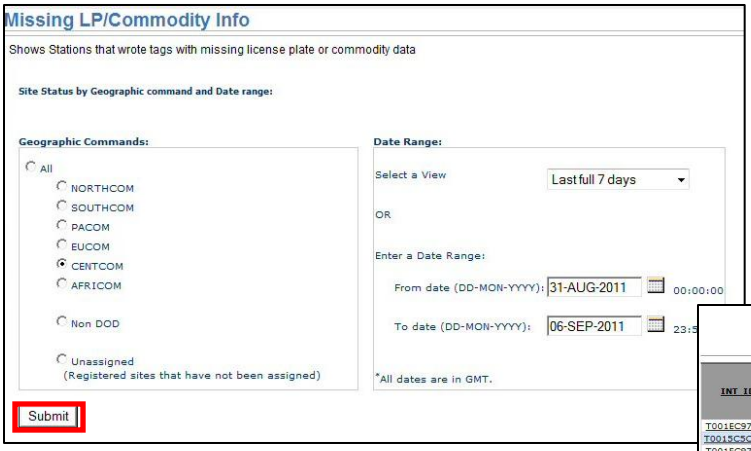
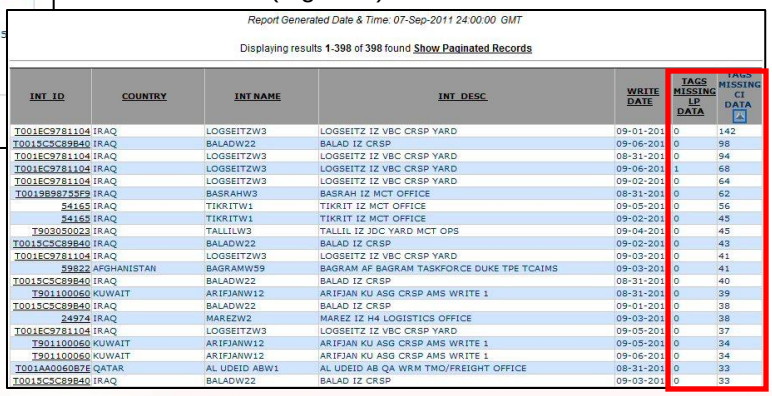


Figure 2

The ***Missing LP Info*** query will be displayed (Figure 2). Select the geographic command for your site and the date range. Click ***Submit*** and the query results will be displayed.

The Tags Missing LP Data and Tags Missing Commodity Information (CI) Data columns will show the number of tags with missing license plate and commodity information. You can sort the columns by clicking on the column header (Figure 3).



INT ID	COUNTRY	INT NAME	INT DESC	WRITE DATE	TAGS MISSING LP DATA	TAGS MISSING CI DATA
T001EC9781104	IRAQ	LOGSEITZW3	LOGSEITZ IZ VBC CRSP YARD	09-01-201	0	142
T0015C5C89B40	IRAQ	BALADW22	BALAD IZ CRSP	09-06-201	0	98
T001EC9781104	IRAQ	LOGSEITZW3	LOGSEITZ IZ VBC CRSP YARD	08-31-201	0	94
T001EC9781104	IRAQ	LOGSEITZW3	LOGSEITZ IZ VBC CRSP YARD	09-06-201	1	68
T001EC9781104	IRAQ	LOGSEITZW3	LOGSEITZ IZ VBC CRSP YARD	09-02-201	0	64
T0019B98755F9	IRAQ	BASRAHW3	BASRAH IZ MCT OFFICE	08-31-201	0	62
54165	IRAQ	TIKRITW1	TIKRIT IZ MCT OFFICE	09-05-201	0	56
54165	IRAQ	TIKRITW1	TIKRIT IZ MCT OFFICE	09-02-201	0	45
T903050023	IRAQ	TALLILW3	TALLIL IZ JDC YARD MCT OPS	09-04-201	0	45
T0015C5C89B40	IRAQ	BALADW22	BALAD IZ CRSP	09-02-201	0	43
T001EC9781104	IRAQ	LOGSEITZW3	LOGSEITZ IZ VBC CRSP YARD	09-03-201	0	41
59822	AFGHANISTAN	BAGRAMW59	BAGRAM AF BAGRAM TASKFORCE DUKE TPE TCAIMS	09-03-201	0	41
T0015C5C89B40	IRAQ	BALADW22	BALAD IZ CRSP	08-31-201	0	40
T901100060	KUWAIT	ARIFJANW12	ARIFJAN KU ASG CRSP AMS WRITE 1	08-31-201	0	39
T0015C5C89B40	IRAQ	BALADW22	BALAD IZ CRSP	09-01-201	0	38
24974	IRAQ	MAREZW2	MAREZ IZ H4 LOGISTICS OFFICE	09-03-201	0	38
T001EC9781104	IRAQ	LOGSEITZW3	LOGSEITZ IZ VBC CRSP YARD	09-05-201	0	37
T901100060	KUWAIT	ARIFJANW12	ARIFJAN KU ASG CRSP AMS WRITE 1	09-05-201	0	34
T901100060	KUWAIT	ARIFJANW12	ARIFJAN KU ASG CRSP AMS WRITE 1	09-06-201	0	34
T001AA0060B7E	QATAR	AL UDEID ABW1	AL UDEID AB QA WRM TMO/FREIGHT OFFICE	08-31-201	0	33
T0015C5C89B40	IRAQ	BALADW22	BALAD IZ CRSP	09-03-201	0	33

Figure 3

For our example, we sorted by INT NAME and found that while BALADW22 reported no blank license plate data, it reported a large number of tags with no commodity data (Figure 4).

INT ID	COUNTRY	INT NAME	INT DESC	WRITE DATE	TAGS MISSING LP DATA	TAGS MISSING CI DATA
T001EC9781104	IRAQ	LOGSEITZW3	LOGSEITZ IZ VBC CRSP YARD	09-06-2011	1	68
54165	IRAQ	TIKRITW1	TIKRIT IZ MCT OFFICE	09-05-2011	0	56
T903050023	IRAQ	TALLILW3	TALLIL IZ JDC YARD MCT OPS	09-04-2011	0	45
T0015C5C89B40	IRAQ	BALADW22	BALAD IZ CRSP	09-02-2011	0	43
T903040135	IRAQ	DELTAW1	DELTA IZ MCT FLIGHTLINE	09-07-2011	0	35
T88AC6F7D4D06	AFGHANISTAN	BAGRAMWW199	BAGRAM AF 455 EOG ELRS ATOC GATES	09-08-2011	0	35

Figure 4

INT ID	INT NAME	TAG ID	WRITE DATE	LICENCE PLATE	COMMODITY
T0015C5C89B40	BALADW22	4619419	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4777755	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4778074	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4778079	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4778084	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4778089	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4790737	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4959974	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973024	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973025	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973026	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973027	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973028	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973029	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973030	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973031	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973032	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973033	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973034	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973035	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973036	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973037	09-06-2011	Available	Not Available
T0015C5C89B40	BALADW22	4973038	09-06-2011	Available	Not Available

Figure 5

By clicking on the INT ID, you can view the tag numbers that have been written with no license plate data and/or commodity data (Figure 5).

It is important to verify that your tags have been written and uploaded correctly to the proper RF-ITV server by performing a quick query on the ***RF-ITV Tracking Portal***—especially if you plan on tracking your deployment, unit sustainment, or doing your own analysis. If you are returning tags for reissue, make sure the tags have been erased and the batteries have been turned around to deactivate the tags. For retrograde equipment, make sure you have written your tags and uploaded the data by performing a quick ITV server query.

The above-mentioned issues could be corrected with a renewed command emphasis on proper RF-ITV procedures.

Site Analysis: ARIFJANKWW7AW131-S, Arifjan, Kuwait

For this month's analysis we looked at RF-ITV *Write* site ARIFJANKWW7AW131-S in Arifjan, Kuwait. The focus of our analysis was on the data quality of RFID tags being written at ARIFJANKWW7AW131-S. Using the ***Site Activity*** query, we looked at the tag writing workload of Tag Docking Station T00111183BEE9 on 30 and 31 July 2011.

The ***Site Activity*** query identified 62 tags that were written during that period, and an analysis of these 62 tags found:

- By comparing the Consignee Department of Defense Activity Address Code (DODAAC), Port of Debarkation (POD) on the RF tag to the "*Read*" events of the tag, and Last Reported Interrogator Name, it was determined 43 of the 62 RFID tags (69%) reached final destination. Out of the 43 tags that reached final destination, 36 tags generated a transportation closeout (TK_). Transportation closeouts are created when the "Consignee DODAAC" written to the tag matches the "Supported DODAAC" entered on the *Read* interrogator's registration page.

- The remaining 19 tags were last read at various points in the logistics pipeline. As of the conclusion of our analysis, we have not been able to determine if these tags reached final destination based on ***RF-ITV Tracking Portal*** data.

- All of the 62 tags contained valid Consignee and Consignor DODAACs (listed in the ***RF-ITV Tracking Portal*** database), and the DODAACs were used properly

- All of the 62 tags contained valid Port of Embarkation (POE) and POD, and the POE/POD codes were used properly

- Additionally, by using the Archive data selection on the ***RF-ITV Tracking Portal***, it was determined that only three out of the 62 tags had prior use

- All of the 62 tags have complete commodity data. Complete commodity data allows users more options for query searches and provides more complete data sharing with other ITV systems.

- The Registration (Site Detail) page contains complete and accurate information (e.g., point of contact, phone, email, etc.); however the device name has additional letters/numbers that are not in compliance with the naming convention guidelines. Naming Convention Guidelines can be found at: https://cac.national.rfitv.army.mil/rfitv/rfdocs/RFID_Naming_Convention.pdf.

Regional Training Team's (RTT's) Tips and Tricks

Zebra PT400/403 Printer – Poor Printing Quality

The Zebra PT400/403 Printer is a mobile label printer used to support moderate volume printing in support of logistical operations. (Figure 1)

Zebra PT400/403 Printer (Figure 1)

The Zebra PT400/403 Printer is commonly packaged with the Portable Deployment Kit (PDK), Deployment Kit-Radio Frequency Identification (DK-RFID) and Early Entry Deployment Support Kit (EEDSK) systems. (Figure 2)

PDK/DK-RFID and EEDSK Systems (Figure 2)

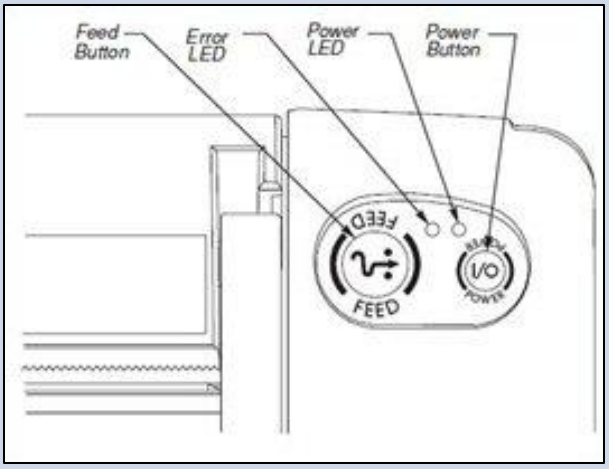
Although there may be a wide range of issues that can impact print quality, one of the most common mistakes is replacing the printer's ribbon cartridge without looking further into the cause of the issue.

This article will cover how to recognize a common issue using the Zebra PT400/403 - Poor print quality due to a "bad" battery.

Notice the poor print quality of the shipping label printed on a test printer with an under charged battery. (Figure 3)

Shipping label printed with an under charged battery (Figure 3)

To determine if this issue is due to an under charged battery, look at the front of the printer and examine the ***Error LED*** and ***Power LED*** status lights. (Figure 4)



Front Panel Status Lights (Figure 4)

Regional Training Team's (RTT's) Tips and Tricks (continued)

In this example, the ***Error LED*** would exhibit a double flashing lamp and the ***Power LED*** would exhibit a single flashing lamp. This is the error code for a "*battery is under voltage*" error as referenced in the printer user's manual.

Note: During the printing process, the label may not print until the errors are cleared by simultaneously holding down the ***FEED*** and ***POWER*** buttons.

To solve this particular printing issue, charge the battery according to the printer user's manual. If this does not solve the issue, the battery is most likely faulty and will have to be replaced. You can verify a suspected faulty battery by exchanging the battery with a known good battery and printing a shipping label.

Below is an example of a shipping label printed using the same printer after the battery was fully charged. (Figure 5)

The printer user's manual is a great resource on how to maintain, configure and troubleshoot the Zebra PT400/403 printer. Below is the manufacturer's website where technical documentation and support for the printer can be obtained:

Zebra Technologies Corporation - http://www.zebra.com

Direct link to the Zebra PT400/403 printer User's Manual:

http://www.zebra.com/id/zebra/na/en/index/resource_library/manuals.results.html?FRRBarcodePrinters=4294

Shipping label printed with a fully charged battery. (Figure 5)

For and From the Field

Reminder

If you have a *Read* or *Write* site that is no longer active or required to support your business processes, please contact the RF-ITV Global Help Desk (GHD) at help.rfitv@us.army.mil or 1 (800) 877-7925 to have it removed from the ***RF-ITV Tracking Portal*** database.

Combined Arms Support Command (CASCOM) In-Transit Visibility (ITV) Website

The CASCOM ITV Website has a new web address: http://www.cascom.army.mil/organizations/cdi/esd/itv/default.aspx

Please be sure to update your bookmark so that you can get the latest edition of the newsletter and updated In-land Location Code (ILC) lists!

RF-ITV Global Help Desk (GHD)

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The RFID GHD should be contacted before any attempt to reach an FSE in your area.

If you would like to subscribe to the newsletter or if you have a noteworthy RF-ITV story, lesson-learned, or short article for publication in the newsletter, please submit to Jerry Rodgers, PM J-AIT, jerry.d.rodgers@us.army.mil.