DoD leadership embracing open standards

JOHN MCHALE, EDITORIAL DIRECTOR

The process of speeding up acquisition and lowering costs through the adoption of open standards apparently takes a lot of time, as there are significant cultural roadblocks to such change not only within the Department of Defense (DoD), but also at the prime contractor level, where open architecture and commonality goes against long-standing business models.

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PODCAST: SOSA, Tri-Service Demo, AI and signal processing

JOHN MCHALE, EDITORIAL DIRECTOR

Open architecture initiatives such as the Sensor Open Systems Architecture (SOSA) effort are showing tremendous momentum at the start of 2020, as demonstrated by the turnout and enthusiasm of attendees at the Tri-Services Open Architecture Interoperability Demonstration at the Georgia Tech Research Institute in January. My colleague Emma Helfrich and I along with guest Rodger Hosking, Vice President and Co-founder of Pentek, discuss these initiatives, their benefits, the business model roadblocks at the prime contractor level, as well as specifics from the
Military AI innovation, SOSA hot topics at Embedded Tech Trends

JOHN MCHALE, EDITORIAL DIRECTOR

The COTS Confidential Roundtable gathers experts from the defense electronics industry – from major prime contractors to defense component suppliers. Below we discuss how embedded computing suppliers are leveraging artificial intelligence (AI) for military applications, the impact of the Sensor Open Systems Architecture (SOSA) Consortium and other open architecture initiatives, and the outlook for the future of embedded technologies in the defense and aerospace markets with sponsors of the Embedded Tech Trends (ETT) conference, held during late January in Atlanta, Georgia.

Government and industry partnership driving FACE and SOSA success

JOHN MCHALE, EDITORIAL DIRECTOR

Despite experiencing doubt from some corners since inception, the Future Airborne Capability (FACE) and Sensor Open Systems Architecture (SOSA) consortia are not simply surviving, they are flourishing.

SOSA initiative gaining momentum in defense electronics community

JOHN MCHALE, EDITORIAL DIRECTOR

The U.S Air Force hosted the FACE and SOSA Expo and Technical Interchange Meeting (TIM) event in Dayton, Ohio.
Ohio during September 2019. The roundtable below consists of members of the SOSA consortium who exhibited at the TIM. The panelists discuss the effects SOSA is having on the military end user; how integrators, primes, and the Department of Defense (DoD) are embracing open architectures; and how to ensure that such added structure does not stifle future innovation.

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**INDUSTRY MEMBER PERSPECTIVE**

**SOSA benefits reach beyond sensor systems**

MARK LITTLEFIELD, KONTRON

The Sensor Open Systems Architecture (SOSA) is a standard currently in development by a government/industry consortium that has as its goal making high-performance sensor platforms easier to design, more interoperable, and upgradable at the modular level throughout a platform’s life. The rules and recommendations captured in the standard address the full range of issues faced by sensor computing system integrators including hardware, electromechanical, architecture, systems management, chassis-level connectivity, communications, middleware and development tools, and software components.

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**NEWS**

**SOSA demonstration system aims to show what open architectures are made of**

JERRY GIPPER EDITORIAL DIRECTOR

Pentek, Herrick Technology Laboratories (HTL), and Kontron have developed products aligned with the Sensor Open Systems Architecture [SOSA™] Technical Standard that are used in a new 3U VPX demonstrator system designed to illustrate the capabilities of open systems architectures. This flight-qualified system is ideal for electronic warfare (EW), SIGINT, radar, and communications applications.

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Modular Open Systems Approach for weapons systems is a warfighting imperative

JOHN BRATTON, MERCURY SYSTEMS

The recent tri-service memorandum requiring modular open system approaches (MOSAs) to be deployed in all future defense systems is aimed at putting the best technology into the hands of the warfighters faster. Take a look at how designers are meeting tri-service requirements by moving past commercial off-the-shelf (COTS) to MOSA.

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Pentek Introduces New Sentinel® Recorder for Signal Intelligence Applications

The RTR 2654 combines the power of a Pentek Talon Recording System with a 25.6 GHz RF tuner and Pentek’s Sentinel intelligent signal scanning, monitoring and detection software. The RTR 2654 automatically scans the RF spectrum from 800 MHz to 26.5 GHz for signals of interest and monitor or record bandwidths up to 500 MHz wide, making it very suitable for military, security and government intelligence (SIGINT, COMINT and ELINT) applications.

WEBCAST NEWS

SOSA open architecture webcast led by Air Force's Dr. Ilya Lipkin

JOHN MCHALE, EDITORIAL DIRECTOR

The defense acquisition community is looking to reduce costs and development time via open-architecture principles in a practical and consensus-driven way with all three services Air Force, Army, and Navy working together. Dr. Ilya Lipkin Steering Committee Chair, Sensor Open Systems Architecture (SOSA) Consortium, Air Force Life Cycle Management Center (AFLCMC) LED a discussion on how these efforts will reduce life cycle costs and enable reuse in applications such as toradar, electronic warfare, and more on Thursday, Nov. 14, in a webcast titled "Enabling Open Architectures and Commonality in Military Systems."

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Covering open standards
JOHN MCHALE, EDITORIAL DIRECTOR
This headline pretty much sums of much of what we cover and have covered since our first issue. We've focused on how open standards have driven open architectures in military systems, whether they are using commercial off-the-shelf (COTS) products or not.

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FEATURE

Development of the next-generation OpenVPX-based embedded system standard – A tri-service convergence of approaches: Part 1 of 3
MIKE HACKERT, NAVAIR; BEN PEDDICORD, CCDC; DR. ILYA LIPKIN, AFLCMC
Something exciting is happening in the service representative community. Representatives from three different programs, one from each of the U.S. Department of Defense (DoD) services, have come together with a common objective to solve their respective acquisition problems with an agreed-upon, open architecture standard. Here is Part 1 of a 3-part article covering the SOSA [Sensor Open System Architecture] Consortium’s efforts.

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WHITE PAPER

Adding RF & Optical Capability Via VITA 65 and SOSA for Radar, Electronic Warfare, and Other Mission Critical Military Applications
ELMA ELECTRONIC
The addition of apertures to the VITA 65 slot profiles has created a revolution in the types of available products, namely simplifying the configuration of the chassis and improving reliability. The flexible arrangements of contacts enabled by VITA 65 will help defense system integrators reduce size, weight, and power (SWaP) and improve interoperability.

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Why an Open Standards Approach Is Essential in Defense and Aerospace

CURTISS-WRIGHT

The tri-services memo issued by the U.S. Army, Air Force, and Navy makes it clear that the need to rapidly share information from machine to machine requires common standards, and that these initiatives are no longer optional – they are vital and they are mandatory. Our white paper explores the benefits of an open standards approach and examines the open standards listed in the tri-services memo, such as OMS/UCI, SOSA, FACE, and VICTORY

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