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April 9, 2013

**Via Federal Express**

Marc Rotenberg  
Electronic Privacy Information Center  
1718 Connecticut Ave., NW  
Suite 200  
Washington, D.C. 20009

RE: *Electronic Privacy Information Center v. Transportation Security Administration*,  
Case No. 11-0290 (D.D.C.).

Dear Mr. Rotenberg,

Enclosed, please find a revised release of pages 404-421, pursuant to the Court's order.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph Mead".

Joseph Mead

Encl.

# TRANSPORTATION SECURITY ADMINISTRATION



## Advanced Imaging Technology

★ ★ ★ ★ ★

### Automated Target Recognition

July 2011

#### SENSITIVE SECURITY INFORMATION

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# Background

- In the summer of 2010, TSA issued a statement of work to qualified AIT vendors for the development and implementation of an Automated Target Recognition (ATR) solution
- In the fall of 2010, TSA completed laboratory trials of the L-3 Provision ATR and determined the detection rate to be suitable for airport trials
- February 2011 the TSA began field testing of ATR at three locations; Las Vegas, Atlanta and Washington Reagan.
- This presentation provides background on ATR functionality and insight on the testing results from airport pilots

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# What is Automatic Target Recognition?

- Software that enables the ATR to automatically identify anomalies on passengers entering the security checkpoint
- Employs imaging analysis techniques to identify anomalies based on [REDACTED] recognition software to uncover potential hidden weapons, explosives, and other contraband without the need for an imaging officer
- Full implementation of ATR will be based on equal or better operational effectiveness and suitability performance compared to image operators

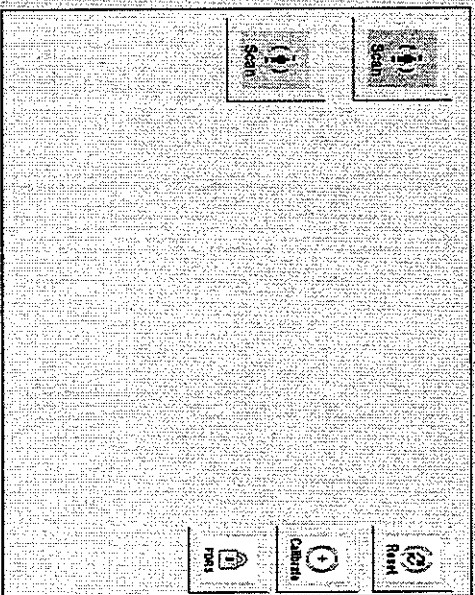
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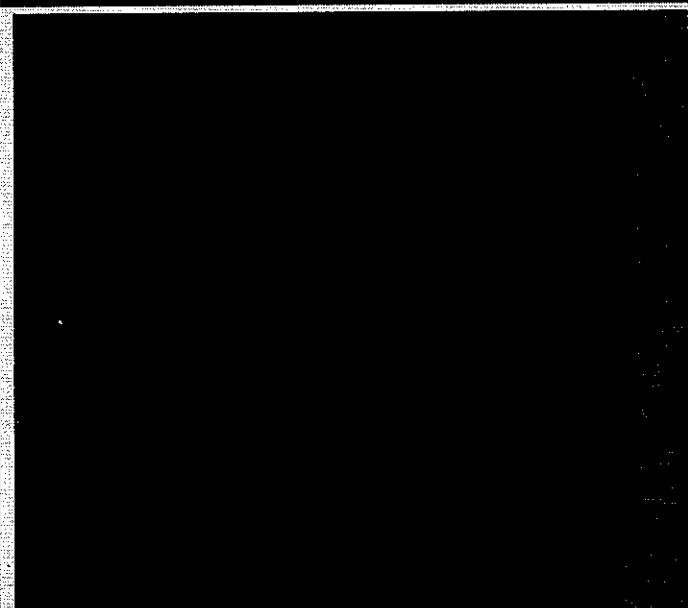
# How will ATR be displayed?

Operators are presented with a display that allows for the selection of male (blue) /female (pink) passenger screening

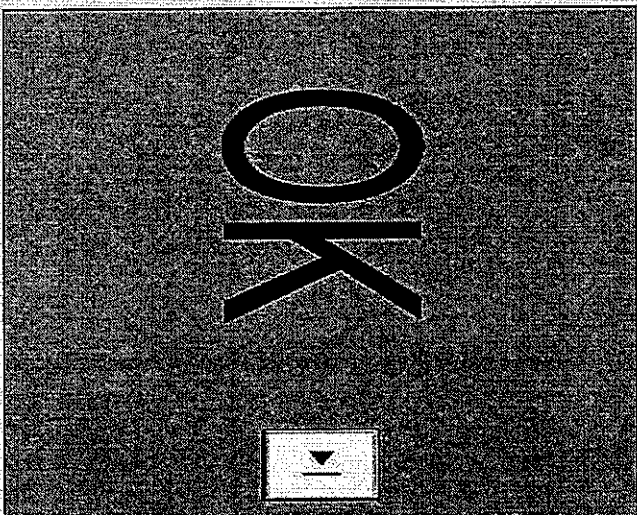


Separate ATR detection algorithms are used to reduce false alarms based on the passenger's gender.

If anomalies are discovered, a screen will signify specific location(s) on the passenger where anomalies ARE detected. Image is the same regardless of gender.



If no anomalies are discovered, a screen will appear signifying that anomalies are NOT detected.



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# Operational Test & Evaluation (OT&E)

## OT&E consisted of:

- Observations of TSOs using the AIT w/ATR to screen actual passengers
- Baseline Detection Comparison of AIT w/IO to AIT w/ATR
- Burn-in period, in which the test team reviewed data collection procedures to ensure that test team members collected the data effectively
- Demonstration of system reliability in airport environment to include operation availability and [REDACTED]
- Evaluation of throughput and other operational suitability issues
- Evaluation of system safeguards for passenger privacy

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# Airport OT&E

## Pilot Details

| Airport                               | Schedule                          | Duration of Pilot | Scope   |
|---------------------------------------|-----------------------------------|-------------------|---|
| Las Vegas International Airport (LAS) | February 01 2010 – March 15, 2010 | 36 days           | 2 L-3 AIT Systems (with and without ATR) were evaluated |
| Ronald Reagan National Airport (DCA)  | February 05 2010 – March 19, 2010 | 36 days           | 2 L-3 AIT Systems (with and without ATR) were evaluated |
| Atlanta International Airport (ATL)   | February 08 2010 – March 22, 2010 | 36 days           | 2 L-3 AIT Systems (with and without ATR) were evaluated |

## Goals

|                                 |   |
|---------------------------------|---|
| Demonstrate operational utility | Demonstrate operational effectiveness and suitability in the field environment. |
| Demonstrate Automated Detection | Demonstrate concept of operations with automated detection capability.          |
| Demonstrate Reliability         | Demonstrate system operation availability in airport environment.               |

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# Operational Performance Metrics

## Define criteria for operational suitability and effectiveness determination of ATR-equipped AIT units

- **Mission Performance:** Does the AIT automatically detect and display possible threats concealed on passengers?
- **Availability:** Is the AIT sufficiently available in potentially deployable environments to process passengers?
- **Human-Systems Integration (HSI):** Can available trained TSOs utilizing the AIT system at airport checkpoints successfully conduct screening operations?
- **Information Assurance:** Does the AIT prevent unauthorized system use and access to the system reporting data and imagery?
- **Interoperability:** Is the AIT interoperable with other checkpoint equipment and processes?

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# Key Performance Parameters (KPPs)

KPPs are those attributes of a system that are considered critical to operational capability

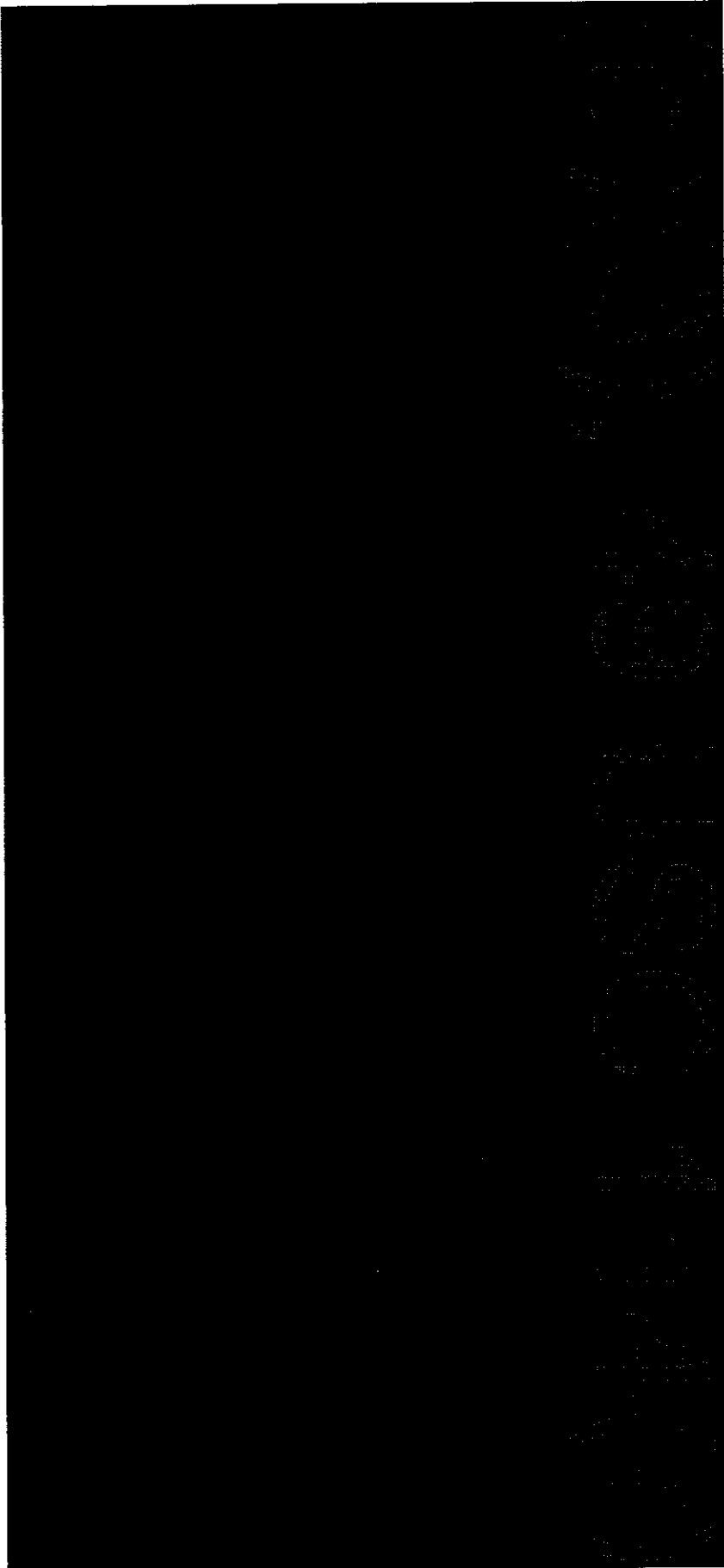
**KPP**

**Result Identified in System Evaluation Report**

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# Effectiveness



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# Effectiveness

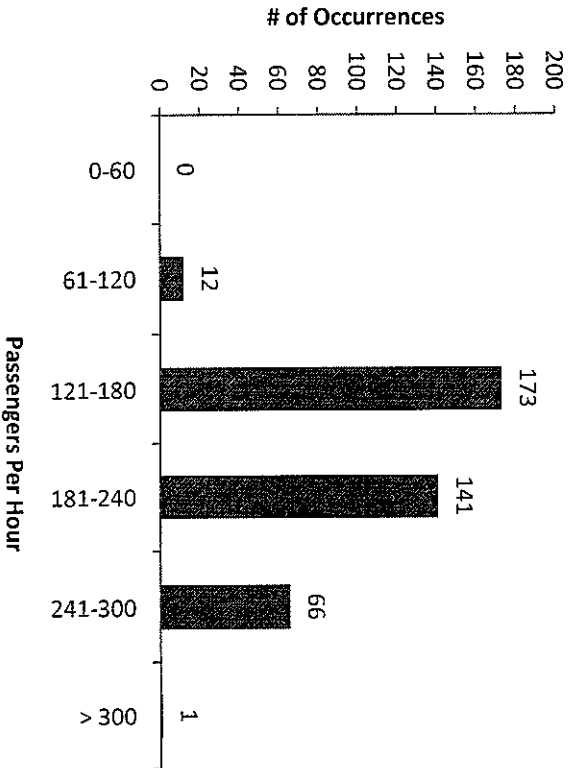
Detection - ATR vs. IO

(b)(3), 49 U.S.C. § 114(r)

## Reliability – Operational Availability

| Airport        | Total Test Hours | Total Downtime Hours | A <sub>0</sub> |
|----------------|------------------|----------------------|----------------|
| ATL            | 558.3            | 13.9                 | 97.5%          |
| DCA            | 566.8            | 1.5                  | 99.7%          |
| LAS            | 563.5            | 2.9                  | 99.5%          |
| <b>Overall</b> | <b>1688.6</b>    | <b>18.3</b>          | <b>98.9%</b>   |

## Throughput - Passengers Per Hour



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## Confirmed Benefits of AIT with ATR

- Allows for reduction of manpower requirements through the elimination of the IO position
- Reduces privacy concerns, since human imagery is not reviewed by TSOs

(b)(3), 49 U.S.C. § 114(r)

- Reduces operator training requirements from days to hours
- Reduces scan time, increasing throughput from 100 to 190+ passengers screened per hour

(b)(3), 49 U.S.C. § 114(r)

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# DHS DOT&E Summary

## Letter of Assessment (LOA) findings:

- “The DOT&E concludes the L3 Communications ProVision 100 AIT System with ATR to be effective and suitable as tested based on the system meeting all Key Performance Parameters (KPPs).”
- “DOT&E concurs with the TSA findings of operationally effective and operationally suitable and finds the execution of the FOT&E adequately followed the approved Operational Test Plan.”
- “All Key Performance Parameters relative to ATR implementation were satisfied as tested.”
- “DOT&E must note and commend the considerable efforts and level of cooperation and collaboration observed amongst the various TSA elements, including the T&E, program management, and user communities, with respect to the ATR initiative.”

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## Next Steps for ATR

- Complete I3 fleet upgrade to ATR within 80 days once formal DHS approval received
- Explore additional privacy protections for imaging technology
- Test additional ATR-equipped AIT systems from vendors

(b)(3), 49 U.S.C. § 114(r)

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# Continuous Improvement of ATR

(b)(3), 49 U.S.C. § 114(r)

- OST will execute a test excursion in July 2011 to [REDACTED]

[REDACTED] at the three original ATR

OT&E locations: ATL, DCA and LAS

(b)(3), 49 U.S.C. § 114(r)

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# Funding

- 500 units procured to date
- \$86.3M awarded for test and production units, shipping, OEM installation, and training classes
- \$7.8M awarded for ATR upgrades
- FY11 Budget \$87.5M ~ 500 units
- FY12 Budget \$48.1M ~ 275 units

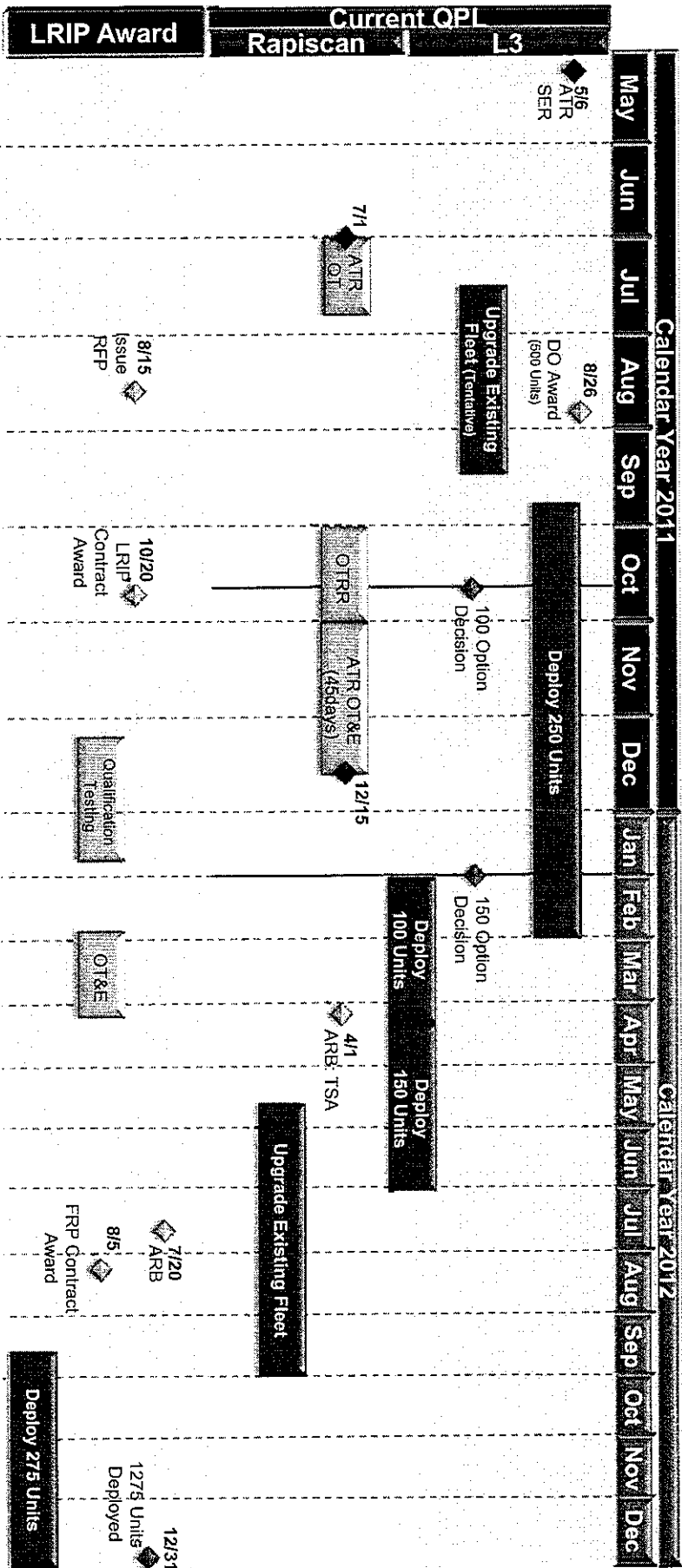
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# Schedule



- ◆ Program Milestone
- ◆ Testing milestone
- ◆ Deployment Milestone
- ◆ Acquisitions Milestone

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# Deployment Approach

- Upgrade existing AIT units to ATR (July-Sept; limited to L3 initially)
- Install new ATR-equipped AIT units
  - First wave of 250 units
    - Begin deployments in August, complete by December/January
    - First deployments at airports where site preparation is complete
    - Update drawings to incorporate additional ATR units into airports with existing AIT units
    - Maintain brand consistency at hub and spoke airports for training and maintenance impacts
  - Second wave of AIT Deployments
    - Continue with deployments to airports that have already received AIT units in 2010
    - Removal of WTMD required for some of the deployments in this wave

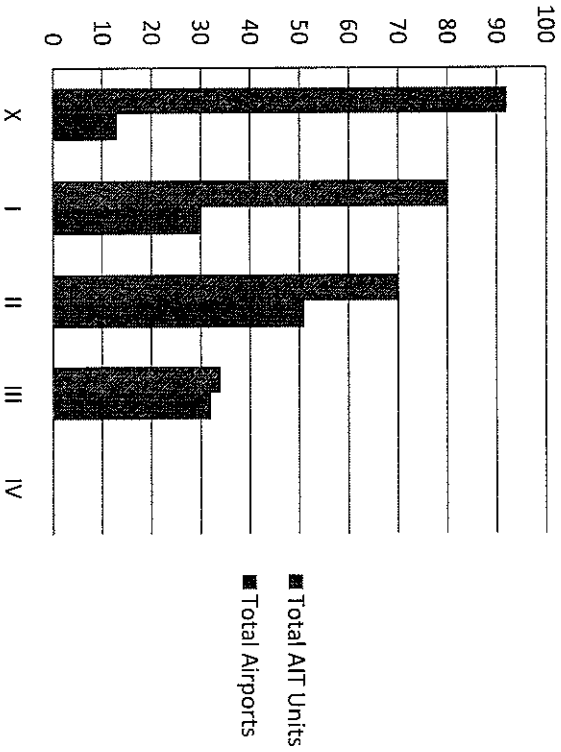
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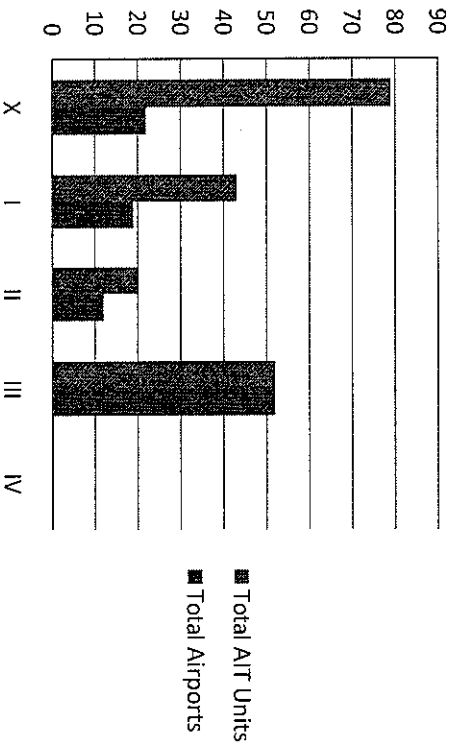


# Deployment

ATR Deployments (August-January)



Additional AIT Deployments  
(January-July)  
(includes removal of WTMD with some deployment in this group)



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