The Ammunition Enterprise
Ready Today? Ready Tomorrow?
An Air Force Perspective

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Overview

Transformation Within Armament Acquisition
- PEO-Weapons
- Air Armament Enterprise

Technology Development Focus Areas
- Future Growth Areas and Vision

Focus of Acquisition Energy
- Insight to Our Direction

Challenges to Meet Emerging Requirements
Mission Transformation

1995
- PEO Munitions SPOs
- Armament Product Group Manager
  - DAC Programs
  - Depot Activities

1998
- AAC Stand Up
- Armament Summit

1999 AEF

2002/2003
- Elevated Nuclear Sustainment
- Added Cruise Missile Group

2003
- Eglin PEO & DAC Merger
- Capability Delivery Focus
  - Counterair
  - Direct Attack
  - Area Attack
  - Standoff
  - Nuclear & DE
  - Combat Support
  - Enterprise Planning

2003
- FP Virtual SPO
- Expeditionary Equipment

Acquisition Transformation

JDAM INS/GPS Exploitation

LGB

WCMD Precision Area Attack

JASSM Precision Stand Off

“Small Bomb”

Loitering Network Capability Concept

B-2 Shelter
Acquisition Realignment

**PEO**
- Counter Air
- Area Attack
- JDAM
- Lethal Strike
- Special Projects

**DAC**
- Armament Product Group
  - Combat Support
  - Precision Strike
  - Range and Targets
  - Advanced Development
  - Air to Surface Munitions Directorate–Hill
  - Armament Directorate- Robins
- Nuclear Weapons – Kirtland
- Cruise Missile Product Group- Tinker

**PEO**
- Counterair Joint Systems
- Long Range Attack
- Direct Attack
- Air Combat Support
- Area Attack
- Nuclear Weapons
- Air Armament Enterprise
Enterprise Perspective

Integrity - Service - Excellence

C2
Space
Platforms
Air Armament

Pre-System Acquisition
Requirements Generation
Concept Refinement
Technology Devel.

System Acquisition Process
System Development
Production Deployment

Sustainment
Operations Support

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System Development
Production Deployment

Operations Support

YEM
YEC
YEL
Future Growth Areas

- Ability to Integrate Weapons on a Joint Network
  - Can Be Re-Targeted and Re-Directed

- Joint Capabilities
  - Fit On Many/Most Platforms

- Universal Armament Interface
  - Reducing Cycle Time for Aircraft/Weapon Integration

- Smaller, More Lethal, More Precise
  - More Targets, Fewer Sorties

- Executable Programs
  - Doable w/in Cost, Schedule and Performance
  - Win-Win, Affordable and Profitable
  - Use Less GFE For Better Integration
Future Battle Space Access Vision

U.S. AIR FORCE

Near Term 0 – 5 yrs

• High Leverage Munition Capability Supporting Near Term GSTF CONOPS
  • Multiple Kills Per Pass/Sortie
  • Standoff Outside Point Defenses
• Improved Accuracy (Better Than JDAM)

Mid Term Attributes 6 – 15 yrs

• Long Range Internal Carriage Munition
• Reduced Platform Attrition
• Flexible Carriage Enabled by Miniaturization
• Multiple Kills Per Munition
  • Defeat Mobile and Fixed Targets
  • Smaller More Lethal Warhead
  • Multiple Dispense of Guided Micro-Munitions
  • Minimal Collateral Damage
• Munition Borne BIA
• Compatible with Global Information Grid
• Low Logistics Footprint

Far Term 16 – 25 yrs

• Rapid Defeat of Time Critical Anti-Access Targets
  • Hypersonic Cruise Missile Option
  • Subsonic Global Attack Capability from International Air Space
  • > 20 Kills/Munition
    • Lethal Micro Munitions
    • Non-Lethal Directed Energy_payloads

Rapid Decisive Forced Entry Into High Threat Environments

• Hypersonic Standoff Munitions

Low Cost Mini Cruise Missile JASSM P³l

SDB

Hypersonic Standoff Munitions
Insight to Our Direction

Weapons Technology

- Networked Weapon Technology
  - Time Critical Targeting
  - Mobile Targets
- Data Link Between Weaponry and C2 Nodes
  - Weapon Data Link ACTD
- Multi-Event Fuze Technology
  - Technology Transition Candidate
- Improved GPS Accuracy and Security
- Integrated Battle Damage Indicator Capture
Networked Weapons

Persistent backbone emulates characteristics of stable terrestrial networks
Edge networks manage their own mobility
Tethered extensions support en-route missions
Built through evolution from current data link gateway initiatives
Structured to evolve to ad-hoc mobile networking as technology matures
Insight to Our Direction

- Insensitive Munitions
  - General Purpose Bombs
    - MK-84 Design In Progress
    - MK-82 Design Next
  - Shift to a New BLU Family
  - Leaning Towards AFX 794 Fill
- Small Diameter Bomb
  - Next Spiral- Weapon Data Link Possibility
- Joint Air-to-Surface Stand-Off Missile
  - Extended Range Spiral
- Continued Movement from Kits to AUR
Insight to Our Direction

- AFSOC 105mm
  - Separate AF Tech Data Packages
  - New PGU-44 HE Round
  - Followed by PGU-43 Training Round and PGU-45 High Frag Round

- Medium Caliber
  - Comparative Testing for 20mm Kinetic Kill Capability
  - No War Fighter Requirement for Depleted Uranium Replacement
  - Need a Multi-Purpose Combat Round for F-35 25mm Gun
Insight to Our Direction

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Tomorrow’s Challenges

- “Smart Fuze” technology and manufacturing
- Propellant production for medium caliber and small caliber rounds
- Stabilizing SMCA procurements
  - Long Term vs. Single Year Actions
- TNT Recycling vs. Demand
- TNT Production Flexibility to Support Insensitive Munitions Fills
Summary

- Shared Insight to OIF Effort
- Rapid Transformation Within Armament Acquisition
  - Enterprise and Capabilities Focus
- Technology Investment Direction, Growth Areas and Vision
- Insight to Our Energy, Focus and Direction
  - Insight to Our Direction
- Challenges to Meet Emerging Requirements
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