DAY 1 | TUESDAY, MAY 3, 2016

UNMANNED SYSTEMS XPONENTIAL EDITION

IN THIS ISSUE

AUVSI
UNITING INTELLIGENT TECHNOLOGIES

Aerosonde UAS Gains Hybrid Quadrotor Capability

By Brett Davis

Textron Systems' Aerosonde UAS, having racked up more than 130,000 flight hours in military and commercial operation, now has a new direction: up and down.

Textron Systems (Booth #2029) has internally funded the development of a vertical-takeoff-and-landing variant of its venerable Aerosonde, which incorporates VTOL systems from Latitude Engineering (Booth #1349) and autopilot technology from Cloud Cap Technology (part of UTC Aerospace Systems, Booth #1847).

David Phillips, Textron's vice president of small/medium endurance UAS, says the work began between the first and second quarter of 2015 and has progressed rapidly enough that the system is now "an extremely mature prototype. If we needed to go use it now, it's mature enough to be able to go and deploy."

The company didn't create the system in response to a specific military or commercial pull, but it sees a forthcoming want from customers who want lightweight, flexible systems, including U.S. Special Operations Command, who may need the capability of a fixed-wing system but often don't operate where landing strips are available.

Phillips says there's a commercial need, too, for companies that might need the quadrotor capability for getting close to structures for aerial inspections but also need the range and speed of a fixed wing. The system can be outfitted to existing Aerosondes as as kit.

"It provides the vertical mission as well as the horizontal, so it gives us that flexibility for the commercial market," he says.

It also could prove useful as federal regulations provide more commercial opportunities, as the extra quadrotor motors would allow safe landings even if the system's Lycoming EL-005 heavy fuel engine were to fail.

The company has already tested the system at Yuma Proving Ground in Arizona, including both vertical takeoffs and landings and transitions from VTOL flight to horizontal flight, and is now working toward a competitive unit production cost goal.

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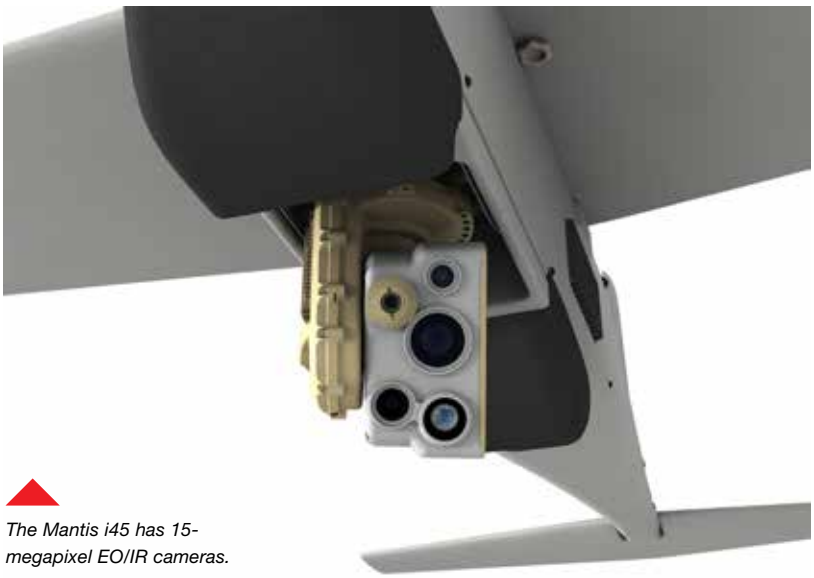

The Mantis i45 has 15-megapixel EO/IR cameras.

AeroVironment Mantis Zooms in on ISR Boost

By Danielle Lucey

This week, AeroVironment announced that has made an upgrade to its Mantis line of electro-optical/infrared gimbals with the Mantis i45.

The new payload integrates five subsystems with EO/IR cameras operating at 15 megapixels so that when integrated onto the company's Puma AE platform, it offers pixels on target that customers usually can only obtain with much larger platforms, says Dave Sharpin, vice president of business development for unmanned aircraft systems at AeroVironment.

"This is what I would consider a pretty big leap," he says, adding the i45 offers three to five times an improvement over the previous Mantis payload.

Included in the sensor suite are two electro-optical cameras (one wide view and one narrow), a 1.2-megapixel low-light camera, a thermal infrared imager and a laser illuminator.

"The bottom line overall is we want to be able to put more pixels on a target at an undetectable range," says Sharpin.

He says if a person is flying a Puma AE at an undetectable range, the payload can allow that person to clearly read a license plate, be able to tell what they're holding in their hand or give an accurate idea of that person's facial features.

AeroVironment is talking to customers for the system, which can be ordered in September, and the company is hosting a live demo of the payload at Booth #1525.

Photo: AeroVironment, Clear-Com.

Clear-Com Debuts Wireless Intercom

By Chantelle Polite

This year at Xponential, Clear-Com Communications, a real-time communication and connectivity solutions company, is showcasing its new DX410 wireless intercom system, the Gateway radio interoperability solution and LQ-R four/eight-port Internet protocol interface devices.

The new DX410, a license-free, two-channel 2.4-gigahertz digital wireless intercom, is a full-duplex system that can be deployed, while also enabling mobile personnel to move freely. It is rugged and reliable, making it ideal for military, aerospace and government applications, according to the company.

DX410 features seven-kilohertz wideband audio. Its frequency-hopping, spread-spectrum 64-bit encryption enables secure, confidential communication. Also, the system's upgraded radio technology allows for better transmission and reception, two-wire/four-wire bridging, and two-wire auto-nulling, according to the company.

Clear-Com will showcase its intercom solutions in Booth #1408.

Know Your Host: Miles O'Brien

PBS Newshour Journalist Hosts Xponential

By Danielle Lucey

This year, Xponential is being hosted by Miles O'Brien, a veteran journalist who focuses on science, technology and aerospace.

A third-generation private pilot, operating since 1988, O'Brien is the science correspondent and producer for PBS Newshour, a producer and director for PBS science documentary series NOVA, a correspondent for PBS Frontline and an aviation analyst for CNN.

Born in Detroit and now a resident of suburban Washington, D.C., O'Brien has focused on unmanned technology on PBS Newshour in past segments, interviewing employees from DJI, 3D Robotics, Vijay Kumar from the University of Pennsylvania and the Federal Aviation Administration's Michael Huerta — Wednesday's keynote speaker.

O'Brien, 56, lost his left arm in in 2014, due to acute compartment syndrome after a heavy equipment case fell on it while on assignment in Asia.

In January, he was honored with the Aviation Inspiration and Patriotism Award at the 13th Annual Living Legends of Aviation Awards.

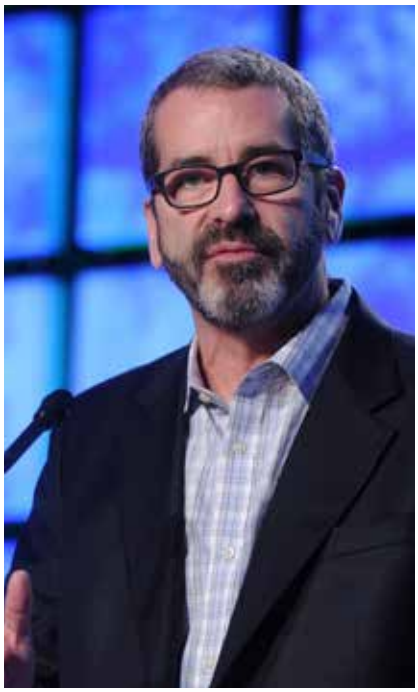

Photo: Miles O'Brien.

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TRANSFORMING THE WAY THE WORLD WORKS

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Get ENVI-ed: Harris Ortho Software Free for 6 Months

By Danielle Lucey

Harris Corp.'s geospatial division is debuting a new software for photogrammetry and orthomosaics at Xponential that cuts down on processing an analysis by leveraging the latest algorithms.

Called the ENVI OneButton Professional, the software provides digital elevation models, true-color 3-D point clouds, orthorectified multispectral mosaics and controlled oblique imagery. And the company is so confident in the software, it is signing up customers for a free six-month license at Booth #2431.

"We're so sure that our customers are going to love ENVI One Button that we're going to allow them to try it out at no cost for six months," says Rebecca Lasica, solutions engineering manager at Harris Geospatial.

Lasica says the postprocessing software works within minutes, instead of hours or days, to paint a complete picture of what an unmanned systems' sensors have captured. She says there's a large uptake of this technology in agriculture and energy.

"One of the things that we're really good at is an end-to-end processing solution. With ENVI … you can go from the data collection to the preprocessing to the orthomosaics, to the analysis, to the output, all in one package," says Lasica. "We're really providing an end-to-end solution for the market."

The algorithms perform some preprocess, so misalignments are corrected on the front end, she says.

For customers that sign up for the software, the company is offering a webinar at three different times on May 11 to demonstrate how it works and is hosting a technical session on May 25 that focuses on agriculture applications. The company is also demoing the product live in its booth.

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RE2 Delivers 2-Armed Manipulator to U.S. Army

By Brett Davis

Pittsburgh's RE2 Robotics (Booth #2053) has delivered a two-armed Highly Dexterous Manipulation System to the U.S. Army, which it says will enable more complex explosive ordnance disposal operations.

Typical anti-EOD robotic systems have single arms, but the dual-arm system allows operators to perform complex tasks, such as securing an object with one arm while manipulating it with the other. The system can be teleoperated or used on mobile robots.

The delivery was done under an Army Small Business Innovation Research Phase II extension contract.

Photo: RE2.

Introducing the TACTICAL SERIES

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VectorNav's Tactical Series is a next-generation MEMS inertial navigation platform that includes high-performance IMU/AHRS, GPS/INS, and GPS-Compass solutions.

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Booth #1043 | XPONENTIAL 2016

Delair-Tech Bolstered by Fundraising, Opening U.S. Office

By Brett Davis

Bolstered by recent work with the national railway system and by a successful $14.5 million fundraising effort, France's Delair-Tech (Booth #773) is expanding further into the U.S. market, opening up a new office in Los Angeles.

The move to the states will help the Toulouse-based company get closer to the Silicon Valley technology hotbed as well as the vast agricultural market of central California, says Benjamin Benharrosh, director of sales and marketing. The office will handle sales and marketing in the United States, with research and development and manufacturing remaining in France.

Founded in 2011 with four employees, Delair-Tech has grown rapidly, with about 50 employees now. To celebrate its fifth anniversary, the company announced a fundraising-backed growth strategy and the creation of Delair-Services, which offers aerial imaging to clients without them having to buy aircraft. That includes not only imagery from UAS, but also from satellites.

"We could see that many customers that entered the drone technology world don't know if they want to buy the product or the service. Rather than promoting to them to buy the hardware or the software, we decided to also offer them a service so they can choose the best solution for them," says Benharrosh.

France is more permissive than the United States in terms of allowing beyond-line-of-sight UAS flights, at least for very lightweight systems — Delair-Tech's DT-18 was the first drone in France certified for that. The company is now working with the French railway system and airspace regulators to push that envelope further.

It is flying its larger DT-26 UAS — which weighs about 30 pounds and is on display in the company's booth — in a new phase with the SCNF railway system "to get enough experience to justify that this product is safe enough to change the regulation to open beyond-line-of-sight flights," Benharrosh says. "We are moving forward together."

SeaPerch Debuts Kits for Kids

By Chantelle Polite

SeaPerch, an underwater robotics program that equips teachers and students with the resources they need to build an underwater remotely operated vehicle has designed a Kits for Kids option so companies and organizations can use the items for outreach.

Kits for Kids comes in three packages for teachers and students, each at different prices. A Kits for Kids classroom package includes 10 SeaPerch kits, two SeaPerch tool kits, 10 build manuals and other features, serving up to 30 students for $3,000. The $6,000 Kits for Kids training package for regular customers and teachers comes with an onsite training session with a SeaPerch trainer, 10 SeaPerch kits and 20 Build Manuals. The third Kits for Kids training package is a Regional SeaPerch Challenge kit. The kit is customizable and includes a competition package consisting of nine trophies, participant medals, T-shirts, judges' kits and competition rubrics. The price of this training package is to be announced.

Companies and organizations can use SeaPerch as an outreach program by pairing personnel with a school or organization in a local community to introduce the program.

For more information on SeaPerch and Kits for Kids, visit the AUVSI Foundation at Booth #2745.

Antonelli Law Debuts DJI Program

Antonelli Law, a three-time exhibitor at AUVSI's largest trade show, is again bringing its presence to Xponential, with this year being the first that it is offering a DJI Referral Program to its clients.

In the UAS legal practice since 2014, Antonelli Law (Booth #371) began its discounted benefits program to clients that own and wish to commercially operate DJI platforms starting in mid-January. Right now, most of the benefits surround a company's application for a Section 333 exemption, but going forward, the benefits will morph into new realms as needed, says Jeffrey Antonelli, president of the firm.

AUVSI Insurance Program Launches at Xponential

By Brett Davis

AUVSI is launching a UAS insurance program for its members at the Innovation Hub (Booth #2717) at 2:30 p.m.

Developed in partnership with Willis Programs, a unit of Willis Towers Watson, and Global Aerospace, DroneGuard is designed for UAS owners and operators. The program delivers a broad range of coverage in an all-in-one package, including protection for physical damage, third-party liability and personal injury, combined with cutting-edge risk management services to enhance AUVSI members' operations, consumer safety and industry reputation.

Willis Towers Watson has deep experience serving the aerospace sector and has drawn on its industry expertise in developing DroneGuard. The program is underwritten through Global Aerospace, a premier provider of aerospace insurance worldwide and a pioneer of insurance for UAS.

"This unique product underscores Willis Programs' commitment to innovate and deliver the best solutions possible to clients," says Tom Coughlin, national partner of Willis Towers Watson. "We are excited to introduce DroneGuard to our portfolio of successful insurance programs."

"With the extraordinary growth of commercial UAS in the United States, the time is right to bring DroneGuard to market," says Chris Proudlove, senior vice president of Global Aerospace. "Featuring integrated safety assurance and risk management, DroneGuard will help AUVSI members grow their businesses with the knowledge that they are protected by an insurance program tailored to their exposures."

Lockheed's Sikorsky Readying OPV Black Hawk

Sikorsky, which was officially acquired by Lockheed Martin (Booth #1839) in late 2015, is building a prototype Black Hawk that's been modified to fly as an optionally piloted vehicle.

"We need to defrag the hard drive in the pilot's head," says Chris Van Buiten, vice president of technology and innovation. He says the workload of the pilot has gotten incredibly high, and joining forces with Lockheed and focusing more on automation will be key to solving that problem.

Photo: Lockheed Martin.

Pelican Chapter to Serve NoLa Region

By Danielle Lucey

AUVSI's newest chapter is gearing up to connected the region housing this year's Xponential conference.

The AUVSI Pelican Chapter recently officially formed, serving the Louisiana area, and President George Rey says he hopes to host its first event later this month.

"We'd like to have a good kickoff event," he says. The chapter hopes the event will take place at Nicholls State University in Thibodaux, Louisiana, later this month.

Safety First With ParaZero Drone Parachute SafeAir

By Danielle Lucey

ParaZero (Booth #552) is debuting a drone safety product that will keep people on the ground safe in case of a malfunction.

Called SafeAir, the solution outfits a 14-gram chip onto a platform that can sense if a drone is going into a freefall. ParaZero, based in Tel Aviv, Israel, works with manufacturers to determine how far into a freefall the system will deploy a parachute — usually about a half-second.

Traditional parachutes cannot deploy in a timely fashion for drones, which are typically limited to a 500-foot ceiling. So the company built a proprietary solution, where gas is pushed out of a tube, and at the end of the tube, the gas deploys small weights fastened to the perimeter of the parachute. The heavier a platform, the more gas is added to the cylinder to prevent a fall.

"Even if something is flying or has a problem 30 or 40 feet above the ground, in 10 to 20 feet, we will have it again in control," says Oren Aviram, chief marketing officer for ParaZero.

The company, which just received a patent for the product, has worked with DJI and 3D Robotics to outfit some of its systems, as well even manned aviation company Martin Aircraft for its Jetpack product, used by first responders.

The company also makes an airbag for drones, which protects expensive payloads prominent in industries like cinematography, where a camera might cost up to four times as much as the platform flying it, says Aviram.

"We're on the verge of an amazing market that's developing. … We need to build together — all our industry should be responsible for a safe approach and build the right infrastructure for this thing to work and do well for everyone. That way, the industry will grow exponentially," Aviram says.

Photo: ParaZero.

IoT Rides on FreeWave Tech

By Danielle Lucey

Today, FreeWave Technologies (Booth #637) is debuting a beta version of its radio technology that leverages the Internet of Things movement to allow developers to program the product to perform functions previously unavailable on radios.

Called the ZumLink, it's the company's first foray into high-speed, frequency-hopping radios that can not only perform signals intelligence and command-and-control functions, but also move video across a link. An addition, the IoT capability allows a customer to house an add-on applet that physically resides on the radio itself. Programmable in either Java or Python, once the product has a software developer kit — available in a few months — customers can deploy distributed applications to the unmanned aircraft linked to the radio.

Chief Marketing Officer Scott Allen says this is the first step in the company's strategic decision to move away from radio hip sets into a more integrated solution.

"We're convinced that discrete radio strategy is going to go away," he says.

Though the solution is robust enough for military application, the company sees a lot of its customers in the oil and gas market, and Allen says FreeWave's third largest customer base is precision agriculture.

He recently met with Oracle executives, the makers of Java, to discuss the product, and they likened it to one of the most widespread technologies today.

"That's the approach we're taking. This thing is really like a smartphone, if you will."

Allen expects that the radio will be out of beta testing around June and will be available on the market shortly after. The company is taking preorders at its booth.

The Stamp Sensor provides geolocation information.

Controp Ships 2,000th Stamp, Releases New Micro-Stamp

By Chantelle Polite

Israel's Controp Precision Technologies Ltd. (Booth #465) announced it has shipped its 2,000th Stamp dual sensor, day/night stabilized payload for small UAS and is debuting the newest member of the Stamp family, the lightweight Micro-Stamp, which tips the scales at only 300 grams.

All of the Stamp family is gyrostabilized and designed for day and night tactical over-the-hill reconnaissance missions. Lightweight and ruggedized, the Stamp provides precise geolocation and can withstand high-shock landings. With low power consumption, the Stamp incorporates only one line-replaceable unit and provides the most cost-effective solution of its type.

"Technology-wise, this is the only small camera payload in the world to incorporate three gimbals, which allows for an unprecedented stabilized picture when looking both horizontally and vertically," says Johnny Carni, vice president of marketing. "This high level of stabilization is critical, particularly when using an uncooled thermal camera with a zoom lens, in order to provide the user with a clear and detailed image. With the Stamp, we have basically taken the most high-end technology in electro-optics and miniaturized it to fit even the smallest of platforms."

The new Micro-Stamp provides a dual-field-of-view, uncooled infrared camera and a day camera with a continuous zoom lens.

Photos: FreeWave, Controp.

DOI Goes DIY With Falcon Unmanned

By Danielle Lucey

Falcon Unmanned, exhibiting in Booth #1248, recently announced it won a contract from the Department of the Interior to supply its fixed-wing and rotary drones for missions, including one being carried out this week for wildfire fighting.

The four-year, indefinite-delivery, indefinite-quantity contract will supply the DOI, which will feed the platforms primarily to the U.S. Geological Survey and the Bureau of Land Management, replacing aging T-Hawk and Raven platforms those offices got after they were mothballed by the Department of Defense.

"I believe they saw the cost benefit," says Chris Miser, owner of Falcon Unmanned, on his theory regarding why DOI invested in an unmanned solution. "The old hand-me-down systems were essentially used to determine if there was value in using UAS. From that, they did determine that there was substantial value in using UAS, so it's a program of record. There's actually funding in place now for it."

Falcon's platforms are unique because its fixed-wing Falcon and Falcon Hover quadcopter have interchangeable payloads, which will drive down the cost to operate the platforms for the photogrammetry and survey work done by the DOI.

"In my book, it's kind of a David and Goliath story of small, veteran-owned business gets a federal contract because of the value of the system," he says.

Aeryon Fleet Management Goes Live

By Danielle Lucey

Today, Aeryon Labs, Booth #2313, is debuting a new solution that provides scalable fleet management as well as video and telemetry capabilities, at Xponential. This product enables live video from a single or multiple SkyRanger unmanned aircraft to stream to a group of users in near real time. It also enables companies to manage their UAS fleets to improve productivity and ensure compliance through consistent reporting.

Called AeryonLive, the product can disseminate the video feed from its integrated payloads – either electro-optical/infrared or high-definition zoom — to a Web-based platform that can be simultaneously viewed by up to 10 people per UAS feed, regardless of geographic location.

Along with capturing visual information, which could be used for search-and-rescue, public safety or commercial applications, AeryonLive provides the automatic upload of flight log information. Flight time and location per aircraft, flights per pilot, aircraft by exemption numbers and N numbers, and the health of the parts of a SkyRanger UAV are all reported back through the Web portal.

"As you add more UAVs to your fleet, reporting on each aircraft every month and managing the airworthiness of that equipment can be time consuming," says Charlie Elliott, senior product manager at Aeryon.

Elliott says some Aeryon customers were seeing their drone pilots and/or fleet manager spend between four and eight hours of their week just reporting on their flights to stay compliant, meaning they either had to work on the weekends or cut into their flying time.

"After every flight, the logs are just uploaded automatically. You don't have to have someone manually go and write them in a book or type them in Excel," he says.

The video and telemetry offering also has built-in authorizations, so different users can have access to different parts of a video stream. The feeds can be viewed on many devices, so a firefighter could see on a phone what a commander can see on a laptop.

For the live stream, which takes five seconds to go from capture to viewer, Aeryon partnered with broadcast company Dejero Labs, which provides live broadcast capability to major news outlets like ABC and NBC. It transmits the feed over a bonded cellular connection, working over multiple wireless service providers' bands to keep latency low.

Oshkosh Defense's Advanced Driver Assist Systems are designed for tactical wheeled vehicles, including the Palletized Load System truck, shown here.

Photo: Oshkosh Defense

ARMY EYES
DRIVER ASSIST SYSTEMS

Smarter Vehicles Could Help Reduce Crashes

By Marc Selinger

Concerned that too many soldiers are dying or getting injured in truck crashes, the U.S. Army and military vehicle makers are developing systems to help drivers avoid such accidents.

Driving can be more dangerous than enemies on a battlefield. From 1980 to 2005, three soldiers died from motor vehicles crashes for each one killed in combat, according to the Army Corps of Engineers, one of several Army agencies developing driver-assist systems.

The Army is drawing on technology from the automotive industry, which has been marketing such safety features to consumers for years. But the Army is doing extra development work to account for the uninviting conditions that its trucks often encounter.

As a result, military systems have to be built with components that are more rugged than those for civilian vehicles, according to Andrew Culhane, business development manager at Vir-

ginia-based TORC Robotics (Booth #1519). And to navigate "unstructured environments," military systems need more sensors, such as lidar devices that create three-dimensional maps and extra computer processing to generate "high-precision" positioning information using GPS satellite signals.

"We've had rollover software on cars for a decade, and yet we have only one system out in the Army that has that same software," says Bryan McVeigh, Army project manager for force projection, referring to Navistar Defense's electronic stability control-equipped MaxxPro armored fighting vehicle. "So we're a little bit behind the power curve."

◆◆◆

Lockheed Martin's (Booth #1216) Autonomous Mobility Appliqué System (AMAS), a kit that combines sensors and control systems, recently demonstrated its driver-assist technology at the Army's Aberdeen Providing Ground in Maryland.

During the December event, in which soldiers drove four AMAS-equipped M915 tractor trucks, sometimes pulling flatbed trailers, the system displayed such functions as slowing or stopping its vehicle to avoid a collision with another vehicle or object, applying "steering corrections" to keep the vehicle from straying from its lane and blocking an intended lane change to prevent the vehicle from hitting another vehicle in its blind spot, says Tim Schulteis, AMAS program manager at Lockheed Martin Missiles and Fire Control.

The demonstration also tried out the system's driver warning functions, which simply alert the driver without actuating the vehicle's braking or steering. Those functions include a mix of audible and dashboard warnings about potential collisions with other vehicles, other objects or pedestrians, Schulteis says.

Schulteis called the demonstration successful, saying it showed that AMAS could save lives and reduce equipment losses.

The same technology that allows AMAS to help drivers can also help perform several other functions, including leader/follower, in which several driverless trucks follow a manned vehicle in a convoy. Having fewer soldiers serve as drivers in a convoy could free them up for other duties, such as looking out for potential threats.

"Convoy operations can be both tiring and stressful, so having a driver-assist system that is capable of providing for the basic continued operation of the vehicle removes that stress from the soldier and allows them to be more vigilant of their surroundings," Schulteis says.

Lockheed Martin, which has been developing AMAS for several years, plans to deliver "advanced" leader/follower capabilities to the Army for testing in the latter half of 2016. A key improvement will involve getting the follower vehicles to trail the lead vehicle in a straighter line.

McVeigh says he hopes to receive approval by the end of fiscal year 2016 to begin developing an acquisition plan for leader/follower. If funding is available, a request for proposals could be released to industry in fiscal 2019.

AMAS offers assist and warning functions for military truck drivers.

In the meantime, the Army is considering whether to buy driver-assist systems. In November, the Army asked industry to provide information about active safety kits that could provide automated braking and steering for its Palletized Load System supply trucks.

"Driver assist is a key technology to making leader/follower work," McVeigh says. "Even if I don't do leader/follower, those technologies, if integrated to plat-

forms today, would save lives, would save accidents and are a significant enhancement to what we have."

◆◆◆

Anticipating increasing military interest in driver assist, Oshkosh Defense (Booth #1663) has developed the Advanced Driver Assist Systems kit to help drivers of tactical wheeled vehicles avoid accidents.

ADAS is available in three versions, or "tiers." Tier one uses a camera-based kit to warn drivers if they are in danger of hitting another vehicle or a pedestrian, or if they are driving too fast or veering out of their lane.

Photo: U.S. Army.

Tier two adds electronic stability control, which helps drivers maintain vehicle control and avoid spinouts or rollovers on curves, slippery roads and emergency maneuvers. It also incorporates a forward-looking radar to maintain a safe distance from a lead vehicle and to automatically slow a vehicle if a crash is imminent.

Tier three combines tiers one and two. Another option, electronic power assist steering, eases the required steering effort to reduce driver fatigue.

ADAS draws on the Wisconsin firm's TerraMax unmanned ground vehicle technology.

"Rather than viewing these ADAS tiered capabilities as a path toward autonomy, it actually kind of happened the other way, [as] we've been doing autonomy with TerraMax," says John Bryant, senior vice president of defense programs at Oshkosh Defense.

Oshkosh unveiled ADAS in October, and company officials report receiving positive feedback.

"In our conversations with our government customers, there's certainly a high interest in bringing a lot of this active safety technology to the tactical wheeled vehicle," says John Beck, chief principal engineer at Oshkosh Corp.

Oshkosh received a TARDEC contract in December to develop the baseline architecture for a kit that includes ADAS and that will be placed on a PLS truck. The kit is intended to be "fault tolerant," meaning it will have "the ability to continue safe operations without driver intervention in the event of a component failure," Bryant says.

Marc Selinger is a freelance writer based in the Washington, D.C., area.

Garden District *Dining*

Located across the Ernest N. Morial Convention Center, New Orleans' Garden District is known for its antebellum mansions and southern charm. Here are a few dinner and late night options near Xponential.

Restaurant Rebirth
857 Fulton St.

Executive Chef Ricky Cheramie honed his chops working for restaurants owned by Emeril Lagasse and New Orleans institution Commander's Palace. Open for a few months, the chef calls the restaurant farm-to-table Cajun Creole.

Cochon
930 Tchoupitoulas St.

You'll find a pork-heavy emphasis at this restaurant, with dishes like ham hock with sweet potatoes, Louisiana cochon with cabbage and cracklins, and onion braised pork cheeks. The restaurant also has local flare, with a crawfish pie, fried alligator, and rabbit and dumplings.

Root
200 Julia St.

With all wood trimmings and seats that look like greenery, Root lives up to its organic name. The restaurant has an extensive charcuterie, sausage and cheese menu, as well as a very reasonable happy hour. From 5–7 p.m. Tuesday through Friday, Root serves a limited menu of $5 house crafted cocktails and wine and $2 Pabst Blue Ribbons.

Get Into the Mix at Generations Hall

Another gem of New Orleans, Generations Hall is a wedding and event venue located in New Orleans' Garden District. Generations Hall was originally built in the early 1820s as a sugar refinery and is now decorated with artwork by pronounced artists like George Schmidt and Xavier deCallaway, whose artwork portrays the rich history of New Orleans jazz.

Generations Hall is another staple of Louisiana that represents a long ago, traditional New Orleans jazz era. The facility is decorated French Quarter style, complete with state-of-the-art audio and video technology. Generations Hall hosts elegant New Orleans-style wedding receptions, rehearsal dinners, banquets and other events, with rooms that can be rented separately or as a whole. Three primary spaces, The Metropolitan Room, Metropolitan Two and the Big Room, are used for hosting elegant events.

On May 4, AUVSI is transforming Generations Hall to host The Mix — Xponential's signature evening event — as one-stop tour of the city. The Mix will run from 7:30 p.m. to 10:30 p.m. and will offering attendees the opportunity to tour the surrounding New Orleans neighborhoods of the French Quarter and Bourbon Street. Attendees can make their way through the French Quarter to experience a live jazz band, human statues, strolling absinthe fairies and much more.

Generations Hall is walking distance from many of AUVSI's hotel blocks. Shuttles will be leaving at 6:30 p.m. from the hotels listed on the shuttle schedule.

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