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## # 5 (68) May 2010

- Rheinmetall MAN Military Vehicles GmbH – Closing after antitrust approval
- ATK Receives $372 Million in Small Caliber Ammunition Orders
- BAE Systems - Navistar Defense - ArvinMeritor Team Delivers First Joint Light Tactical Vehicles (JLTV) to U.S. Army and Marine Corps
- Oshkosh Defense Awarded $13 Million for HEMTT A4 Add-on Armor Kits, Fuel Tanker Self-Sealant Applications
- ATK Receives $52 Million Training Tank Ammunition Order From U.S. Army
- Navistar Defense Receives $191 Million in New Vehicle and Upgrade Orders
- Force Protection Receives $24 M Award for 30 Cougar Vehicles
- Harris Receives $11 M for Falcon III and Falcon II Tactical Radios
- Force Protection Receives $62.4 M for 60 Buffalo Vehicles
- Harris Receives $139 H for HF Radio Systems to Equip MRAPs
- The FN SCAR For U.S. Military Reaches FINAL Milestone
- First deliveries of the counter-mining system SOUVIM 2
- Oshkosh Corporation Receives $410 Million Delivery Order For Family of Medium Tactical Vehicles
- SAIC Awarded $128 Million Contract By U.S. Army to Support Army Sustainment Command
- ATK Receives New Order for Modular Lightweight Load-Carrying Equipment (MOLLE II) Kits
- As Lead Technology Integrator for AEWE, Raytheon Demonstrates High-Bandwidth Wireless Communications and Network Interoperability
- ROSOBORONEXPORT At SOFEX 2010

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Defence Industry

## Rheinmetall MAN Military Vehicles GmbH – Closing after antitrust approval

First announced in January 2010, the joint venture between the Dusseldorf-based Rheinmetall Group and MAN Nutzfahrzeuge AG can now take immediate effect following approval by the relevant competition authorities.

The expertise of both companies in wheeled tactical vehicles will flow directly into the newly founded company Rheinmetall MAN Military Vehicles GmbH (RMMV) of Munich.

The move creates a comprehensive supplier of wheeled tactical vehicles, capable of meeting the needs of the military at home and abroad for protected and unprotected transport, command and multifunctional vehicles. Rheinmetall holds a 51% stake in the company, with the remaining 49% held by MAN Nutzfahrzeuge. By bringing together Rheinmetall's defence technology prowess with MAN's longstanding experience in utility vehicles, RMMV makes an important contribution to the consolidation of the German and European market for military utility vehicles.

As a first step, the development and sales activities of both companies in the wheeled tactical vehicle sector will be transferred to RMMV effective 1 May 2010. In a second contractually agreed step, the relevant production facilities of the partner companies will be integrated into the joint venture structure by the end of 2011, though they will remain at their present locations in Kassel, Germany (Rheinmetall) and Vienna, Austria (MAN).

During the first phase, RMMV will have approximately 370 employees; following completion of the second phase, the company's staff will increase to around 1,300, with projected annual sales in excess of €1 billion.

Contracts

## ATK Receives $372 Million in Small Caliber Ammunition Orders

MINNEAPOLIS -- Alliant Techsystems has received orders totaling $372 million to produce 5.56mm, 7.62mm and .50-caliber ammunition for the U.S. Army Contracting Command in Rock Island, Ill. This is the first significant order in the second year of a four-year contract, with additional orders expected during this fiscal year.

ATK operates the Lake City Army Ammunition Plant (LCAAP) in Independence, Mo., where the rounds will be produced.

During the 10 years it has operated the plant, ATK has delivered more than 10 billion rounds of ammunition to the U.S. Army for use by all the military services, while successfully executing a $242 million modernization project to ensure the LCAAP remains a viable national asset.

"ATK has demonstrated the capability to support the tremendous increase in demand, while in parallel, modernizing the facility," said Mark Hissong, Vice President and General Manager of ATK Small Caliber Systems. "Our daily focus on continuous improvement in all of our processes has resulted in the world's best small caliber ammunition and a facility that will support the warfighter for years to come."

ATK is a premier aerospace and defense company with more than 18,000 employees in 22 states, Puerto Rico and internationally, and revenues of approximately $4.8 billion. News and information can be found on the Internet at www.atk.com.

Certain information discussed in this press release constitutes forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995. Although ATK believes that the expectations reflected in such forward-looking statements are based on reasonable assumptions, it can give no assurance that its expectations will be achieved. Forward-looking information is subject to certain risks, trends and uncertainties that could cause actual results to differ materially from those projected. Among those factors are: assumptions related to demand forecasts for small caliber ammunition and the ammunition's performance; changes in governmental spending, budgetary policies and product sourcing strategies; the company's competitive environment; the terms and timing of awards and contracts; and economic conditions. ATK undertakes no obligation to update any forward-looking statements. For further information on factors that could impact ATK, and statements contained herein, please refer to ATK's most recent Annual Report on Form 10-K and any subsequent quarterly reports on Form 10-Q and current reports on Form 8-K filed with the U.S. Securities and Exchange Commission.

Defence Industry

## BAE Systems - Navistar Defense - ArvinMeritor Team Delivers First Joint Light Tactical Vehicles (JLTV) to U.S. Army and Marine Corps

ARLINGTON, Va. -- BAE Systems, through its U.S. Combat Systems line of business, teammates Navistar Defense and ArvinMeritor, are proud to announce an on-time delivery of its Joint Light Tactical Vehicle (JLTV) prototype vehicles to the U.S. Army and Marine Corps. The prototypes will undergo a 12-month rigorous government test and evaluation period as part of the JLTV Technology Development (TD) phase.

The BAE Systems -- Navistar -- ArvinMeritor team

handed over seven JLTV prototype vehicles and four companion trailers to the U.S. Army in a ceremony last week at the Navistar Defense productions facility in West Point, Miss. The mix of vehicles included two JLTV Category A General Purpose vehicles, four JLTV Category B Infantry Carriers, one Category C Utility Carrier.

In January 2009 Australia entered into a Land Force Capability Modernization (LFCM) Project Arrangement (PA) for the TD phase of the JLTV program, enabling tactical vehicle interoperability and integration between U.S. future forces and Australian land forces. In support of the Australian Department of Defence, the team is now focused on completing the build of three additional variants and a companion trailer that will be delivered in June. These vehicles are designed to be highly compatible with the U.S. variants, ensuring interoperability between forces, yet tailored specifically to meet the needs of the Australian troops.

"Our rich history and extensive experience with combat vehicles has allowed us to develop a JLTV family of vehicles design that represents a balance between performance, protection and payload," said Ann Hoholick, vice president and general manager of New Vehicles and Amphibious Systems for BAE Systems. "We have invested heavily in the development of the technology and capabilities that a platform like JLTV could provide to the modern day war fighter."

The JLTV design incorporates lessons learned from the U.S. Department of Defense's Mine Resistant Ambush Protected (MRAP) vehicle program and features the latest in lightweight, advanced armor and a V-shaped hull design to provide maximum crew protection.

"The BAE Systems - Navistar - ArvinMeritor team brings a balance of military, production and automotive experience to the program," said Archie Massicotte, president of Navistar Defense. "We work hard to provide vehicles that are safe to operate and survivable against current threats. We also understand that our design needs to be flexible so it can evolve ahead of future threat levels."

The team builds off the three companies' current leadership in armored and tactical vehicle development and support. Combined, the BAE Systems - Navistar -- ArvinMeritor team maximizes JLTV program value through proven capabilities, lean manufacturing and extensive worldwide logistics support.

The team draws on top talent from across the country. Sites participating in the development include: York, Pennsylvania; Ontario, San Diego and Santa Clara, California; Dearborn Heights, Sterling Heights and Troy, Michigan; Minneapolis, Minnesota; Johnson City, New York; Austin, Texas; Nashua, New Hampshire; Reston, Virginia; Melrose Park and Warrenville, Illinois; Fort Wayne, Indiana; West Point, Mississippi; Huntsville, Alabama; and Laurinberg and Aiken, South Carolina.

**About BAE Systems**

BAE Systems is a global defense, security and aerospace company with approximately 107,000 employees worldwide. The Company delivers a full range of products and services for air, land and naval forces, as well as advanced electronics, security, information technology solutions and customer support services. In 2009 BAE Systems reported sales of GBP 22.4 billion (US$ 36.2 billion).

**About Navistar Defense**

Navistar Defense is an affiliate of Navistar International Corporation (NAV 49.71, +1.37, +2.83%) , a holding company whose subsidiaries and affiliates produce International(R) brand commercial and military trucks, MaxxForce(R) brand diesel engines, IC Bus(TM) brand school and commercial buses, Monaco RV brands of recreational vehicles, and Workhorse(R) brand chassis for motor homes and step vans. It also is a private-label designer and manufacturer of diesel engines for the pickup truck, van and SUV markets. The company also provides truck and diesel engine service parts. Another affiliate offers financing services.

**About ArvinMeritor**

ArvinMeritor, Inc. is a premier global supplier of a broad range of integrated systems, modules and components to original equipment manufacturers and the aftermarket for the transportation and industrial sectors. The company marked its centennial anniversary in 2009, celebrating a long history of 'forward thinking.' The company serves commercial truck, trailer and specialty original equipment manufacturers and certain aftermarkets, and light vehicle manufacturers. ArvinMeritor common stock is traded on the New York Stock Exchange under the ticker symbol ARM.

Contracts

## Oshkosh Defense Awarded $13 Million for HEMTT A4 Add-on Armor Kits, Fuel Tanker Self-Sealant Applications

OSHKOSH, Wis. -- Oshkosh Defense, a division of Oshkosh Corporation, has received two awards valued at more than $13 million from the U.S. Army TACOM Life Cycle Management Command (LCMC) for the next-generation Heavy Expanded Mobility Tactical Truck (HEMTT).

Under an award valued at more than $8 million, Oshkosh will supply more than 90 HEMTT A4 add-on armor kits. A second award valued at more than $5 million is for the application of self-sealant coating to more than 300 new and recapitalized M978 A4 Tankers to help reduce the risk of fire during fuel transport.

The HEMTT A4’s add-on armor package, or “B Kit,” is in addition to the HEMTT A4’s factory-installed, or “A Kit,” armor and can be installed in theater. Delivery of the armor kits is expected to be completed by September 2010. The HEMTT A4 and the next-generation Palletized Load System (PLS) share a common cab, resulting in a reduced logistics footprint and streamlined training.

The award for self-sealant applications continues work that began in December 2009 and extends it to September 2010. The self-sealant coating increases

safety for HEMTT Tanker crews by sealing punctures from small-arms fire or other small, high-velocity objects.

The Oshkosh HEMTT's 13-ton payload and off-road capabilities make it the backbone for the U.S. Army's logistics fleet. Since its introduction in 1985, the HEMTT has helped keep the Army on the move during major conflicts such as Operations Desert Storm, Iraqi Freedom and Enduring Freedom. The HEMTT is part of the Family of Heavy Tactical Vehicles (FHTV) built by Oshkosh, which also includes the Heavy Equipment Transporter (HET) and PLS. Oshkosh has produced more than 70,000 military-class vehicles at its facilities, including more than 30,000 FHTVs.

Contracts

## ATK Receives $52 Million Training Tank Ammunition Order From U.S. Army

MINNEAPOLIS -- Alliant Techsystems (NYSE: ATK) has received a $52 million order for 120mm training tank ammunition from the U.S. Army. The award is for the third year of a four-year contract.

The 120mm training ammunition, used by the M1A1/A2 Abrams main battle tank, include the M865 kinetic energy and the M1002 multi-purpose anti-tank training rounds. These training rounds closely replicate tactical ammunition in appearance and ballistic performance to provide the warfighter with an affordable, yet realistic training experience.

"High-quality ammunition that is extremely reliable in training situations is essential to the warfighter who must be prepared to react decisively on today's battlefield," said Bruce DeWitt, ATK Advanced Weapons Vice President and General Manager.

Since 1980, ATK has delivered more than four million rounds of 120mm tactical and training tank ammunition to the U.S. Army, U.S. Marine Corps, and allied militaries. Through its proven, system-level contracting approach that reduces the risk to the customer, ATK has delivered a constant supply of 120mm ammunition that is consistently reliable and affordable.

Propellants for ATK's tank ammunition are produced by ATK at the Radford Army Ammunition Plant, Radford, Va. ATK's manufacturing center of excellence in Rocket Center, W. Va. provides the high-quality metal and composite components; projectiles; and cartridge load, assembly and pack operations. Program management is headquartered in ATK's Plymouth, Minn. facility.

As a prime contractor, ATK specializes in developing innovative, advanced weapon systems that provide affordable precision and effectiveness for artillery, mortars, tanks, naval gun systems, and tactical aircraft.

ATK is a premier aerospace and defense company with more than 18,000 employees in 22 states and $4.8 billion in revenue. News and information can be found on the Internet at http://www.atk.com/.

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Defence Industry

## Navistar Defense Receives $191 Million in New Vehicle and Upgrade Orders

WARRENVILLE, Ill. -- Navistar Defense, LLC today announced that it has received two separate awards totaling $191 million for the delivery of new medium tactical vehicles as well as enhancements to International® MaxxPro® Dash Mine Resistant Ambush Protected (MRAP) units in Afghanistan.

Under the new delivery order for medium tactical vehicles from the U.S. Army Tank-automotive and Armaments Command (TACOM) Life Cycle Management Command, Navistar will provide 629 additional medium tactical vehicles for $89 million. The order falls under Navistar's three-year contract awarded in May 2008 to support the Afghan National Police and Afghan National Army. Deliveries are scheduled to begin in October 2010 and all units will be general troop transport trucks for use in Afghanistan.

"To date, we have more than 14,000 vehicles in Iraq and Afghanistan that leverage the same commercial truck platform, but operate as different medium tactical vehicle and MRAP variants," said Archie Massicotte, president, Navistar Defense. "This commonality allows us to customize our vehicles for the mission while also accelerating the fleet support provided by our global parts and support network."

Navistar's second award is from the U.S. Marine

Corps Systems Command for $102 million for MaxxPro Dash MRAP capability insertions. Under the contract, the company will provide a number of vehicle enhancements for the 1,222 Dash units currently in Afghanistan. Installations will begin in August 2010 and be completed by the end of October 2010. These same enhancements have been incorporated into the new MaxxPro Dash vehicles with DXM™ independent suspension currently being delivered.

"Capability insertion is just one form of vehicle sustainment that Navistar provides," said Massicotte. "Vehicle fleets have been known to operate for 15 and 20 years and we will provide all the support necessary to keep our trucks up and running and equipped with the latest and greatest technology."

Contracts

## Force Protection Receives $24 M Award for 30 Cougar Vehicles

Force Protection, Inc., a leading designer, developer and manufacturer of survivability solutions and provider of total life cycle support for those products, today announced it has received contract M67854-10-C-5133 from United States Marine Corps Systems Command (MARCORSYSCOM) for approximately $24 million for 30 Cougar Category I Mine Resistant Ambush Protected (MRAP) vehicles including Field Service support.

The contract is a Foreign Military Sale (FMS) for coalition forces in support of U.S. forces and is subject to definitization. The work will be performed in Ladson, SC and is expected to be completed prior to April 29, 2011.

Randy Hutcherson, Chief Operating Officer for Force Protection, commented, "We are pleased to receive this new order for these 30 Cougar vehicles. The battle proven Cougar has been the workhorse not only for the U.S. Marine Corps but allied forces around the globe such as the United Kingdom and Canada. We stand ready to deliver and support these vehicles wherever they are deployed around the world."

Contracts

## Harris Receives $11 M for Falcon III and Falcon II Tactical Radios

Rochester, NY. -- Harris Corporation, an international communications and information technology company, has received an $11 million order to provide Falcon(r) tactical radio systems to a Partnership for Peace nation participating in the NATO-led International Security Assistance Force (ISAF) in Afghanistan.

This order will result in one of the largest deployments of the Harris RF-7800S radio to that country.

NATO and Partnership for Peace countries have standardized on the Harris Falcon family of radios, which has improved communications interoperability during coalition operations. These countries consult on national security issues and their forces interact frequently during combined military exercises and NATO-led missions.

Harris will supply Falcon III(r) RF-7800S Secure Personal Radios, a lightweight "wearable" radio that provides individual warfighters with an easy-to-operate solution for voice and wideband data communications. Designed to address soldier system communication requirements, the RF-7800S operates in the 350- to 450-MHz frequency band. The radio provides more than two kilometers range over open terrain, and easily penetrates through buildings and dense foliage.

Harris also is providing Falcon II(r) RF-5800M multiband manpack and handheld radios for line-of-sight terrestrial communications and Falcon II(r) RF-5800H high-frequency radios for beyond line-of-sight communications - along with data terminals, accessories, spare parts and services.

Falcon II RF-5800M transceivers are software-programmable radios, supporting continuous VHF/UHF operation across the 30 to 512 MHz bandwidth. These radios operate in multiple waveforms and encryption modes, making them to suitable for ground-to-air and ground-to-ground applications. RF-5800M radios provide multi-mission, multi-mode secure interoperability in a compact, lightweight package.

The Harris Falcon II RF-5800H HF radio provides secure beyond-line-of-sight radio communications in the most demanding battlefield environments. These radios feature Third Generation-Automatic Link Establishment (3G-ALE), integrated data link protocols and embedded GPS receivers. The RF-5800H offers secure interoperability with the Harris AN/PRC-150(C) radio, which is widely deployed with U.S. and NATO forces operating in Afghanistan.

Contracts

## Force Protection Receives $62.4 M for 60 Buffalo Vehicles

Ladson, SC. -- Force Protection, Inc., a leading designer, developer and manufacturer of

survivability solutions and provider of total life cycle support for those products, today announced it has received a modification to contract W56HZV-08-C-0028 from the United States Army Tank- Automotive and Armaments Command (TACOM) for approximately $62.4 million for 60 Buffalo Mine Protected Clearance Vehicles (MPCV).

This contract modification is subject to definitization. The work will be performed in Ladson, SC and is expected to be completed prior to June 30, 2011. Deliveries are scheduled to begin in the fourth quarter of 2010.

Randy Hutcherson, Chief Operating Officer for Force Protection, commented, "The Buffalo is highly successful and we are proud of its performance in Iraq and Afghanistan. Buffalo has proven to be the leader in route clearance missions and has saved untold numbers of lives over the last several years in combat operations. We look forward to delivering these additional Buffalos over the coming months to the troops conducting vitally important missions."

Contracts

## Harris Receives $139 H for HF Radio Systems to Equip MRAPs

Rochester, NY. -- Harris Corporation, an international communications and information technology company, has received a $139 million order to provide additional Falcon II(r) AN/VRC-104 high-frequency (HF) tactical radio systems for the U.S. Department of Defense (DoD) Joint Mine Resistant Ambush Protected (MRAP) Vehicle Program.

The radio systems will be installed in new standard-size MRAP vehicles and MRAP All-Terrain Vehicles (M-ATVs).

"The DoD's Joint MRAP Program has standardized on our AN/VRC-104 vehicular system, which includes the AN/PRC-150(C) HF radio, for long-range communication requirements," said Steve Marschilok, president, U.S. Department of Defense business, Harris RF Communications. "This software-defined radio system will provide beyond-line-of-sight communications in the rugged and mountainous terrain of Afghanistan. We're continuing to provide our U.S. and international defense customers the broadest portfolio of field-proven, future-focused communications technologies that meet mission needs today and tomorrow."

The AN/VRC-104 system is a vehicular transceiver/amplifier that includes the AN/PRC-150(C), a Type-1 certified HF radio. In addition to the AN/VRC-104 and AN/PRC-150(C), Harris radios systems in a range of configurations have been installed in MRAP vehicles across the DoD's fleet.

Defence Industry

## The FN SCAR For U.S. Military Reaches FINAL Milestone

FN Herstal, S.A. (FN) received notification from the USSOCOM Program Executive Office—SOF Warrior (PEO—SW) that the SCAR Acquisition Decision Memorandum (ADM) was approved and signed on April 14, 2010, moving this FN program into the Milestone C phase.

This decision authorizes the production and deployment of the Special Operations Forces (SOF) Combat Assault Rifle (SCAR) MK 16 and MK 17, as well as the Enhanced Grenade Launcher Module (EGLM) MK 13.

Following a worldwide solicitation to the military firearms industry, nine vendors submitted a dozen different designs for a new modular, multi-caliber weapons system. The FN SCAR submission was the only weapons system to pass all of the Go/No-Go criteria and was unanimously chosen in November 2004 by the selection board composed of senior operators from every SOF component.

The SCAR is the first new assault rifle procured by the U.S. Military through a full and open competition since the M16 trials were held in the mid-1960s. Tests in reliability, accuracy, safety and ergonomics were administered from August 2005 to September 2008 and were conducted in a variety of environments including urban, maritime, jungle and winter/mountain operational test scenarios. The SCAR weapons system successfully endured more than two million rounds of ammunition during these trials, therein making it one of the most heavily tested weapons in the history of small arms.

The FN SCAR system consists of two highly adaptable modular rifle platforms and a grenade launcher. Type-designated as the MK 16 MOD 0 5.56mm Special Operations Forces Combat Assault Rifle and the MK 17 MOD 0 7.62mm Special Operations Forces Combat Assault Rifle, both weapons are available with three different barrel lengths optimized for conducting operations in close-quarters combat, standard infantry and longer-range precision fire roles. All SCAR barrels can be easily interchanged by the operator in just minutes to instantly meet the requirements of virtually any mission. The MK 13 MOD 0 40mm Enhanced Grenade Launcher Module (EGLM) quickly mounts under the barrel of either SCAR platform, providing additional capability to the individual warfighter's firepower, and can be easily configured for use as a stand-alone weapon as well. Because of the SCAR

system's modular design, ergonomic commonality (100%) and parts commonality (greater than 80%), it represents a significant reduction in training costs and life-cycle support. The weapon system's open architecture is designed to support future advancements in operational requirements including ammunition, aiming devices, sighting systems and other mission critical equipment.

Defence Industry

## First deliveries of the counter-mining system SOUVIM 2

Development of SOUVIM 2, a mine path clearing system designed and manufactured by MBDA since 2008, has just been completed.

Two units of this land vehicle set will be delivered very shortly to the DGA, the French armament procurement agency and will undergo final qualification testing before delivery to the French Army. In line with the DGA's aim, the French Army will be ready to deploy this system on foreign theatres in 2010.

SOUVIM 2 was designed for use in mobility support missions, allowing quick clearing of mined paths over long distances behind the lines: over 100 km of track cleared daily, with extensive counter-mining capabilities. The SOUVIM 2's performance is currently unequalled.

The system relies on the combined action of two vehicles towing mine-activation trailers. The first vehicle is designed to roll over a pressure mine without activating it. It tows a first "mine-triggering trailer" (RDM) whose weight will trigger pressure-sensitive mines and thereby secure the second vehicle's progress. This latter vehicle tows two further RDMs whose different wheel bases help cover the whole width of the track to be cleared.

Contracts

## Oshkosh Corporation Receives $410 Million Delivery Order For Family of Medium Tactical Vehicles

OSHKOSH, Wis. -- Oshkosh Corporation, a leading manufacturer of specialty vehicles and vehicle bodies, announced today that its Defense division has received a delivery order valued at more than $410 million from the TACOM Life Cycle Management Command (LCMC) for the production and delivery of 2,634 Family of Medium Tactical Vehicles (FMTV) trucks and trailers for the U.S. Army.

This award is for deliveries scheduled between March and December 2011. To date, Oshkosh Corporation has received orders valued at more than $690 million under the five-year FMTV requirements contract.

Oshkosh Corporation utilized its own resources to lean forward before its original contract award was affirmed by the Army on February 12, 2010, enabling the company to deliver FMTV vehicles and trailers according to the Army's original schedule. The company will begin supplying initial trucks to the Army this month for performance and durability testing. Production deliveries will begin in October 2010. All Oshkosh FMTV vehicles will include the company's Long-Term Armor Strategy (LTAS)-compliant armor solution.

"Oshkosh Corporation's world-class production capabilities, coupled with our independent investments in this program, will ensure vehicles are delivered without any disruption to the original timeline," said Robert G. Bohn, Oshkosh Corporation chairman and chief executive officer. "We are closely engaged with the Army and moving forward on all necessary processes to maintain this schedule and deliver high-quality trucks and trailers to meet the Warfighters' needs."

The five-year, multi-billion-dollar contract calls for the production of an estimated 23,000 trucks and trailers, as well as support services and training. The FMTV is a series of 17 models and 23 variants ranging from 2.5-ton to 10-ton payloads.

Oshkosh Corporation has broken ground on a new 150,000-square-foot, state-of-the-art electrocoat (E-coat) facility in Oshkosh, Wis., to support the FMTV program, and possibly other programs. Facility start-up will begin in late summer 2010. The company also announced last month that it is expanding its Michigan office with plans to move into a new facility in Warren, Mich., and hire up to 190 new employees there to support the FMTV System Technical Support (STS) work.

Contracts

## SAIC Awarded $128 Million Contract By U.S. Army to Support Army Sustainment Command

MCLEAN, Va. -- Science Applications International Corporation (SAIC) announced that it has been awarded a prime contract by the U.S. Army to provide support services to the Army Sustainment Command (ASC) Distribution Management Center.

The contract has a six-month base period of performance, four one-year options, and a total value of more than $128 million if all options are exercised. Work will be performed primarily at the Rock Island Arsenal in Illinois and at other U.S. Army sites worldwide.

A subordinate command of the Army Materiel Command, ASC serves as the Army's logistics integrator for contingency and sustainment support of American fighting forces worldwide. ASC provides sustainment level logistics by synchronizing acquisition, logistics and technology support from the strategic through the

operational to the tactical level. Under the contract, SAIC will provide centralized materiel management control and distribution services to help ASC ensure readiness and accelerate logistics support to commanders and troops in the field.

"SAIC is pleased to support ASC's important mission -- helping ensure that our soldiers have what they need, when and where they need it," said Glenn San Giacomo, SAIC senior vice president and business unit general manager.

**About SAIC**

SAIC is a FORTUNE 500(R) scientific, engineering, and technology applications company that uses its deep domain knowledge to solve problems of vital importance to the nation and the world, in national security, energy and the environment, critical infrastructure, and health. The company's approximately 45,000 employees serve customers in the U.S. Department of Defense, the intelligence community, the U.S. Department of Homeland Security, other U.S. Government civil agencies and selected commercial markets. Headquartered in McLean, Va., SAIC had annual revenues of $10.8 billion for its fiscal year ended January 31, 2010.

Contracts

## ATK Receives New Order for Modular Lightweight Load-Carrying Equipment (MOLLE II) Kits

MINNEAPOLIS -- Alliant Techsystems announced today that its Eagle Industries, Unlimited subsidiary has received a delivery order from the U.S. Army to produce Modular Lightweight Load-Carrying Equipment (MOLLE II) kits in a new camouflage pattern, that the Army chose specifically for the Afghanistan conflict.

Eagle will begin delivery of the MOLLE II equipment kits by the end of August, 2010 to support the U.S. Army's operational needs in Afghanistan.

In response to the U.S. Army's approved plan to field all U.S. Soldiers deployed in Afghanistan with new equipment and uniforms in MultiCam®, Eagle Industries immediately began preparing its supply chain and production lines to support the Army's efforts. Eagle Industries has produced MOLLE equipment kits for the Army since 2007 and has produced a wide variety of survivability systems in the MultiCam® pattern for military and commercial customers for over four years. The MultiCam® pattern was designed by Crye Precision to increase concealment capability across multiple environments.

"MOLLE kits are a core part of our growing security business," said Ron Johnson, President of ATK's Security and Sporting group. "The Army's decision to outfit all of its Soldiers in Afghanistan with this new camouflage pattern presents a new opportunity for ATK as we build-out our security portfolio, which now includes the recent acquisition of the Blackhawk Products Group."

Eagle Industries is a leader in the production of top-quality individual equipment systems for military personnel, law enforcement professionals and first responders. Several highly adaptable, combat proven and durable personal protective systems and components are distributed by Eagle Industries, a wholly owned subsidiary of Alliant Techsystems.

ATK is a premier aerospace and defense company with more than 18,000 employees in 22 states, Puerto Rico and internationally, and revenues in excess of $4.8 billion. News and information can be found on the Internet at www.atk.com.

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Future Technologies

## As Lead Technology Integrator for AEWE, Raytheon Demonstrates High-Bandwidth Wireless Communications and Network Interoperability

MARLBOROUGH, Mass. -- As the lead technology integrator for the recent U.S. Army Training and Doctrine Command's Army Expeditionary Warrior Experiment (AEWE), Raytheon Company successfully connected more than 25 technologies from more than 20 different companies and agencies into a common network.

This was the first time the Army contracted this role to an industry partner. The key enabler for the common

network was Raytheon's Mobile Ad-Hoc Interoperable Network GATEway (MAINGATE).

In AEWE, MAINGATE served as the backbone network, providing radio interoperability via the network, not the radio. The result was seamless communications, data and video sharing among mounted and dismounted forces using different radios or networks.

Specifically, the network was composed of fixed ground locations, tactical vehicles, airborne relays, and individually networked soldiers. It also connected communication devices, command and control applications, and sensor platforms. MAINGATE linked unattended ground systems, unmanned ground vehicles, and unmanned aircraft systems.

"This was the first time the U.S. Army employed a mobile network, successfully interconnecting many disparate radio sub-networks over a large area to share data seamlessly in simulated missions," said Brian McKeon, Raytheon Network Centric Systems vice president of Integrated Communications Systems. "This successful demonstration reinforces MAINGATE's potential to achieve interoperability among the diverse radios used by coalition forces," McKeon added. "Never before has so much bandwidth been available to the warfighter at these echelons."

MAINGATE, which was designed in partnership with the Defense Advanced Research Projects Agency, has the tactical network capacity to provide four simultaneous video streams; image transfers; voice bridging; and complete situational awareness and command and control down to the squad level.

"DARPA had the vision to foresee how this technology could transform the modern battlefield," said McKeon.

AEWE is the Army's premier live, soldier-focused, network-enabled venue for aggressive experimentation of emerging and existing technologies. More than 150 soldiers participated in 14 missions through live operations and virtual simulations. AEWE is a live, operational experiment that provides insights to evaluate the mission effectiveness of technologies and concepts for soldiers and small units.

Raytheon Company, with 2009 sales of $25 billion, is a technology and innovation leader specializing in defense, homeland security and other government markets throughout the world. With a history of innovation spanning 88 years, Raytheon provides state-of-the-art electronics, mission systems integration and other capabilities in the areas of sensing; effects; and command, control, communications and intelligence systems, as well as a broad range of mission support services. With headquarters in Waltham, Mass., Raytheon employs 75,000 people worldwide.

Exhibitions

## ROSOBORONEXPORT At SOFEX 2010

Rosoboronexport brings the most advanced items of Russian special-purpose weapons and equipment to SOFEX 2010, The 8th International Special Operations Forces Exhibition and Conference to be held from 10th till 13th May 2010 in the capital city of Amman, Jordan.

The federal state unitary enterprise (FSUE)

Russia has been traditionally participating in SOFEX events at the Marka airbase since 2002 with its national expositions set up under the aegis of Rosoboronexport.

The Middle East is seen by Rosoboronexport as one of the most promising arms markets with bright prospects for establishing closer and deeper military-technical cooperation. Russia has traditionally maintained friendly relations with Jordan, the host country, as is evidenced by continuous bilateral contacts at high level.

Rosoboronexport shapes its policy for potential customers by making analysis of their urgent requirements, and puts forth the most effective still economical ways of meeting them. Such an approach must attract visitors'attention to the Russian exposition.

A number of items on display have been developed with due account of the vast experience that Russia gained in its anti-terrorism operations. Nowadays most of these weapons and devices are used by special-operations units of the Russian Ministry of Interior and Federal Security Service, allowing them to effectively counter emerging threats. It must be emphasized that Russian special-purpose weapons offered for delivery by Rosoboronexport are manufactured in small batches and transferred under stringent control practically denying chances of their falling into the hands of terrorists.

Visitors will be able to obtain detailed reference data on a wide range of small arms as well as ammunition and sights for them. Among the exhibits one will find legendary Kalashnikov assault rifles of the hundredth series: AK-101, AK-102, AK-103 and AK-104 models, its AK-74M and AKMS upgrades, AN-94 Nikonov assault rifle as well as 7.62-mm RPK and Pecheneg machine guns and 12.7-mm 6P50 infantry heavy machine gun. The 5.45-mm PSM and 9-mm PMM pistols as well as Yarygin self-loading pistol are considered to be ideal weapons for close quarters battle.

Professionals single out the PP-2000 compact submachine gun from among other special-purpose small arms. The weapon allows conducting aimed fire at a range of up to 200 m. Its 9-mm armour-piercing bullets neutralise enemy personnel wearing Class II body armour protection means. High-strength plastic components used in the PP-2000 submachine gun structure have allowed designers to cut its weight to mere 1.4 kg (with empty magazine). The submachine gun can mount various types of sights, as well as fire sound and flash suppressors.

The APS underwater assault rifle stays unique in the international arms market with its underwater range of fire surpassing visibility limits. It provides stable fire capacity at up to 40-metre depths.

Sniper weapons intended for special-operations units are represented by the world-famous 7.62-mm SVD/SVDS and OTs-03 rifles as well as 12.7-mm

OSV-96 high-power rifle. The latter weapon is capable of defeating light armoured hardware, radars, and aircraft parked on aprons. Its maximum aimed range of fire against hardware extends to 1,800 m and against manpower to 1,200 m (600 m at night). It fires the B-32 rounds capable of penetrating a 20-mm thick steel panel at a range of 1,000 m. The OSV-96 rifle can be used as an anti-sniper weapon due to its extended range of fire and collapsible design facilitating carriage.

The Middle East customers are well aware of Russian antitank grenade launchers. They are seen not only as a serious threat to modern tanks but also as an effective weapon against terrorists hidden inside buildings and fortifications. The Russian exposition will also showcase the RPG-7V1 and RPG-29 hand-held antitank grenade launchers, AGS-30 automatic grenade launchers, Metis-M1 and Kornet-E antitank guided missile systems, as well as RPO-A, RPO-D and RPO-Z infantry rocket flame-throwers.

The GM-94 magazine-fed grenade launcher is an effective weapon for use in special and police operations conducted in urban terrain. It can be fired from within confined spaces and transportation means owing to its low sound and zero flash signatures. It is a versatile weapon capable of firing different types of ammunition, including among others thermobaric, sound-and-flash, and stunning grenades.

Many states in this region are confronted with the most acute problem of maintaining control over their exclusive economic zones. Lately Russia has carried out a number of projects for setting up automated littoral control systems operated in the interests of various state agencies. Visitors to the Rosoboronexport's stand will be able to familiarise themselves with eventual constituents of such systems. Among showcased equipment are underwater surveillance sensors including the Komor electromagnetic antisubmarine system, Komor-1 magneto-acoustic antisaboteur system, and Amga-ME sonar. Surface targets can be monitored by means of such surveillance systems as the MR-101M1E shore-based radar and its mobile version - Mys-M1E.

Another exhibit in this class is the DP-65 remotely-controlled grenade launcher system designed to protect against underwater saboteurs both military and civil installations, such as offshore oil production platforms and terminals. Its range of fire goes from 50 to 500 m, with the fuze set to a given depth.

The Russian-made Eleron-3 and Eleron-10 remote surveillance unmanned aerial vehicles (UAVs) will also be showcased at the exhibition. The UAVs can be deployed to conduct real-time surveillance over designated targets in given areas. Small size, high mobility, manual and automatic flight control modes are listed among their main advantages. The UAVs are flown on signals received from both US GPS and Russian GLONASS navigation systems.

Moreover, this exhibition provides Rosoboronexport with the opportunity of presenting other types of Russian arms and military equipment offered for export. Specialists will be able to get detailed briefings on the Mi-35M, Ka-52 and Mi-171Sh helicopters, T-90U main battle tank with its new 45M integrated fire control system, upgraded ZU-23/ZOM1 anti-aircraft gun system, and Igla-S man-portable air defence missile system.

## Contracts

### Textron to Deliver 423 Additional Armored Security Vehicles to US Army

New Orleans -- Textron Marine & Land Systems, an operating unit of Textron Systems, a Textron Inc. company, today announced the signing of a new base contract award for the M1117 Armored Security Vehicle (ASV) and M1200 Armored Knight with the U.S. Army Tank-automotive and Armaments Command (TACOM).

The finalized contract includes an exercised option for 423 vehicles (327 M1117s and 96 M1200s) with provisions for future options of up to 272 more vehicles. These quantities are in addition to a base order previously awarded under a letter contract award of 191 M1117 ASVs and 65 M1200 Armored Knight vehicles, field support and special sustainment tools, as well as technical and field services.

Delivery of these latest orders are expected to commence October 2010 and, should all options of the contract be exercised, could continue through the first quarter of 2012.

The contract totals approximately $461 million with an additional $239 million in options remaining to be exercised. Textron Marine & Land Systems has delivered a total of 2,600 ASVs to the U.S. Army to-date.

"The ASV, which effectively addresses the U.S. Army's current requirements overseas and has significant upgrade potential to mitigate emerging threats, is seeing ever-expanding combat mission roles for the U.S. Army in Iraq and Afghanistan," said Textron Marine & Land Systems General Manager Tom Walmsley. "Our team looks forward to building and supporting ASVs with a focus on mission success and returning our soldiers home safely."

The ASV is a 4X4 wheeled armored vehicle that offers significant crew protection through the employment of multiple layers of armor, defending against small arms fire, artillery projectile fragments, Improvised Explosive Devices (IEDs) and land mines. The ASV possesses superior mobility, agility, handling and ride quality

through the utilization of a four-wheel independent suspension system.

The ASV has maintained exceptional operational readiness and combat availability rates over the life of the U.S. Army program as vehicles log more than 30,000 miles per year in combat operations. Textron Marine & Land Systems has achieved more than 56 consecutive months of on-time delivery to the U.S. Army on the ASV program.

The ASV family of vehicles performs a wide variety of missions including scout, infantry personnel carrier, reconnaissance, command and control and maintenance. U.S. Army ASV missions include operations with the Military Police, convoy protection, perimeter security, as well as Field Artillery Combat Observation and Lasing Teams (COLT) with the M1200 ASV configuration.

Contracts

## Spartan Motors Receives MRAP Subcontract from BAE

Charlotte, Mich. -- Spartan Motors Chassis, Inc., a subsidiary of Spartan Motors, Inc., has been awarded a $6.8 million subcontract order from defense contractor BAE Systems to support the production of advanced tactical vehicles under the Mine Resistant Ambush Protected (MRAP) program.

John Sztykiel, President and CEO of Spartan Motors, said: "The improvised explosive device threat around the world continues to expand, and has nearly doubled in Afghanistan during the last year. This new order speaks to Spartan's demonstrated experience and success in producing threat-specific vehicles."

Under the terms of the MRAP subcontract, the Mich.-based custom chassis manufacturer will supply and integrate key chassis components, including independent suspension systems, for United States Special Operations Command ("USSOCOM"), MRAP vehicles in the third and fourth quarters of 2010. The units will then ship to Letterkenny Army Depot for final assembly and acceptance by the U.S. Government.

Sztykiel added: "This subcontract supports comments of ours made over the past few quarters that the defense business-for Spartan-is becoming smaller in order volume with greater product variation, which is in alignment with our strategic and operational strengths."

In addition to this new award, Spartan also continues its ongoing support of MRAP prime contractors and the U.S. Government by providing spare/replacement parts for many of the MRAP vehicles built at Spartan since 2005.

Defence Industry

## French DGA Orders 187 Small Armoured Vehicles

On 7 May 2010 the French Armament Procurement Agency (Direction generale de l`armement, DGA) ordered 187 small armoured vehicles (petits vehicules proteges, PVP) from Panhard General Defense.

This order is for the last lot from the contract for a total of 933 PVPs, signed on 7 September 2004. So far, 506 PVPs have been delivered to the French Army. The deliveries are scheduled to be completed in 2011.

The PVPs are manufactured at the two industrial facilities at Marolles-en-Hurepoix (Essonne) and Saint-Germain-Laval (Loire). The PVP programme comprises a total of approximately one million work hours for Panhard and its sub-suppliers. The initial delivery contract provided for the delivery of 200 PVPs per year starting in late 2007 through 2012. The acceleration of deliveries and orders, agreed within the framework of the economical revitalisation plan, has allowed increasing the production cycle to 300 PVP per year in 2009 and 2010.

The PVP is a state-of-the-art 4x4 vehicle, planned to equip the command posts of the artillery and engineering units, as well as some specific paratrooper, mountain infantry, logistical and reconnaissance units. Air-transportable, armoured and very mobile, it features a 7.62mm self-protection gun and can transport up to four people. The PVP has been deployed to the Lebanon in late 2009 and is being deployed to Afghanistan since February 2010.

Contracts

## BAE Systems Receives $5 Million U.S. Army Contract for Patriot Vehicles

HOUSTON, Texas -- BAE Systems today announced the award of a $5.5 million contract from the U.S. Army Tank-Automotive and Armaments Command (TACOM) to manufacture 24 Patriot support vehicles for Taiwan.

These vehicles will be configured on the Long-Term Armor Solution (LTAS) equipped Family of Medium Tactical Vehicles (FMTV).

The LTAS system, specifically designed for the

FMTV by BAE Systems, is comprised of the ready for armor cab, or A-Cab, and appliquй armor, or B-kit. The A-Cab configuration allows crews to operate the FMTV in on- and off-road, non-tactical and low-threat tactical environments with minimal vehicle weight. The crews can increase their protection during periods of increased threat levels by installing the B-kits.

"Our LTAS equipped FMTV Patriot vehicles demonstrate BAE Systems' distinctive flexibility to support the continued modernization of the Patriot Batteries," said Dennis Morris, president of Global Tactical Systems, BAE Systems. "While maintaining a high level of tactical mobility, the vehicles provide a new level of protection and capability for the Patriot program."

Under this contract BAE Systems will manufacture eight Specially Modified Long Wheel Base Chassis, nine cargo vehicles and seven tractors. The vehicles will be produced in Sealy, Texas and delivered to the Army by December 2010.

BAE Systems' Sealy facility is a world-class designer, volume manufacturer and through-life supporter of high-quality, best value military tactical vehicles.

Army

## Raytheon Links Combat Systems for Networked Lethality at Army Exercise

MCKINNEY, Texas -- Raytheon Company networked an array of combat systems during a U.S. Army experimental force exercise to evaluate existing and emerging capabilities for improved situational awareness and targeting efficiency.

At the Army Expeditionary Warrior Experiment, Raytheon linked a number of combat sensors and weapons systems for improved lethality. The tactical network included a 3rd-generation electro-optical Mast Mounted System, the Long Range Advanced Scout Surveillance System, an Improved Target Acquisition System, and the Javelin Command Launch Unit.

"By networking these systems, Raytheon significantly reduced target acquisition and engagement timelines through slew-to-cue target handoffs and automated target reports," said Glynn Raymer, vice president, Raytheon Network Centric Systems Combat Systems. "We increased situational awareness through transmission of streaming sensor video and imagery that supports targeting and battle damage assessments.

"This is the third year we brought networked lethality solutions to AEWE for soldiers to experience firsthand, and through our participation, Raytheon has progressively enhanced these critical force modernization capabilities," added Raymer. "These ready and near-ready netted systems reduce time-to-target, improve accuracy and help save warfighter lives."

Raytheon also served as the lead integrator for AEWE technologies. That effort included using its MAINGATE mobile ad-hoc communications system as a network backbone for the experiment.

While the Army is still analyzing field test data, emerging results indicate that Raytheon's lead technology integration and netted combat systems yielded positive performance.

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Army

## US Army Cancels Non-Line-of-Sight Launch System

The Department of Defense announced today that it authorized the Army to cancel the Non-Line-of-Sight Launch System and transition management responsibilities for system development and acquisition from the old Future Combat System (FCS) program - currently aligned under Program Executive Office Integration (PEO I) - to the PEOs that already manage similar systems.

Both decisions are a result of the Capability Portfolio Reviews, a new process the Army implemented in February.

The Army's vision is to have an effective, affordable and modernized Army. In pursuit of this goal, the Army's senior leaders recognize the need to be diligent in their efforts to be responsible stewards of the resources provided and to carefully manage existing programs and budgets. With this obligation in mind, the Secretary of the Army directed the Under Secretary of the Army and the Vice Chief of Staff, Army, to implement a Capability Portfolio Review (CPR) process for a one-year period, effective Feb. 22, 2010.

The intent of this review process is to conduct an Army-wide, all-components revalidation of requirements for all Army Acquisition programs. The Army holistically examines all existing requirements and makes recommendations to terminate ones that are redundant and outdated. Reviews will focus on eight portfolios: Tactical Wheeled Vehicles, Precision Fires, Air and Missile Defense, Radios and Network, Aviation, Engineer Mobility, Combat Vehicle Modernization and Intelligence Surveillance and Reconnaissance (ISR). The intent of this revalidation is to eliminate redundancies and to ensure that funds are properly programmed, budgeted, and executed against the programs that yield the most value to the Army.

The review process revalidates the requirement in each portfolio using a wide-range of criteria, including: combatant commander requests; wartime lessons learned; the ability to support the Army Force Generation (ARFORGEN) model; the potential for leveraging

emerging technologies and affordability.

The analysis that has resulted from the Capability Portfolio Reviews conducted to date has clearly highlighted the utility of this new process in building an effective and affordable modernization strategy. The resulting recommendations will continue to assist the Secretary of the Army in establishing future priorities for investment, research, development and acquisition, and life cycle sustainment.

The Capability Portfolio Reviews have yielded two key results to date, including:

1) The Precision Fires portfolio review examined the balance of high-end precision munitions and lower-end near-precision munitions. A detailed analysis of alternatives determined that the Non-Line-of-Sight Launch System (NLOS-LS) does not provide a cost-effective precision fire capability. The Army intends to pursue other capabilities to engage a moving target in all-weather conditions in order to fulfill the operational requirement defined for the NLOS-LS. As a result, the Army concluded NLOS-LS is no longer required; the Secretary of the Army recommended cancellation and the undersecretary of Defense for Acquisition, Technology and Logistics approved and authorized the request. Additionally, analysis from the portfolio review concluded a reduction in the number of Excalibur and Accelerated Precision Mortar Initiative rounds was also warranted; the Secretary of the Army also recommended approval of these proposed reductions, which the Department approved as well.

2) In conjunction with the Capability Portfolio Reviews, the Army Acquisition Executive is planning to transition management responsibilities for system development and acquisition from the old FCS program currently aligned under Program Executive Office Integration (PEO I) to the PEOs that already manage similar systems. This realignment will allow the systems to more comprehensively be evaluated as part of the Capability Portfolio Review process. Overall, System of Systems Engineering, Integration and Test will remain the responsibility of PEO I. The remainder of PEO I's current portfolio will be transitioned as follows:

- Network Integration Kit (NIK) to PEO Command, Control and Communications Tactical (PEO C3T)
- Class I Unmanned Aerial Vehicle (UAV), currently managed separately, to PEO Aviation
- round Combat Vehicle (GCV); Small Unmanned Ground Vehicle (SUGV); Multi-mission UGV to Program Executive Office for Ground Combat Systems (PEO GCS)
- Unattended Ground Sensors (UGS) to Program Executive Office for Intelligence, Electronic Warfare & Sensors (PEO IEWS)

The Army remains committed to integrated development of brigade capabilities. While individual systems will remain under various PEOs, PEO I will be given the expanded mission for integration across those PEOs and their associated portfolios. For example, rather than just integrating the Class 1 UAS into the network, PEO I will ensure that all UAS (e.g. ERMP, Shadow, and Hunter) are fully integrated.

The directed framework of the Capability Portfolio Review process serves as a roadmap to achieving an integrated analysis of all portfolios. Additional portfolio areas may be identified and added in the future. The Secretary of the Army will continue to rely on this process to help him make informed decisions on behalf of the Army.

Army

## US Army Recalls 44,000 Combat Helmets

The Department of the Army announced today that it has initiated a recall message for approximately 44,000 Advanced Combat Helmets produced by ArmorSource LLC (formerly Rabintex USA LLC).

These helmets do not meet Army specifications.

The 44,000 helmets represent about 4 percent of Advanced Combat Helmets issued to soldiers. Sufficient helmets produced by other manufacturers that meet Army requirements are currently available in the Army's inventory. The Army will immediately issue these helmets to soldiers worldwide serving in those units identified to have recalled helmets. Army Central Issue Facilities have been directed to remove all affected helmets from the inventory and to directly exchange noncompliant helmets turned in for helmets meeting Army specifications. The recalled helmets will be sent to the Defense Logistics Agency Defense Reutilization and Marketing Services for demilitarization.

The exact risk to soldiers wearing the recalled helmets is still being determined; however, sample testing from a quarantined inventory revealed that the helmets did not meet Army specifications.

The matter is under investigation by the U.S. Department of Justice, Office of the Inspector General.

Contracts

## KVH Receives $2 M for TACNAV II Military Navigation Systems

Middletown, R.I. -- KVH Industries, Inc., (Nasdaq: KVHI) announced today that it has received a $2 million order for its TACNAV(r) II tactical navigation system for use by an international customer.

Shipment of this order is expected to begin in the second quarter of 2011 and conclude in early 2014.

"KVH's TACNAV II tactical navigation system is an important tool for navigation and coordination of vehicles operating in critical military situations," explains Dan Conway, KVH's vice president of business

development. "The system is crucial to keeping soldiers safe and out of harm's way, serving as a resource for navigation, battle management, and even as a backup to GPS. This order reaffirms the value of KVH's TACNAV products in the international market, and adds to our steady foundation of revenue for the coming years."

The TACNAV II tactical navigation system is an easy-to-integrate, affordable solution for battle management and weapon systems. Ideal for virtually any platform, the system offers a compact design, continuous heading and pointing data output, and a flexible architecture that allows it to function as either a standalone navigation module or as the heart of an expanded, multifunctional TACNAV system. With its precision fiber optic gyro (FOG) and an optional compass sensor providing a complete backup to GPS, the TACNAV II can integrate with a host of applications, including navigation and data consolidation for Battle Management Systems (BMS).

Contracts

## BAE Systems Receives $10.7 Million Order for Soldier Equipment

PHOENIX, Arizona -- BAE Systems has received a $10.7 million order from the U.S. Army Research, Development and Engineering Command (RDECOM) to manufacture and deliver more than 20,000 Modular Lightweight Load-Carrying Equipment (MOLLE) system sets in MultiCam® camouflage.

Designed to blend into virtually any environment, MultiCam is a single camouflage pattern that provides the wearer with needed concealment in one, basic set of gear. The MultiCam order includes core riflemen sets, large rucksack sets, as well as medic, grenadier, pistolman and SAW (Squad Automatic Weapon) Gunner pocket sets.

Developed by the U.S. Army RDECOM, MOLLE is the Army's primary field equipment system. MOLLE is a highly adaptable platform that enables soldiers to carry equipment and supplies critical to their mission.

"For more than a decade, the MOLLE system has proven its effectiveness as a highly durable, reliable and adjustable platform that delivers performance for the individual soldier," said Greg Kraak, Director of U.S. Military Programs for BAE Systems' Security & Survivability business. "The system's modular design-with a flexible attachment system-allows for limitless configurations, giving our servicemen and women the ability to customize their kit with specialized equipment to suit their specific mission," added Kraak.

Production of the MOLLE sets will take place at BAE Systems' facilities in Jefferson City, Tennessee; McKee, Kentucky; and Jessup, Pennsylvania. Production on this initial delivery order will begin in June 2010, with final deliveries expected to be completed by August 2010.

To date, BAE Systems has delivered more than a million core rifleman sets, and more than 750,000 large rucksack sets to support U.S. troops in Iraq, Afghanistan and throughout the world.

BAE Systems' Security & Survivability business is a leader in protection, security and survivability systems. It is a technology leader in lightweight materials, including composites, ceramic and transparent armor technologies; integrated vehicle armor systems; vehicle and aircraft survivability components and accessories; and soldier protection equipment, sold primarily to the government and other defense contractors.

Defence Industry

## Further Blast Testing is conducted on the Supacat SPV400

The Supacat SPV400, the all-British, all-new contender from Supacat to meet the UK Ministry of Defence`s Light Protected Patrol Vehicle (LPPV) requirement was, this week, subjected to a second round of blast tests as part of the vehicle's development programme.

A number of blast tests were conducted to correlate development work and prove the upgrades and improvements incorporated into the SPV400 design since the first round of testing in December 2009.

The results were very positive and consistent with expectations. Whilst for security and competitive reasons the detail cannot be released, the size of the blasts were "very significant" and underwrote Supacat's philosophy of future proofing the SPV400 design by aiming for protection levels above those within the LPPV requirement. Further refinement will now take place prior to another round of testing next month.

The SPV400's integrated protection system comprises of a composite crew pod, developed in conjunction with NP Aerospace, mounted on a V-shaped hull with sacrificial subframes front and rear housing the engine and axles. With the primary blast focussed under the belly of the vehicle, the integrated V-shaped hull successfully deflected the majority of the blast away from the vehicle proving the SPV400's crew and system survivability capabilities. Additional testing focussed away from the central V-shaped hull also proved Supacat's approach when mounting the axles in

sacrificial sub-frames fore and aft of the hull.

"These tests have once again proven Supacat's design philosophy for delivering a state of the art light protected patrol vehicle providing the protection and mobility our soldiers need for 21st Century operations", said Nick Ames, Managing Director, Supacat Ltd. “We have now proven that the SPV400 can provide levels of protection way in excess of anything seen previously in vehicles of this size and weight. Having said that, there is yet more that can be achieved and our team are now working hard to enable that”.

A new component of the latest tests was the introduction of post-test formal repair analysis to prove the ability to repair the SPV400. The results confirmed that the same test vehicle could be quickly repaired after each blast.

“I am particularly pleased with the repair aspects of this testing as our offering has been designed to reduce through life costs by having the ability to be repaired in theatre. The modular and sacrificial approach reduces overall damage to the system and will allow LPPVs to be put back on the road quickly. With the SPV400, the MoD will not have to write a vehicle off each time there is a mine strike”, said Nick Ames.

Vehicle 01 was subjected in December 2009 to two days of blast trials, which included a 'significant' under vehicle mine blast simulation as well as a "huge" Vehicle Borne Improvised Explosive Device (VBIED) simulation. Vehicle 04 in the SPV400 development programme underwent these latest blast tests and Vehicle 05 is being completed at Supacat’s Devon facility in readiness to undergo further blast tests next month. The UK Ministry of Defence purchased two vehicles from Supacat, Vehicle 02 and 03, to participate in trials and risk reduction activities for the LPPV Programme.

### The SPV400 Series

The SPV400’s modular design optimises survivability and mobility within the LPPV specification for a 7.5 ton vehicle carrying a crew of six (2 +4).

The SPV400 has an armoured steel V-shaped hull that deflects the blast away from the crew pod which is blast and ballistic protected using the latest composite and ceramic armour systems. The crew pod is constructed as a separate module, sealed off from potential secondary projectiles, such as kit and electronic devices, which are housed in a rear compartment. All seats are mine blast protected.

Additional protection is provided by the front and rear axles, which are mounted on detachable `sacrificial` sub-frames to absorb and deflect a blast away from the crew pod if a wheel strikes an explosive device. To enable this approach, the engine and transmission are separated to ensure the crew pod is not impacted should the front sub-frame detach. This modular approach also enables rapid in-theatre repair should a vehicle be involved in an incident. The affected module(s) can be quickly replaced enhancing the availability and maintainability of deployed platforms.

The SPV400’s speed and all terrain mobility is comparable to Jackal and it is capable of 80mph on desert plain. Air suspension provides troops with a smooth ride, reducing crew fatigue, and the manoeuvrability has been optimised to allow troops to operate in the tightest of terrain.

### About Supacat

Supacat specialises in the design and development of high mobility vehicles and other specialist transport systems for military and civil customers. The company was founded in 1981 to develop the Supacat 6x6 high mobility vehicle and is a UK centre of excellence in all terrain transport technology. From its facility at Dunkeswell, Devon, UK, it employs 120 people across a range of engineering disciplines, including design, testing and prototype manufacture through to maintenance, repair and overhaul and low rate production. It provides a complete support management service for its own as well as other manufacturers’ vehicles.

Supacat designed the Jackal weapons-mounted, long-range patrol vehicle and the 6x6 Coyote Tactical Support Vehicle (Light) – both variants of the High Mobility Transporter (HMT) concept designed by Supacat and built under licence from Lockheed Martin. Currently in service with British Forces there are over 260 Jackal 2, 200 Jackal 1 and over 70 Coyote vehicles.



## Finnish Army Begins Trials Of EB Tough VOIP Products In An Effort To Enhance Millitary Communications

OULU, FINLAND -- EB, Elektrobit Corporation, a developer of cutting-edge embedded technology solutions for automotive and wireless industries, today announced that its EB Tough VoIP(TM) system has been delivered to the Finnish Army, who will commence an extensive series of field trials on the system during 2010 to evaluate its performance in varying military scenarios.

Since being unveiled as the new era IP voice and data communications solution for the Finnish Air Force at the 2009 International Defence Exhibition & Conference (IDEX) in Abu Dhabi, EB Tough VoIP will now operate under even more demanding environmental conditions for the Army branch of the Finnish Defence Forces. EB will work with the Finnish Army on various testing phases throughout this year in order to ensure proper usage and meet system requirements. With new components such as broadband data communications, enhanced voice over IP services, and advanced functions designed specifically for ground forces, the system provides significant levels of increased performance and operational capabilities. In addition, it enables the Finnish Defence Forces to take a giant leap forward on the road to adopting a Network Centric Defense model.

EB Tough VoIP can be used as a stand-alone system or the solution units EB Tough VoIP Terminal(TM) and the EB Tough VoIP Network Extender(TM) can be integrated to a customers' existing communications infrastructure. The products can be leveraged in many

ways, including:

- Rugged and secure Voice over IP (VoIP) clients for military communications
- Radio over IP (RoIP) clients
- Tactical data radio environment
- Demanding environments where limitations in communications can greatly affect operational capabilities

"EB Tough VoIP was designed to fulfill the communications needs of military units, and we continue to strive towards achieving that goal," said Mikko Viitaniemi, senior manager, Defense Products, Wireless Solutions, EB. "This agreement adds to our already strong relationship with the Finnish Defence Forces, and further showcases EB's ability to offer unique solutions that advance the global communications capabilities of military defense systems worldwide."

Future Technologies

## CTE Selected to Lead Hydrogen Fuel Cell Programme for US DoD

The Center for Transportation and the Environment (CTE) has been awarded a US$6 million contract for the development of a Department of Defense hydrogen fuel cell pilot programme at the Defense Depot San Joaquin (DDJC), in Tracy, California.

The project scope includes development of a hydrogen pilot at DDJC utilising 20 hydrogen-powered forklifts for warehousing activities, and an electrolysis-based hydrogen generation system using renewable energy. The project consists of approximately 12 months of infrastructure and vehicle development and deployment followed by two years of pilot program operations and data collection.

The project team, led by CTE, consists Plug Power, Air Products and Chemicals, and Proton Energy Systems.

Plug Power will source and lease a fleet of 20 sit-down counterbalanced forklift trucks and integrate each with their class-1 GenDrive fuel cell power unit. The fleet will be serviced and supported by Plug Power for 24 months under real-world conditions and will provide Plug Power the opportunity to collect data, improve readiness levels and reduce costs.

Air Products and Chemicals will provide the hydrogen back up, compression, storage, and dispensing equipment needed to fuel the lift trucks. The system will operate by compressing purified hydrogen from the Proton FUELGEN system with the Air Products Series 150 compression system. The compressed hydrogen will be stored in three gaseous hydrogen storage vessels. The stored high-pressure hydrogen will be dispensed through an automated gaseous hydrogen outdoor dispenser at the DDJC site.

Proton Energy Systems will provide hydrogen generation via electrolysis using green energy. Proton's FUELGEN electrolysers, based on the commercial HOGEN H6M hydrogen generator, have enhanced system controls. It includes an energy conservation mode for both the generator and chiller that is well suited to the intermittent hydrogen demand of the proposed fueling scenario.

This is the fourth in a series of Defense Logistics Agency (DLA) pilot projects to research the economic, operational and environmental benefits of powering material handling equipment with fuel cells.

Defence Industry

## BAE and Portendo Sign IED Threat Detection Agreement

Stockholm -- BAE Systems and Portendo AB have signed an agreement to co-operate on civil and military detection systems for improvised explosive devices.

The agreement means that BAE Systems obtains an exclusive license to market, sell and manufacture Portendo's P.Eye-S in the United States and Canada, for the civil market. The P.Eye-S is Portendo's first product for remote detection of explosives, providing safer working conditions for security personnel at airports, military establishments, government buildings and other potential targets.

The agreement also covers the development of a military detection system for roadside bombs based on this technology. It will, under a separate license agreement, be manufactured and sold exclusively by BAE Systems.

This technology can be adapted to vehicle-mounted weapons and sensor systems, such as BAE Systems' Lemur, helping troops to secure an area and clear concealed explosives from a safe distance.

"We have worked with several different initiatives for countering the improvised explosive device threat and the Portendo equipment is technologically ground breaking. This agreement will ensure that technologies developed in support of the war against terrorism are exploited in the most efficient way," said Ulf Einefors, head of business development for BAE Systems Weapons.

"Our system has a great potential in the homeland security market in the US and Canada and, with further development, for IED clearance on military operations. With its vast experience in the defence market, BAE

Systems is an ideal partner for us when it comes to development and marketing of such products," said Portendo CEO Gunilla Savring.

Training And Simulators

## Cubic Reports 1st Sale of New Virtual Reality System

Orlando, FL. -- Cubic's Simulation Systems Division, a defense systems unit of Cubic Corporation, has been awarded a contract valued at approximately $4.8 million to supply 27 of its COMBATREDI systems to the Florida Army National Guard, along with four 180-degree Warrior Skills Trainers (WST), a vehicle trainer that works with COMBATREDI.

The award represents Cubic's first sale of the new COMBATREDI system, which immerses users in a highly realistic 360-degree "virtual reality" environment.

COMBATREDI is a new approach for Cubic, its first completely tetherless, user-worn virtual training system. It features a high-definition helmet-mounted OLED video display that delivers game-quality graphics with a 60-by-45-degree field of view, and an integrated 3D stereo headset for sound effects. Trainees are able to move through a 360-degree virtual environment, including entering buildings, as if it were real. The user carries a realistic wireless "surrogate" rifle that performs like a real one, requiring things like magazine changes and selecting the correct firing mode to operate correctly.

Cubic introduced the new system to potential military users late last year.

"Cubic is pleased that it hasn't taken long for the groundbreaking characteristics of COMBATREDI to be recognized by the user community," said Tony Padgett, Immersive Product Line Manager for Cubic Simulation Systems in Orlando. "COMBATREDI fully immerses trainees into the virtual environment. This is a whole new way to train the dismounted soldier."

Padgett said COMBATREDI allows individual soldiers to be trained almost anywhere, incorporating virtually limitless scenarios without the need for dedicated facilities.

The WST system also being delivered to the Florida Army National Guard projects realistic high-fidelity scenes on large screens using the Virtual Battle Space 2 (VBS2) engine. This system is in use in multiple U.S. Army locations.

Contracts

## DRS Awarded $94 M for Additional M1000 Heavy Transport Trailers

Parsippany, N.J. -- DRS Technologies, Inc. announced that it has received a follow-on order valued at over $94 million to manufacture new M1000 Heavy Equipment Transporter (HET) trailers for the U.S. Army.

DRS received the new order from the U.S. Army Product Manager, Heavy Tactical Vehicles at the TACOM Lifecycle Management Command in Warren, Michigan.

The M1000 HET trailer is designed and manufactured by the company's DRS Sustainment Systems division, and the work for this contract will be performed at its heavy manufacturing facility in West Plains, Missouri.

Defence Industry

## Oshkosh Defense Unveils New M-ATV Ambulance Variant at Army Medical Symposium and Exposition

OSHKOSH, Wis. -- Oshkosh Defense, a division of Oshkosh Corporation, announced today it is unveiling a new version of its well-protected, highly mobile MRAP All-Terrain Vehicle (M-ATV) tactical ambulance variant at the 2010 Association of the United States Army's (AUSA) Institute of Land Warfare (ILW) Army Medical Symposium and Exposition, which is being held May 18-20 in San Antonio, Texas.

The M-ATV ambulance can be seen at the Henry B. Gonzalez Convention Center, booth #558.

"We've created an additional M-ATV tactical ambulance variant to offer a side-by-side patient litter layout in response to feedback from the military," said Ken Juergens, Oshkosh Defense vice president and general manager, Joint Programs. "We developed the M-ATV ambulance to allow military operations to provide critical casualty care services in the unforgiving landscapes where tactical missions must operate. It is very important to us to attend events like the ILW Army Medical forum to meet with the officers and soldiers who will be using our vehicles in theater. Their input is crucial as we build the best possible vehicles for our Warfighters."

The tactical ambulance variant offers a new mission profile and expanded medical capabilities while maintaining the durable, best-in-class mobility and superior crew protection of the original M-ATV offering. The vehicle seats three crew members plus two litters or

four ambulatory patients. Like the standard M-ATV, the tactical ambulance variant provides 16 inches of independent wheel travel and uses 370-horsepower engine, an Allison 3500 SP transmission and a two-channel central tire-inflation system with four terrain settings. To ensure medics can reach and safely evacuate wounded Warfighters in the severe and uneven terrain where they must operate, the tactical ambulance uses the Oshkosh TAK-4® independent suspension system to achieve a 70 percent off-road profile capability.

Oshkosh continues to expand the M-ATV into a family of vehicles. This tactical ambulance variant joins another version of the M-ATV ambulance as well as the M-ATV utility variant. To date, Oshkosh has received orders to deliver 8,079 M-ATVs for operations in Afghanistan, where those M-ATVs already fielded are providing superior off-road mobility for harsh mountainous landscapes and unimproved road networks.

Defence Industry

## Northrop Grumman Teams With EOS Technologies on U.S. Army's CROWS 3

HUNTSVILLE, Ala. -- Northrop Grumman Corporation and EOS Technologies Inc. have teamed to pursue the U.S. Army's Common Remotely Operated Weapons Station 3 (CROWS 3) program.

The CROWS vehicle-mounted stations allow soldiers to locate, identify and engage targets with better accuracy and improved range, while the gunner remains safely inside an armored vehicle.

Under the agreement announced today, Northrop Grumman will be the prime contractor and systems integrator if the team is selected for CROWS 3.

The U.S. Army Tank-Automotive Research, Development and Engineering Center, Warren, Mich., is expected to release a request for proposals for approximately 10,000 CROWS 3 systems in late 2010. The Army plans to equip its entire inventory of tactical vehicles under the CROWS 3 program, making the total program worth as much as $4 billion.

EOS provided systems to the Army under the initial CROWS 1 contract and produces a weapon system that is compliant with both CROWS 1 and CROWS 2 requirements.

"Northrop Grumman and EOS have separately been pre-eminent suppliers of systems to the U.S. Army for a considerable time," said Joe G. Taylor, Jr., Northrop Grumman Information Systems' vice president for ground combat systems. "Our team looks forward to working side-by-side with the Army to deliver this critical capability to soldiers.

"Collectively, we bring the proven experience, the latest technology and cultures of innovation and large-scale production to the Army's effort to ensure that soldiers at all levels of the Army are able to operate effectively on the modern battlefield."

Northrop Grumman has a long history of delivering complex integrated platforms to the Army, having fielded more than 1,000 platforms over the last 10 years. The company is the top supplier of command centers to the Army's brigades and one of the largest suppliers to the U.S. Defense Department.

EOS specializes in the design, development and production of remote weapon systems and space surveillance and missile defense systems. EOS' advanced technologies are applied to a variety of sighting and surveillance applications in the aerospace and defense markets.

"The pooling of our companies' technologies will provide higher product performance and more options to the customer, as well as easier integration of CROWS into the increasingly complex information and control systems used for weapon system deployment," said Ben Greene, chief executive officer of EOS.

"Northrop Grumman's proven, scalable production technology and its proven capability to provide weapon system support to U.S. forces globally will clearly enhance EOS' own capabilities. We are proud to combine our unmatched experience in remote weapons stations with Northrop Grumman's complementary capabilities to deliver this important system to our forces in combat."

As part of the teaming agreement, the companies have formed a single product development and production team to offer new technology products. EOS is also modifying its current production of remote weapon systems to include Northrop Grumman participation.

Northrop Grumman Corporation is a leading global security company whose 120,000 employees provide innovative systems, products, and solutions in aerospace, electronics, information systems, shipbuilding and technical services to government and commercial customers worldwide.

Defence Industry

## Smiths Detection Launches Portable Hazmatid 360 for Advanced Analysis Of Unknown Chemicals

Smiths Detection today launches HazMatID 360, the latest version of its portable and rugged HazMatID chemical identification system, providing fast and comprehensive in-field analysis of unknown solids, gels and liquids to emergency responders, military personnel and other users.

The HazMatID 360 offers a combination of new features to enable comprehensive data scrutiny and faster decision-making. These include optimized mixture algorithms, larger substance libraries, chemical hazard classification for not-in-library substances, easy-to-connect Bluetooth wireless communications, and integrated PEAC-WMD software by Aristatek providing critical information management and decision support. Previous generation HazMatID systems can be upgraded to leverage these new capabilities.

Tim Picciotti, Vice President, Smiths Detection, said: “As the roles and responsibilities of emergency

responders evolve, so too must the tools they need to safely do their jobs. Smiths Detection has a long history of providing advanced and trusted security solutions based on customer need. Our HazMat ID 360 combines enhanced identification technology and cutting-edge data handling to provide a 360 degree view of a potential threat and help users maximize the tools they already have."

Building on the most widely deployed ruggedized Fourier Transform Infrared Spectroscopy (FT-IR) chemical identifier worldwide, the HazMatID 360 features the largest spectral library of its kind, more than doubling the previous standard. The system is capable of identifying more than 32,000 solids, liquids and gels in less than a minute including unknown powders, explosives, homemade precursors, Weapons of Mass Destruction (WMDs) and Toxic Industrial Chemicals (TICs). It also incorporates industry-leading PEAC decision support software providing an additional layer of information management and guidance.

The system's optimized mixture analysis allows effective chemical assessment of a broader range of samples including those that may have been contaminated with more than one material, like water or dirt. The HazMatID 360 can also provide on-screen chemical hazard classification of not-in-library substances to alert responders to the type of threat they are dealing with if definitive identification is not possible.

Additionally, the HazMatID 360 doubles its wireless communications range and incorporates easy-to-connect functionality into its remote command capabilities. By increasing the ease of use of its wireless connection feature, test results can be readily sent from a potentially harmful environment to a command center, eliminating the time needed for the system to be decontaminated before retrieving results.

With thousands of original HazMatID systems in use across the world, the HazMatID 360 allows users of the original system to upgrade and enhance the device's capabilities, maximizing the usefulness and cost effectiveness of the identifier.

Dustin Levy, Product Manager, Smiths Detection said: "Because original systems can be upgraded, users can leverage the technology they've already got without having to become trained to operate the device again. We've already heard from some of our customers, and they are eager to upgrade their HazMatID systems so they can make faster and more informed decisions that enable rapid incident mitigation."

Future Technologies

## Next Generation of Armor Technologies presented at IAV 2010 in London

With the development of the 4th generation of armor technologies IBD made a significant step forward towards lighter and cost-efficient protection solutions.

The presentation, given by IBD president Ulf Deisenroth in the plenary session, highlighted amongst others the substantial improvments in protection solutions achieved with the introduction of nano-technologies.

The superior properties of IBD's nano ceramic material with regard to hardness and fracture toughness were tl_files/resources/content-images/products/amap/Comparison of Areal Densities of Modern Ceramics with RHA.jpgdemonstrated in comparison to standard high performance ceramics. As a result the areal density of ceramic armor can be reduced by about 30 %. Alternatively with the same weight a higher protection level can be achieved (see illustration above).

IBD managed to develop - in cooperation with steel manufacturers - high strength nanometric Nitrogen steel with almost the performance of standard ceramic materials. The weight savings compared to conventional armor steel go up to 30%. Furthermore the nanometric steels can be used for structural elements in a vehicle facilitating the integration of the protection as well as structural support. Thus IBD can contribute to advanced vehicle constructions when being involved in the early design phase. This type of steel can also be used as very cost-efficient add-on armor for vehicle upgrades whtl_files/resources/content-images/products/amap/aaaplatte.JPGich was also exemplified in Mr. Deisenroth's presentation.

Another important progress was made with Aluminum-Titanium-Alloys. Their ballistic properties have come close to those of ceramics. Since these alloys are easy to process they do not only help to save weigth, but also allow creating cost-efficient solutions.

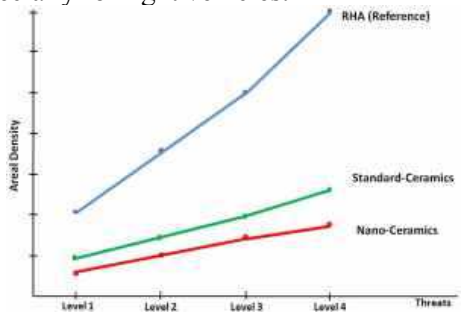
First vehicles equipped with IBD's 4th generation type light weight armor kits are already in service.

With the short range, Hardkill Active Defense System AMAP-ADS the survivability concept is completed to form a spherical protection around the platform with a protection level that cannot be achieved with passive components alone. After finalizing the development the system is now close to being fielded.

These new technologies are all together a part of, and integrated in the IBD Evolution Survivability Concept that can be applied to all kinds of platforms (land vehicles, aricrafts, and naval vessels). The main advantages of this concept can be summarized as follows:

- The concept enables protection levels that were not

achievable with conventional technologies, especially for light vehicles.




- By balancing the survivability measures within the concept, an optimized protection solution - specifically used in urban environment - can be tailored for any platform (light, medium and heavy).
- The weight savings provide significant tactical advantages in increased payload and maneuverability.
- The modularity of the concept allows easy maintenance and repair by the soldiers in the field as well as upgrades with new technologies at any time.
- Easy maintenance even under field conditions and less wear reduce life cycle costs.

Defence Industry

## General Dynamics Team Submits Army Ground Combat Vehicle Proposal

STERLING HEIGHTS, Mich. -- A team led by General Dynamics that includes Lockheed Martin, Raytheon and MTU Detroit Diesel today submitted its proposal for the Technology Development (TD) phase of the U.S. Army's Ground Combat Vehicle (GCV) program.

"The General Dynamics team's design is grounded in a focus on Soldier survivability and operational effectiveness. Our design draws on mature technologies to provide survivability, Soldier capacity, network interoperability, mobility and lethality that is unmatched by any existing ground combat vehicle," said Donald Kotchman, senior program director for General Dynamics Land Systems.

"Our design approach capitalizes on the proven ability and competence of each team member to meet the requirements for a completely integrated next-generation fighting system," Kotchman said. "We explored more than one million potential design options using a trade-optimizing process to determine our Ground Combat Vehicle Infantry Fighting Vehicle point of departure."

General Dynamics assembled a best-in-class team with unmatched Heavy Brigade Combat Team experience that is involved in the development, integration or sustainment of over 70 percent of today's fleet of combat vehicles and weapons systems. Each team member brings unrivaled program management experience, systems engineering and technical expertise to the team. Together, the team provides an unmatched legacy of performance on contemporary ground combat vehicles.

"Our design concept was selected to provide Soldiers the comfort, connectivity, survivability, lethality and growth potential necessary to adapt to the fluid conditions of a contemporary battlefield and address the spectrum of operations from hybrid/irregular warfare to conventional warfare," Kotchman said.

The purpose of the 27-month GCV TD phase is to complete the preliminary design, mature technologies through subsystem demonstrators, and inform the requirements process for an Infantry Fighting Vehicle (IFV) that meets the Army's requirements for operations in a contemporary threat environment.

With more than 70 years of ground combat vehicle design, development, integration and sustainment experience, General Dynamics Land Systems leads the team as the prime contractor and has overall responsibility for program management, vehicle design and integration. General Dynamics also is responsible for Soldier interfaces, vehicle structure and chassis, squad and crew environments, integrated survivability and safety, and distributed systems.

Lockheed Martin has responsibility for the turret, lethal and non-lethal effects, Soldier health management and embedded training. The company offers over 50 years of experience in systems integration and is the world leader in design and development of missiles and fire control systems.

Raytheon was selected as the hit-avoidance system, indirect-vision and sensor integrator. The company brings more than 40 years of combat sensor and systems integration experience in providing advanced situational awareness, target engagement and force protection capabilities for a variety of ground combat vehicles.

MTU Detroit Diesel has responsibility for the propulsion system. It is the premier provider of high-capacity diesel propulsion systems, with proven integration experience in modern combat systems worldwide.

With responsibility for network integration, communications, data management, common computing and information assurance, General Dynamics C4 Systems leads the network integration integrated product team. General Dynamics C4 Systems bring over 50 years of experience in the development of the some of the world's most advanced command, control, communications and computing systems.

Army

## New camouflage arrives in Afghanistan

British military personnel in Afghanistan have started wearing uniforms bearing the first new camouflage design in over 40 years.

Soldiers began wearing the new Multi-Terrain Pattern (MTP) camouflage in Afghanistan in April 2010. It will be issued to all military personnel by 2012.

The camouflage is intended to help British troops

blend into Afghanistan's varied terrain.

It was trialled in laboratory tests and field evaluations to assess overall performance, with pilot trials held before the final testing. This included aerial and scientific photography to provide the right colours and brightness for the new camouflage pattern.

Colours were fed into a computer and computer modelling was used to represent the Green Zone, deserts and mixed environments in Afghanistan. A number of camouflage samples were then generated based on the colours found in Afghanistan and via the computer modelling trials.

The new MTP camouflage will work across different terrains in Helmand province, such as compounds, grassland, crops and woodland - all the areas our troops encounter on patrol.

Members of the Royal Dragoon Guards are among the first to be issued with the new pattern.
Sergeant Luke Cunningham said:

"I was in Afghanistan in 2008 and so I have worn both Combat 95 and Multi-Terrain Pattern camouflage on operations.

"The new camo is definitely better for the conditions we face in the Green Zone of Helmand. It's more comfortable and it is superior in terms of the operations we're undertaking."

It is the first time since 1968 that the British Armed Forces have changed the camouflage pattern.

Colonel Stephen James, Project Team Leader for the Defence Equipment and Support Clothing Team, who was responsible for delivering the new pattern, said:

"We have presented the new designs to the US Department of Defense and, following our recommendations, the US Army are about to adopt the same technology for their uniform in Afghanistan."

Samples of the MTP camouflage were tested in the UK, Cyprus, Kenya and Afghanistan by the Infantry Trials Unit.

The new uniform is part of the MOD's ongoing programme of work to provide the best possible equipment and support to the front line.

Robots

## DARPA readies Big Dog for the battlefield

The Defense Advanced Research Projects Agency calls it the LS3, for Legged Squad Support System. The robotic mule, dubbed "Big Dog", is under development at DARPA.

With the Big Dog prototype complete, Mandelbaum told Federal News Radio the next goal will be for the LS3 to operate for 24 hours, go at least 20 miles over very rugged terrain, carry 400 pounds, and do it all in a "quiet mode" if need be. As the meme (internet catch phrase) goes, "Your dog wants a steak."

The goal, eventually, is to field one LS3 for every 4 or 5 ground troops. That will be a big pack of dogs. "This could be as ubiquitous as a Jeep, if not more," said Mandelbaum, "especially in terrains such as Afghanistan where wheeled vehicles have difficulty over the very rugged terrain."

Which is exactly what the legs are for: to go where tracked or wheeled vehicles can't. Just like 2 and 4 legged animals, the LS3 can go over, and through, black ice, mud, sand, and water.

That's not to say it won't fall over. As Mandelbaum reminded, and Alex Karas proved in Blazing Saddles, "you can knock over a horse if you hit it hard enough." But the LS3 gets back up again, and keeps going.

While no one is trying to pass off the Big Dog as a horse or mule, future developments, said Mandelbaum, will probably reinforce the comparisons.

The LS3 vehicle will have a head. Big Dog vehicle does not have a head with sensors because it doesn't need it. It's controlled by a human, but the LS3 vehicle will be steering and controlling itself and navigating through the terrain so it will have a head with sensors on it. So it will look even more animal-like.

And like many faithful companions before it, the LS3 could draw fire and even provide temporary shelter in the heat of battle.

DARPA hopes to have Big Dog ready to join the hunt by 2014.

Defence Industry

## BAE Systems-Northrop Grumman Submit Bid for Ground Combat Vehicle Competition

ARLINGTON, Virginia - The BAE Systems-Northrop Grumman team pursuing the U.S. Army's Ground Combat Vehicle (GCV) submitted its proposal to the Army today.

"As a top supplier to the U.S. military we must

continue to evolve and provide enhanced protective capabilities to our soldiers as they operate in increasingly dangerous environments," said Mark Signorelli, vice president and general manager of Ground Combat Vehicle at BAE Systems. "We have provided our customers with a proposal that meets their requirements, mitigates risk, will deliver on schedule and is affordable."

The BAE Systems-Northrop Grumman GCV offering will be the first combat vehicle designed from the ground-up to meet the current IED-threat environment. The team offering brings more survivability, mobility and versatility to the Army and is scalable to the level of protection required for a variety of operations. The team's GCV survivability will exceed that of a Mine Resistant Ambush Protected vehicle and the enhanced mobility capabilities will allow it to effectively operate in urban and cross country environments.

"As proven by our proposal, both Northrop Grumman and BAE Systems will exploit decades of hard won, hands-on experience to provide the warfighter with the most potent, fully integrated combat platform capable of prevailing on any battlefield, anywhere in the world," said Joe G. Taylor, Jr., Northrop Grumman Information Systems' vice president for Ground Combat Systems.

The teams' vehicle will also have an integrated electronic network capability and embedded intelligence, surveillance and reconnaissance assets to connect warfighters. The design concept is based on mature technology and provides a low risk approach to a highly compliant solution. The advanced electronic network will also be adaptable to future network upgrades.

BAE Systems is the top producer of combat vehicles in the world and earlier in the year announced a teaming agreement with Northrop Grumman Corporation. Northrop Grumman will serve as the C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance) lead for GCV.

The GCV program is a development effort headed by the U.S. Army to develop the first combat vehicle designed from the ground-up to operate in an IED-threat environment.

**Exhibitions**

## Rosoboronexport at ISSE 2010

The Rosoboronexport Corporation will display the most advanced export versions of Russian arms and materiel at the third International Integrated Safety & Security Exhibition 2010 (ISSE) to be held at the All-Russian Exhibition Centre in Moscow on 18-21 May, 2010.

Rosoboronexport takes a comprehensive approach to cooperation with foreign customers. This approach envisions deliveries of a wide range of cutting-edge products of various purposes, capable of discharging the entire scope of security tasks, after-sale services, and high-quality training of experts. A flexible policy and a custom-tailored approach to each partner allow the corporation to meet every requirement of its customers to the maximum extent possible.

Foreign customers will especially be interested in the GAZ-233036 Tiger High Mobility Tactical Vehicle (HMTV) and the KAMAZ-43269 Vystrel armoured truck, designed for special forces units and exhibited at Rosoboronexport's stand. These vehicles are currently in great demand in the international arms market. They boast the best features of Russian materiel, i.e. a high reliability, an easy maintenance, and user-friendly training.

Visitors of the show will be able to get detailed information on the new Kalashnikov AK-100 series assault rifles (AK-101, AK-102, AK-103, and AK-104), as well as well-known and time-tested 7.62 mm Dragunov SVD and SVDS sniper rifles. The Kazak light body armour will also be on display.

Rosoboronexport will also demonstrate the SKAT optronic simulator, designed for small arms target practice. The simulator boosts the process of training highly qualified shooters three- to four-fold.

The corporation offers its customers a host of multi-role aircraft, including Be-200 amphibious aircraft, which are successfully operated by the Russian Emergencies Ministry and have taken part in fire-fighting operation both in Russia and abroad. Experts will also stand a chance to familiarise themselves with Ka-226 and Ansat utility helicopters, which boast a number of unique advantages over similar foreign rivals.

Given a growing international demand for modern and efficient counterterrorism equipment, Rosoboronexport is ready to meet any request and requirement of foreign customers with respect to small arms and close-quarter combat weapons for special forces, special materiel and hardware, including participation in their development, manufacture, and deliveries to third countries.

Experts will be able to get professional consultations on every exhibit on display, as well as hold negotiations with officials of flagship Russian designers and manufacturers at Rosoboronexport's stand, to be set up in exhibition hall B1.

Rosoboronexport is Russia's only enterprise authorised to export the entire range of military and dual-purpose products, technologies and services. The status of the Enterprise warrants state's support for all export transactions.

Rosoboronexport is among leading companies operating in the international arms market, accounting for more than 80% of Russia's arms exports. Russia maintains military-technical cooperation with more than 70 countries all over the world.

Rosoboronexport always attributes great value to its reputation of a reliable partner and strictly abides by the letter and spirit of international military and political commitments of Russia, including arms control agreements.

Exhibitions

## Ukrainian products exhibits at KADEX 2010

From May 26 through May 29, 2010 State Company for Export and Import of Military and Special Products & Services UKRSPETSEXPORT will take part in the International exhibition of arms and military equipment KADEX 2010.

UKRSPETSEXPORT will show the products of a score of the key enterprises of the Ukrainian Defense-and-Industrial complex, including the enterprises which specialize in the repair and modernization of aircraft and ground support equipment, as well as in the technical state & malfunction diagnosis of the aircraft and engines.

The capability of the Ukrainian enterprises to repair and modernize combat armored vehicles (i.e. armour) will be introduced.

One can see the products of research-and-production enterprise FORT, namely the samples of small arms, both combat and traumatic, which make a good showing.

The products of the defense industry will be demonstrated in various formats ranging from dummies or replicas to promotional material. In particular, the specialists and the visitors of KADEX 2010 can familiarize themselves with the dummies of small arms and air defense missile system IGLA simulators for operator (antiaircraft gunner) training.

Thus, UKRSPETSEXPORT will demonstrate for the first time the new developments of the Ukrainian Defense-and-Industrial complex, i.e. combat crew & detachment training simulator systems and complexes.

Besides, the visitors of the exhibition will have the possibility to see the Armored Personnel Carrier-3 E1 (APC-3E1) interactive demo (version) stereo complex with combat module "SHTURM", to watch video reels about the achievements of Antonov Aeronautical Scientific/Technical Complex (transport aircraft AN-124 "Ruslan" and AN-225 "Mriya"), and joint-stock company "Topaz" (long-range passive strategic electronic intelligence system "KOLCHUGA-KE", automated multifunctional jamming complex "MANDAT-B1E ) as well as State Enterprise "Scientific & Production Complex "ISKRA" (radars 36 D6-M and 1 L220-U).

Special attention should be given to the precision weapon systems designed by State Design Bureau "Luch". The visitors of the exhibition can get aquianted with the characteristics and advantages of the guided missile "ALTA", anti-tank guided missile projectile "KOMBAT", anti-tank complex "BARIER".

Intelligence gathering & surveillance radar equipment will be represented by the developments of the holding company "Ukrspetstekhnika", such as ground targets radar 112L1 "BARSUK", ground & above-water low-flying targets radar 111L2 "MANGUST", and radar 111L1 "LYS".

The achievements of Ukrainian automobile industry will be represented by the products of the holding company "AutoKrAZ".

Contracts

## MTL Group wins Defence contract worth Euro 4 million

MTL Group, one Europe's largest suppliers of processed armour has been awarded a significant contract worth more than Euro4m to supply TL approved armour to a major German OEM for a large scale vehicle programme.

The contract will use all of MTL Group's processing equipment which includes large format laser cutting, waterjet cutting, large intricate pressing, automated welding, large CNC machining and painting.

MTL Group's ability to supply high quality parts from both armour and high strength materials at a commercially competitive price is now recognised worldwide and significant orders are being secured for this service.

Karl Stewart, Sales Director comments "This is a major breakthrough for us in the German market. We had to ensure all the correct qualifications were in place including the rigorous TL audit that was carried out at our manufacturing site in 2009. This has made us the only supplier to have this qualification in the UK".

"The other main area our customers are benefiting from is our wide range of stock armour and also our strong buying power from the armour manufacturing mills"

As part of its marketing strategy to develop its export markets, MTL Group will be exhibiting at several exhibitions over the next 12 months which will include France, India, UAE and South Africa, displaying a wide range of its armour components.

Robots

## Lockheed Martin Demonstrates New Ambush-Thwarting Push Vehicle Capability For Automated Convoy Program

DALLAS -- Lockheed Martin has developed a new push vehicle capability for its automated convoy program that will save lives in the fight against convoy ambush and IED attacks. The Convoy Active Safety Technology system, which enables convoy vehicles to autonomously follow each other, demonstrated the push-vehicle feature recently

It allows the first vehicle to be driven autonomously, as compared to past system designs where the lead had to be under human control.

"CAST's push-vehicle capability directly responds to real life dangers that our troops are facing. It will prevent injury and loss of life in the forward vehicle, which most frequently bears the brunt of deadly ambushes and IED attacks," said Glenn Miller, vice president of Technical Operations and Applied Research at Lockheed Martin Missiles and Fire Control. "CAST already improves the safety, security, survivability and sustainment of tactical wheeled vehicles. Our proven push-vehicle feature takes that to another level."

The autonomous push vehicle was developed to lead a convoy of semi-autonomous follower vehicles into hazardous areas without a human operator on board. Using the AutoMateTM sensor, actuator and processing kit, any tactical wheeled vehicle can quickly and easily convert into the push vehicle or perform as part of the convoy. Even in this role, the vehicle can maintain safe trajectories and interval distances on both developed and undeveloped roadways, avoid dynamic obstacles and operate at full speed in visually obstructed conditions such as dust or blackout night operations.

Lockheed Martin tested CAST's new capability this month in internal tests and is ready to demonstrate its life-saving features to Warfighters during user assessments. Notably, CAST demonstrated its precision system during the Army's Robotics Rodeo held last year at Fort Hood, TX.

CAST is a development program for the U.S. Army Tank Automotive Research, Development and Engineering Center. The affordable, simple, kit-based technology is not dependent on any platform and has logged more than 10,000 miles of operation. Tests have proved CAST-enabled trucks can follow roads and other vehicles to eliminate rear-end collisions, reduce road departures and enable soldiers to respond to 25 percent more hostile threats and from greater distances.

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 136,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The Corporation reported 2009 sales of $45.2 billion.

Robots

## General Dynamics Robotic Systems Completes Successful Autonomous Navigation System Critical Design Review

WESTMINSTER, Md. -- General Dynamics Robotic Systems' Autonomous Navigation System (ANS) program has successfully completed its Critical Design Review (CDR). General Dynamics Robotic Systems is a part of General Dynamics Land Systems of Sterling Heights, Mich., a business unit of General Dynamics.

The ANS system is an onboard, integrated suite of sensors and technology that enable autonomous navigation, perception, path-planning and vehicle-following capabilities for unmanned ground vehicles. Designated by the U.S. Army for integration on the Armed Robotic Vehicle-Assault (Light) (ARV-A(L)), the ANS is capable of controlling several other classes of manned and unmanned vehicles.

Successful completion of the CDR enables the General Dynamics Robotic Systems team to continue maturing, fabricating, and testing the ANS design. These activities will lead to delivery of prototypes and the start of Integrated Qualification Testing in 2012.

The ANS CDR is among the first in a series of critical Increment 2 reviews underway for the Army's Brigade Combat Team (BCT) Modernization program. General Dynamics Robotic Systems is the leading partner on the ANS program.

Contracts

## Saab receives order for Carl-Gustaf components

Defence and security company Saab has signed a contract for components to the Carl-Gustaf man-portable weapon system. The total value of the order is MSEK 115.

"This is very positive and it further proves the capability of the Carl-Gustaf system which until now has been exported to more than 40 customers around the world," says Tomas Samuelsson, business area manager for Dynamics within Saab.
Delivery will take place during 2010-2011.

At the request of the customer, further details regarding the contract will not be announced.

The Carl-Gustaf system has a long and successful history, and still proves itself to be a modern and capable Ground Support weapon. The system has successively been modernized and adapted to meet new requirements.

Future Technologies

## Boeing Teams with SAIC in Ground Combat Vehicle Proposal

ST. LOUIS -- The Boeing Company has teamed with Science Applications International Corporation on a proposal for the U.S. Army's Ground Combat Vehicle (GCV) program.

SAIC will be the prime on the team, with Boeing, Krauss-Maffei Wegmann (KMW) and Rheinmetall Defence as subcontractors. The team's offering draws from the experience gained from the Manned Ground Vehicle and the Puma programs and will be built in the United States with a team of experienced American small and mid-tier supplier businesses.

"SAIC has pulled together an outstanding team to answer the Army's requirement for a modern infantry fighting vehicle," said Charles Toups, Network and Tactical Systems (N&TS) vice president and general manager. "We have a unique offering that brings forward mature technologies at the system and sub-system levels. Boeing brings technology and expertise from its background in weapons systems development and integration to the ground environment to give soldiers next-generation precision engagement, for both lethal and non-lethal weapons. Collectively, our team will give the U.S. Army a combat vehicle that is ready sooner and has an adaptable design that will evolve to meet the ever-changing needs of the American warfighter, throughout its projected 20-plus year lifecycle."

A unit of The Boeing Company, Boeing Defense, Space & Security is one of the world's largest defense, space and security businesses specializing in innovative and capabilities-driven customer solutions, and the world's largest and most versatile manufacturer of military aircraft. Headquartered in St. Louis, Boeing Defense, Space & Security is a $34 billion business with 68,000 employees worldwide.

Defence Industry

## Elbit Systems of America Announces Successful Installation and Transition of First Fire Control Systems to the U.S. Army

FORT WORTH -- Elbit Systems of America, LLC, a wholly owned subsidiary of Elbit Systems Ltd. announced the successful installation and handoff of the first production units of the M150/M151 Mortar Fire Control System – Dismounted (MFCS-D) to the U.S. Army.

The initial installations of the MFCS-D kits were performed in April 2010 at the 3rd Infantry Brigade Combat Team (IBCT), 25th Infantry Division. These installation kits consist of ruggedized computers, battery power supplies, displays, navigation and pointing hardware, and associated mounting hardware and cabling that are installed with the M326 Mortar Stowage Kit in the M1101 light tactical trailer. The M150/M151 MFCS-D system will greatly enhance the accuracy of the M120A1 120mm Towed Mortar System; enable the digital coordination of multiple systems and Fire Support network; and significantly reduce the time required to emplace, fire and displace the weapon. This not only increases the accuracy of the weapon in the battlefield, but also sharply reduces the amount of time in which our forces are potentially exposed to return enemy fire.

Elbit Systems of America was awarded a systems integration contract in April 2009 to take an innovative U.S. Army designed fire control system for the 120mm towed mortar and manufacture, procure and integrate all of the components into a complete kit and install these kits at both CONUS and OCONUS locations. Since contract award, Elbit Systems of America has worked closely with representatives of the U.S. Army Product Manager for Mortar Systems and RDECOM-ARDEC located at Picatinny Arsenal in New Jersey to refine the final system design for production and delivery.

Elbit Systems of America, President and Chief Executive Officer, Raanan Horowitz commented, "The first delivery and installation of the mortar fire control system was accomplished on-time and on-budget through a collaborative effort with our U.S. Army customer. We are pleased to be able to play a key role in transitioning this cutting edge technology to the soldiers in the field."

Defence Industry

## Team Ocelot receives Invitation to Tender for light protected patrol vehicle

Force Protection Europe has been invited by the UK MoD to tender for the Light Protected Patrol Vehicle Programme – Demonstration, Production and Support Phases

The Invitation to Tender (ITT) follows a recently awarded contract placed with Force Protection Europe by the UK MoD for the supply of two Ocelot light protected patrol vehicles.

An all-new concept, Ocelot has been developed by Force Protection Europe and Ricardo to provide levels of survivability comparable with the Cougar family of Mine Resistant Ambush Protected (MRAP) vehicles, together with exceptional cross country mobility, flexibility and value for money.

Ocelot's capabilities have been proven by a sustained programme of blast, ballistic, automotive and manoeuvrability tests conducted since the summer of 2009. The vehicle successfully completed another series of tests last week.

Ocelot can be maintained and repaired quickly out in the field to ensure maximum availability, while its unique modular design enables the vehicle to be reconfigured in theatre within two hours to meet a variety of different roles, such as patrol, fire support and protected logistics.

Force Protection Europe Managing Director, David Hind, said, "We firmly believe that Ocelot has defined the future for light protected patrol vehicles and are delighted to have received this invitation to tender from the MoD."

**Company or Organisation Portrait:**

Force Protection Europe Ltd (FPE) is a wholly owned subsidiary of Force Protection Industries, Inc. (FPII) - the world's leading provider of survivability solutions. FPII's Cougar MPRAP vehicles (in service with the British Army as Mastiff, Ridgback and Wolfhound) are acknowledged globally as providing the highest levels of blast protection. FPE has been established to create a UK leader in the provision and sustainment of survivability solutions based on tactical wheeled vehicles.

With technical centres and offices in the UK, USA, Germany, the Czech Republic, France, Italy, Russia, China, Japan, India and Korea, Ricardo plc is a leading independent technology provider and strategic consultant to the world's transportation sector and clean energy industries. The company's engineering expertise ranges from vehicle systems integration, controls, electronics and software development, to the latest driveline and transmission systems and gasoline, diesel, hybrid and fuel cell powertrain technologies, as well as wind energy and tidal power systems. Ricardo is committed to excellence and industry leadership in people, technology and knowledge; approximately 70 percent of its employees are highly qualified multi-disciplined professional engineers and technicians. A public company, Ricardo plc posted sales of J178.8 million in financial year 2009 and is a constituent of the FTSE techMark 100 index - a group of innovative technology companies listed on the London Stock Exchange.

Contracts

## Finnish Defence Forces has received 60 new SISU 8x8 Military Trucks

Delivered trucks are equipped with effective mine protection and feature a cabin of armour steel.

Finnish military vehicle supplier, Sisu Defence Oy, has handed over 60 High Mobility SISU 8x8 Military Trucks to Finnish Army. The delivery was received by the Minister of Defence, Jyri Hakamies, at Sisu factory in Raasepori, Finland, on 24.5.2010.

Delivered trucks are equipped with effective mine protection and feature a cabin of armour steel. Additionally, part of these trucks are allocated to be used in international crises management operations. The latter are equipped also with ballistic protection matching with the requirements of the intended use.

Sisu 8x8 Military Trucks feature a modular protection system. Thereby, the ballistic and NBC protection of the vehicles can easily be assembled on or dismounted, quickly even in field.

The delivery includes also a training, servicing and spare parts program. The value of the delivery altogether is approximately EUR 26 Million, excl. VAT.

Defence Industry

## Rheinmetall and KMW Join Forces With SAIC and Boeing

Dusseldorf/Munich, Germany -- Rheinmetall and Krauss-Maffei Wegmann (KMW) have concluded a cooperation agreement with the American companies Science Applications International Corporation (SAIC) and Boeing in order to tender a joint bid for the development contract for the Ground Combat Vehicle (GCV) programme of the United States Army.

This cooperation will see Rheinmetall and KMW acting as subcontractors to Boeing, with SAIC acting as the general contractor with regard to the procuring agencies.

As the manufacturers of the Puma infantry fighting vehicle of the German Armed Forces, the most modern system of its kind in the world, Rheinmetall and KMW will be contributing their highly advanced expertise to this transatlantic team.

The objective of the cooperation is to provide the American Army with absolute state-of-the-art technology, which characterizes the Puma.

The team will be bidding for the contract for the first of four phases to the GCV programme. In this development phase, the U.S. Army intends to award up to three contracts to different tendering companies, before drawing up a short list in subsequent steps for the actual solution to be realised.

The Puma, which Rheinmetall and KMW have jointly developed for the German Armed Forces and will be delivering from late-2010, offers the series maturity expected by the U.S. Army. In virtually every category the Puma already satisfies the technical requirements of the GCV programme, even exceeding these significantly in key areas.

In addition the system will be further developed for the United States Army to accommodate a total crew size of three, plus nine soldiers, a 40mm gun and weigh a total of around 50 tons. With its high level of protection, its mobility and outstanding mission capability, this GCV response will - in the same way as the performance features of the Puma - also set new standards. Furthermore, the vehicles will be built in the United States.

Defence Industry

## Textron Defense Systems` Tactical RPG Airbag Protection System Demonstrates Maturity, Performance in Government Testing

WILMINGTON, Mass. -- Textron Defense Systems, an operating unit of Textron Systems, a Textron Inc. company, announced today that the maturity and performance of its Tactical Rocket-Propelled Grenade (RPG) Airbag Protection System (TRAPS) have been demonstrated through rigorous government testing completed by the Office of the Secretary of Defense (OSD) under the Active Protection Systems Live Fire Test and Evaluation effort, which was mandated by Congress in 2008.

More than six weeks of OSD testing demonstrated the ability of two patent-pending countermeasure configurations of the scalable TRAPS architecture, which incorporates Textron Defense Systems' sensor technology, to identify and defeat RPG threats. The first configuration utilizes the company's proprietary airbag technology as the countermeasure to defeat threats; the second countermeasure, called TRAPSNet, is comprised of a modular net system. These are the first in a family of countermeasures that will enable spiral upgrades to address advanced threats while maintaining the common hardware of the TRAPS system.

During the testing, the TRAPS architecture was integrated onto a Mine-Resistant Ambush-Protected, or MRAP, vehicle. The OSD's testing goals included evaluating system effectiveness in protecting the vehicle from threats, as well as creating an information baseline for consideration during possible future defense acquisition programs. The rigorous test plan included emulated and live RPG threats against both stationary and moving vehicles from several angles and ranges. TRAPS demonstrated exceptional performance consistent with its design in each test scenario.

"We designed the TRAPS architecture to be flexible, scalable and highly effective," says Chief Technology Officer Thomas McNamara of Textron Systems Corporation. "The system is compatible with multiple military vehicle types, and it delivers reliable, robust performance against different RPG threats while minimizing costly, time-consuming modifications and vehicle recertification tests. In addition, TRAPS offers significantly lower weight and demonstrated lower collateral damage than competing active protection systems. Following the successful OSD testing, we are prepared to deliver the customer a mature, affordable and rapidly deployable active vehicle protection solution."

Contracts

## Navistar Defense Receives $61 Million to Support Allied MRAP Needs

WARRENVILLE, Ill. -- Navistar Defense, LLC today completed two foreign military sales worth a total of $61 million for 80 enhanced International® MaxxPro® Dash Mine Resistant Ambush Protected (MRAP) vehicles with DXM™ independent suspension.

“U.S. and coalition forces share a common mission in Afghanistan and we are proud to provide vehicles to support that joint objective,” said Archie Massicotte, president, Navistar Defense. “We continue to focus on the quick delivery of MaxxPro vehicles to help our U.S. and allied forces complete their missions safely.”

The enhanced MaxxPro Dash with DXM suspension offers vehicle operators a turning radius of 54 inches, approximately 14.5 inches of wheel travel as well as a number of enhanced capabilities. Upgrades have been made to the windows and doors, which continue to utilize an air-hydraulic system to ensure doors function in the most extreme situations.

The company is currently delivering new Dash units with DXM suspension to U.S. Forces and will begin deliveries to several allies at the end of June. Navistar is the leading provider of Category I MRAPs with 7,589 MaxxPro units on contract.

Defence Industry

## Oshkosh Defense Ships First FMTV Trucks, Trailers to U.S. Army Ahead of Schedule

OSHKOSH, Wis. -- Oshkosh Defense, a division of Oshkosh Corporation, has shipped its first Family of Medium Tactical Vehicles (FMTV) trucks and trailers to the U.S. Army.

The vehicles left the company’s Oshkosh, Wis. campus yesterday – ahead of schedule.

“These Oshkosh vehicles represent a major milestone for the FMTV program, and exemplify our history of

meeting commitments to the U.S. Army," said Mike Ivy, vice president and general manager, Army Programs, Oshkosh Defense. "We've leveraged our proven manufacturing expertise and a substantial pre-award program investment to ensure that all of our customer's requirements and original schedules are met. We look forward to delivering these mission-critical vehicles to our country's Warfighters."

Two FMTV variants and trailers for both vehicles are being delivered. The Oshkosh FMTVs feature the Long-Term Armor Strategy (LTAS)-compliant cab solution. "We are pleased to do all we can to advance the safety and protection of our Warfighters," added Ivy.

According to the U.S. Army's original FMTV program timeline, Oshkosh Defense will begin delivering production units in October 2010. Production deliveries under existing orders run through December 2011. To date, Oshkosh has received orders to deliver 5,209 FMTV trucks and trailers.

The five-year FMTV contract is for the production of an estimated 23,000 vehicles and trailers, as well as support services and training. The FMTV is a series of 17 models and 23 variants ranging from 2.5-ton to 10-ton payloads. Vehicles feature a parts commonality of more than 80 percent, resulting in streamlined maintenance, training, sustainment and overall cost efficiency for the U.S. Army.

Training And Simulators

## Cubic Develops Rapid-Fire Weapon Simulator

ORLANDO, Florida -- A defense division of Cubic Corporation (NYSE: CUB) has developed a new weapon simulator that replicates the characteristics of a Gatling-style gun, firing up to 3,000 rounds a minute.

The Cubic division recently received a total of $5 million in contracts to supply the M134D trainer and other training equipment to multiple locations in the United States.

Called the M134D Virtual Trainer, the simulator is modeled after the M134D Minigun, a six-barrel electric-powered machine gun that fires 7.62mm rifle rounds. Its high-rate of fire – up to 50 rounds per second – makes the M134D exceptionally effective at suppressing hostile forces in a wide variety of combat situations. The same characteristic, however, also is a major drawback because training personnel to use the M134D with live rounds is incredibly expensive.

"You are talking a dollar a round, and you are shooting 3,000 rounds a minute," said Tony Padgett, Product Line Immersion Training Manager for the Cubic Simulation Systems Division in Orlando.

Cubic's trainer recreates the ballistics of an actual M134D in a virtual training environment as well as weapon sounds and other characteristics. Two of the simulators are scheduled to be delivered to Department of Energy facilities, where they will be used for facility protection and counterterrorism training along with Cubic's Warrior Skills Trainer (WST), a virtual vehicle trainer that uses high-fidelity graphics projected on large screens for training scenarios. A third M134D virtual trainer will go to Fort Campbell, Kentucky, as part of a mobile Cubic training system being used to train U.S. Army special forces units.

Contracts

## Harris to Provide Additional JTRS-Approved Falcon III Tactical Radio Systems for Next Generation MRAP Vehicles

ROCHESTER, NY -- Harris Corporation, an international communications and information technology company, has received a $27 million order to supply additional JTRS-approved Falcon III AN/PRC-152(C) multiband handheld radios and AN/VRC-110 vehicular amplifier adapter systems to the U.S. Department of Defense for use in Mine Resistant Ambush Protected All-Terrain Vehicles (M-ATVs).

Harris radios are installed in the majority of M-ATV vehicles deployed to Afghanistan.

The AN/VRC-110 is a fully integrated, high-performance multiband vehicular radio system, consisting of an amplifier adapter and two Falcon III AN/PRC-152(C) multiband handheld radios, which serve as handheld transceivers. The AN/VRC-110 enables warfighters to maintain communications in dismount operations by allowing the AN/PRC-152(C) handheld radios to be quickly removed from the vehicle while remaining powered on and connected to the network. The combat-proven AN/PRC-152(C) is the most widely-fielded JTRS-approved handheld radio with more than 100,000 units deployed.

The Falcon III AN/VRC-110 and AN/PRC-152(C) were developed by Harris following the U.S. military's Joint Tactical Radio System (JTRS) Enterprise Business Model. Both radios operate on the JTRS Software Communications Architecture. By adhering to the DoD's open-standards approach to radio technology, Harris Falcon III tactical radios and related systems give customers a future-focused platform that easily integrates pre-planned upgrades and new capabilities while offering compatibility with legacy radios.

Defence Industry

## SELEX Galileo`s latest sensor systems on show at UK MoD trials

Porton Down -- On the 26 May, SELEX Galileo, a Finmeccanica Company, played a key part in the UK Ministry of Defence (MoD)'s trials being carried out under the Electro-Magnetic Remote Sensing (EMRS) Defence Technology Centre (DTC).

Since the start of the DTC initiative in 2003, SELEX Galileo has led the EMRS DTC consortium's efforts to manage this J42M collaborative research programme, a key building block in the UK's military sensing research programme.

Working closely with the UK MoD and a range of UK Industry partners, the trials involved the Company gathering data from a number of its latest sensors with a view to improving the technology behind them. SELEX Galileo also proved new ways of exploiting the data collected from the Company and partner's sensors for the benefit of troops on the ground.

The trials provided an important opportunity for partners in Government and Industry to work together to solve some of the problems facing troops in the field. SELEX Galileo's participation in the trials is a confirmation of the Company's commitment to research for the development of new technologies able to give troops the situational awareness they need.

The MoD's event included a range of static and dynamic scenarios including those relating to the IED life-cycle and its disruption, as well as the tracking of ground targets, with SELEX Galileo being involved in trials covering both air and ground sensing capabilities. The air trials included the Company's proven PicoSAR Active Electronically Scanned Array (AESA) radar, while the ground trials involved the Company's Burst Illumination Ladar (BIL), the state-of-the-art Harrier thermal imaging camera and Nexsense C chemical detector.

SELEX Galileo's PicoSAR radar was integrated into two helicopters, each radar being teamed with an Industrial partner's surveillance turret. As well as collecting data for future research use, the output from the two PicoSAR radars was then exploited by a SELEX Galileo-UK Industry team to provide a dual-radar Ground Moving Target Indicator (GMTI) capability to more accurately track land vehicles.

On the ground, SELEX Galileo's BIL, which provides increased target identification ranges during the day and at night, operated in both 2D and 3D active imaging modes. New techniques designed to improve imaging through atmospheric turbulence such as heat haze were then evaluated by another collaboration between SELEX Galileo and UK Industry. The Nexsense C chemical detector also collected data for use in future efforts to improve the system.

### Background information

Electo-Magnetic Remote Sensing (EMRS) Defence Technology Centre (DTC) is a partnership between the UK MoD, industry and the science base working to develop military sensing technology for future defence needs. Formed in 2003, the EMRS DTC is managed by an industrial consortium led by SELEX Galileo. The EMRS DTC industrial consortium comprises: SELEX Galileo Ltd, Thales UK Ltd, BAE Systems Insyte and Roke Manor Research Ltd.

PicoSAR, the compact and lightweight ground surveillance AESA radar, provides all-weather surveillance for Unmanned Aerial Systems (UAS), fixed-wing and helicopter Platforms.