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U.S. Army Research, Development and Engineering Command

APS Common Architecture Industry Overview

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

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- What is the Common Architecture?
- How can Industry get involved with the APS Common Architecture effort?
- What is the schedule for events that industry can engage?



Overview



- Armor combined with an Active Protection System (APS) will provide the most efficient system level protection for space, weight, and performance
- Army and industry have made significant investments into APS point designs; none have been fielded by the US because of cost, reliability, and integration challenges
- Common Architecture (CA) for APS will allow commonality across the vehicle fleet, tailored systems to meet PM needs, and facilitate transition.

		FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	RPG	RR AT	GM TF
	Common Architecture		2C ICD (SK	2C HW (SK) 2C ICD (HK/SK)	2C v1.0 (SK) 2C HW (HK/SK)	2C v2.0		con	nponent inter	chitecture (C/ face standard coller (2C) imp	ls			
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Key Technical Components



Key Program Component: APS Common Architecture; development of an affordable flexible common (integration of components) architecture suitable for the timelines and environment of a APS.

Issue(s): Flexibility for integration of various technologies and components into a APS.

Plan to Approach: Develop and publish standard bus protocols with common interfaces, develop an AFSRB-compliant processor and software with a fire control module.

Key Program Component: Mature sensor and countermeasure technologies with common architecture interfaces for advance threat detection and defeat.

Issue(s): Level of effort necessary to build in common interfaces. Quantify performance impacts, issues and concerns using the common interface.

Plan to Approach: Partnership with Industry, Government engineering centers and labs to overcome any interface issues and obstacles.

Industry Engagements



• Why

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- This will allow industry to be <u>proactive</u> with influencing CA and ensure the broadest inclusion of potential components
- Foster component competition to obtain the optimum components and to drive down cost
- When
 - CA updates have been provided to industry at annual TARDEC/Survivability Industry days since FY12
 - Technical industry engagements will be entry criteria to all major demonstrator reviews and feedback will shape deliverables – starting with Demonstrator System Requirements Review (~2QFY14)
 - Additional engagements to ensure industry contact will occur <u>quarterly</u>
- How
 - Formal substantive information sharing is a challenge currently being worked
 - Researching lessons and mechanisms used by other efforts (VICTORY, Robotics ,and F22)

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