THE McHALE REPORT

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The McHale Report, by mil-embedded.com Editorial Director John McHale, covers technology and procurement trends in the defense and aerospace electronics community.

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PODCAST

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

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.

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COTS CONFIDENTIAL

Military AI innovation, SOSA hot topics at Embedded Tech Trends

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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TOP STORY

DARPA chooses propulsion tech for Glide Breaker hypersonic interceptor

Aerojet Rocketdyne has won a contract worth up to $19.6 million from the Defense Advanced Research Projects Agency (DARPA) to develop enabling technologies for its advanced hypersonic defense interceptor, known as Glide Breaker.

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COLUMN

Sensor-driven "skin" possible with web of circuits, organic signal amplifiers

Research that could be a game-changer for troops in the field is currently being undertaken by several teams attempting to replicate human skin.

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Pentek Introduces 8-CH A/D & D/A SOSA Aligned 3U VPX Board

The Quartz? Model 5550 is an eight-channel A/D and D/A converter 3U OpenVPX board based on the Xilinx Zynq? UltraScale+ RFSoC FPGA and aligned to the SOSA? technical standard. The Model 5550 is ideal for communications, electro-optical, electronic warfare, radar and signals intelligence applications. The Model 5550 incorporates the ANSI/VITA 67.3 VPX Backplane Interconnect standard for RF and optical I/O.

TOP STORY

Protected Tactical SATCOM prototype provided to Space Force

Northrop Grumman Corporation has been selected by the U.S. Space Force?s Space and Missile Systems Center to develop a Protected Tactical SATCOM (PTS) rapid prototype payload for an on-orbit demonstration of assured tactical communications. The company was selected for the award through the Space Enterprise Consortium.

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Sonar system to equip L3Harris UUV

Northrop Grumman Corporation?s ?SAS (micro-sas) will be integrated onto L3Harris Technologies? Iver4 Unmanned Undersea Vehicle (UUV) for a 12-month test period for the Defense Innovation Unit?s (DIU) Next Generation Small-Class UUV program.

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Manta Ray UUV to be developed by Lockheed Martin

The Defense Advanced Research Projects Agency (DARPA) has awarded Lockheed Martin with a $12.3 million contract for phase one of the the Manta Ray program. The contract funds research, development, and demonstration of an extra-large underwater drone.

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GUEST BLOG

Changing landscape for rugged data storage

Awareness is mounting regarding the importance of protecting data-at-rest (DAR) on deployed military platforms. Every time an unmanned aerial vehicle (UAV) is lost, it provides a stark example of the simple fact that what goes up must come down, and there?s no guarantee that what comes down won?t end up in an adversary?s hands.

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AI-powered, counter-UAS system delivered by Citadel Defense

Citadel Defense, the manufacturer of innovative, high-performance counter-unmanned aerial system (C-UAS) solutions for military, government, and commercial markets, announced that its artificial intelligence (AI)-powered system, Titan, has been selected by a military service customer for mission-critical ground and airspace perimeter security deployments overseas.

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ODIN laser weapon system to counter UASs

The U.S. Navy announced that it has installed a laser weapon system that allows ships to counter unmanned aerial systems (UAS). According to the Navy, the first Optical Dazzling Interdictor, Navy (ODIN) was installed on the Arleigh Burke-class guided missile destroyer USS Dewey during the vessel's recently completed dry-docking restricted availability.

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Niobium-based connectors making electrical connections underwater

Northrop Grumman Corporation has signed its first non-exclusive agreement to manufacture niobium-based connectors (NiobiCon) designed for harsh environments. NiobiCon is a new way of making electrical connections underwater that enables power transfer and data exchange without using seals, oil, or moving parts.

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Event Horizon blog series

Hello and welcome to Event Horizon, my periodic blog about embedded technologies, defense systems, and anything generally tech-related that I might find interesting (and hopefully you as well). I?d like to thank the kind folks at OpenSystems Media, and especially John McHale, Editorial Director at Military Embedded Systems Magazine for giving me a little space where I can muse on various topics that strike my interests.

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Military-training segment of simulator market to grow at fast clip to 2025, study says

The simulators market -- estimated at $21.5 billion in 2019 -- is projected to reach $27.9 billion by 2025, at a combined annual growth rate (CAGR) of 4.4% from 2019 to 2025, with the military simulator market growing at the at the highest CAGR during the forecast period, according to a new study from MarketsandMarkets.

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Analytics technology to detect weapons of mass destruction

BAE Systems announced that it has received funding from the U.S. Defense Advanced Research Projects Agency (DARPA) to develop advanced analytics technology to help detect and deter weapons of mass destruction.

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Unmanned EA-18G Growlers flown in test mission

Boeing and the U.S. Navy flew two autonomously controlled, unmanned EA-18G Growlers at Naval Air Station Patuxent River in Maryland, Boeing announced. The flights were intended to prove that F/A-18 Super Hornets and EA-18G Growlers can effectively run combat missions using unmanned systems.

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Duskin & Stephens Foundation

Each issue, the editorial staff of Military Embedded Systems will highlight a different charitable organization that benefits the military, veterans, and their families. We are honored to cover the technology that protects those who protect us every day. To back that up, our parent company ? OpenSystems Media ? will make a donation to every group we showcase on this page.

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Secure comms for robotic systems in development for Army

Persistent Systems, LLC announced that it won a $5.4M contract by the U.S. Army Combat Capabilities Development Command C5ISR Center to develop Protected Communications for Manned-Unmanned Teams (MUM-T).

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Air-to-space laser comms system tested by GA-ASI

General Atomics Aeronautical Systems, Inc. (GA-ASI) has ground tested its Airborne Laser Communication System (ALCoS) by establishing a link with a satellite in Geo-synchronous Earth Orbit (GEO). GA-ASI conducted the test with Tesat-Spacecom (TESAT), space-based laser communication (lasercom) company, using their GEO Laser Communication Terminal (LCT), the LCT 135.

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Automated vehicle capability in development with Rheinmetall

Rheinmetall announced the launch of its first Australian research and technology program, the Autonomous Combat Warrior (ACW) program. Under this program, Rheinmetall?s Australian, German, and Canadian development teams will work alongside research teams to develop advanced sovereign robotics and automated vehicle technologies.

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Space radio monitoring system to be developed by Kratos

Kratos Defense & Security Solutions, Inc., a national security solutions provider, announced that it was

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FMVDL power amplifiers to equip F-35 Lightning II

Elbit Systems of America was selected by Cubic Mission Solutions to design and develop the Full

awarded an $11.5 million contract to build an advanced space radio monitoring system for a government customer. The system will incorporate Kratos technologies and integrated products to help the country regulate and protect the satellite spectrum.

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Motion Video Data Link (FMVDL) amplifier module for the communications suite of the F-35 Lightning II aircraft.

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INTEGRITY-178 software selected for GPS modernization

Green Hills Software, embedded safety and security company, announced that its INTEGRITY-178 Time-Variant Unified Multi-Processing (tuMP) RTOS running on a quad-core ARM Cortex-A53 CPU has been selected by Northrop Grumman Corporation for the Embedded Global Positioning System (GPS)/Inertial Navigation System (INS)-Modernization (EGI-M) program.

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Vertical Take-Off and Landing UASs to be delivered to Israel

BlueBird Aero Systems, global developer and provider of micro, mini, and small tactical unmanned aircraft systems (UAS), has received an order worth tens of millions of euros from a European customer for the delivery of more than 150 vertical take-off and landing (VTOL) UASs of various categories.

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