Implementing C5SIR Modular Open Suite of Standards (CMOSS)

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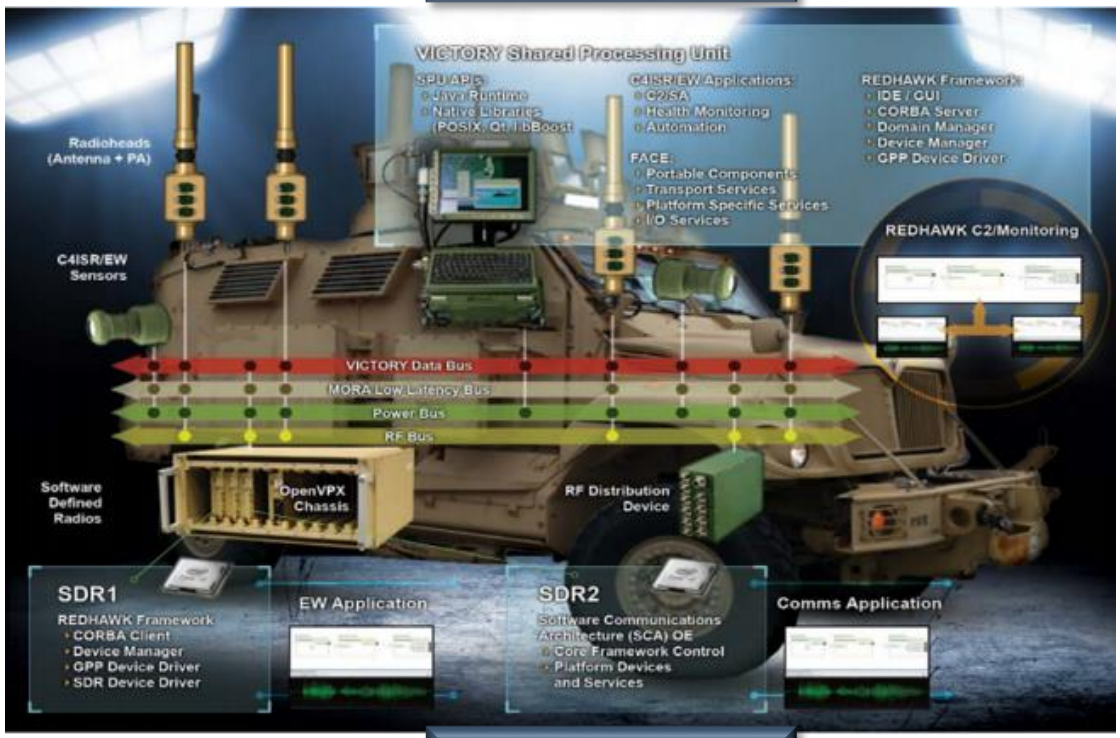
CMOSS Mounted Form Factor (CMFF) Capability Need

Potential Solutions



FOCUS of A-CDD

CMFF Chassis Ground Platform

CMFF Abbreviated CDD
4 Jan 2021

CMFF will:

- Tailor Network Transport. Commanders and leaders lack the capability to **dynamically adapt network architecture** and resources (LOS and BLOS) to **match network transport capability with the commander's priorities** in support of full spectrum operations. Information transport available to **enable timely collaboration and information sharing.**
- Execute C2 OTM: Commanders and leaders engaged in full spectrum operations require the **capability to access, select, filter, share, display, and collaborate** on fused operations and intelligence information, while **operating away from their command post**, in air or ground platforms, and while dismounted at the tactical edge.

Operational Benefits:

- Addresses the overburdened platforms' size, weight, power, and cooling (SWaP-C) shortcomings.
- Enable the execution of Multi-Domain Operations (MDO) across multiple environments on ground and air platforms by Commanders, Leaders, and Soldiers.
- Provides extensive flexibility to configure platform mission needs and rapid insertion of new technology to meet emerging threat.
- Base document provides the integrating function for Command, Control, & Communications, Assured Positioning Navigation and Timing, and Electronic Warfare
- Prototyping driven by the CMFF A-CDD and aligns to individual capability roadmaps. Emerging capability on-ramped through agile methodologies.

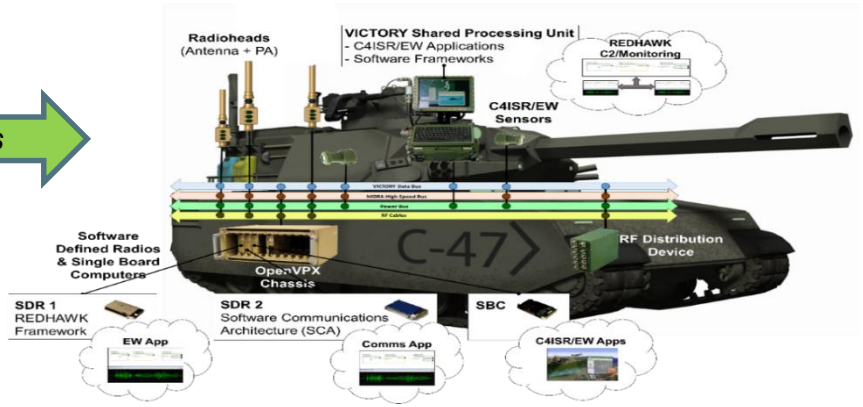
CMOSS Solution Overview

Why Converge?

C5ISR/EW Modular Open Suite of Standards (CMOSS)

CMOSS

CMOSS Architecture



- CMOSS is a suite of standards to improve the soldier user experience (UX) and reduce the size, weight, power, and cooling (SwaP-C) of C5ISR, A-PNT and EW systems while increasing the flexibility and adaptability of these systems
  - "Universal" A-Kit – PMs field capabilities as cards into a common chassis, instead of installation kits (IKs)
  - Pooled radio resources such as antennas and amplifiers for Communications, Electronic Warfare (EW), and Signals Intelligence (SIGINT) systems
  - Shared processing resources such as computers and displays
  - Shared data services such as Assured Position, Navigation, and Time (A-PNT)
  - Foundation for enhanced convergence, interoperability and simultaneity between C5ISR systems
  - Reduced life cycle cost through increased competition, smaller logistics tails with common sparing, and upgrading to the latest hardware as parts are replaced
  - Rapid insertion of new technology/capability

Army, Air Force, Navy, Industry, and Academia collaborate under the SOSA Consortium to develop a holistic open architecture that leverages existing standards, maximizes economies of sale, and provides the flexibility to rapidly insert the latest capabilities.

CMFF Strategy Overview

ORGANIZE

Standards

CMFF Acquisition IPT
Responsible for strategy and execution of the CMFF A-CDD

PEO C3T
PEO IEW&S

SYNCHRONIZE

- FY21 goal to demonstrate integrated CMOSS capability showing Mounted Mission Command (MMC) running over TSM and L band in a CMOSS form factor leveraging M-Code compliant PNT Card
- CMFF efforts will participate in multiple FY21 events to prove converged CMOSS capability (NetModX21 and PNT Assessment Exercise (PNTAX) part of PC21
- We will continue to engage with industry through solicitations, Technical Exchange Meetings, and through the Open Innovation Lab (OIL)
- Will align capability roadmaps and prototyping efforts across the PEOs to include Project Manager (PM) Mission Command, PMT Tactical Radios, PM Interoperability, Integration and Services, PM PNT and PW EW&C

EXECUTE

CMFF Strategy

Manage

- Manage and mature standards
- Educate community
- Leverage and apply to relevant S&T

CMOSS MIL, SIL, OIL

- Validate against CMOSS Standards
- Integrate capability
- Compatibility and performance testing / tooling

Field Experiment

- Baseline platform capability
- Compliance/performance tests
- Tech demonstrations
- Soldier Touch Points

Open Innovation Lab (OIL)

The OIL is a Gov't facility that will accelerate technology transition and integration as part of the PNT Modernization Process and across the C5ISR Community

- Provides a unique, unclassified, facility for DevOps, integration and assessment of technology against Modular Open Systems Approach (e.g. CMOSS) and other open standards
- Leverages the investments of S&T, Industry, and Academia on future capabilities and solutions
- Collaboration, development and integration lab to accelerate mature technologies for insertion into the CMFF

Website provides a single point to register your technology, stay up-to-date on events, and synchronize with Army standards

https://apntoil.army.mil/