46th ANNUAL GUN AND MISSILE SYSTEMS CONFERENCE AND EXHIBITION

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Presented by:
COL Cavalier
JAMS Project Manager
PEO Missiles and Space

Distribution A: Approved for Public Release, Distribution Unlimited
Any Warfighter – Anywhere – All the Time…
CURRENT CHALLENGES

• Reducing Budgets
  – Prioritizing Efforts to Maintain the Most Effective Warfighting Capability as Possible
  – Achieving Cost Savings Within Programs by Implementing Better Buying Power Initiatives
CURRENT CHALLENGES (cont’)

• System of System Integration Improvements
  – Achieving Greater Capability Through Better Integration
  – System Requirements to be Adjusted to Match with the Army’s System of System Emphasis
  – Integrating Air and Missile Defense Systems Efforts are Ongoing – Departing from a Long History of Separate More Stovepiped AMD Systems
CURRENT CHALLENGES (cont’)

• Responsive Program Execution to Support Warfighter Needs and Timelines

  – Executing Quick Reaction / JUONS Efforts Can Be Done Rapidly to Fill Current Requirements Gaps

  – Program of Records are Challenged by the Requirements and Contracting Process, and Higher Level Program Oversight
CURRENT CHALLENGES (cont’)

• Maintaining Our Industrial Base and a Viable Highly Skilled Workforce is Essential for DoD

  – Needs to be Factored into Budget Decision to Maintain Long Term Capabilities for Guns, Missiles and Ammo Development and Production, as Well as for Many Other Areas

  – FMS Will Help Substantially in Some Areas
HELFIRE MAINTENANCE OPTIMIZATION VIA CAPTIVE CARRY MONITORING UNIT

Captive Carry Health Monitoring (CCHM) Unit

Overview

- **Scope of Effort**: Qualified design to monitor captive carry hours of individual HELFIRE missiles and maintain an electronic record on each missile.
- **Methodology**: Integrate commercially available data acquisition technology to deployed HELFIRE missiles. These devices will measure and record the captive carry time for each missile along with other variables.
- **Participants**: AMRDEC (ED, AED, AATD), RTTC, NSWC-Crane, JAMS PMO, OEM Contractor, and Pacific Northwest National Labs.

Schedule

- **Near Term**
  - FY09-FY10 Design/Qual with FY10-FY13 Production
  - Additional Sensing (Drop Shock/Humidity)
  - Number of Captive Carry Cycles
  - Multiple Platforms (Investigate UAS)
- **R Missile HMU**
  - Integration into AGM-114R Production
  - Vibration
  - Temperature
  - Drop/Shock
  - Interface w/ ULLS-A

Benefits

- **Reduce O&M Costs by $52M (FY09-FY18)**
- **Integrated with CBM**:
  - Reduce maintenance burden
  - Increase reliability & availability
  - Enhance safety
- **Utilize captive carry failure rate data to optimize preventive maintenance interval at depot**
- **Reduction of repair part cost saves $5.2M per year**
Overview

- JAMS partnered with Lockheed Martin to streamline the HELLFIRE Missile Depot (HMD) process to repair a HELLFIRE missile that only has a dome failure
- Repair cycle time for a failed dome was 58.5 hours
- New process is 15 minutes and allows dome replacement to be conducted at FTRF
- FTRF also evaluates domes against revised dome scratch criteria

Schedule

- 22 Oct 09 - Initial Meeting on Dome Replacement
- 20 Jan 10 - Follow-on Meeting where improvements were identified
- 07 Apr 10 - SOPs and testing guidance finalized
- 30 Apr 10 - Improved dome replacement capability implemented at the FTRF

Benefits

- Cost Savings: $5.8M (FY10-FY15)
- Dome replacement cycle time reduced to 0.25 hours
- Dome replacement at the FTRF reduced the median TAT from 431 days to 146 days for all dome failures.
- Increased Materiel Availability by 10%
- Increased Turn Around Time by at least 50% for Eligible Missiles
- Improved Depot Efficiency (Improving Turn Around Times for Remaining CONUS RESET Missiles)
Data Collection Evolution

From Paper
Data collector uses paper Form to record missile data

To Desktop
Data is entered into Flex application Installed on collector’s desktop

To Web
Data is imported to PCIR for reporting and analysis

Overview
- The old, manual method of tracking missile CBM data was inaccurate and required additional work to correct errors
- Process lead time took 20.5 hrs on average which resulted in “dated” information
- Process did not track all required information
- Sigma Quality Level (SQL) rate was 2.9
- Process Cycle Efficiency (PCE) was 26.8%

Schedule
- 30 May 10: Implementation of automated database reporting tool
- Use contracted Data Collectors through FY13
- FY13 and beyond: Data collection and transmittal will be fully automated as ULLS-AE/PMA is fielded

Benefits
- Cost Savings: $11.5M (FY09-FY16)
- Created new database that tracks all required information and utilizes automated reporting tool
- Leveraged existing contract to expanded data collectors to all nodes where trackable assets are located
- SQL increased to 3.26
- PCE increased to 52.4%
BACK UP
PEO MS PORTFOLIO

**BMC4I**
- Communications Relay Group
- Launcher Control Station
- Engagement Control Station
- Battery Command Post
- Information Coordination Central
- JTAGS
- MEADS
- BMC4I
- IBCS
- JFCC
- IFCS
- FAAD C2
- AMDPCS Family of Systems

**Launchers**
- M299 Launcher
- M260 / M261 Hydra 70
- M270A1 MLRS
- HIMARS
- M41A4ITAS
- Bradley TOW
- JavelinCLU
- Stinger MANPADS
- SLAMRAAM
- Avenger
- MEADS Launcher
- PATRIOT Launcher
- LPWS

**Radars**
- JLENS FCR & SuR
- SENTINEL
- PATRIOT Radar
- MEADS SuR
- MEADS FCR
- LCMR
- Firefinder

**Missiles**
- 20mm Round
- APS EAPS
- Viper Strike
- Javelin
- Griffin
- TOW 2B Aero
- TOW Bunker Buster
- 2.75"
- Stinger
- Laser-Guided Hellfire
- Longbow Hellfire
- Joint Air-to-Ground Missile
- SLAMRAAM
- GMLRS
- ATACMS
- PATRIOT
- PAC-3
- PAC-3 MSE

Any Warfighter – Anywhere – All the Time...
• Implementing a Strategy Focused on the IAMD Program / Integrated (AMD) Battle Command System (IBCS)
  – Reducing Multiple Current C2 / Engagement Operations System Down to IBCS
  – ‘Plug and Fight’ and ‘Any Sensor, Any Shooter’

• Improving Sensor / Radar Strategy to Capitalize on IBCS Networked Capabilities
  – Ability to Fuse Sensors is Critical Along with Enabling compatibility with Future Launchers and Interceptors

• Multiple Possibilities for Improving the ‘shooter’ capabilities over time
  – From Long Range Hit to Kill Interceptors Down to Short Range RAM Interceptors, and Everything In Between
## MISSILE EFFORTS

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- Lightweight Missiles
  - TBD
MISSILE SYSTEM CONCERNS AND CHALLENGES

• U.S. Missile Program Funding

• Missile Industrial Base and Development Expertise

• Affordability / Efficiencies

• Stockpile Reliability and Shelf Life Strategies

• FMS Volume