Advancements in 40mm Ammunition

Low Velocity High Velocity

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Session Overview—Introduction

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Objectives

- **Establish Rigorous Engineering Based Design and Performance Rationale for 40mm Grenade Ammunition**
  - Low Velocity Family
  - High Velocity Family
  - Product Improvements
  - Weapon Interfaces
- **Evolve Improved Documentation for:**
  - Technical Data Packages
  - Specifications
  - Performance Characteristics
    - Interior, Exterior, Terminal Ballistics
    - Reliability
    - Safety
- **Support Performance, On-Going, Production, and Operational Failure Analysis**

40mm Ammunition Government Technology Insertion Team

• Melissa Wanner	PM-MAS	Project Management Engineer
• James Grassi	ARDEC	40mm Special Projects Lead
• Adam Sorchini	ARDEC	Project Engineer
• Adam Jacob	ARDEC	Project Engineer
• Jason Wasserman	ARDEC	Project Engineer
• Peter Martin	ARDEC	Project Engineer
• Christopher Summa	ARDEC	Project Engineer
• Matthew Millar	ARDEC	Project Engineer

40mm Ammunition Technology Insertion Participants

- US Army PM—MAS
- USAIC
- US Army JMC
- ARDEC
- PEO Soldier Weapons
- ARL
- ATC
- 40mm Ammunition System Management Contractors
  - AMTEC Corporation
  - DSE
- Various Supporting Subcontractors

Integrated Product Team (IPT)
Linking
Technology, Development, Production
To Realize
40mm Ammunition Improvements

40mm Technology Advancement Highlights

- **Focused on Rigorous Engineering**
  - Analysis
  - Design/Development
  - Test
  - Producibility

- **Establishing 40mm Ammunition Baseline Characteristics**
  - Performance Characteristics
  - Identifying and Addressing Concerns
  - Supporting On Going Production

- **Implementing Product Improvement Priorities**
  - Performance (Ballistic, Reliability, Quality, Safety etc.)
  - Producibility
  - Affordability

40mm Technology Advancement Status Presentations

- **Producibility Improvements of 40m High and Low Velocity Shaped Charge Liners**
  - **Mr. Adam Sorchini**
- **Center of Mass Changes During Arming of 40mm Fuzes**
  - **Mr. Adam Jacob**
- **Electronics and Sensors in 40mm Low Velocity Grenade Ammunition**
  - **Mr. Jason Wasserman**

40mm Technology Advancement Status Presentations

- 40mm Day/Night Practice Cartridge for Mk13/XM320/M203 Grenade Launchers
  - Mr. Peter Martin
- M385A1 Composite Projectile Feasibility Study
  - Mr. Christopher Summa
- Development of M16A2 Pivoting Coupling
  - Mr. Matthew Millar

40mm Technology Advancement Benefits

- **Rigorous In-Depth Engineer Rationale and Design/Performance Data Base Evolving for all 40mm Ammunition**
  - Baseline Design/Performance Evolving
- **Attention to Implementing Priority Product Improvements**
  - Development (New Technology, Components, Cartridges)
  - Addressing Producibility Topics
  - Technology Insertion
- **Linking the 40mm Government and Contractor Community**
  - Effective IPT Teams

Supporting the Warfighter Objectives
40mm Ammunition
Capability, Quality, Reliability, Availability, and Affordability
Today and the Future