



Arming Unmanned Aircraft Systems

LTC(P) Tom Payne
Joint Attack Munition Systems (JAMS)

15 April 2008

Distribution Statement A – Approved for public release. Distribution is unlimited.



UNCLASSIFIED



JAMS Family Of Products



15+ Hellfire Variants

Laser HELLFIRE

Longbow HELLFIRE



Blast Frag Sleeve



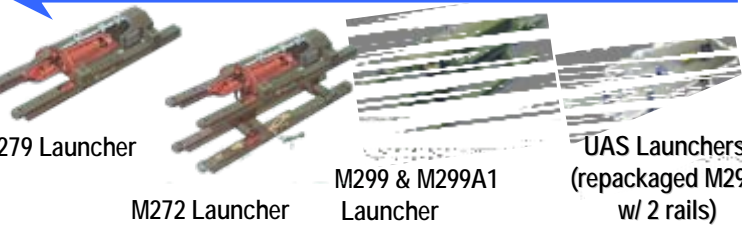
Joint Air Ground Missile

Missiles



2.75-inch Hydra Rocket System

Rockets



M279 Launcher

M272 Launcher

M299 & M299A1 Launcher

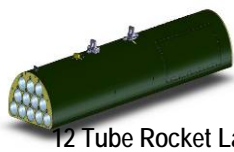
UAS Launchers (repackaged M299 w/ 2 rails)



M310 Launcher



M260/M261 Rocket Launchers



12 Tube Rocket Launcher



AN/TSM-205 Test Set



Launcher Test Station



Viper Strike



AN/AWM-101A TSGMS

Launchers / Support Equipment/ Viper Strike



UAS Weaponization

Integration of HELLFIRE on Predator

- Integration on Predator
- Providing Launchers and Missiles for use on UAS.
- Supporting platform, launcher, and missile interface modifications as necessary



Viper Strike on Hunter

- Rapid integration and testing
- Currently supporting Strike Warfighting Capability
- Fielded FY07
- First combat use – September 2007



JAMS Began UAS Weaponization in 2001 and continues today:



UAS Weaponization - Future Systems



Weaponizing ER/MP

- Currently Working Integration
- Possible Munitions:
 - Hellfire
 - JAGM
- Modified M299 Launcher



Fire Scout

- Viper Strike integration
- Laser Payload integration for compatibility with HELLFIRE Missile System for Remote Designation



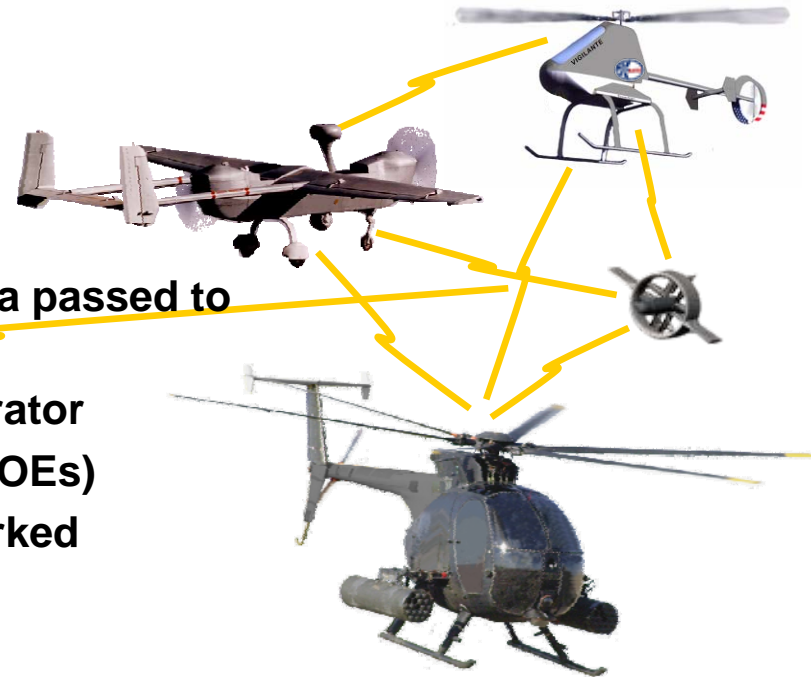
Limitations & Desired Capabilities of Armed UAS



- **Current limitations of Armed UAS**
 - Limited payload weight and types
 - Limited engagement envelope
 - Altitude Restrictions
 - Strict Rules of Engagement (ROEs)
 - Sensors and weapons under full manual control
 - Stovepipe control
 - Limited to larger UAS

- **Desired capabilities of Armed UAS**

- Effective mix of weapon types
- Flexible engagement envelope
- Automated, fused sensors with pertinent data passed to an operator
- Final weapon release authority still with operator
- Easily implemented Rules of Engagement (ROEs)
- Integrated into MUM Teaming and the networked battlespace
- Multiple UAS classes





JAMS Total Life Cycle Weapon Support



- **UAS Weaponization Process**
 - **Documentation of Requirements**
 - **Design of Experiment (to include ROM Cost Estimate)**
 - **Documentation of Munitions and Platform Characteristics**
 - **Identification of Required Modifications to Munitions or Platform**
 - **Design of Required Interfaces**
 - **Prototype Development**
 - **Testing**
 - **Materiel Release**
 - **Fielding / Training**
 - **Transfer / Sustainment**

The JAMS PO is providing overall program management for weaponization of UAS armed with JAMS PO munitions and is actively working with other Joint Customers to support their weaponization needs.



Contact Information



LTC(P) Tom Payne

HELLFIRE Product Manager
Joint Attack Munition Systems

Email: thomas-payne@us.army.mil

Phone:

Comm: (256) 313-2084

DSN: 897-2084

Mailing Address:

Joint Attack Munition System Project Office

ATTN: SFAE-MSLS-JAMS

5250 Martin Road

Redstone Arsenal, AL 35898