Army Aviation Component Tracking Program

The Army Maintenance Management System – Aviation (TAMMS-A)

Presented to:
The Unique Item Tracking Committee
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Presented by:
Kathy Biddlecombe
AMCOM
Acting Chief, National Maintenance Programs Division
(256) 876-5122   DSN: 746-5122
TAMMS-A For Safety

Component lifecycle linked to aircraft utilization, shelf life or events

- Critical safety items serialized to ID source, document acceptance date
- Maintenance intervals managed through TAMMS-A tracking system
- Finite Life items removed before failure ("RC" code)
- Time Change items overhauled on schedule ("TC" code)
- Condition Change items included in the program as required by PM or AMRDEC ("CC")
Cradle to Grave Tracking

**ACQUISITION / TECH DATA**
- New Procurement
- CDRL
- DID
- DD 250 Verification

**COMPONENT PERFORMANCE**
- Field Installation/Removal

**REPAIR EFFECTIVENESS**
- (Field - National)
- Organic/Contractor

**DISPOSAL**
- Remove from Inventory

- 13 Million Records
- 2.7 Million Tracked Parts
- 2410
# TAMMS-A Stakeholders Serialization Process

<table>
<thead>
<tr>
<th>Task</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify what gets tracked</td>
<td>PM, Engineers, Item Mgr</td>
</tr>
<tr>
<td>Modify Tech Data Package</td>
<td>PM, Engineers</td>
</tr>
<tr>
<td>Provision, Catalog, Apply for FLIS</td>
<td>Materiel Mgr, SIM Team, Service POCs for UIT</td>
</tr>
<tr>
<td>Acquisition Cycle, RFP, CDRL, DID</td>
<td>Acquisition, SIM team</td>
</tr>
<tr>
<td>Serial Number Review, Component Acceptance</td>
<td>DCMA, SIM Team, Asset Mgr, Contracting Officer, Legal, DFAS</td>
</tr>
<tr>
<td>Enter Supply/Transport/Warehouse Cycles</td>
<td>PM, Engineers, Item manager</td>
</tr>
<tr>
<td>Maintenance (repair/overhaul) Cycle</td>
<td>PM, SIM Team, Item manager</td>
</tr>
<tr>
<td>Disposal - Sale/De-Mil/crash damage</td>
<td></td>
</tr>
</tbody>
</table>

**DCMA** - Defense Contract Management Agency  
**DFAS** - Defense Finance Accounting Service  
**SIM** - Serialized Item Management
Core Process Initiatives

**Database**
- 30% Electronic
- 2.5 Million Unique Items

**Field Installation/Removal**
- AMATS demo/deployment with AIT feed
- Virtual Aircraft

**Wholesale**
- Automate CCAD - DLMD Backbone
  - Reduce CCAD overhead paperwork requirements
  - Improve 2410 accuracy
  - Monitor recap mandatory items
  - Improve build record accuracy, future parts availability
- Link to process analysis data collection system & development capabilities
- Joint Service Contractor Reporting Sikorsky
- Integration of AIT field/wholesale
  - RF Tag
  - Memory Button
  - Bar Code

**Acquisition**
- Automated links:
  - Contract lot to Serial # Block
  - EPDM links planned
Serialized Item Management
Based on a TAMMS-A “Backbone” to Integrate

- Acquisition
- Maintenance
- Disposal
- Supply
- Warehouse
- Transportation

AIT Enabled

- ePDM
- GCSS-A
- LMP
**TAMMS-A**

*Designed for Safe Operation*

Manages:

- ✓ Maintenance Schedules
- ✓ Component Removal
- ✓ $40 + Billion in Assets
- ✓ Over 10,000 actions/wk

**Used today for:**

- SOF
- Failure Mode Analysis
- Component Life/Age Studies
- Configuration Status/Studies
- Source of Supply/Repair Analysis
- Recap & Overhaul Improvement
- Data Reconstruction in excess of $20M/yr

**Data Quality**

**Data Transmission**

**The Army Maintenance Management System Aviation**

**Modeling**

- Surge/Supply Prediction
- Deployment/Flyaway Package
- Operating Cost Control
Back-Up
Aviation Issues

- Component cycle driven by finite life, maintenance interval and flying hour program may not fit standard requirements modeling.

- Difficulty in predicting arrival of various components at depot can increase difficulty of configuration management.

- Funding requirement changes for supply driven by maintenance concept change is difficult.
Modeling ARMY TRANSFORMATION - Reduced Footprint, System Recap, Improved Component Overhaul and Requirements Forecasting

**Virtual Aircraft** utilizes TAMMS-A Records to link serialized component performance with aircraft tail numbers, producing aircraft specific requirements:
- Models use Component performance profiles and “flight of these virtual aircraft”
- Manual process can take weeks to analyze an aircraft data comes from many sources

**Constraints**
- Data availability, access procedures and quality vary greatly
- Automated access to varied data sources
- Provides screening capability for raw data
- Provides decision tools to analysts for ranking induction/distribution
- Flys a single aircraft, unit or entire fleet to analyze component demand
- Models age, configuration and optempo to ID predicted failures
- Used to optimize recap decisions, review planned spares requirements
- Expanded to evaluate deployment requirements - tailored deployment packages

**Issue:** what is incorporated into ERP solution, what stays at each MSC as a bridge or unique?
Life Cycle Fleet Management Tool – looks at each aircraft tail by tail.
models effect of component life / age, maintenance and supply cycle time
on system cost and reliability

Utilized to Predict Expected Component Failure
• For Recapitalization
• For Requirements Identification
• For Pre-Deployment Support
• For Optimization of Deployment Resources

How?
Input: JACE, 2410, ARDSS
Model: Virtual Aircraft with existing log system
Output: Monte Carlo simulation in aging obsolescence. Distribution Played
## Data Definitions

<table>
<thead>
<tr>
<th>SAS_var</th>
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<td>UIC</td>
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<td>Unit Identification Code of Original Receipt (perform the action)</td>
<td>UIC</td>
<td>VCh2</td>
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</table>
Joint Service

ELITE Extensions

- Other data exchanges within H-60
- Extension to Navy process and infrastructure
- 2410 to other PM’s