

2018 Air Armament Symposium

Developing Technologies – The Art of the Possible



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The Art of the Possible



AF LCMC... Providing the Warfighter's Edge

- Operational Concept Demonstration

- 2 Mar 1992 – Start
- 15 Apr – Weapon hardware available, guidance section mockup complete, Aircraft ICD complete
- 1 May – Guidance kit contract complete
- 2 Jun – First guidance kit arrives at Eglin AFB
- 18 Dec – First Captive carry flight
- 10 Feb 1993 – First free flight drop
- 26 Mar – Sixth (final) free flight drop
- 12 Jul – Final report published

- Exploitation of Differential GPS for Guidance Enhancement

- 14 Jul 1994 – Start
- 22 Jul – Guidance kit and Differential GPS network UCA's awarded
- 23 Nov – First guidance kit delivered
- Dec – UCAs definitized
- 7 Mar 1995 – First captive carry flight complete
- 10 Mar – Differential GPS network complete
- 5 May – First free flight drop
- 29 Jun – Free flights 5 and 6 (final) complete



The Direction We're Moving



AFLCMC... Providing the Warfighter's Edge

- Weapon Open Systems Architectures (WOSA)
- Weapon Design Agents
 - Pathfinder Programs
- Model Based Systems Engineering
- Software Factories
- Engineering Center that Supports the Product Center

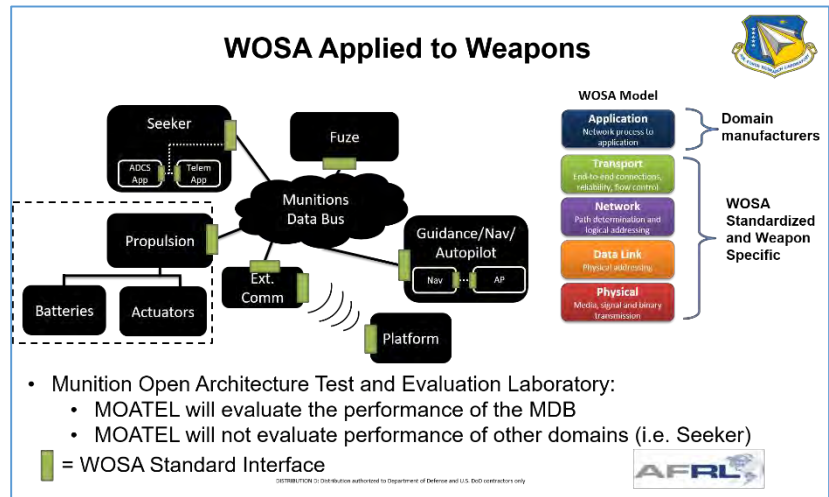
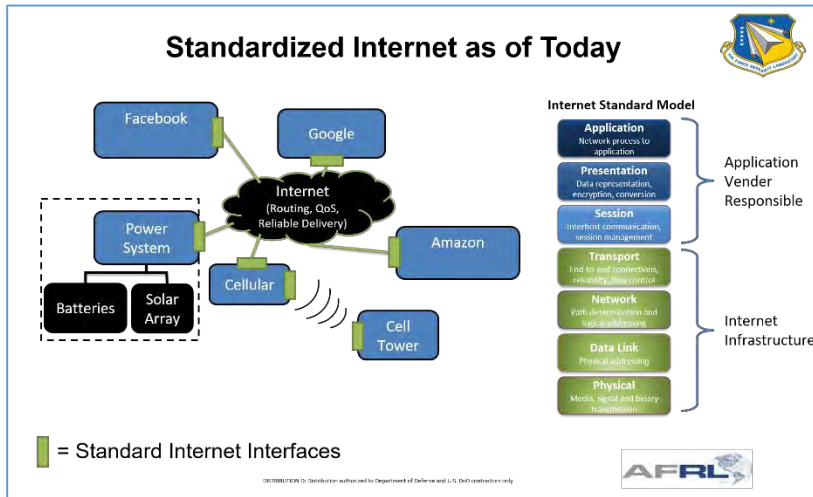


Weapon Open System Architecture



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- WOSA is a Product Developed and Maintained with Industry Consensus a Non-Proprietary Architectural Standard for all Munitions
 - Open Key-Interfaces, Modularity, and Composition Requirements



- Government Owned Architecture
 - Detailed Architecture Specification Interface Control Document
 - Architecture Reference Model
- Intended to Support any Mission Type
- Designed to be Tailorable to Specific Missions and Acquisition Strategies

Weapon Design Agent Pathfinders



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- A Weapon Design Agent (WDA)
 - Is the Prime Contractor for the Development Phase of a Program
 - Facilitates Best of Breed Prototyping
 - Is an Integrator of Subsystems
 - Helps Qualify a Design
 - Delivers the Technical Data Package to the Government
 - Does Not Compete for Production
- Current WDA Programs at Eglin AFB Include
 - BLU-136
 - BLU-111 ECP
 - Maverick
 - A2K
 - A5K



Engineering Direction



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- Model Based Systems Engineering (MBSE)
 - Use Virtual Models of a System to
 - Conduct Near Continuous Design Reviews
 - Understand and Communicate Subsystem and System-of-System Level Interfaces
 - Assess System Performance
 - Conduct Virtual Dress Rehearsal Missions
 - Make Data Accessible to the People Who Need It
- Software Factories
 - Resource with Requirements Expertise
 - Strive for Facebook, Amazon, Netflix, Google Performance
 - The “8-second turn time” Story

The Upshot



AFLCMC... Providing the Warfighter's Edge

- Team Eglin Provides
 - The environment and opportunity to develop, field, and sustain world class weapon systems
- Team Eglin Needs
 - New capability deliveries within 18 months
 - Hardware upgrades within 12 months
 - Software upgrades within 24 hours
 - Industry's production capacity
 - Willing partners who help us transform acquisition

No Change to Total Obligation Authority – the Same Amount of Funding Remains on the Table

Questions?



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