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## COTS CONFIDENTIAL

### 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. Each Roundtable will explore topics important to the military embedded electronics market. This issue, 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.

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## FACE AND SOSA UPDATE

### SOSA initiative gaining momentum in defense electronics community

JOHN MCHALE, EDITORIAL DIRECTOR

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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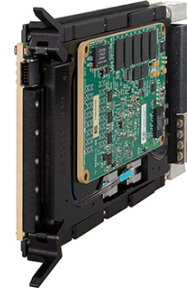


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### FACE AND SOSA UPDATE

## FACE approach improves affordability, time-to-field of avionics systems and software platforms

RICARDO CAMACHO, LDRA

An open systems architecture strategy has shown that it can curb the high-cost, long program schedules and lack of integration options of warfighting capabilities. This is where an initiative such as the Future Airborne Capability Environment (FACE) can play a major role in making a business and technological difference.

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EDITOR'S PERSPECTIVE

## FACE conformance becoming a necessity

JOHN MCHALE, EDITORIAL DIRECTOR

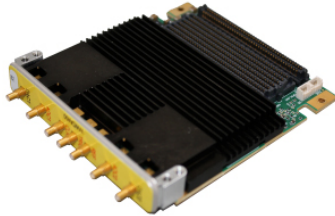
The roundtable below consists of members of the FACE



Consortium who exhibited at the TIM. The panelists discuss the growth of the FACE Registry of conformant products, made on the aerospace market, how FACE 3.0 supports running multi-threaded applications across multiple cores; and proving the extensibility of FACE to the connected battlefield.

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### SISTER PUBLICATION

## 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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How the Small Form Factor  
Transition is Reshaping  
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Computing

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### GUEST BLOG

## 6G stealth fighter planes: The quarterback of the kill web

RAY ALDERMAN, VITA STANDARDS ORGANIZATION

There are six aircraft generation classification charts out there: Hallion, Aerospaceweb, Air Force Magazine, Winchester, Air Power Development Center, and China's Air Force. All these templates have been overcome by advances in technology and evolving mission requirements. So, we'll be breaking new ground in this essay, by adding to the common 6G characteristics from the old charts and building an updated definition. Then, we'll integrate those new aircraft into the kill web.

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### SISTER PUBLICATION

## VPX ecosystem steps up

JERRY GIPPER, EDITORIAL DIRECTOR

The first serious blast of winter just hit my area! It made me realize that we are not far away from the ninth annual Embedded Tech Trends forum. Scheduled for January 27 and 28 in Atlanta, Georgia, it promises to be an intense couple of days. I always look forward to the presentations and catching up with everyone. So much networking and information exchange happens so fast, it often takes a few days to decompress when I get home!

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## How to Avoid Common Pitfalls in MISRA Compliance

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MISRA C is a standard developed by the Motor Industry Software Reliability Association, and aims to foster safety, reliability, and portability of programs written in ISO C for embedded systems.

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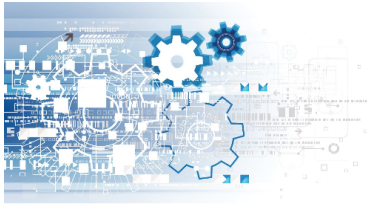
## Accelerating Automotive Software Safety with MISRA and Static Analysis

GRAMMATECH

The MISRA C/C++ coding guidelines came about due to concern for safely using the programming language in critical automotive systems. Since its inception in 1998, it has become one of the most used coding standards in the automotive industry; and the application has spread to other safety-critical devices in medical and industrial control.



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## Enhancing Code Reviews with Static Analysis - GrammaTech

GRAMMATECH

Code reviews (or inspections) are a proven, effective way to reduce defects in software projects. In fact, defect removal rate due to code reviews can be as high as 75%, meaning two thirds of all bugs are removed during code review as part of the development phase of a project.

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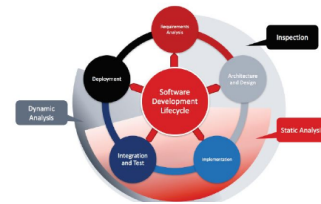
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## Easing Adoption of Static into Existing Projects

GRAMMATECH

The adoption of any new tool into an existing Software Development Process with an established code base is always a challenge. Static analysis tools are no different but there are steps to take to make the transition easier and smooth the introduction of these tools into an existing workflow.

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## DevSecOps - Integrating Static Application Security Tools (SAST) in DevSecOps

GRAMMATECH

Teams are continuously trying to improve their tools, methodologies and processes, and this is where DevOps has sprouted from, the combination of software development and systems operations to make sure that software development is not done in a vacuum, but in combination with the teams that operate these systems in the real-world.

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## The Role of Static Analysis in Management of Cybersecurity in Medical Devices

GRAMMATECH

Recognizing the need for more robust security in medical devices, the FDA issued its guidance on managing cybersecurity in 2014. But the growth of wireless, networked, and internet-connected devices means that medical devices are more at risk than ever before.

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webcast

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