Mr. Joe W. Carter
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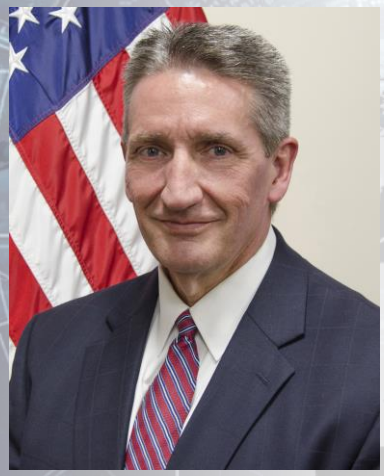

Mr. Joe W. Carter, Acting Systems Engineering Lead, is the Chair of the Army's Real Time, Safety Critical, Embedded (RTSCE) Computing Environment (CE) Working Group (WG), which consists of over 40 programs across 8 PEOs and is part of the U.S. Army's Common Operating Environment (COE). Mr. Carter also serves as the elected Future Airborne Capability Environment (FACE) Steering Committee Chair.

PEO Aviation's aircraft including rotary, fixed wing and unmanned systems are adopting the FACE Approach to meet the COE requirements, address the 5 Principles of Modular Open Systems Approach (MOSA) and implement an Open System Architecture (OSA). The FACE Approach is one of the Real Time Interoperability Framework (RTIF) enablers adopted by the RTSCE CEWG for member systems to address COE requirements. He has the responsibility for assisting the tactical systems to achieve Army Interoperability Certification (AIC) via interoperability testing and COE compliance.

Overall Goal: Reduce Costs Through Software Reuse

Different Upgrade Reasons

- New warfighter functionality
- Congressional/Higher HQ mandates
- Obsolescence Issues
- Technology insertions

Too many requirements, too few dollars

PMs Dilemma

Platforms

A. 

B. 

C. 

SW reuse via the FACE Approach allows you to ***do more with what you have!***

Funding Profiles

Platform A	Reuse	Platform B	Reuse	Platform C
• Task A		• Task A		• Task A
• Task B		• Task B		• Task B
• Task C		• Task C		• Task C
• Task D		• Task D		• Task D
• Task E		• Task E		• Task E
• Task F		• Task F		• Task F

MOSA Principles & FACE Approach

5 Principles of MOSA	FACE Approach & Ecosystem
Establish Enabling Environment	Technical Standard; Data Architecture, Tools (CTS, PR/CR), RIG, Examples (BALSA), Training, Available Capabilities in Registry, Tailorable Contract Language
Employ Modular Design	FACE Reference Architecture & Data Architecture
Designate Key Interfaces	FACE Interfaces include OSS, IOSS and TSS
Select Open Standards	Leverages existing standards including ARINC 653, ARINC 661, OpenGL, POSIX
Certify Conformance	FACE Conformance Program Operational

*MOSA Principles defined in OSD Open Systems Joint Task Force Program Manager's Guide: A MOSA to Acquisition, v2.0 Sept 2004.
Additional information also available from Defense Standardization Program website at https://www.dsp.dla.mil/Programs/MOSA/

PEO AVN MOSA Transformation & OSA Implementation

PEO AVN is Undergoing a MOSA Transformation

- Following Guidance from DoD, Tri-Services, AAE and ASA(ALT)
- MOSA will be a source selection discriminator in future contracts
- Creating an Enabling Environment Across the Organization
- Defining a Reference Architecture Incorporating OSA Principles
  - Utilizing Open, Widely-Used, Consensus-Based Standards
  - Designating Open Interfaces
  - Prescribing Modularity
  - Certifying Conformance
- Utilizing a Digital Engineering Approach
  - Utilizing Model Based Systems Engineering (MBSE)
  - Establishing a Digital Engineering Environment
    - Training for MBSE and OSA
    - Implementation Tools integrated into Integrated Tool Chain (ITC)
    - Creating Technical Reference Frameworks to promote development of reusable software components