The SOSA Update quarterly E-newsletter from the editorial staff of mil-embedded.com covers the news, blogs, columns, feature articles, videos, podcasts, and more on the activities of the Sensor Open Systems Architecture (SOSA) Consortium, via the Military Embedded Systems collaboration with The Open Group, who manages the consortium, and the SOSA Outreach Committee. The SOSA Consortium enables government and industry to collaboratively develop open standards and best practices to enable, enhance and accelerate the deployment of affordable, capable, interoperable sensor systems.

NEWS

FACE/SOSA Expo and TIM event on for September

JOHN MCHALE, EDITORIAL DIRECTOR

Officials at the Open Group and the consortia they manage - the Future Airborne Capability Environment (FACE) and the Sensor Open Systems Architecture (SOSA) - are organizing the The Open Group FACE and SOSA Consortia Expo & TIM, to be held September 22, 2020 at the Holiday Inn Solomons Conference Center & Marina in Solomons, Maryland. FACE and SOSA Consortia Meetings will be held September will follow the expo at the same location from Sept. 23-25, 2020.

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INDUSTRY MEMBER PERSPECTIVE

SOSA and VITA: Working together for next-gen defense systems

RODGER HOSKING, PENTEK

The SOSA (Sensor Open Systems Architecture) Consortium is developing common open standards for designing, building, and deploying hardware, software, and firmware components of new military electronic systems. Contributing members to SOSA include the U.S. Department of Defense (DoD) – including the Army,
Navy, and Air Force – along with key representatives from industry and universities.

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SOSA Update, FACE content, and WEST 2020

JOHN MCHALE, EDITORIAL DIRECTOR

We've took our coverage of open architecture initiatives up a notch in February 2020 with the launch of our SOSA Update e-newsletter. It's part of a collaboration we have with the Open Group for not only the newsletter but also for SOSA webcasts, podcasts, and other content.

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SOSA and VPX

MARK LITTLEFIELD, KONTRON

I've been heavily involved in a standards effort called the Sensor Open Systems Architecture, or SOSA. SOSA is interesting because it's a government/industry consortium formed with the goal to create a hardware/software standard aimed at making it much easier to integrate and maintain defense sensor systems. As it is a huge undertaking with something like 70 organizations participating and usually upwards to 150 people at each semi-monthly face-to-face, there is a lot to say about SOSA. Today I'll discuss VPX and SOSA, but I'll be touching on different aspects of SOSA over the
coming months as there is far too much to tackle in a single blog post.

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INDUSTRY MEMBER PERSPECTIVE

Multivendor interoperability is real: The TSOA Interoperability Demo
MARK GROVAK CURTISS-WRIGHT DEFENSE SOLUTIONS

On January 29, 2020, the first Tri-Service Open Architecture Interoperability Demonstration (TSOA-ID) was held in Atlanta, Georgia, hosted by Georgia Research Tech Institute at its Conference Center. The event was attended by nearly 300 representatives of government, industry, and academia, and was supported by the U.S. Army, Navy, and Air Force. The sponsors of the event were Naval Air Systems Command, Program Executive Office Aviation, COEVCOM C5ISR Center, and Air Force LCMC.

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FEATURE

Innovation in military power supplies: Intelligence, standardization, efficiency
EMMA HELFRICH, ASSOCIATE EDITOR

Power-supply designers for military applications face the same reduced cost, size, and weight challenges as other military electronics suppliers. These restrictions can make innovation complicated, but power supply experts innovate nonetheless – in areas like power efficiency, balancing standardization versus customization, intelligent power supplies, and – perhaps most importantly – securing the digital interfaces of modern power supplies.

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Cyber/EW system enters next development phase

EMMA HELFRICH, ASSOCIATE EDITOR

The Consortium Management Group (CMG)/Consortium for Command, Control and Communications in Cyberspace (C5), on behalf of the U.S. Army, awarded Lockheed Martin a Project Agreement to move into the second phase of development for the “Air Large” component of its Multi-Function Electronic Warfare (MFEW) family of systems program. MFEW will conform with C4ISR/EW Modular Open Suite of Standards (CMOSS).

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WEBCAST NEWS

WEBCAST: SOSA and VITA: Enabling Open Standards for Improved Capability on June 24 at 2:00 p.m. EST

JOHN MCHALE, EDITORIAL DIRECTOR

Elements of the Sensor Open System Architecture (SOSA) technical standard are leveraging standards developed by the VITA Standards Organization, specifically VITA 65, also known as OpenVPX. This webcast titled, “SOSA and VITA: Enabling Open Standards for Improved Capability,” to be held on Wednesday, June 24, at 2 pm Est., will cover how the SOSA Consortium is working with VITA to enable standardization of VITA-based standards within the SOSA Technical Standard.

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Eyes up and out: Advancing situational awareness in helicopter avionics

EMMA HELFRICH, ASSOCIATE EDITOR

Basic physics still dictates much of what makes helicopter flight successful, but military airborne platforms are constantly faced with environments civilian rotary- and fixed-wing aircraft simply don't encounter: Degraded visual environments, a need for reduced workload, and improved pilot-vehicle interface drive military helicopter avionics upgrades and remain at the top of customer design requirements. In response to these military-user needs, companies are attempting to uncomplicate helicopter cockpit designs while using the most advanced electronics available.

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Defense industry response to COVID-19 pandemic

JOHN MCHALE, EDITORIAL DIRECTOR

In this podcast, Mark Aslett, CEO of Mercury Systems, discusses with me how the nationwide shutdown is impacting the defense supply chain and the speed of the defense acquisition process as well as which types of defense electronic suppliers are likely to feel the most financial pain. He also shares positive examples of how defense companies are stepping up to help the victims of the virus either through fundraising or supplying much desperately needed equipment.

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Naval radar market shifting toward multirole and modular systems, study says

LISA DAIGLE, ASSISTANT MANAGING EDITOR

The radar technology landscape used in the naval arena is shifting toward multirole and modular systems, especially with the arrival of newer gallium nitride (GaN)-based active electronically scanned array (AESA) radars, according to the findings of a new market analysis from
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.

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.

Achieving Reliability to Match Capability

ABACO SYSTEMS

Each new defense platform asks more from embedded electronics. Designers respond with faster processors, more processors, more sensors, and faster interconnects. These leaps in embedded capability carry with them...
expanding complexity. Every new component is another potential point of failure. System engineers wrestle with the problem. Some are building their own solutions, writing software to collect component information and then make sense of what is collected. Veteran engineers, who have been down the roll-your-own road before, know its pitfalls and would much prefer a standards-based, flexible, and rigorously tested solution focused on maintaining embedded system reliability.

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How SOSA Leverages OpenVPX Standards to Enable Interoperability in Radar, EW Systems

Sponsors: Abaco Systems, Annapolis Micro Systems, Pentek, Elma Electronic

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