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Future Technologies

Four new technology demonstrator programmes for the Future Rapid Effect System (FRES)

Four new contracts to help inform decisions on which technologies will be used for the Army's next generation of armoured fighting vehicles have been awarded by Atkins, the FRES Systems House, Minister for Defence Procurement Lord Drayson announced on 4 January 2006.

BAE Systems have been awarded two contracts. The first is for a Chassis Concept Technology Demonstrator Programme (TDP). This work will demonstrate the readiness of an alternative electric drive technology, and enable us better to understand the challenges of applying this technology across the range of FRES roles. The second contract will look at potential light bridging concepts based on two designs; a stretched version of current technology and a new design using hybrid materials.

Thales UK, teamed with Boeing, has been selected to lead the Integrated Survivability (IS) programme. This project will define Integrated Survivability concepts for the full range of FRES roles.

The fourth contract has been awarded to Lockheed Martin UK, which has been awarded a contract for an Electric Armour TDP. This programme will determine the principles for integration of Electric Armour into FRES.

Lord Drayson said:

"The four TDPs placed by Atkins, along with others already awarded, will help ensure we get the right technology in these new vehicles that will be at the centre of the Army's future capability."

FRES is the most significant Army project for the next decade. The FRES capability will be delivered via a family of medium-weight, armoured fighting vehicles that will fulfil a wide range of roles.

FRES will be an integral part of an interoperable network and will deliver modern, battle-winning equipment to the Army.

Future Technologies

8 PIRANHA IIIC 8x8 Electronic Warfare Vehicles (EWVs)

Kreuzlingen -- the Kreuzlingen based technology enterprise MOWAG GmbH received an order from armasuisse for the production of eight PIRANHA IIIC 8x8 vehicles as platforms for the Integrated Radio Surveillance and Transmitter System. The vehicles will be produced in Kreuzlingen and delivered to armasuisse by the end of 2007.

Information and communication are absolutely essential for both military and civilian command. The increasing mobility, flexibility and the modern communications technology demand an infrastructure which provides on time reliable information. With the EWVs it is possible to intercept wireless communications, to locate and, where necessary, to influence such communications. The EWVs can be applied in cooperation with the subsidiary support of civilian authorities, with the airspace security and defence operations, as well as for peace-keeping missions. Within the scope of the Defence Procurement Program 2005, parliament approved the procurement of eight state-of-the-art Electronic Warfare Vehicles on the basis of the worldwide successful MOWAG PIRANHA IIIC 8x8. The selection of the PIRANHA IIIC as platform for this system is further proof of the close partnership with the Swiss Army as well as its trust in the reliability of the PIRANHA. It is further to be said that currently more than 850 vehicles of the PIRANHA family in numerous configurations are in service with the Swiss Army. In addition to the development, production and delivery of this new Electronic Warfare Vehicle, including the logistic support, MOWAG will also be responsible for the critical additional role of system integrator.

Defence Industry

40 PIRANHA I 6x6 Ambulance Vehicles

Kreuzlingen -- the Kreuzlingen based technology enterprise MOWAG GmbH received an order from armasuisse for the re-role of 40 PIRANHA I 6x6 Panzerjagern (Tank Hunter) vehicles to protected ambulances.

The new ambulances will replace a part of the Pinzgauer 6x6 ambulance fleet, which will be liquidated by the end of 2008. As system integrator, MOWAG will be solely responsible for the conversion of the vehicles as well as for the logistic materiel. Delivery to the medical corps will take place between 2006 and 2007.

In contrast to most other armed forces, the Swiss Army to date has no off-road, ballistic protected vehicles for the rescue and evacuation of the wounded. With the re-role of the PIRANHA I 6x6 PanzerjГ¤ger, this gap has been closed with a cost-effective solution. This new ambulance vehicle makes it possible to quickly rescue the wounded under extreme conditions, to provide immediate life-saving measures, and to transport the wounded to the respective medical installations. The vehicle has space for maximum three reclining or six seated patients plus a maximum 4-man crew. The layout in the transport interior corresponds with respect to space, equipment, air conditioning and lighting to the requirements of a modern ambulance vehicle, thus providing optimum care of the patients. The equipment includes splint material, recovery material, respiratory equipment and oxygen, infusions as well as bandaging material. The medical materials used are commercial

products which are already in use with the Swiss Army.

The prototype for the new ambulance vehicle was developed by MOWAG GmbH in Kreuzlingen in close partnership with armasuisse and delivered in March 2004. The subsequent technical testing and troop trials were successful, so that in the autumn of 2004 the ambulance was declared as ready for procurement. More than 300 PIRANHA I 6x6 Panzerjager have been in service with the Swiss Army since the beginning of the 90's. Due to the excellent condition of these vehicles, they can be used for another 25 years following the conversion.

Defence Industry

Industry Alliance Bids for U.S. Army Strategic Services Sourcing Program

MCKINNEY, Texas, -- Three of the largest and most capable defense companies have formed a long-term strategic alliance that positions it to bid for the U.S. Army's Strategic Services Sourcing (S3) program and similar procurements.

The three, Raytheon Company, IBM and The Boeing Company, have collaborated for nearly two years to determine the best way to deliver logistics and sustainment solutions for pursuits like S3.

S3 is a five-year, $20 billion indefinite delivery/indefinite quantity contracting vehicle that will provide cradle-to-grave support to command, control, communication, computer, intelligence, surveillance and reconnaissance (C4ISR) systems. The new program consolidates five existing contracts into one instrument that will allow the Army to quickly procure engineering, logistical and business operations services to support fielded C4ISR systems.

The Raytheon-IBM-Boeing team provides the Army with unrivaled capabilities in C4ISR support services, coupled with sophisticated management control systems. The three are joined by other companies, including incumbents Blackhawk and JB Management, which will meet the Army's requirements by providing the most innovative solutions possible.

Raytheon's Network Centric Systems, the Public Sector of IBM's Business Consulting Services and Boeing's Integrated Defense System's Logistics Support Systems business are involved in the S3 bid. Because of its deep knowledge and direct experience in meeting the Army's garrison-to-field platform sustainment requirements, Raytheon leads the effort.

By leveraging Raytheon and Boeing's platform and mission support expertise coupled with IBM's integration capabilities, the three will offer transformational solutions to meet the Army's global needs.

"The S3 opportunity illustrates the purpose of the alliance," said Jack Costello, vice president of business development and strategy for Raytheon Network Centric Systems. "Our three companies' strengths in technology, customer service, customer domain knowledge and best practice experience will provide robust, end-to-end, on-demand solutions for the Army."

"Each company has expertise in network-centric operations (NCO) and customer-support solutions," said Jim Brunke, vice president of Boeing Advanced Logistics Services. "We bring together global solutions for NCO, making our alliance unique in the Army's transformational logistics market space."

"The strength of this alliance lies in broad customer relationships, global facilities and personnel and forward-looking spiral development capabilities to ensure rapid transformation and innovative solutions with minimal risks to ongoing military operations," Said Chuck Prow, defense leader of IBM's Public Sector Business and Consulting Services.

Raytheon Company, with 2004 sales of $20.2 billion, is an industry leader in defense and government electronics, space, information technology, technical services, and business and special mission aircraft. With headquarters in Waltham, Mass., Raytheon employs 80,000 people worldwide.

With consultants and professional staff in more than 160 countries globally, IBM Business Consulting Services is the world's largest consulting services organization. IBM Business Consulting Services provides clients with business process and industry expertise, a deep understanding of technology solutions that address specific industry issues, and the ability to design, build and run those solutions in a way that delivers bottom-line value to the business of Defense.

A unit of The Boeing Company, Boeing Integrated Defense Systems is one of the world's largest space and defense businesses. Headquartered in St. Louis, Boeing Integrated Defense Systems is a $30.5 billion business. It provides network-centric system solutions to its global military, government, and commercial customers. It is a leading provider of intelligence, surveillance and reconnaissance systems; the world's largest military aircraft manufacturer; the world's largest satellite manufacturer and a leading provider of space-based communications; the primary systems integrator for U.S. missile defense and Department of Homeland Security; NASA's largest contractor; and a global leader in sustainment solutions and launch services.

Defence Industry

PANDUR II was the first in Czech tender

According to ITAR-TASS, the subsidiary company of the American General Dynamics, Steyr-Daimler-Puch has won the tender for supply of armoured personnel carrier to Czech Army.

Austrian company Steyr-Daimler-Puch that plays a major role in General Dynamics Land Systems Europe, will supply 199 armoured personnel carriers. The contract provides for possible increase of the order by 35 vehicles.

The contract value is 23 billion korunas (1.03 billion dollars).

The supplies of PANDUR II will start in 2006 and continue till 2012.

Initially more than 40 manufacturers of armored vehicles took part in the tender, but only four of them reached the final - Patria Vehicles Oy from Finland, British BAE Land Systems & Armament, German Rheinmetall Landsysteme GmbH., and Austrian Steyr-Daimler-Puch (which did not offer the vehicle but participated with weapon station on the Finish APC base).

Later the British abandoned the tender, German weapon station was withdrawn due to failure of the vehicle to produce proper qualities during water fording. Rheinmetall stated that their weapon station has better protection comparing to other weapon stations and reduction to the level of others will not effect the buoyancy.

The cost of the Finish APC increased the limit set by the Czech Army. However it contained additional, comparing to Pandur II, systems such as IFF and «Hunter-killer».

However the arguments of those who lost might not have been sufficiently convincing, and nowadays the Czech Republic will arm its Army with the armoured personnel carriers produced by the Austrian-American consortium.

Contracts

Armor Holdings Receives $58 Million In New Military Awards and $18.3 Million of Exercisable Options for 2006

JACKSONVILLE, Fla., -- Armor Holdings, a leading manufacturer of security products and vehicle armor systems serving military, law enforcement, homeland security and commercial markets, announced today the recent receipt of new orders totaling $58 million for individual equipment and heavy tactical wheeled vehicle armor components.

Armor Holdings indicated that the U.S. Marine Corps has ordered $9.3 million in ceramic protective inserts as part of the individual body armor ensemble, and that the Defense Supply Center-Philadelphia issued a $27.9 million purchase order for continued production of components for the U.S. Army Modular Light Weight Load Carrying Equipment ("MOLLE") system.

The Company also indicated that recent orders included the purchase of heavy truck armor components totaling $21.1 million, plus exercisable options of $18.3 million to support the U.S. Army Tank-automotive and Armaments Command (TACOM). The vehicle work will provide add-on-armor equipment for the M915, HEMTT, PLS and HET vehicles, including numerous full armor kits as well as spare armor panels and ballistic glass.

All work is scheduled to be performed in 2006 with vehicle and body armor production at the Armor Holdings Aerospace and Defense Group facilities in Phoenix, Arizona, and individual equipage completed at the Company's Kentucky and Tennessee locations.

Robert Schiller, President of Armor Holdings, Inc., said, "We are proud to begin 2006 with additional opportunities to support the U.S. military's efforts to ensure force protection and survivability of our deployed Armed Forces. These orders highlight the diversity of our product offering within the defense industrial base and we are honored to play such an integral role in support of the U.S. Army Tank-automotive and Armaments Command, the U.S. Marine Corps Systems Command, and the Defense Supply Center-Philadelphia. We pledge to continue our commitment to these important organizations and to all of the critical survivability and equipage programs throughout the coming year."

Defence Industry

Three Successful Tests of the Guided MLRS Unitary Rocket

DALLAS -- Lockheed Martin successfully conducted three flight tests of Guided Multiple Launch Rocket System (GMLRS) Unitary rockets recently in three separate missions at White Sands Missile Range, NM.

Test objectives included demonstrating the GMLRS Unitary rocket in the point detonate, delay and proximity modes at short and long range. The GMLRS Unitary warhead has a tri-mode fuze which allows airburst, point-impact and delay detonation modes. These missions were part of the Production Qualification Test (PQT) flight test series of the GMLRS Unitary Rocket, which is manufactured at Lockheed Martin's Camden, AR, facility.

"These missions were production qualification, man-in-the-cab launches of the GMLRS Unitary rocket, and all three flights met our expectations for extreme accuracy," said Al Duchesne, director - MLRS Rocket Programs at Lockheed Martin Missiles and Fire Control. "These tests demonstrated the capability of the GMLRS Unitary Rocket against tactical targets, collecting valuable information for its use on the battlefield."

Lockheed Martin received a $119 million contract to conduct System Development and Demonstration (SDD) for a GMLRS variant with a single warhead in October 2003. The SDD contract includes 86 rockets, 71 of which are flight articles, with the balance supporting test and other activities. The contract also provides test hardware to support 26 flight tests for an initial configuration and 39 flight tests of a follow-on configuration.

The SDD phase of this program was preceded by a successful system demonstration in 2002 of a Quick Reaction Unitary Rocket and a nine-month Component Advanced Development program. The Guided Unitary

SDD program will continue through 2007.

Lockheed Martin received a $12.5 million contract in early 2005 to accelerate the GMLRS Unitary rocket program for the U.S. Army. This represents a modification to the existing SDD contract, and accelerates the completion of the test program by 21 months.

Lockheed Martin completed delivery the first 72 GMLRS Unitary rockets in June 2005, satisfying the requirements of the Urgent Need Statement requested by the U.S. Army Aviation & Missile Command (AMCOM), Redstone Arsenal, AL. A total of 498 GMLRS Unitary rockets will be delivered according to the UNS.

“Basically, it [GMLRS Unitary] is a safer munition for our troops and nearby civilians, but a more deadly munition for the insurgents,” said Sgt. 1st Class Paul Luketich, senior fire control non-commissioned officer, Force Field Artillery Headquarters (FFA HQ), Multinational Corps-Iraq (MNC-I). “It’s the best munition in the arsenal today.”

“Guided Unitary is proving to be one of the most highly effective munitions in our troops’ arsenal in theater,” said Duchesne. “Not only does it limit collateral damage, but we’re hearing that it has been extremely effective in the war on terror. It’s so precise, it’s providing a much quicker and more effective cover in those defining moments.”

Guided MLRS Unitary integrates a 180-pound unitary warhead into the GMLRS rocket, giving battlefield commanders the ability to attack targets up to 70 kilometers away with high precision. This low-cost, low-risk program will greatly reduce collateral damage by providing enhanced accuracy to ensure delivery of the warhead to the target.

Lockheed Martin Missiles and Fire Control was able to deliver the first lot of GMLRS Unitary rockets in a very short time after the Army’s initial request due in part to the use of company funds to supplement the request.

The GMLRS Unitary rocket performed successfully in 15 different tests in 21 months.

Army

TERRIER Training Contract For BAE Systems Integrated System Technologies

As part of the TERRIER® programme BAE Systems Integrated System Technologies (Insyte) has been awarded a contract to provide TERRIER Training Systems. This contract was won in competition against several other Simulation and Training companies.

The systems enable the training of British Army crews in driving, digging and maintenance of the TERRIER vehicle, providing a comprehensive, cost effective and environmentally friendly approach to training.

Delivery of the contract requirement, valued at approximately J10 million, is due in February 2008. The BAE Systems solution is for three training systems: four mission crew trainers (simulated crew compartments on motion platforms), a remote control trainer and a classroom set of VoRTEX diagnostic emulator workstations. VoRTEX is a software suite that underpins the next generation of virtual reality trainers.

The training systems are key to ensuring the TERRIER programme achieves its In Service Date of the middle of 2008.

Clive Richardson, Managing Director, BAE Systems Integrated System Technologies (Insyte) said: “This contract to provide TERRIER Training Systems further develops BAE Systems’ position in the training domain and enables us to build upon our capabilities already demonstrated through CATT, Desert Warrior and other Land training systems.”

Defence Industry

Force Protection Armored Vehicles Win Praise from Combat Troops in Iraq

LADSON, S.C. -- Force Protection, Inc. has received accolades from military users for its specialty armored vehicles which have been deployed in active operations in Iraq and Afghanistan for nearly three years.

"The Buffalo saved our lives on our first mission," said Specialist Franklin Miles. "An IED went off and blew out three tires and the radiator had a hole in it, but nobody inside was hurt. There have been no casualties in a Buffalo in Iraq."

Force Protection supplies U.S. and Coalition forces with specialty vehicles designed to withstand blast and ballistic attacks. More than 90 vehicles have been shipped since 2003. That number is expected to double by June 2006. The most serious reported injury sustained by an occupant of a Force Protection vehicle to date has been a broken wrist.

"Two of my men in Ramadi survived an IED attack while in the Cougar, so I am a believer," wrote U.S. Navy EOD Lieutenant Cameron Chen. "I have gone on a few response calls in the Cougar and I drove one from Fallujah to Ramadi. All agree that it's the safest vehicle."

1st Lieutenant Elijah Simpson agreed. "Safety is a large factor and is the purpose for this vehicle and its design," he wrote. "The Buffalo is the safest vehicle out there."

Force Protection's vehicle series, the Buffalo mine clearance and Cougar EOD and combat engineer transport, are used by all branches of the U.S. military and Coalition forces to protect against explosive attacks

from improvised explosive devices (IEDs), land mines and roadside bombs.

"It is enormously encouraging to receive this type of feedback from our troops on the ground in Iraq and Afghanistan," said Force Protection Vice President Michael Aldrich. "The vehicles are built to save lives, and hearing these first hand accounts inspires in us an even greater commitment to build the world's finest mine- and blast-protected vehicles. The testimonials we post to our Web site represent only a fraction of the praise we have received from our customers. Unfortunately, due to heightened security surrounding our vehicles and at the request of the Department of Defense, we do not comment on sensitive operations nor the exact numbers or locations of the vehicles."

"The Buffalo has the toughest niche job in the US Army - to find and destroy the insidious IEDs the insurgents plant along the roads," said Captain Daniel Bout. "American ingenuity has taken something good, and made it great."

Force Protection receives messages from around the world and updates them periodically at its Web site, www.forceprotection.net.

Defence Industry

PANDUR II 8x8 WITH RAFAEL RCWS 30

A special version equipped with a remote controlled weapon station (RCWS) cal. 30mm of Rafael.

The RCWS-30 is the most modern 30 mm turret increasing the capability and survivability of a modern high-mobility fighting vehicle. The armament of the RCWA-30 includes a 30mm ATK Mk44 automatic cannon, a launcher pod for two RAFAEL SPIKE-LR anti-tank/ multipurpose guided missiles, and a coaxial 7,62mm general-purpose machine gun. The system provides observation capabilities during day and night and accurate firing capabilities, aided by a stabilization system and an automatic tracker for fire-on-the-move capability.

Defence Industry

New Leading Edge Combat Equipment for Australian Army

Close combat units within the Australian Defence Force (ADF) will be better equipped to defeat enemy forces on the battlefield following the introduction of new leading edge communications.

Defence Minister Robert Hill said Defence has awarded a $13 million contract to Marconi Australia to supply about 6000 handheld personal radios for soldiers in the five regular infantry battalions, the School of Infantry, cavalry reconnaissance scouts and the Combat Training Centre.

The contract is part of a $35 million package of equipment for the Army under Project LAND 125 to provide soldiers with a range of combat equipment including thermal weapon sights, helmets and personal protective padding.

Senator Hill said the package will improve the fighting capability and safety of the Army's regular infantry battalions in future combat operations.

"The new equipment will improve the lethality, survivability and command and control capabilities of infantry soldiers and cavalry reconnaissance scouts," Senator Hill said.

"The new radios will ensure more effective communications between individual soldiers. This capability has been proven on recent operations to improve situational awareness and security within small teams.

"The radios will be delivered early this year and will contribute to the Hardened and Networked Army objectives announced last year."

Following an extensive evaluation process, the Marconi Personal Role Radio was selected to provide the Soldier Personal Radios. The evaluation process included field testing by soldiers of the 3 Battalion, The Royal Australian Regiment.

The current phase of Project Land 125 was approved in February 2005, to enable the first of a planned series of enhancements to Army's close combat capability.

Senator Hill said the Howard Government has given a long-term commitment to provide the ADF with the necessary equipment and support to safely carry out the operations that are asked of them. This project is another example of the Government delivering on this commitment.

Contracts

ATK Awarded $166 Million in New Orders for Small-caliber Ammunition

Minneapolis -- Alliant Techsystems, the largest supplier of small-caliber ammunition to the United States military, has received additional small-caliber orders from the U.S. Army Field Service Command, Rock Island, Ill., worth more than $166 million.

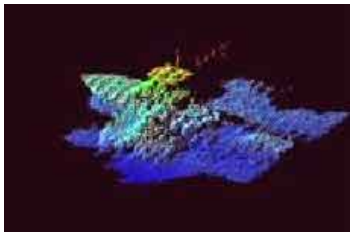
ATK operates the U.S. Army's Lake City small-caliber ammunition plant in Independence, Mo., where it produces a mix of 5.56mm, 7.62mm, 50-caliber and various other small-caliber rounds.

Since winning the contract to produce small-caliber ammunition in April 2000, ATK has steadily increased production. In partnership with the U.S. Army, ATK is modernizing the facility to reach a production capacity of

1.5 billion rounds annually by March 2006. The modernization effort is on schedule and ATK stands ready to provide U.S. forces with the small-caliber ammunition they need to train for, fight and win the global war on terror.

Future Technologies

LOCKHEED MARTIN Develops Multi-Sensor System For Target Detection And Identification



Lockheed Martin has developed and operationally demonstrated a new multi-sensor system that provides unique high-resolution, three-dimensional target imaging for military and civil applications.

This sensor system is a product of Lockheed Martin's proven Laser Detection and Ranging (LADAR) capability.

The multi-sensor system includes forward-looking infrared (FLIR), TV and a long-range variant of existing LADAR sensors, neatly integrated into a single 15-inch turret. The system is designed to conduct wide-area searches and identify actual or potential threats, including targets partially obscured by camouflage or foliage. Additionally, the system can be operated in a high resolution terrain mapping mode.

"We have built upon our mature LADAR sensor capability that has already proven itself, over multiple missile free flights and in hundreds of captive flight hours, to create an advanced sensor that provides high-resolution reconnaissance in a variety of situations," said Gil Metzger, Lockheed Martin Missiles and Fire Control's director of Research and Technology. "This advanced sensor, combined with Lockheed Martin's sensor fusion algorithms, will provide the warfighter with more accurate situational understanding because of its long-range, high-resolution, three-dimensional capabilities. In addition to combat reconnaissance, we are exploring additional applications, such as disaster recovery and homeland security."

This LADAR sensor and planned variants have short- and long-range capabilities from less than one kilometer to as far as 20 kilometers. The sensor system can be packaged to make it suitable for integration aboard manned or unmanned aerial vehicles. It will provide reliable performance under a wide variety of conditions.

"It is our passion for invention that drives us to provide a system that does not merely collect data or provide some situational awareness, but actually comprehends the data it collects," Metzger added. "Its real-time Automatic Target Recognition algorithms have been proven through independent testing to provide outstanding target identifications with virtually no false alarms. This system can provide customers such as the Departments of Defense and Homeland Security with a powerful, lower-cost, multi-sensor LADAR system that will improve situational understanding in a number of scenarios."

Lockheed Martin has a family of proven LADAR sensors that range from very short-range navigation systems to missile seekers to long-range reconnaissance assets. Lockheed Martin is a world leader in systems integration and the development of innovative technologies that protect the warfighter.

Defence Industry

Metal Storm wins US funding for munitions development

Metal Storm Limited today announced that its subsidiary Metal Storm, Inc had been awarded a two year contract worth approximately A$975,000 from the US Army's Armament Research, Development and Engineering Center (ARDEC) for the design, prototyping and demonstration of Metal Storm less-than-lethal munitions.

The company had advised the market on 21 November 2005 that this contract was expected.

Under the Phase II Small Business Innovation Research (SBIR) contract, Metal Storm will design and build prototype less-than-lethal munitions for demonstration to ARDEC of a range of crowd-control options. These munitions will be compatible with the Metal Storm 40mm launcher technology. Incorporated into the munitions will be "smart-round" capabilities, providing an improved level of safety and flexibility in the less-than-lethal spectrum of operations. The project effort, entitled "Metal Storm Crowd Control System", will extend over a 2 year period.

"The confirmation of this Phase II SBIR contract is very timely as much of our current engineering efforts are directly focused on the final development of our High Explosive (HE) munitions. Being able to expand our current efforts into specific less-lethal capabilities will fit nicely with our 2006 strategic plans." said Metal Storm's Chief Executive Officer, David Smith.

"We are extremely pleased to receive this award from the US Army in support of their efforts to provide broad war fighting versatility. Metal Storm systems have potential to add significant capability to operations

requiring crowd control for the urban warfare environment while also having numerous applications and market opportunities in civil law enforcement scenarios."

"As advised to the market in September 2005, Metal Storm is also currently working under a Cooperative Research and Development Agreement with ARDEC in relation to the development of HE munitions. This critical business relationship will become even more advantageous as we add the less-lethal line of munitions to the already established framework for the rapid development, testing, and eventual certification of a range of 40mm munitions for use in Metal Storm weapons systems. We will continue to keep the market informed of our progress in this area", said Mr. Smith.

As announced on 2 December 2005, Metal Storm was also recently awarded a Phase II SBIR contract with the US Department of Defense worth approximately Au$1.32 million for the development and testing of a remotely operated weapon system.

See the footnotes below for further information regarding ARDEC, the SBIR program, and less-than-lethal systems.

Future Technologies

RAFAEL Introduces Personal Ceramic Armor Especially Designed For The Modern Soldier

Haifa, -- RAFAEL Armament Development Authority Ltd. has received an order valued at $2.2M for ultra lightweight personal ceramic armor intended to protect the individual soldier on the modern battlefield.

Developed by RAFAEL, this unique armor is made of boron carbide, one of the hardest materials known and has the ability to defend against high velocity projectiles at a lower cost than that of its competitors.

During extensive ballistic testing carried out both in Israel and abroad, RAFAEL's boron carbide ceramic tiles encased in polyethylene withstood all threats and fulfilled requirements previously indicated by interested customers.

This new technology enables the use of ceramic armor not only for personal armor, but for the protection of vehicles and helicopters as well.

According to RAFAEL's figures, this ceramic technology will lead RAFAEL to new markets with sales worth tens of millions of dollars.

Defence Industry

India To Purchase SMERTCH MLRS From Russia

INTERFAX news agency reports about signing of contract for supply of two regiment sets of Russian-made Smertch Multiple Launcher Rocket System to India.

As per the contract of 31 December, 2005, two regiments of Smertch Multiple Launcher Rocket System in the most advanced modification will have been supplied to India by the end of 2007.

According to unofficial sources, 28 launchers of Smertch MLRS will be supplied to India.

Smertch MLRS is one of the most powerful and high-performance means of suppression of enemy's troops and means. Their recent modifications can use six types of rockets of various designation, including a 300 mm rocket with cluster head, armed with hollow charge fragmentation combat elements. It is designed to destroy the enemy's man-power at open ground or in shelters, light armored equipment and certain fortifications at the distance from 25 to 70 km. Rocket weight is 800 kg, mass of war-head is 100 kg.

A special 300 mm rocket, armed with anti-tank mines, has been developed to fight armoured equipment. It enables remote laying of minefield at tank hazardous directions (25 mines). Arsenal of Smertch MLRS includes rockets with cluster heads, armed with homing, fragmentation, thermobaric combat elements and detachable high-explosive head.

Smertch MLRS is composed of combat vehicle (on the base of MAZ or Tatra vehicle) with 12 guides, rockets, equipped with control system at the active section of flight trajectory, transportation-loading vehicle, automated fire control complex. Launching time of 12 rockets – is 38 seconds, reloading time is 16 minutes.

Defence Industry

Marine Corps LAVs and Tanks to Get Advanced Night Vision Technology; Raytheon Upgrades Fighting Vehicles with $121 Million in New Awards

MCKINNEY, Texas, -- Raytheon Company will improve the Marine Corps' ability to fight 24/7 in all weather conditions by equipping nearly 900 vehicles with detection and targeting systems based on advanced infrared technology.

The company recently received $96 million to produce, install and support 416 Improved Thermal Sight Systems (ITSS) for the Corps' Light Armored Vehicles (LAV 25s) and $25 million in Firepower Enhancement Program (FEP) funds to outfit another 150 of their 403 M1A1 tanks with equivalent night vision systems.

ITSS and FEP are new, compact sighting systems that boost warfighters' ability to see the battlefield in the day, at night and in adverse conditions such as sand storms, rain, smoke and dust. LAV and tank gunners use the systems to target and shoot enemy platforms at safe distances. Both systems also support long-range reconnaissance missions, including precise location of distant targets.

Each ITSS contains a high-performance 2nd generation forward looking infrared imaging system, a laser rangefinder, an embedded fire control computer and a "far target" location system. These elements form an integrated mission solution that Marines use to execute fire control missions.

"ITSS and FEP are powerful mission solutions," said Glynn Raymer, vice president of Raytheon Combat Systems. "Using ITSS and FEP, Marines and other troops will have no doubt about their ability to see the battlefield, 24/7."

Raytheon anticipates that ITSS and FEP contract options, in tandem with sales of ITSS to allied forces, could result in additional new orders valued at $200 million during the next few years.

Raytheon Company, with 2004 sales of $20.2 billion, is an industry leader in defense and government electronics, space, information technology, technical services, and business and special mission aircraft. With headquarters in Waltham, Mass., Raytheon employs 80,000 people worldwide.

Defence Industry

From contract to delivery within eight months when the Netherlands buys BvS10 from Hagglunds

When BAE Systems Hagglunds today delivers the first armoured all terrain vehicle, called BvS10, to the Dutch Army barely eight months have passed since the contract was placed.

– We are very content with Hagglunds and the companyBrs ability to keep the time agre-ed for the first delivery. A key to the success has been the unconventional but flexible way of working regarding the processes of development, purchase and production says Brig.Gen. Paul Opgenort

– Characteristic for this project is how fast and smooth everything has functioned, says Sven Kagevall, Managing Director of BAE Systems Hagglunds. The cooperation with the Dutch customer has been characterized by a mutual trust. We have in all aspects had a profound collaboration on each level, which also has resulted in an extremely short period of time between order and delivery. This shows Hagglunds ability to real-ize a project in a short period of time, which is valuable to our customers who live and act in an increasingly changing time.

The purchasing process was accomplished in less than three months. The lead time be-tween contract and serial delivery has been only 8 months.

The Netherlands has totally ordered 74 BvS10 (also delivered to the British Royal Marines under the name of “Viking”). The delivery contains four variants of the BvS10; 46 vehicles for troop carrying, 20 commander vehicles, 4 recovery vehicles and 4 ambulance vehicles. The deliveries will take place during 2006 and 2007. The product name “Viking” will also be adopted by the Dutch Army.

The BvS10 is the latest generation of the BAE Systems Hagglunds All Terrain Vehicle family, and is based on more than 25 years experience of articulated all terrain vehicle design and production.

Parallel to the manufacturing of the BvS10 continues the realization of CV9035 to the Nether-lands. These vehicles will be delivered from 2007 through 2010.

Contracts

Armor Holdings, Inc. Receives $17.2 Million Armor Component Award for Up-Armored HMMWV

JACKSONVILLE, -- Armor Holdings, Inc., a leading manufacturer and distributor of security products and vehicle armor systems serving military, law enforcement, homeland security and commercial markets, announced today the receipt of a $17.2 million modification to the current multi-year Up-Armored HMMWV contract from the U.S. Army Tank-automotive and Armaments Command.

The contract modification adds production of specially designed armor components for field installation to enhance protection levels on the M1114 Up-Armored HMMWV. The Company advised that work will be performed during 2006 at the Armor Holdings Aerospace and Defense Group facilities in Fairfield, Ohio.

Robert Schiller, President of Armor Holdings, Inc., said, "We are pleased to provide this additional equipment to support the U.S. Army and to assist in offering greater levels of protection against evolving threats. It is gratifying to receive this work as it is

evidence that our engineering efforts to offer continuous improvements are quickly recognized and realized in the field in support of our soldiers."

Source: Armor Holdings, Inc.

Defence Industry

Ireland orders further PIRANHA IIIH 8x8 in new variants

Dublin, Ireland - On December 20, 2005 the Irish Department of Defence (DoD) and MOWAG GmbH – a General Dynamics company – signed a contract for a further batch of 15 units of the PIRANHA IIIH 8x8, with a total value of close to 30 Million Euros.

After two contracts for the same vehicle between 1999 and 2002, this contract adds two new variants to the fleet of MOWAG vehicles operated by the Irish DoD.

In 1999 the Irish Department of Defence selected the PIRANHA for their overseas peace keeping missions, where the vehicle proved its liability and performance. Earlier last year, the Irish Department of Defence (DoD) had announced the procurement of additional PIRANHAs. Until today 65 vehicles are in operation and the additional order will summarize to a total fleet of 80 units.

Of the now ordered 15 PIRANHA IIIH 8x8, 9 will be equipped with a remotely controlled and stabilized 12.7 mm KONGSBERG Weapon Station and 6 with a stabilized OTOMELARA 30 mm Weapon System. The PIRANHAs will further enhance the military capability of Ireland to participate in international operations. The threat situation in such missions specifically calls for a high level of protection for the vehicle crews against mines and ballistic weapons. With the in worldwide operating PIRANHA IIIH 8x8, the technology-minded company from Kreuzlingen, Switzerland offers a proven product, which fulfils this high-ranking requirement of protection, comfort and mobility. With its third order, the Irish Army continues to trust in the reliability and performance of the successful product from Kreuzlingen.

Production will take place at MOWAG's facility in Kreuzlingen and deliveries will start in February 2007.

Defence Industry

MAC International Was Awarded Contract For Police Trucks

MAC International, Dubai, U.A.E., was awarded on Dec. 16, 2005, a delivery order amount of $67,210,440 as part of a $171,582,910 firm-fixed-price contract for Police Trucks.

Work will be performed in Detroit, Mich., and is expected to be completed by June 30, 2009. Contract funds will not expire at the end of the current fiscal year. There were an unknown number of bids solicited via the World Wide Web on Sept. 22, 2005, and 12 bids were received. The Army Tank-Automotive and Armaments Command, Warren, Mich., is the contracting activity.

Robots

Oshkosh Truck Unveils Next Generation of Unmanned Defense Logistics Vehicle

OSHKOSH, Wis., -- Oshkosh Truck Corporation announced that it has unveiled an unmanned version of its Palletized Load System (PLS) vehicle at the U.S. Army Tactical Wheeled Vehicle Component Technology Demonstrations in Yuma, Ariz. Showcasing the immediate application of the technology for the U.S. Army fleet, Oshkosh is demonstrating a real-world mission scenario as the driverless truck transports cargo between destinations seven miles apart in the Arizona desert.

The unmanned navigational kit being applied to the PLS was tested at the 2004 and 2005 DARPA Grand Challenge races, and has undergone additional testing in desert environments, similar to those in the Middle East. Oshkosh is partnered with Rockwell Collins and the University of Parma, Italy, on the development this unmanned navigational kit.

"It is Oshkosh Truck's objective to always support the U.S. Army's drive to integrate the most capable and reliable technologies into their fleet. To that end, we're proud to make this next-generation of unmanned technology a reality that could be applied within the near term," said John Stoddart, Oshkosh executive vice president and president of defense. "Our technology allows soldiers to be taken out of convoy resupply missions or to be re-assigned to other tasks within the convoy."

The current "manned" Oshkosh(R) PLS transportation vehicle has proven its ability in front-line supply missions in Bosnia, Kosovo, Afghanistan and Iraq. A 10-wheel-drive truck and trailer system, the PLS is designed to transport containers carrying ammunition and other critical supplies, or large tanks holding fuel or water. The original PLS and the PLS Unmanned Ground Vehicle have a 16.5 ton payload capacity and an on-board material handling system that quickly unloads and loads cargo.

"Having helped the United States military move people and supplies for more than 80 years, Oshkosh

understands the needs and challenges facing the armed services and are committed to helping the United States military lead the way in realizing the benefits of autonomous vehicle technology," said Stoddart. "I believe this technology can revolutionize the transport of logistics in future conflicts and contribute to increased soldier survivability."

Contracts

GM GDLS Defense Group gets a 24 million dollar contract

GM GDLS Defense Group L.L.C., Sterling Heights, Mich., was awarded on Dec. 19, 2005, a $24,466,112 modification to a cost-plus-fixed-fee contract for Parts to Support the Stryker Mobile Gun System and the Stryker Nuclear, Biological Reconnaissance Vehicles.

Work will be performed in Sterling Heights, Mich. (73 percent), London Ontario, Canada (15 percent), Tallahassee, Fla. (10 percent), and Scranton, Pa. (2 percent), and is expected to be completed by July 31, 2007. Contract funds will not expire at the end of the current fiscal year. This was a sole source contract initiated on Dec. 9, 2003. The Army Tank-Automotive and Armaments Command, Warren, Mich., is the contracting activity.

Contracts

Russia to supply $4 billion worth of arms to Algeria

As reported by INTERFAX, ROSOBORONEXPORT State Corporation has prepared a package of contracts for supply of Russian weapon and military equipment worth of more than $4 billion to Algeria.

Some of these contracts have already been initialed and expected to be signed in February 2006.

Among the ready contracts are the contracts for supply of 8 battalions of air-defence systems S-300PMU «Favorit» worth of about $1 billion, as well as batch of T-90C tanks for several hundreds million dollars.

Apart direct supply of the equipment, modernisation of the existing one is envisaged - a big batch of T-72 tanks will undergo modernisation. Industrial enterprise Uralvagonzavod shall participate in implementation of these contracts.

Payment for the supplied arms will be effected according to a complicated scheme, which also includes writing off the part of Algerian debt to the former USSR, which according to experts, comes to $4.7 billion.

Defence Industry

Lockheed Martin UK Annonces Completion Of HMT Vehicles Limited Acquisition Purchase Strengthens Military Vehicle Design Capabilities

Bethesda, Md., January 23, 2006 -- Lockheed Martin UK Holdings Limited, a subsidiary of Lockheed Martin Corporation [NYSE: LMT], has acquired HMT Vehicles Limited, a United Kingdom-based developer of designs for military vehicles.

HMT Vehicles Limited (HMT) is a privately owned company that has funded the development for innovative designs that have been incorporated into light to medium high mobility wheeled military vehicles in the U.S. and U.K. HMT owns and licenses the intellectual property associated with these designs. Vehicles incorporating HMT's designs are used as platforms for weapons programs such as the Lightweight Mobile Artillery Weapons System and the Soothsayer electronic warfare programs in the UK. Lockheed Martin plans on incorporating HMT's designs into its vehicles for U.S. programs such as the Lightweight Prime Mover program and the U.S. Army's Future Tactical Truck System (FTTS).

Lockheed Martin UK Holdings Limited, located in London, will manage the HMT Vehicle business in coordination with Lockheed Martin Systems Integration, based in Owego, NY.

"The HMT acquisition aligns with the Corporation's cash deployment strategy of acquiring companies that enhance our core focus areas and position us for future growth," said Bob Stevens, Lockheed Martin Chairman, President and Chief Executive Officer. "HMT's highly innovative vehicle designs will enhance the functionality of Lockheed Martin's vehicle products, which will benefit our customers and the critical missions they support worldwide."