JAMS Family of Products

- **HELLFIRE Missiles**
  - FA - K - N - R Variants
  - Semi-Active Laser (SAL) HELLFIRE
  - Longbow HELLFIRE Millimeter Wave

- **Joint Air-to-Ground Missile**

- **Launchers and Test Sets**
  - AN/AWM-101A TSGMS
  - M260/M261 Rocket Launchers
  - Launcher Test Station
  - M299 Launcher

- **Rockets**
  - Advanced Precision Kill Weapon System (APKWS)
  - 2.75" Hydra Rocket System

- **Small Guided Munitions**
  - Joint Air-to-Ground Missile (JAGM)

**Any Warfighter - Anywhere - All The Time**
JAGM Increment 1; 20 out of 48 EMD test shots completed, AROC 1 Dec 17 and MS-C May 2018; Lightweight Precision Munition (LPM)

HELLFIRE Romeo Block I, APKWS, Launchers

HELLFIRE F, K, N, and Longbow; Hydra-70 2.75” Rocket System; HF Production capacity increase

HELLFIRE (C variant) Missiles used for training
HELLFIRE R-2

**AGM-114R-2**

Weight = 108 lbs  Length = 64"

**Scope**
- Same as R, plus the Height of Burst (HOB) Sensor

**Milestones - Accomplishments**
- AFSOC early fielding of R2 - Jun 2013
- Air Force qualification of R2 Complete - FY14
- Army Gray Eagle UMRs

**Upcoming Events/Activities**
- Army FY15/16 Procurement of R2/R (60/40 ratio)
- Army FY17 Procurement of R2/R (70/30 ratio)
- Army FMR in work; Complete in FY18
- Army Apache Integration in FY18 (tentative)

**HOB Fuze Function**

**Improved Fragmentation over Point Detonation**
JAGM Missile

JAGM Backward Compatible to HELLFIRE II Platforms

- Fire + forget with options
- Multi-mode seeker (MMW/SAL)
- AH-64/AH-1Z - Initially

Longbow (Radar)
- Shelf life expiration
- Out of Production

HELLFIRE (Laser)

- Improved Fire & Forget
- Moving Targets
- Adverse Weather
- Improved Operational Flexibility
Hydra-70 2.75 Inch Rocket Variants

Advanced Precision Kill Weapon System (APKWS) II Guidance Section

- M264: Red Phosphorus (RP) Smoke
- M255A1 / M149: Flechette
- M257: Visible Illumination Flare
- M278: Infrared Illumination Flare
- M229 / M146: High Explosive (17#)
- M151: High Explosive (10#)
- M156: White Phosphorus (WP) Smoke
- WTU-1/B: High Explosive (10#) Practice (Inert)
- M274: High Explosive (10#) Practice (Smoke)
- M282: Multi-Purpose Penetrator
**Background:** APKWS is an ACAT III Navy Program of Record

- March 2016 U.S. Army Aviation Center of Excellence Equipment Modernization Strategy Annex B – Munitions / Lethality Strategy states:
  - “(APKWS)…is an interim solution for Army Aviation until such a time as a Small Guided Munition Program of Record is established/approved to deliver a forward firing munition, a drop/glide munition, or combination of both…”

**Integration Approach:**

- APKWS Urgent Materiel Release renewed for deployment and fielding to AH-64D/E Apache May 2017

- APKWS Full Materiel Release 1QFY19

*Any Warfighter - Anywhere - All The Time*
JAMS FY17 Accomplishments

Air to Ground Missile Systems

• Production
  – Delivered 6,840 HELLFIRE missiles and 361 launchers to the Army, Navy, Air Force, and Foreign Military Customers
  – Planning to deliver 8,500 HELLFIRE missiles FY18 and increasing production

• Development
  – JAGM completed 20/48 EMD tests, on track for successful AROC Dec 2017 & MS-C May 2018
  – HELLFIRE Longbow L7A ONS fielded April FY17
  – Gray Eagle integration fully resourced for JAGM

Aviation Rockets and Small Guided Munitions

• Production
  – Hydra experienced a break in production (continued to build Warheads/Motors)
    • Resume product delivery Nov 2017
  – Delivered 39,087 AURs and 40,686 Rocket Motors to the Army and Navy combined.
  – APKWS production ramp being executed by Navy (Army will receive 2,000 FY18, 4,000 FY19 and beyond)

• Development
  – APKWS Full Materiel Release 1QFY19
  – Executing MPP ONS (Multi-purpose Penetrating Warhead)
  – Lightweight Precision Munition (LPM) ONS for Gray Eagle
  – Army Aviation Weapons, Sub-Systems, and Munitions ICD in staffing
Joint Attack Munition Systems (JAMS) Project Office

COL David Warnick
Project Manager

Mr. Michael Kuenzli
Deputy Project Manager

HELLFIRE
- Mr. Forrest Collier
  Product Manager
  HELLFIRE Systems
- Mr. Patrick Miller
  Deputy Product Manager
  HELLFIRE Systems

ARSGM
- Mr. Timothy Kay
  Product Lead
  ARSGM
- Mr. Kevin Connelly
  Deputy Product Lead
  ARSGM

JAGM
- LTC Christopher Hill
  Product Manager
  JAGM
- Mr. James Edmonds
  Deputy Product Manager
  JAGM

LTS
- LTC Patrick “Josh” Baker
  Product Lead
  Launchers/Test Sets
- Mr. Dustin Hicks
  Deputy Product Lead
  Launchers/Test Sets

We Make Aviation Lethal
GD-OTS Hydra 70
2017 Cribbins Aviation Symposium

Dave Whitehouse
Sr. Director, Rocket Programs
Williston, VT
• 60+ year old Program
  – Area suppression
  – Illumination, obscuration, marking

• Introduction of Guided capabilities expands applications
  – Reduced collateral damage
  – Point targets
    • Buildings
    • Vehicles

• Needs/ Industry focus
  – Warhead Improvements
    • Shaped Charges, Penetrators
    • Dual Safe/Programmable Fuzing
QUESTIONS?