

# Army Guide monthly



## # 1 (64) January 2010

- AM General and General Dynamics Announce Joint Venture Company for U.S. JLTV Program
- General Dynamics Awarded \$198 Million to Build 140 M1A1 SA Tanks for Iraq
- Company Also Receives Second MRAP Support Contract; Awards Equate to \$90 Million
- Oshkosh Defense Receives \$290 Million Delivery Order for the U.S. Army Family of Heavy Tactical Vehicles
- Boeing Laser Demonstrator Program Accepts Oshkosh Military Truck, Enters Fabrication Phase
- Harris Corporation Receives Orders to Provide JTRS-Approved Falcon III Tactical Radio Systems to MRAP-ATV Program
- Testing The New Multi-Terrain Camouflage
- GD Awarded \$112 M in Stryker Contracts
- Fuel Cell Yacht Wins Race
- KONGSBERG signs increased CROWS II agreement with US Army
- US Army Announces Force Structure Actions
- CACI Awarded \$100 Million Task Order to Provide U.S. Army Battle Command Systems
- AT Power Distribution System
- Cyber Technology`s UAV perches, stares, makes us a little uncomfortable
- Motorised Infantry
- First UK Company to be awarded TL Approval by German Army
- MAN Nutzfahrzeuge and Rheinmetall form joint company for wheeled military vehicles
- ST Kinetics Targets Major Opportunities in Indian Defence
- Metal Storm to deliver MAUL Weapon Systems to Defence R&D Canada

## Defence Industry

### AM General and General Dynamics Announce Joint Venture Company for U.S. JLTV Program

STERLING HEIGHTS, Mich. -- AM General and General Dynamics Land Systems today announced they will form a joint venture to compete for the U.S. Army and Marine Corps Joint Light Tactical Vehicle (JLTV) program.

STERLING HEIGHTS, Mich. -- AM General and General Dynamics Land Systems today announced they will form a joint venture to compete for the U.S. Army and Marine Corps Joint Light Tactical Vehicle (JLTV) program.

General Tactical Vehicles, the joint venture company, will design, develop and produce a highly mobile, highly survivable and innovative wheeled utility vehicle for the armed services to meet all the requirements of the JLTV program. The joint venture is the first-ever collaborative project for the two American defense companies, both of whom were awarded JLTV "Best Technical Approach" trade studies by the Office of Naval Research in 2006.

The JLTV family of vehicles will comprise five "Mission Role" variants: the Combat Tactical Variant, the Command and Control Variant, the Utility Variant, the Light Infantry Squad Carrier Variant and the Reconnaissance Variant. The vehicle family will also include compatible trailers.

The JLTV design will include a basic armor protection package as well as provisions to accommodate an additional add-on armor kit. The Joint Light Tactical Vehicle will be network-enabled, provide power for all on-board electronic components with the engine on and during extended silent watch, and export power to outside systems. Satisfying these design issues, meeting transportability and mobility requirements, and making this an affordable family of vehicles will require the use of innovative technologies and design strategies. General Tactical Vehicles will locate in the Detroit metropolitan area to leverage the best of American automotive technology and military research and development to deliver the JLTV.

## Defence Industry

### General Dynamics Awarded \$198 Million to Build 140 M1A1 SA Tanks for Iraq



STERLING HEIGHTS, Mich. -- The U.S. Army Tank

and Automotive Command has awarded General Dynamics Land Systems, a business unit of General Dynamics, a contract worth \$198 million to build 140 M1A1 SA (Situational Awareness) tanks for Iraq.

The SA enhancements to the M1A1 for Iraq include a second-generation forward-looking infrared (FLIR) thermal sight, a driver's vision-enhancer thermal viewer and Tank Urban Survivability Kit (TUSK) improvements, which provide better crew protection in urban warfare environments. In addition, engines developed through the Army's Total Integrated Engine Revitalization (TIGER) program will be installed and pulse-jet filter cleaning systems added to improve performance while reducing maintenance requirements and costs.

Work will be performed in Lima, Ohio; Scranton, Pa.; Anniston, Ala.; and Tallahassee, Fla. The completion date for the contract is May 31, 2011.

## Contracts

### Company Also Receives Second MRAP Support Contract; Awards Equate to \$90 Million



WARRENVILLE, Ill. -- Navistar Defense, LLC today announced that it has made a new foreign military sale to the Israel Ministry of Defense. Under the \$12 million contract, Navistar will deliver 114 medium tactical vehicles by June 2010.

#### Navistar Defense Wins Foreign Military Sale From Israel

In addition to the Israel contract, the company also received a second four-year, System Technical Support (STS) contract for up to \$78 million to support its International® MaxxPro® Mine Resistant Ambush Protected (MRAP) vehicles.

"Medium tactical vehicles provide a solid base for our U.S. business and our ability to customize these vehicles allows Navistar to also support the mission needs of allied armed forces," said Archie Massicotte, president, Navistar Defense. "We are honored to help serve U.S. allies and we will continue to focus on growing our foreign military sales in 2010."

Based on Navistar's commercial International® WorkStar®, or 7000 Series platform, vehicle variants for Israel will include cargo, recovery and tow trucks. Parts and service are not included in the contract.

Though the company will target growth in markets outside the United States as part of its 2010 strategy, the company remains dedicated to its U.S. customers. Under Navistar's four-year STS contract, the company will provide hardware to accompany work conducted under the previous MRAP STS engineering award announced

November 9, which is also a four-year contract for up to \$78 million. Navistar's STS awards allow the company to improve MaxxPro MRAP vehicle reliability, support combat issues encountered in theater, as well as provide new vehicle enhancements.

"As one of the leading providers of MRAP vehicles, we have a duty to evolve our vehicles to help counter changing in-theater threats," said Massicotte. "Both our STS contracts will enable us to quickly serve those who require new vehicle features to tackle the road - or lack of road - in Afghanistan."

The company currently supports several vehicle fleets for the U.S. armed forces, including more than 6,400 MaxxPro MRAP vehicles.

## Contracts

### Oshkosh Defense Receives \$290 Million Delivery Order for the U.S. Army Family of Heavy Tactical Vehicles



OSHKOSH, Wis. – January 5, 2010 – Oshkosh Corporation announced that its Defense division has received a delivery order valued at more than \$290 million from the U.S. Army Tank-automotive and Armaments Command Life Cycle Management Command (TACOM LCMC) to deliver more than 725 next-generation Palletized Load Systems (PLS) A1.

The order was issued under the U.S. Army's existing Family of Heavy Tactical Vehicles (FHTV) contract. Production will begin in April 2010 and be completed in September 2011.

"The modernized PLS A1 delivers superior performance and protection capabilities to help deliver supplies and equipment in some of the U.S. Army's most demanding operations," said Andy Hove, Oshkosh Corporation executive vice president and president, Defense. "The PLS truck and trailer combination can load and unload a variety of heavy-payload cargo, which helps eliminate the need for material-handling equipment and results in leaner, more efficient logistics units."

The PLS A1 is the next generation of the PLS, which Oshkosh has manufactured for the U.S. Army's distribution and resupply needs for its most challenging military missions. The vehicle features a Long Term Armor Strategy (LTAS)-compliant cab and a 600-hp engine. It also uses the Oshkosh-patented TAK-4® independent front suspension for greater off-road mobility. Additionally, the truck and trailer carry a demountable cargo bed, also known as a flatrack, which features a 16.5-ton payload capacity.

Oshkosh has the available capacity, highly skilled workforce and proven manufacturing capability to

deliver this FHTV order and vehicles for other Army and Defense programs, including the MRAP All Terrain Vehicle (M-ATV) and Family of Medium Tactical Vehicles (FMTV), as well as any surges in production.

## Defence Industry

### Boeing Laser Demonstrator Program Accepts Oshkosh Military Truck, Enters Fabrication Phase



HUNTSVILLE, Ala. -- Boeing announced today that it has accepted the Oshkosh Defense military truck that will carry a Boeing-built laser beam control system for the U.S. Army's High Energy Laser Technology Demonstrator (HEL TD) program.

Boeing received the Oshkosh Heavy Expanded Mobility Tactical Truck (HEMTT) on Dec. 17 at the Oshkosh facility in Oshkosh, Wis.

"This demonstration program has successfully transitioned from the design phase to the fabrication phase," said Gary Fitzmire, vice president and program director of Boeing Missile Defense Systems' Directed Energy Systems unit. "This transformational, solid-state laser weapon capability will provide speed-of-light, ultra-precision capability that will dramatically improve warfighters' ability to counter rocket, artillery and mortar projectiles."

The eight-wheel, 500-horsepower HEMTT A4, a widely used military tactical vehicle, will be shipped to Boeing's facility in Huntsville this spring for integration with the laser's rugged beam control system (BCS). The program has already begun receiving BCS components from suppliers.

"These hardware deliveries show that the program is making great progress and getting closer to demonstrating its revolutionary capability," said Blaine Beardsley, Boeing HEL TD program manager.

The BCS will acquire, track and select an aimpoint on a target during the same time frame in which the system also will receive the laser beam from the laser device, reshape and align it, and focus it on the target. The system includes mirrors, high-speed processors and high-speed optical sensors.

HEL TD testing against real targets, but using a low-power surrogate for the high-energy laser, is scheduled for fiscal year 2011 at White Sands Missile Range, N.M. HEL TD is a cornerstone of the Army's high-energy laser program and will support the transition to a full-fledged Army acquisition program.

Boeing is developing laser systems for a variety of U.S. Air Force, Army and Navy warfighter applications. Besides HEL TD, these systems include the Airborne Laser, Free Electron Laser and Tactical Relay Mirror System.

Oshkosh Defense, a division of Oshkosh Corporation, is an industry-leading global designer and manufacturer of tactical military trucks and armored wheeled vehicles.

A unit of The Boeing Company, Boeing Integrated Defense Systems is one of the world's largest space and defense 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 Integrated Defense Systems is a \$32 billion business with 70,000 employees worldwide.



### Contracts

#### Harris Corporation Receives Orders to Provide JTRS-Approved Falcon III Tactical Radio Systems to MRAP-ATV Program

ROCHESTER, NY -- Harris Corporation, an international communications and information technology company, has received orders totaling \$119 million to supply JTRS-approved Falcon III AN/PRC-152(C) tactical handheld radio systems with vehicular amplifier adapters to the U.S. Department of Defense for use in Mine Resistant Ambush Protected (MRAP) all-terrain vehicles (ATV).

The AN/PRC-152 was selected to provide MRAP users with advanced multiband SINCGARS and Demand Assigned Multiple Access (DAMA) satellite communications interoperability.

Harris RF Communications is the leading global supplier of secure radio communications and embedded high-grade encryption solutions for military, government and commercial organizations. The company's Falcon family of software-defined tactical radio systems encompasses manpack, handheld and vehicular applications. Falcon III is the next generation of radios supporting the U.S. military's Joint Tactical Radio System (JTRS) requirements, as well as network-centric operations worldwide.



### Future Technologies

#### Testing The New Multi-Terrain Camouflage

The Defence Science and Technology Laboratory (Dstl), the Ministry of Defence civilian scientists, working with the MOD Defence Clothing Project Team, has tested and trialled new multi-terrain camouflage clothing that has been proven to improve mission effectiveness across a range of different backgrounds.

It is the first time in 40 years the Armed Forces have changed the camouflage pattern. George Philpott, Land

Battlespace Systems, Dstl, says: "Dstl scientists researched and tested whether a mixed multi-terrain camouflage pattern would improve mission success and basically keep soldiers hidden for longer during ambush operations or when on patrol. It is not just a question of colours; we looked at texture and tone of patterns, how the light reflects and how well it disguises the wearer when observed both close up and at a distance.



"Dstl's this work is all about creating battle-winning technology for UK armed forces on current operations, and we're proud we were able to cram all the work in to just six months, with extra people working a lot of extra hours to get this research and testing complete."

Troops in Helmand, Afghanistan, operate in a mixed landscape: desert, woodland, mountainous, urban etc. Dstl assessed whether a multi-terrain camouflage was better than the standard army woodland camouflage disruptive pattern material (DPM) or the desert DPM and if so what is the best pattern, or balance of colours. The two current camouflage schemes were tested alongside an existing off-the-shelf multi-terrain camouflage to see which performed best across various backgrounds that soldiers are likely to encounter across the landscape in Afghanistan.

Computer modelling was carried out across representations of the green zone, desert and transition backgrounds. Soldiers operated in various scenarios in a simulated set of environments to test how the different camouflages performed in situations where staying undetected was important.

Overall the multi-terrain performed best, supporting the theory that a multi-terrain camouflage offers improvements when soldiers move between different places and backgrounds. Dstl also conducted interviews and subjective testing with service men and women to understand and evaluate whether they would actually be happy to wear the new camouflage and whether the concept of a multi-terrain camouflage was desirable and effective.

As a result of this work, it was determined that a multi-terrain camouflage could improve mission success so Dstl set about testing available multi-terrain patterns and creating new ones for testing.

Christopher Jones, Air & Weapons Systems, Dstl, adds: "In addition to existing aerial photography, Dstl sent cameras to Helmand for soldiers to take specific scientific photographs of the various backgrounds and landscapes they operate in."

Dstl teams in the UK, at Fort Halstead, near Sevenoaks in Kent and at Portsdown West, near

Portsmouth in Hampshire, measured the colour properties for each image and identified seven major background types. These colours were then used for Dstl's camouflage optimisation and testing programme.



Christopher Jones continues: “The colours and backgrounds in Helmand are similar to those found in parts of the UK, so we used the colour data from Afghanistan and used it to identify places where there was a good colour match, to allow us to run large scientific trials.”

The Afghanistan background colours were used to generate new multi-terrain type camouflage based partly on the shapes and patterns of the existing UK woodland DPM. These were tested against the current army woodland and desert uniforms, to act as a baseline, and a commercially available pattern from Crye Precision.

Ten camouflage suits were trialled in five tests to assess overall performance with pilot trials held before the final main testing. The trial team developed experimental techniques, which were initially established through collaborative research with other NATO countries.

Lt Col Toby Evans, military advisor, Dstl, adds: “The detailed tests and trials looked at everything from how easy is it to spot these camouflages in different terrains and backgrounds to simply asking the soldiers who helped on the trial „which one do you like best and would feel happy wearing?”

### The tests



Observer assessment – a live trial with military personnel asked to judge the performance of each suit at 50m, 100m and 150m. The trial was carried out at Stanford Training Area, Norfolk and at RAF Donna Nook, Lincolnshire as they contained areas with similar colours and backgrounds to Helmand. Additional testing was also carried out at night to test low light performance.

Statistical assessment – using a computer model of how camouflaged objects are detected, each suit was tested for its match to the seven identified different backgrounds.

The following three trials took place at Catterick Garrison and included a large number of army personnel:

Order rank – soldiers ranked how well close-up images of the suits performed against the seven backgrounds.

Time to detect – Dstl measured the time it took soldiers to detect the 10 different camouflage patterns in the seven backgrounds using a computer-based assessment.

Personal preference – soldiers were asked which their favourite three patterns were based purely on appearance and any patterns they wouldn't like to wear.

### The results



The results showed the Crye Precision Multicam performed the best, on average, across all the trials. The final camouflage has a pattern that is similar to the current woodland DPM as it allows for easy identification between soldiers and this type of pattern consistency proved popular during the research.

Dstl is currently looking at future research into army camouflage clothing, optimising the camouflage to perform well in a variety of landscapes and backgrounds around the world to support wider operations. If this is successful the outcome could become the standard camouflage for all UK armed forces.



### Contracts

#### GD Awarded \$112 M in Stryker Contracts

Sterling Heights, Mich. -- General Dynamics Land Systems, a business unit of General Dynamics, was awarded an \$84 million contract for battle-damage assessment, repair services and materials for Stryker brigades deployed to Iraq and Afghanistan.

In addition, General Dynamics was awarded \$28 million for 474 hull protection kits and spare parts for the Stryker family of vehicles.

The contracts support the U.S. Army's Operation Iraqi Freedom and Operation Enduring Freedom. Work will be performed at the General Dynamics Land Systems headquarters in Sterling Heights, Mich.; at the Anniston Army Depot in Anniston, Ala.; and in Doha, Qatar. The estimated completion date for the assessment and repair

of the Strykers is Dec. 31, 2010. The hull protection kits and spare parts will be delivered by Feb. 28, 2011.

## Future Technologies

### Fuel Cell Yacht Wins Race

A yacht powered by a fuel cell auxiliary power unit (APU) has won a prestigious yacht race, the Atlantic Rally for Cruisers (ARC).

The yacht, the 'Nightlife', captained by UPS Systems MD Tom Sperrey, featured an SFC Smart Fuel Cell APU which provided 65 W of electrical power for the navigation, computer, and communications equipment.

The crew crossed the finish line last month after sailing from Gran Canaria to St. Lucia. Under the race's handicapping system, Nightlife won the RORC IRC Racing Division of ARC 2009, and the crew received their winner's trophy in front of 800 people at the prize-giving ceremony.

After winning the race Tom Sperrey commented: 'The fuel cell performed incredibly well, even under the hostile conditions of the mid-Atlantic. It's perfect for sailing as it provided us with a quiet, clean, compact and reliable source of power that lasted for the whole trip. Using the fuel cell for the communications equipment meant that we didn't have to keep powering up the boat's diesel engine to recharge the batteries.'

Last month another yacht, equipped with an EFOY 2200 fuel cell from SFC Smart Fuel Cell, came second overall in the Transat 6.50 solo transatlantic sailboat race.

"The US Army has long demanded state-of-the-art technology to both save Soldiers' lives and increase their battlefield effectiveness," said Knut Saeter, Vice President of Kongsberg Protech Systems in Alexandria, VA. "The extension of the CROWS II framework agreement underscores the significant role that the PROTECTOR RWS plays in meeting those demands."

The US Army's CROWS II is a KONGSBERG design based on the PROTECTOR family of Remote Weapon Stations (RWS) already supplied to 16 nations around the world, replacing the discontinued CROWS I design previously provided in a limited number to the US Army by another supplier.

KONGSBERG's PROTECTOR RWS is intended to enhance troop safety by enabling the operator to remotely control the system from inside the protection of an armored vehicle. Designed to mount on an array of vehicle platforms and support numerous weapon systems, the PROTECTOR RWS has been in full scale production since December 2001 and is qualified for global operations. With over 20 million hours of operation, the PROTECTOR RWS has a proven and unprecedented Operational Readiness Rate (ORR) of over 99%. With headquarters in Norway and production facilities in Johnstown, Pennsylvania, USA, Kongsberg Protech Systems maintains its position as the world's leading provider of remote weapon stations.

This contract was announced to the Oslo Stock Exchange (OBX) on 24 December, 2009.

## Army

### US Army Announces Force Structure Actions

The US Army announced today the decision to relocate Headquarters, Army Contracting Command and Headquarters, Expeditionary Contracting Command from Fort Belvoir, Va., to Redstone Arsenal, Ala.

These force structure actions will result in the reassignment of 79 soldiers and 234 civilians to Redstone Arsenal. The move is expected to be completed in August 2011.

Headquarters, Army Contracting Command provides global contracting support to combatant commanders, and Headquarters, Expeditionary Contracting Command plans and executes contracting support for Army service component commanders in support of Army and joint operations. Headquarters, Expeditionary Contracting Command also provides support for multi-national contracting requirements.

Both contracting commands will collocate with the U.S. Army Materiel Command and the U.S. Army Security Assistance Command, which are also moving to Redstone Arsenal as a result of the Base Realignment and Closure (BRAC) process.

The collocation of these organizations will serve to improve the integration of contracting services within the continental United States, overseas installations, and

## Contracts

### KONGSBERG signs increased CROWS II agreement with US Army



WASHINGTON -- Last week, KONGSBERG signed a contract with the United States Army increasing the number of PROTECTOR Remote Weapon Stations (RWS) from 6,500 to 10,349 within the existing Common Remotely Operated Weapon Station (CROWS II) framework agreement.

The value of this extended contract, initially signed in August 2007 and valued at \$1.4 billion, may potentially increase up to \$750 million, depending on demand for complete CROWS II systems, spare parts and support within the limits of the extended CROWS II contract. In addition to the enhanced frame agreement, KONGSBERG also received a purchase order for additional PROTECTOR RWSs valued at \$162 million.

theater operations.

### Contracts

## CACI Awarded \$100 Million Task Order to Provide U.S. Army Battle Command Systems

ARLINGTON, Va. -- CACI International Inc announced that it has been awarded a \$100 million task order to continue providing technical, engineering, logistics, business, and program support services to the Program Executive Office Command, Control and Communications Tactical (PEO C3T) Program Manager Battle Command family of products.

The contract, for two base years and an eight-month option, was awarded under the Army's Strategic Services Sourcing (S3) contract vehicle. With this award CACI continues its business in C4ISR (command, control, communications, computers, intelligence, surveillance, and reconnaissance).

CACI will provide management support, software development, fielding, training and product support that will directly support soldiers at all levels in making informed decisions as part of Battle Command's foundation for the Army's present and future command and control architecture.

The CACI Team has been supporting this client for three years and will continue to provide a proven management approach emphasizing efficient budgeting, scheduling, and performance. Through its core competency in C4ISR, CACI provides proven program management, engineering and integration, test and evaluation, and logistics support and training.

Bill Fairl, CACI's President of U.S. Operations, said "We're pleased that this award from PEO Command Control and Communications Tactical, Project Manager Battle Command provides CACI with another opportunity to support its vital work. Our continuing work with this client is a strong vote of confidence for the quality of the services we provide."

According to CACI President and CEO Paul Cofoni, "CACI's Strategic Services Sourcing business with the U.S. Army enables us to continue serving our clients' missions. CACI has a significant presence within the C4ISR community, having developed relationships based on technical expertise, global presence, and competitive distinction. These collective synergies enable us to deliver highly responsive solutions to ongoing and surge requirements for our nation's highest priorities."

CACI provides professional services and IT solutions needed to prevail in the defense, intelligence, homeland security, and federal civilian government arenas. We deliver enterprise IT and network services; data, information, and knowledge management services; business system solutions; logistics and material readiness; C4ISR integration services; cyber solutions; integrated security and intelligence solutions; and program management and SETA support services.

### Defence Industry

## AT Power Distribution System



AT Communication are pleased to announce the introduction of the AT Power Distribution System for emergency services and military vehicular platforms.

The AT Power Distribution System provides an effective means of managing the output supply and charging control of battery bank systems required for modern digital technology installed in vehicles. The system overcomes the common problem of fluctuating supply voltages from the battery banks which can render digital systems inoperable as they are less tolerant than analogue system counterparts to this fluctuation.

The AT Power Distribution Systems design is modular to allow flexible installation options for dual and triple battery bank systems of 12 or 24V DC. The system provides intelligent charging control of batteries to achieve up to 95-100% of battery charge capacity. The result is a battery bank which is charged fully, quickly and safely without damage to the batteries and alternator and thus providing longer battery life.

### Future Technologies

## Cyber Technology's UAV perches, stares, makes us a little uncomfortable



We've seen UAVs that hover in the past, but if you are looking for something that eschews rotors for nearly silent ducted fans, you'll need to get your hands on the CyberQuad by Cyber Technology.

The fans don't produce sparks (which is why this thing was recently tested with much success in an extended survey of an offshore drilling platform / oil rig damaged by fire), and its "perch and stare" capabilities mean that it can find a stable spot and sit unattended - not only saving battery time that would otherwise be lost by hovering in place, but taking it all in with whatever video equipment / sensors the operator might have placed on-board.

Just the thing for sniffing out enemy combatants and

relaying the info to your One Force Tracker-equipped iPhone, perhaps? Get a closer look after the break.



Thanks to Randers for hooking us up with some video of the thing in action. It still makes us a little uncomfortable, all that staring...



### Term of the day

#### Motorised Infantry

Motorised infantry is infantry which is transported by trucks or other motor vehicles. It is distinguished from mechanized infantry, which is carried in armoured half-tracks or armoured personnel carriers.

Motorising infantry is the first stage towards the mechanisation of an army. Civilian trucks are readily adaptable to military uses of transporting soldiers, towing guns, and carrying equipment and supplies. This greatly increases the strategic mobility of infantry units, which would otherwise rely on marches or railroads.

Motorisation provides no direct tactical advantage in combat, because trucks and jeeps are vulnerable to artillery and small arms fire. For winter and mountain use, light tracked vehicles were employed, the Swedish made Snow Trac and Bv202 both found service with the British military. But it does increase the infantry's flexibility, because motorized elements can travel with their own integral support weapons (heavy machine guns, mortars and artillery, anti-tank weapons, etc.).

The disadvantages of motorisation is that the formation becomes dependent on supplies of fuel.

The speed advantages of motorised infantry first became important in WW2 in the German Blitzkrieg. While in combat effectiveness not more robust than regular infantry (which was foot infantry), its speed component became decisive in the Blitzkrieg strategy, because it could follow the panzer forces and defend its flanks.



#### First UK Company to be awarded TL Approval by German Army



MTL Group Ltd a global supplier of processed armour steel has become the first company in the UK to be awarded TL approval from the German Federal Armed Forces (Bundeswehr or BWB).

TL approval is a pre-requirement for any company wanting to supply components to the BWB. Managing Director Dr Henry Shirman said "Exports have become an essential part of MTL Group's growth over the past two years. Being the first UK Company to be awarded TL approval by BWB is a massive step in developing relationships with Europe's global OEMs who provide armoured vehicles to the BWB"

After a rigorous audit of both MTL Group's systems and capabilities at their site, the Sheffield based company passed first time in all areas and was awarded the approval in late December 2009. TL approval now allows MTL to supply components manufactured from armour steel in accordance with strict German defence manufacturing standards for contracts specifically related to the BWB.

Over the past few years MTL Group has invested heavily in the latest processing equipment including bevel laser cutting, robotic pressing, water jet cutting, CNC machining and robotic welding. Processing circa 2000 tonnes of armour per year MTL can supply components in both blast and ballistic grade armour ranging from laser / water jet cut plates including weld preparations up to fully fabricated structures including hulls and cabs.

MTL also stock and process other grades of material including high strength, abrasive resistant and standard steel grades. MTL currently supplies components to Mainland Europe, Middle East, North Africa and North America.



### Defence Industry

#### MAN Nutzfahrzeuge and Rheinmetall form joint company for wheeled military vehicles

With the founding of Rheinmetall MAN Military Vehicles GmbH, the market for logistical and tactical military vehicles has an important new provider of complete solutions.

MAN Nutzfahrzeuge AG and Rheinmetall AG are to form a joint company for military wheeled vehicles. A



contract to this end has now been signed by the two companies. The new company, which will be known as Rheinmetall MAN Military Vehicles GmbH (RMMV), is an important provider of complete solutions in the market for military wheeled vehicles, covering the entire range of armoured and unarmoured transport, command and role-specific vehicles for the international armed forces. Rheinmetall will have a stake of 51 percent and MAN 49 percent in the new company, which will be headquartered in Munich. The plan is still subject to approval from the competition authorities.

"With this new company we are combining the strong MAN and Rheinmetall brands and the complementary technological core competencies of the two partners to form a globally operating system provider, which will present one face to the military customer with the goal of improving its position in the world market," said Dr. Georg Pachta-Reyhofen, CEO of MAN Nutzfahrzeuge AG at the signing of the contract. RMMV unites MAN's automotive expertise in commercial vehicle manufacture with Rheinmetall's technological know-how in the military field.

"The new company follows the trend towards the joint acquisition of logistical and tactical military vehicles, whose protective and mobility characteristics have become highly similar because of current operational conditions," explained Klaus Eberhardt, Chairman of the Executive Board of Rheinmetall AG. "With their joint enterprise MAN and Rheinmetall are at the same time making an important contribution to the necessary consolidation of military vehicle systems at national and European levels," Eberhardt continued.

The first step calls for the merging of the development and sales activities of the two companies in the military wheeled vehicle sector under the aegis of the new company, which thus takes over product and market responsibility. The second contractually agreed step sees the two companies' production capacities at the plants in Kassel (Rheinmetall) and Vienna (MAN Nutzfahrzeuge) integrated into the joint company by the end of 2011.

In the initial phase, RMMV will have around 370 employees; when the second step has been completed this will increase to around 1,300 employees, whose annual turnover will amount to more than a billion euros.



## Defence Industry

### ST Kinetics Targets Major Opportunities in Indian Defence

New Delhi -- ST Kinetics today said that it will be fielding the world's first and longest in-service 155 mm 52 Calibre towed Howitzer, the FH 2000, in field trials next month. The company is hopeful that the stalled trial of the 155 mm calibre 39 Pegasus Lightweight Howitzer (LWH) will also recommence very shortly.

ST Kinetics is a subsidiary of the ST Engineering in which the Singapore Government has a stake of 51 per cent through Temasek Holdings. ST Engineering, with a turnover of US\$3.8 billion in 2008, has a workforce of

over 20,000 employees, and global operations in Aerospace, Electronics, Land Systems and Marine.

ST Kinetics plans to address India's strategic needs and is fielding tailored solutions to meet the requirements of the modernisation programmes of the armed forces. These include the iFH2000 155mm 52 Calibre Howitzer for the Towed Gun requirement and the Pegasus 155mm 39 Calibre Lightweight Howitzer for the Ultra Lightweight Howitzer program. ST Kinetics has also offered the SAR 21 Carbine with its proven reliability and performance.

Speaking at the Press Conference, Brig Gen Patrick Choy, Chief Marketing Officer, said "ST Kinetics has a 40 year lineage in defence and over a billion dollars in revenue earned from being a market leader in many areas. For example, we are a leading 40mm grenade solutions provider and manufacturer of other class leading defence products. We are a much accoladed company, recognised with many awards for our innovation in defence technologies including those for the Pegasus, Trailblazer, Bronco, SAR 21, 40mm Air Bursting Munitions. We have a strong Engineering background and a large number of IPs. The company is respected for its integrity, transparency and high standards of corporate governance.

"We are ideal partners for the modernisation programs of the Indian armed forces. ST Kinetics' 155mm 52 Calibre Howitzer is the first to be fielded in the world. Our head-start in the development of the whole family of 155mm Howitzers has given us certain advantages in the design and development of a towed gun that could meet the Indian Army's total fire power needs. ST Kinetics believes our system is superior in many ways and it would prove itself during the field trials. The strongest credential for the FH 2000 is its long years in service, having been inducted in regular service as far back as 1993," he said.

He further said, "The Lightweight Howitzer Pegasus is a highly operable and portable system that meets the Indian Army's total battlefield needs. The ST Kinetics engineering team has also ingeniously retained the flexibility for the Indian Army to retrofit it into self propelled lightweight 155mm Howitzer system that could operate in the plains. Pegasus is deemed to be superior in its class with its unique self propelled capability, flexible configuration and lower crew fatigue due to powered handling. The gun is already in India in Gwalior and is awaiting a call to trials."

ST Kinetics has been designing and developing Howitzers for the last 30 years, including the FH 88, a 155mm Calibre 39 towed Howitzer, the FH 2000 155mm 52 Calibre Self Propelled Howitzer, the Pegasus Lightweight Self Propelled Howitzer and the Primus 155mm tracked Self Propelled Howitzer. ST Kinetics will continue to develop capabilities in artillery systems.

ST Kinetics is also offering innovative and customised engineering solutions including dual use systems such as the Bronco All Terrain Tracked Carrier for frontline defence and disaster relief applications. With its all terrain capability, the Bronco would be an excellent

protected mobility solution in view of India's vast and diverse terrains.

**Defence Industry**

**Metal Storm to deliver MAUL Weapon Systems to Defence R&D Canada**



Brisbane, Australia -- Metal Storm Limited announced that Metal Storm Inc (MSI) had received an order from Defence Research and Development Canada for three Metal Storm MAUL(tm) 12 gauge Multi-shot Accessory Under-barrel Launchers together with ammunition.

The customer has now approved a more detailed release.

Defence R&D Canada is examining technologies that could be used in a future integrated small arms weapons system. Metal Storm technologies, the 3GL and MAUL, have been identified as potential lightweight solutions providing semi-automatic fire and escalation of force capabilities. In addition, the electronic ignition technology is of considerable interest from the perspective of an enabling technology for an automatic target engagement capability. The MAUL system has been purchased as representative of the two technologies and will undergo evaluation both from the perspective of user acceptance and EMC vulnerability and emissions.

Commenting on the agreement, Peter D. Faulkner MSI General Manager said "We are pleased to be working with Defence R&D Canada and are looking forward to receiving the results of their evaluation. We view this as the beginning of a long term relationship that could potentially lead to our participation in the development of Canada's next generation small arms weapon system."

The three MAUL weapons will be delivered in March 2010, subject to export regulations.

**Defence Industry**

**Xplore Launches Rugged Military Computer for Armoured Military Vehicles**

AUSTIN, Texas -- Xplore Technologies Corp., a maker of award-winning rugged mobile computers, today announced the launch of its new iX104C4M Military Tablet PC.

Xplore Launches Rugged Military Computer for Armoured Military Vehicles

"It was a significant undertaking engineering a COTS product to meet the stringent requirements of battlefield conditions. This milestone achievement is one that we are very proud of and further complements our product portfolio," said Mark Holleran, President and Chief Operating Officer of Xplore.



"The need for rugged battlefield computing devices continues to grow. Based on customer input and that of our key partners, we developed the iX104C4M to be a computing tool addressing the difficult extremes of most military situations – whether for command and control or situational awareness, in a vehicle, on the flight line or in a tank," said Holleran. "We recently debuted the product at the AUSA Conference in Washington, D.C. It was demonstrated in a network of partner booths including VT Miltope, Northrop Grumman and BAE Systems and was very well received by the end users who took part in the demos."

The iX104C4M design implements best in class indoor/outdoor AllVue Xtreme display technology with Night Vision Imaging System (NVIS) compatibility, a flexible user interface with Dual Mode functionality, Intel Core Duo technology, Windows 7 and Military Standard 461F (MIL-STD-461F) compliance for battlefield computing. The iX104C4M's key features include:

- 1.2 GHz Intel Core Duo processor
- AllVue Xtreme LCD technology for viewing in all lighting conditions
- NVIS Compatibility
- MIL-STD-461F compliance
- Extended Thermal Operating ranges
- Customizable mounting solutions for Military vehicles such as MRAP/M-ATV, Buffalo, and Stryker

**Training And Simulators**

**Northrop Grumman Wins Saudi Arabian National Guard Contract With a Potential Value of \$550 Million**

HERNDON, Va. -- The U.S. Army has awarded Northrop Grumman Corporation a contract to continue the modernization and training of the Saudi Arabia National Guard (SANG). The contract has a potential value of \$550 million.

The five-year, cost-plus-award-fee hybrid contract also contains fixed-fee and firm-fixed-price elements.

Under the terms of the contract, Northrop Grumman subsidiary Vinnell Arabia LLC will provide U.S.

Army-based doctrine and military training as well as logistics and support services that will further contribute to SANG fulfilling its national defense mission with self-sustained command, control and operational capabilities. Work will be performed throughout the Kingdom of Saudi Arabia.

"Our U.S. Army customer not only has selected a trusted partner who will continue to provide them with seamless continuity for the SANG program, but also a partner who values a culture of performance," said Robert S. Coffey, program general manager for Vinnell Arabia LLC. "We look forward to continuing to raise our collective bar of excellence with the SANG program, which is an essential force in the long-term defense of the Kingdom."

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

power output from 88 to 512 MHz. A compact, rugged unit with a low-profile form factor and total weight of 16 pounds, the CVA can be easily integrated into space constrained land, air, and sea-based platforms. The CVA has the unique capability of remoting the radio separate from the amplifier to reduce the operational profile and, like the company's other vehicle mount units, allows cable-free, two-second radio dismount, providing users with a fully-charged and immediately-operational handheld radio upon dismount.

The CVA uses the AN/PRC-148 JEM as its core component, providing higher RF power output for all of the AN/PRC-148 radio capabilities with a common Human Machine Interface (HMI). The AN/PRC-148 JEM radio hosts all of today's key waveforms, including ANDVT, HAVEQUICK I/II, SINGGARS, MELP, 56 kbps High Throughput Waveform, Project 25, and SATCOM IW.

"The CVA, developed specifically for space-constrained installations, offers an alternative to legacy vehicular installations with the benefits of the multiband, multi-mode capability and a future growth path of the AN/PRC-148 JEM," said Andrew Bostock, Director of Tactical Ground Communications Programs at Thales Communications.

---

## Defence Industry

### USMC Orders 11,000 Vehicular Units from Thales



These contracts were awarded under the Consolidated, Interim, Single-Channel Handheld Radio (CISCHR) contract

Thales Communications, Inc., a pioneer and global leader in the development, manufacture, and support of multiband, software-defined radio (SDR) equipment, announces the award of two contracts by the Joint Program Executive Office Joint Tactical Radio System (JPEO JTRS) to provide Cradle Vehicle Adapters (CVAs) for the U.S. Marine Corps. Under these contracts, Thales will deliver 11,000 50-Watt CVAs to the Marine Corps for use with previously-purchased Thales AN/PRC-148 JTRS-approved radios. These contracts were awarded under the Consolidated, Interim, Single-Channel Handheld Radio (CISCHR) contract.

The 50-Watt CVA combines the functionality of Thales' battle-proven AN/PRC-148 JEM (JTRS Enhanced MBITR) handheld radio set with a high-powered vehicle amplifier, providing 50 Watts of RF power output from 30 to 88 MHz and 20 Watts of RF

---

## Contracts

### BAE Unveils New Modernized Howitzer Vehicle for US Army



York, Pennsylvania -- BAE Systems today unveiled its upgraded PIM (Paladin Integrated Management) vehicle to military customers, Congressional representatives, community leaders and employees at a ceremony held at its York facility.

PIM is the next generation howitzer in the M-109 Paladin family of vehicles, a combat proven weapon system manufactured by BAE Systems at York.

"The modernization of the Paladin is a critical step in providing the Army with a sustainable and supportable fleet of upgraded vehicles," said Joe McCarthy, vice president and general manager of the Heavy Brigade Combat Team (HBCT) systems for BAE Systems. "The roll-out of our PIM system will ensure that the HBCT continues to have the premier Fire Support Platform needed to support the warfighter."

BAE Systems was awarded a \$63.9 million contract in August 2009 to produce seven PIM vehicles: five Self Propelled Howitzers and two Field Artillery Ammunition Support Vehicles. Today's roll-out introduces the first of

the seven vehicles awarded in that contract.

The PIM uses the existing main armament and cab structure of a Paladin M109A6 and replaces the out-of-date chassis components with up-to-date components from Bradley Combat Systems. PIM incorporates a state-of-the-art "digital backbone" and robust power generation capability and integrates electric elevation and traverse drives, electric rammer and digital fire control system. The upgrade of the PIM ensures maximum commonality with existing systems in the Heavy Brigade Combat Team (HBCT), and reduces its logistical footprint and operational sustainability costs by replacing obsolete components within the mobility chassis.

The BAE Systems Paladin Integrated Management vehicle is the first production vehicle equipped with the company's enhanced on-board power management capability, representing the first implementation of the U.S. Army's Common Modular Power System (CMPS) requirement. BAE Systems enhanced on-board power management solution will double the electrical power of most military vehicles, exponentially increasing the mission effectiveness of ground forces in theatre.

Design and engineering analysis work for the vehicle structure, automotive systems and electric and vehicle electronics will be performed at the BAE Systems facilities in Pennsylvania, California, New York, Minnesota and Michigan as well as U.S. Government facilities at the Army Research and Development Center in Picatinny, New Jersey. The remanufacture for the Paladin fleet will be performed in partnership with the Anniston Army Depot in Alabama and at BAE Systems facilities in York, Pennsylvania and Elgin, Oklahoma.



**Contracts**

**Oshkosh Defense Receives Four Awards Valued at \$89 Million for M-ATV and FHTV Parts**

OSHKOSH, Wis. -- Oshkosh Corporation announced today that its Defense division received four awards valued at more than \$89 million from the Defense Logistics Agency (DLA) to supply parts for the MRAP All Terrain Vehicle (M-ATV), Heavy Equipment Transporter (HET) and Heavy Expanded Mobility Tactical Truck (HEMTT).

**Oshkosh Defense Receives Four Awards Valued at \$89 Million for M-ATV and FHTV Parts**

Under two delivery orders with the DLA, Oshkosh will supply M-ATV spare parts, including engines, transmissions, transfer cases and alternators. Work under the orders is expected to be completed by October 2010. Under two other delivery orders with the DLA, Oshkosh will supply 2,400 axle assemblies for the HEMTT A2 and A4 models and more than 430 engines for the HET. Work under these orders is expected to be completed by December 2010.

Oshkosh is providing the M-ATV's spare parts to the

DLA to be used as in-the-field replacements after the original vehicle parts have been consumed. These parts will ship without delay to maintain optimal readiness rates for existing vehicles in theater. To date, Oshkosh has received awards valued at more than \$3.6 billion to deliver 6,619 M-ATVs, as well as spare kits and aftermarket in-theater support.

Existing Oshkosh facilities have the capacity, highly skilled workforce and proven manufacturing capability to deliver these spare parts and all other Defense program orders, including the Family of Medium Tactical Vehicles (FMTV), as well as any surges in production.

The M-ATV features the Oshkosh-patented TAK-4® independent suspension system to provide superior mobility on Afghanistan's harsh off-road terrain and unimproved roads. Oshkosh teamed with Plasan North America to provide an advanced armor solution for the vehicle. Plasan also developed the armor system used on more than 5,000 legacy MRAPs and thousands of Oshkosh Medium Tactical Vehicle Replacement (MTRV) Armored Cabs already in theater.

A 13-ton payload and off-road capabilities make the Oshkosh® HEMTT the backbone of the U.S. Army's logistics fleet. Improvements to the HEMTT A4 include: a more powerful drivetrain; improved suspension; a fully air-conditioned and armor-ready cab; and other structural changes to make in-field installation of add-on armor quicker and easier. The HEMTT A4 is built with maximum common parts across its variants.

The Oshkosh HET is designed to rapidly transport battle tanks, fighting and recovery vehicles, armored vehicles and construction equipment, as well as their crews, so they arrive in mission-ready condition. The latest Oshkosh HET A1 configuration includes increased horsepower, higher-capacity front suspension, an armor-ready cab, electrical upgrades and improved diagnostics.



**Defence Industry**

**PLA armored equipment forms complete system**



On August 15, the "Stride 2009.Luzhai" military exercise officially kicked off in a division under the Jinan Military Area Command. In light of the preplan, an armored regiment had the combat vehicles loaded onto the military train in an orderly way in less than 40 minutes and the train set off for the predetermined destination on time.

Recently, the reporter learned from the symposium on

“Retrospect and Prospect of Armored Equipment over the Past 50 Years” organized by a research institute of the General Armaments Department of the Chinese People’s Liberation Army (PLA) that the PLA has established a complete system of armored equipment which can meet the demands of various battlefields. China has been among the most advanced nations in the world in its overall level of armored equipment.

In the military parade in celebration of the 60th anniversary of the founding of the People’s Republic of China held in Beijing, 8 armored equipment formations of the third-generation main battle tanks, infantry combat vehicles, amphibious assault vehicles and parachute combat vehicles rumbled through the Tian’anmen Square, displaying the marvelous achievements obtained by the PLA in the development of armored equipment over the past 50 years as reflected in the evolution from copying and modifying imported equipment to independent research and development, from possessing a single-type of equipment to building up a system of armored equipment characterising the compound development of both mechanization and informationization.

In recent years, the PLA has been accelerating the process of compound development of armored equipment in terms of both informationization and mechanization. Advanced electronic information technology is extensively applied in the new-type combat vehicles, which has notably uplifted the overall combat capability of the troops.

In the year of 2009, the advanced armored vehicles took part in some major military actions including the “Stride 2009” military exercise and the “Peace Mission 2009” Sino-Russian joint anti-terrorism military exercise.

facility in McHenry, Miss., and deliveries are expected to be completed in November 2010. The program will be managed from General Dynamics’ Burlington Technology Center in Vermont. The order is an extension of a contract awarded in 2006. A strategic partner, Rafael Advanced Defense Systems Ltd., Ordnance and Protection Division, will share the production workload in Haifa, Israel.

General Dynamics’ reactive armor system is composed of tiles that fasten to the exterior of the Bradley Fighting Vehicle, allowing it to better withstand direct hits from a variety of anti-armor munitions.

“Our reactive armor package is a light-weight solution that can defeat full-scale, shape-charge threats of modern, long-range anti-tank missiles,” said Russ Klein, vice president and general manager of weapon systems for General Dynamics Armament and Technical Products. “Our team in McHenry is proud to produce reactive armor tiles that save lives and prevent severe damage to combat vehicles in Iraq.”



## Defence Industry

### Supacat SPV400 Prototype is Revealed



The first running prototype of the Supacat Protected Vehicle (SPV) 400 is officially revealed by Supacat Ltd.

The vehicle is currently being subjected to a detailed trials programme. The second SPV400 prototype is being completed at Supacat's Devon, UK, facility and will enter the trials programme towards the end January. Further development vehicles are scheduled to follow.

The vehicle was subjected to blast testing in December 2009 where Supacat's design philosophy for highly mobile and lightweight protected vehicles was proven.

The SPV Series is the next generation design from Supacat to enhance the company's successful range of high mobility vehicles, which includes its HMT (High Mobility Transport) vehicles, Jackal and Coyote, which are in service with the UK Armed Forces in Afghanistan.

"The SPV400 is a superb achievement by Supacat's innovative engineering team here in the UK. Its clean sheet design offers an upgradeable solution for 21st century operations and takes the performance of lightweight protected mobility platforms to new levels, making it the vehicle to beat in the international markets we see for this class of vehicle," said Nick Ames, Managing Director of Supacat.

## Contracts

### General Dynamics Receives \$33 Million U.S. Army Order for Bradley Fighting Vehicle Reactive Armor



CHARLOTTE, N.C. -- General Dynamics Armament and Technical Products has been awarded an order of approximately \$33 million to produce reactive armor tile sets for the Bradley Fighting Vehicle by the U.S. Army Contracting Command in Picatinny Arsenal, N.J. Deliveries are expected to begin in June 2010.

General Dynamics Armament and Technical Products is a business unit of General Dynamics.

Work will be performed at the General Dynamics’

## About the SPV Series

The 4x4 SPV 400 Series concept, which carries a 2+4 crew and has a declared GVW of 7500kg, provides a useable payload of 1500kg.

The SPV design combines a fully integrated protection system with a cutting edge automotive solution with supreme cross country performance and the agility to operate in tight urban environments. The protection system is fully integrated and comprises a V-shaped hull to provide mine blast protection and a composite crew "pod" to provide both blast and ballistic protection. The system includes mine blast seats and configurable ballistic armour to meet specific operational threats. The protection system has been developed in conjunction with NP Aerospace.

The SPV survivability is predicated on "Fully Integrated Protection", in which the threat protection measures are integrated into the vehicle structure to achieve an optimised high protection, low weight solution. It uses an armoured steel V-shaped chassis hull, manufactured as a single structure, with high ground standoff to provide integral blast protection. The axle assemblies are mounted in sacrificial sub frames, fore and aft of the hull, designed to blow off in the event of a wheel mine blast. The composite crew pod sits over the hull, between the wheels, and utilises the latest composite and ceramic armour systems to mitigate the operational threats at optimal weight. The composite armour systems are designed by NP Aerospace, building on their extensive weight efficient composite experience.

The SPV chassis design extends the "mobility performance" ethos of previous Supacat vehicles and incorporates all our experience from previous platforms. High articulation independent suspension, air spring units and tuned-for-purpose damping coupled to managed power transmission provides all terrain mobility and speed. A starter-generator provides substantial electrical power for all mission scenarios and the same Cummins engine and Allison transmission system matches the logistic footprint of Jackal and Coyote.



## Exhibitions

### Force Protection to brief on Ocelot at International Armoured Vehicles 2010 exhibition



Visitors to the Force Protection stand (no.420) at the International Armoured Vehicles 2010 exhibition will be able to receive technology briefings on

Ocelot, the new light protected patrol vehicle designed, developed and funded by Force Protection and Ricardo plc.

Since the middle of 2009 Ocelot has been put through an extensive series of blast and ballistic testing at Force Protection's own blast range in the US. In addition automotive trials have been conducted at the Millbrook Proving Ground in the UK and the Ricardo facility in Shoreham. This series of tests has demonstrated the effectiveness of Ocelot's unique 'skateboard' armoured spine configuration and pod design in terms of both survivability and mobility.

Ocelot's highly versatile design enables a range of special-to-role pods to be mounted on the skateboard. The pods, which can be easily changed in the field as the need arises, have been designed for roles such as patrol, fire support or protected logistics. Four wheel steering is common to all configurations and the vehicle can be transported in a C-130 or underslung from a Chinook.

David Hind, Managing Director of Force Protection Europe, said, "The next generation of protected vehicles must meet a range of stringent demands. High levels of survivability and reparability must be combined with manoeuvrability, the flexibility to perform a number of roles, easy maintenance and light weight. Ocelot is equally suited to operations in desert, jungle, mountainous or urban environments. While non-threatening in appearance, it provides levels of protection never before achieved in a vehicle of this size and weight. We firmly believe Ocelot will meet the global need for a new class of light protected patrol vehicle".

Force Protection will also be briefing on the Buffalo route clearance vehicle and the Cougar MRAP. Now in highly successful service with the US Army, Buffalo is the most advanced mine protected clearance vehicle in the world, with a 'V' shaped monohull chassis that directs the force of the blast away from the occupants, and with a large articulated arm for ordnance interrogation and disposal. The vehicle can be configured for multiple missions and is specifically designed to be repaired in the field. Renowned for its outstanding survivability performance in Iraq and Afghanistan, the Cougar is in service with a range of militaries, including Canada, Hungary, Italy, Poland, United States and the UK.



## Contracts

### Oshkosh Corporation Receives Orders Valued at \$325 Million for M-ATV Parts, Repair Kits

OSHKOSH, Wis. -- Oshkosh Corporation announced its Defense division received two delivery orders valued at more than \$325 million from the U.S. Army Tank- automotive and Armaments Command Life Cycle Management Command (TACOM LCMC) to supply spare parts and repair kits for the MRAP All-Terrain Vehicle (M-ATV).

Timing for the delivery orders is expected to begin in

August 2010 and be completed by the end of January 2011. To date, Oshkosh has received awards valued at more than \$3.9 billion to deliver 6,619 M-ATVs, as well as spare kits and aftermarket in-theater support.

“These M-ATV spare parts and repair kits are being produced to ensure they are available to our Armed Forces as operations require,” said Robert G. Bohn, Oshkosh Corporation chairman and chief executive officer. “We have a continued commitment to our Warfighters to keep a robust aftermarket parts support program running parallel to the needs in the field.”

Oshkosh Defense provides the complete spectrum of service and support for the M-ATV fleet in the Afghan theater. The company already has field service representatives (FSR) to support the M-ATV program in-theater. Building on its experience from Operation Iraqi Freedom, Oshkosh FSRs can operate service facilities on any of the forward operating bases that might require training and more support than internal assets can provide.

Existing Oshkosh manufacturing facilities have available production manufacturing capability to deliver these M-ATV orders and vehicles for all other Defense programs, including the U.S. Army’s Family of Medium Tactical Vehicles (FMTV), as well as any surges in production. The company has exceeded the accelerated vehicle delivery schedule every month since being awarded the M-ATV contract on June 30, 2009.

Using the Oshkosh-patented TAK-4® independent suspension system, the M-ATV features a 70-percent off-road profile capability and 16 inches of independent wheel travel to deliver the superior off-road mobility that is needed for Afghanistan’s mountainous terrain and unimproved roads. The TAK-4 system is being retrofitted on more than 2,400 legacy MRAPs for improved mobility in Afghanistan and has undergone more than 500,000 miles of government testing.

Oshkosh teamed with Plasan North America to provide an advanced armor solution for the M-ATV. Plasan also developed the armor system used on more than 5,000 legacy MRAPs and thousands of Oshkosh Medium Tactical Vehicle Replacement (MTVR) Armored Cabs already in theater.

strategic relationship and to improve the security of an important partner which continues to be an important force for political stability, peace, and economic progress in South Asia.”



The agency further explains that India intends to use the howitzers to modernise its armed forces and enhance its ability to operate in hazardous conditions. According to the official press release of the DSCA, the howitzers will assist the Indian Army to develop and enhance standardisation and to improve interoperability with US soldiers and Marines who use the M777 as their primary means of indirect fire.

The principal contractors will be BAE Systems; Watervliet Arsenal, Seiler Instrument Company, Triumph Actuation Systems, Taylor Devices, Hutchinson Industries, and UK-based Selex.

## Defence Industry

### Pindad Delivers 33 Panzers APC-2 6X6 to the Indonesian Ministry of Defense



Indonesia's Pindad delivered 33 Panzers APC-2 6x6 to the Indonesian Ministry of Defense. The ceremony took place at PT. Pindad Jl. Jend. Gatot Subroto, Bandung is a submission to the stage-3.

Indonesia's Pindad delivered 33 Panzers APC-2 6x6 to the Indonesian Ministry of Defense. The ceremony took place at PT. Pindad Jl. Jend. Gatot Subroto, Bandung is a submission to the stage-3. Present on this occasion, Minister for State Owned Enterprises Mustafa Abubakar, Minister of Defense Purnomo Yusgiantoro and Minister of Research and Technology Suharna Surapranata and Director General of Defense Facilities, Ministry of Defense Eris Herryanto.

With submission of 33 Panzers, the total number that have been submitted to the Ministry of Defense is 93 units from 150 units APC-2 6x6 and 4 units reconnaissance of the Ministry of Defense orders, while

## Contracts

### India Orders 145 US-built M777 155mm Light-Weight Towed Howitzers Worth \$647 Million

On 22 January 2010 the Defense Security Cooperation Agency (DSCA) notified the US Congress of a possible foreign military sale (FMS) to India of 145 M777 155mm light-weight towed howitzers with laser inertial artillery pointing systems (LINAPS) and associated equipment, training and logistical support for a complete package worth approximately \$647 million.

According to the DSCA, “this proposed sale will contribute to the foreign policy and national security of the United States by helping to strengthen the US-India

the remaining 61 units with a contract value of Rp. 473 billion scheduled to be completed in 2010. From the 33 units submitted, 13 units will use military forces for peace missions in Lebanon.

In his speech the Minister of Defense, Yusepandi affirmed, the government remains supportive and totally committed in raising the domestic defense industry that will reflect the Indonesian National Army and a strong national defense. Year 2010 is the year of resurrection for the defense industry and toward independence in the process of revitalization of the defense industry needs to bear the cost and not as easy as turning the palm of the hand.

Similar submitted by the Minister for State Owned Enterprises Mustafa Abubakar, the existence of financing constraints in developing a state-owned defense industries, especially the defense budget constraints in the state budget, for domestic procurement of the main tools of weapons systems and other issues faced by the large dependence on the Ministry of Defense.

Since the beginning of Pindad orders 150 units of Panzer APC-2 6x6 and 4 types of reconnaissance of the Ministry of Defense in 2008, Pindad committed to completing the order in accordance with the agreed contract, irrespective of the budget problems. President Director of Pindad Adik A. Soedarsono expects the government to help strategic industries such as Pindad to realize some of the initial payment for each purchase that will help resolution of the main tools of weapons systems procurement program on time.

Besides provision of the main tools of weapons systems for domestic needs, Pindad is now preparing to purchase plans 32 Panzer Pindad by Malaysia that will be used by the Malaysian peacekeepers soldiers in Lebanon as well as opportunities Panzer orders of Nepal. This may be the era of the rise of the defense industry forward, hopefully.

■