USAF Fuze Acquisition Roadmap

National Defense Industrial Association
51th Annual Fuze Conference
"Changing Fuze Standards"

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U.S. AIR FORCE

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Integrity - Service - Excellence

Why Are We Here?

- **Air Force Fuze Acquisition Process**
- **Current Fuze Roadmaps**
- **Industry Fuze Assessment**
- **Summary**

USAF Fuze Acquisition Process

Three Methods of USAF Fuze Acquisition

1) Total System Approach (Eglin AFB)

- **308th Armament Systems Wing**
  - **308th Armament System Group**
    - JASSM (AGM-158)
  - **408th Armament Systems Group**
    - Wind Corrected Munition Dispenser
    - JSOW (AGM-154)
    - Sensor Fuzed Weapon
  - **918th Armament Systems Group**
    - Small Diameter Bomb I & II (GBU-39)

- **328th Armament Systems Wing**
  - **328th Armament Systems Group**
    - AMRAAM

USAF Fuze Acquisition Process

Three Methods of USAF Fuze Acquisition (Cont)

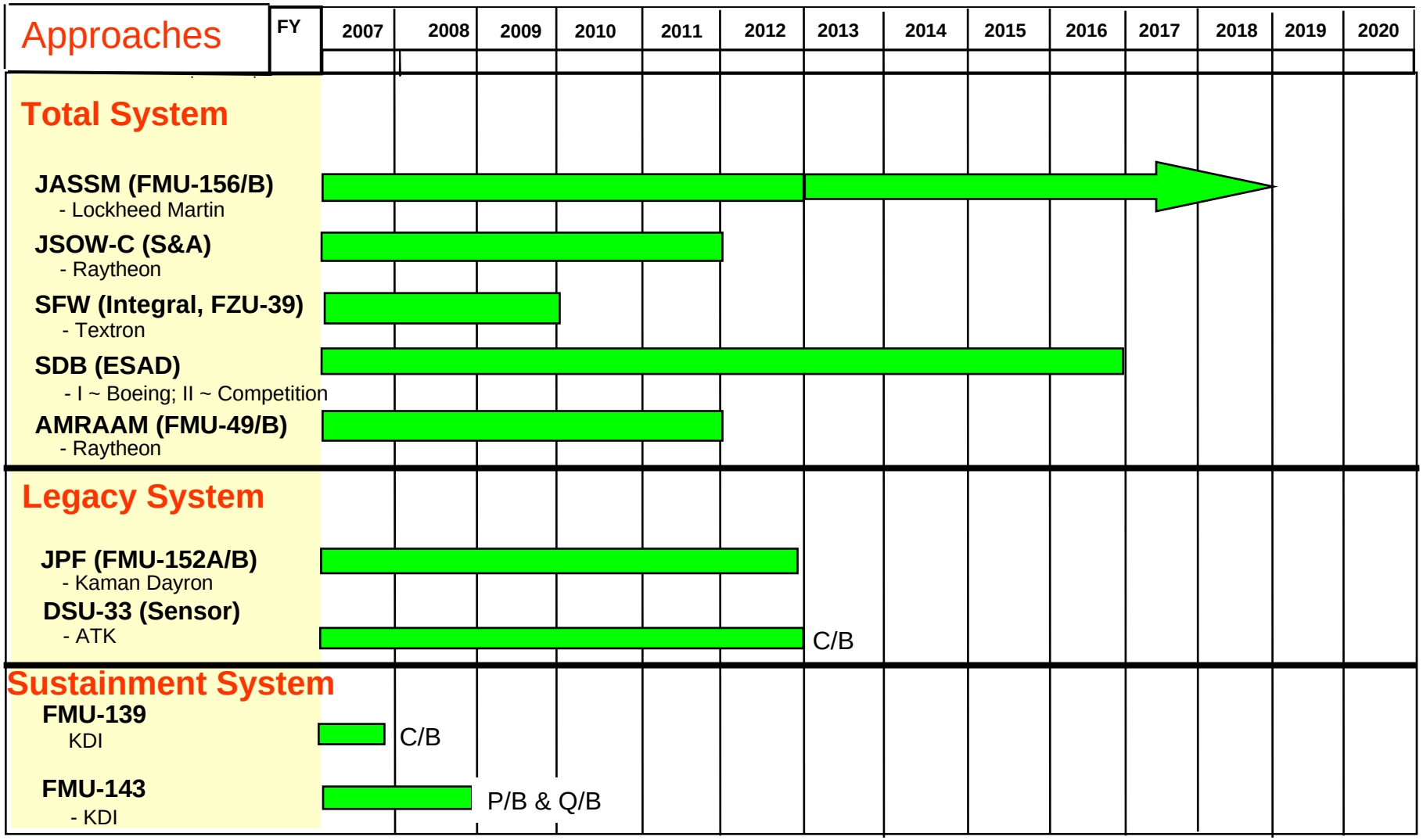
2) Legacy System Approach (Eglin AFB)

- **308th Armament Systems Wing**
  - **708th Armament Systems Group**
    - FMU-152 (Joint Programmable Fuze)
    - DSU-33 (Proximity Sensor)

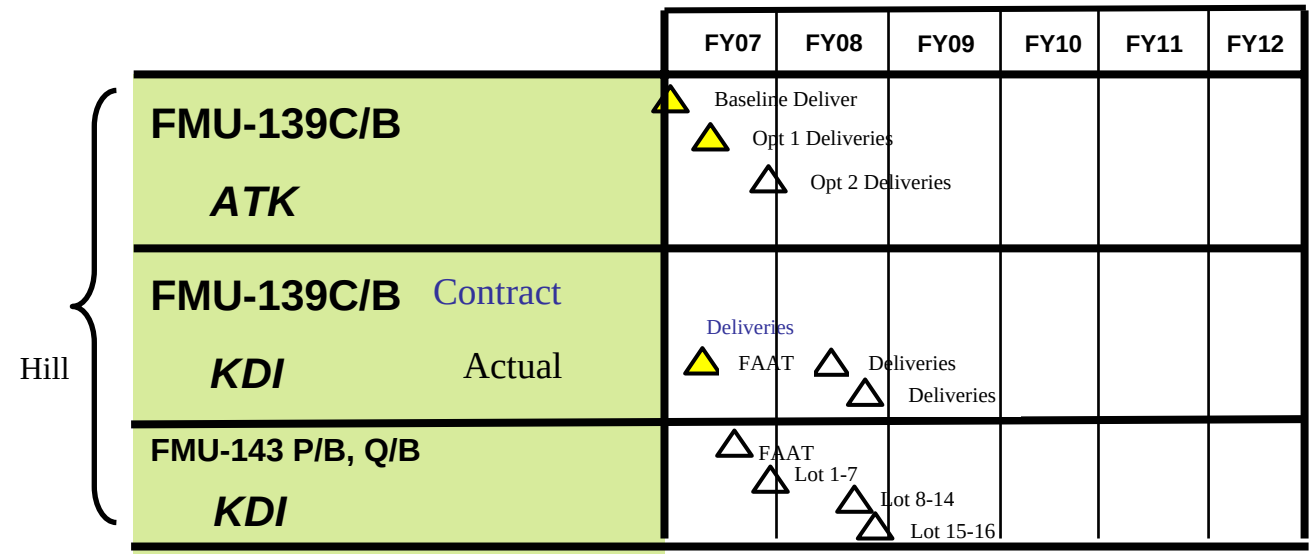
3) Sustainment Approach (Hill AFB)

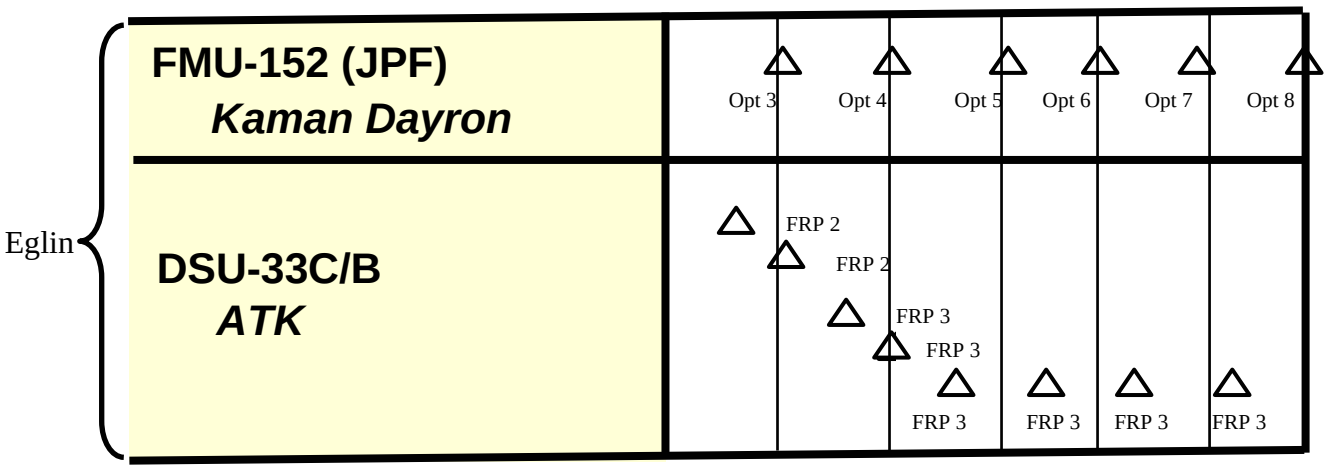
- **784th Combat Sustainment Group**
  - **506th Combat Sustainment Squadron**
    - FMU-139 (Electronic Bomb Fuze)
    - FMU-143 (Electronic Bomb Fuze)

USAF FUZE ROADMAP



Component Fuze Roadmap





AAC's Challenge to Industry Summer 2006

- **Boeing --- lead; assemble a panel made up of Industry with Government Personnel for Advisors**

- **Interview the Fuzing Industry with the following questions and report back at the NDIA 2006 Air Armament Symposium (Oct 2006)**
  1. What should the community be doing differently?
  2. Is the next generation fuze beyond our grasp? What are the issues (technical, cost, or political)?
  3. Recommend those investments/activities required to produce a reliable product that the warfighter requires.

Panel Members

Raytheon
Missile Systems

NORTHROP GRUMMAN

LOCKHEED MARTIN

BOEING

ATK

GENERAL DYNAMICS
Ordnance and Tactical Systems

MUSTANG
TECHNOLOGY GROUP

L3 communications
KDI Precision Products, Inc.

KAMAN

THALES
THALES MISSILE ELECTRONICS LIMITED

Industry Panel Findings

- **Current fuze capability**
  - Are reliable and affordable when used in intended environments
  - Have been a GFE (commodity) component of the system (MK-Series; BLU-109; BLU-113; BLU-121)
  - New target intel reveals harsher environments; driving weapon system / fuze failures
  - Current systems capability against new targets not known

Characterization of the current inventory has not been done in enough detail to develop a comprehensive fuze for new hard targets

Industry Panel Findings

- **Future fuze capability**
  - For concrete hardness of > 9,000 psi, the technology will be available for a Hard Deeply Buried Targets fuze for existing inventory weapons by FY10
  - Future targets and void-sensing/layer-counting requirements are not sufficiently defined to determine if the technology is available for a future HDBT weapon systems
- Future Air Force procurements need to take into consideration the fuze industrial base to maintain stability and/or prevent further erosion
- Air Force needs to maintain awareness of international products
- Air Force needs to maintain dialog among Govt/Primes/ Fuze Contractors

Summary

- **The Air Force recognizes the importance of partnership between the Fuze community and weapon Primes in developing fuzing as part of the weapon system to support the total system approach**

- **The fuze industry production base is under-funded to support technology advances to meet out-year capability needs**

- **Hard and Deeply Buried Targets fuzing is achievable near-term as a system solution with appropriate investment**
  - **AAC/XR --- Hard Target Void Sensing Fuze JCTD**