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Future Technologies

## General Dynamics Participates in Successful Trophy Active Protection System Experiments at DoD Test Facility

DAHLGREN, Va. - The first tests of the Trophy Active Protection System in the U.S. were successfully completed today by the U.S. Naval Surface Warfare Center.

Conducted at the request of the Office of the Secretary of Defense's Office of Force Transformation (OFT), the tests certify comprehensive experiments conducted by the Israel Defense Forces, validating Trophy's ability to detect, track and destroy incoming rocket propelled grenades (RPG) at safe distances from the host vehicle.

A Stryker eight-wheeled combat vehicle equipped with Trophy underwent U.S. validation testing in support of OFT's Project Sheriff, or the Full-Spectrum Effects Platform (FSEP). FSEP program officials seek to meet urgent operational requirements for a range of lethal and nonlethal technologies on a rapidly deployable platform. Trophy was selected in 2005 to be FSEP's active protection solution.

The Dahlgren tests culminated in a live-fire demonstration March 30 for various U.S. and international military dignitaries. Trophy detected, tracked and defeated an inert incoming RPG while the Stryker combat vehicle was on the move. Similar tests were successfully conducted in Israel in late February.

Trophy intercept sequence

"Our mission is not to discover the 100 percent solution, but to find the best solution that can meet warfighter needs today," said Marine Corps Col. Wade Hall, transformation strategist at OFT. "Currently, the warfighters' only counter to the RPG threat is armor, more armor and more armor.

"As demonstrated today, the Department of Defense now has at its disposal technology that allows U.S. Forces to defeat both the 'archer and the arrow.' As General Patton once said, 'A good plan executed today is better than a perfect plan executed at some indefinite point in the future.' OFT and the Full-Spectrum Effect platform are executing today," Hall added.

General Dynamics Land Systems and Rafael Armament Development Authority, Ltd. entered into a teaming agreement in 2005 to introduce Trophy in the United States for possible integration on ground vehicle fleets.

OFT advocates and seeks to catalyze experiments that get nascent capabilities into the hands of warfighters to create new knowledge and learning. The FSEP will integrate new weapons and sensor technologies onto current platforms in a spiral development approach, and will ultimately field increasingly advanced capabilities. U.S. test certification concludes the Trophy FSEP's Spiral 0 efforts. Spiral 1 includes developing an autoloader for the Trophy Active Protection System.

Israel Defense Forces' Merkava 4 main battle tanks will feature Trophy as part of their survivability suite. Trophy could also meet lightweight armor requirements for a variety of military ground vehicle survivability upgrade programs worldwide. Offered as a kit, Trophy would increase lightweight armored vehicles' survivability and enhance mission profiles. Under the General Dynamics Land Systems-Rafael teaming agreement, General Dynamics serves as the prime contractor for related U.S. Department of Defense programs.

Contracts

## BAE SYSTEMS Awarded J15 Million Contract To Support Upgraded FV432 Armoured Vehicle

LONDON -- The Defence Logistics Organisation (DLO) has awarded BAE Systems a contract worth up to J15 million to provide support for 500 upgraded FV430s multi-role armoured vehicles.

Capable of carrying up to eight personnel and two crew, the FV430 is the workhorse of British Army mechanised units, fulfilling many varied roles.

A related J85 million contract to upgrade 500 FV430s was awarded last October to BAE Systems. Under the contract, BAE Systems will serve as the design authority for the upgrades, which will include fitting modern engines and transmissions, designed to improve vehicle reliability, while reducing maintenance costs. The work will be carried out by ABRO at Bovington.

“This announcement is the first contract we have awarded under the Partnering Agreement signed between the Ministry of Defence and BAE Systems in December. This Agreement aims to deliver significant improvements in the Land (Army) environment, similar to those already being achieved for both Harrier and Tornado,” said Major General Tim Tyler, DLO Director General Logistics (Land).

“The agreement reflects Defence Industrial Strategy principles by seeking to combine industry and military strengths, helping us deliver better support to our front line troops at better value to taxpayers.”

Ian McNeeney, BAE Systems’ business director Support Programmes for Land Systems said, ”The upgrade contract will significantly increase the reliability of the FV430 fleet and combined with this innovative support contract will deliver a step change in fleet availability and through life support cost. This demonstrates the potential of the Partnering Agreement to deliver major benefit to Defence.”

The contract will be in two stages. The first 18 months

will determine an accurate cost profile, subject to extension depending on operational use of the vehicle, which will lead on to a five year support period.

The In-Service Date for the first 50 vehicles is August 2006, with a further 20 vehicles being converted per month over the next two and a half years. The contract will be managed by a BAE Systems Integrated Project Team co-located with the Ministry of Defence at Andover with support from Telford.

Contracts

## Thai Ministry Of Defence Gets OK For Major Artillery Purchase 1.3 Billion Bath For Howitzers

Government House, Bangkok, Mach 28, 1500 Hrs - Mr Danuporn Punnakan, Deputy Spokesman, with the office of the Prime Minister, announced that the cabinet had just given its approval to the Ministry of Defence's request for procurement of six self propelled 155 mm Howitzers at a cost of 1.305 billion baht.

The weapons would be included in the Royal Thai Army's multi-fiscal year debt that runs until 2008. The price of the weapons also includes training, technical manuals, spare-parts and maintenance.

The procurement is consistent with the development plan of the 2nd Infantry Division, King's Guard - an armoured vehicle unit assigned by the Royal Thai Army as the lead unit under the contingency plan.

The purchase is also in line with the Army's weapons modernisation principles where ease of mobility is combined with accuracy and highly destructive firepower, providing strategic forces with distinct advantages when engaged in close-range combat.

Contracts

## Ceradyne, Inc. Receives $8.8 Million Order For Next-Generation Ceramic Body Armor

COSTA MESA, Calif. -- Ceradyne, Inc. (Company) received a sole-source contract from the United States Special Operations Command not to exceed $8.8 million for next-generation ceramic body armor components.

These new components, developed by Ceradyne's research and development team to meet the Special Operations' unusual and compelling urgency, are scheduled to be shipped in the second and third quarters of 2006.

Joel Moskowitz, Ceradyne chief executive officer, stated that this order represents the first of what may be a new series of lightweight ceramic armor components to be used initially by the Special Operations Command and that he is proud of the level of effort and results that had been obtained by Ceradyne's in-house ballistic development team. He anticipates that these new components may become standard issue and, if that becomes the case, the next series of orders might be placed on an open and competitive basis. Moskowitz added that Ceradyne will be competing for future orders for this new-generation armor.

Defence Industry

## BAE Systems Precision Mortar Seeker Survives Gun-Level Shock Test

NASHUA, N.H. -- BAE Systems has successfully completed initial 120mm mortar weapon-level launch shock tests of its semi-active laser seeker for the U.S. Army's XM395 Precision Guided Mortar Munition (PGMM) cartridge.

The seeker met all test objectives and maintained accuracy during an evaluation at Alliant Techsystems' (ATK) rail gun test facility in Elk River, Minn.

The milestone success opens the way to the program's next phase — guided flight demonstrations scheduled for this spring.

"This successful rail gun test is a key stepping-out point for the PGMM program," said Dave Rathe, ATK program manager for PGMM. "The team is pleased with BAE Systems' accomplishments to date, and we continue to be impressed by the capability of the semi-active laser seeker. The ATK-led team is confident in our readiness to start the first phase of the PGMM flight test program."

BAE Systems is partnered with ATK on the PGMM program, an advanced weapon system that offers soldiers a precise, multipurpose indirect fire capability. The nose-mounted seeker is one of several components in the PGMM cartridge. The ATK-led program is currently in system design and development, with production expected to begin in late 2008.

"This was an extremely stressful test on the hardware," said Kim Cadorette, BAE Systems' PGMM program manager. "The seeker passed the test without degradation. We are continuing with production and look forward to the upcoming seeker and mortar-round guided flight tests."

The semi-active laser seeker uses BAE Systems' Distributed Aperture Semi-Active Laser Seeker technology, which has exceptionally high sensitivity coupled with accurate angle accuracy over a large field of view. ATK and the U.S. Army have planned extensive testing to ensure that the first PGMM production rounds will be ready for delivery by 2010.

Defence Industry

## U.S. Marine Corps Selects Lockheed Martin To Build Lightweight Prime Mover Truck For New Howitzer

OWEGO, NY, -- The United States Marine Corps has awarded Lockheed Martin a contract to manufacture Lightweight Prime Mover (LWPM) trucks to tow the new M777 155-mm lightweight artillery howitzer.

The $2.1 million Low-Rate Initial Production (LRIP) contract is for four vehicles. Under the contract, the Marine Corps has the option for full-rate production of 120 LWPM vehicles, which represents a potential value of approximately $30 million.

"Lockheed Martin will provide the Marines with a safe, proven and survivable truck that will support the Corps' high mobility needs and meet their demanding expeditionary requirements," said Louis J. DeSantis, vice president and general manager, Integrated Products at Lockheed Martin Systems Integration – Owego. "Our LWPM assembly line will start work immediately so we can deliver these stronger, safer trucks as quickly as possible."

Lockheed Martin's LM4x4 truck will serve as the LWPM. Built on the proven High Mobility Transport (HMT) design, the LM4x4 provides a superior weight-to-payload ratio, enabling the approximately 9,000-pound vehicle to easily tow the 10,000-pound M777 howitzer. The LM4x4's all-terrain capability allows it to keep pace with armored vehicles and it is air-transportable inside the C-130 Hercules tactical transport aircraft. The vehicle also can be externally carried by CH-53 and CH-47 helicopters, and the V-22 tilt-rotor aircraft.

The LM4x4 has been engineered to accept appliquй armor, significantly improving troop safety and survivability. The vehicle also features rollover protection and fording capabilities, and a central tire inflation system that automatically adjusts air pressure to terrain and payload needs.

The Marine Corps contract is Lockheed Martin's third significant achievement in the military truck market this year. The company announced in late January that it had acquired HMT Vehicles Limited, a United Kingdom-based developer of designs for military vehicles and the designers of the platform the LM4x4 is based on. Lockheed Martin plans on incorporating HMT's designs into its U.S. programs such as the LWPM and the Army's Future Tactical Truck System (FTTS).

Lockheed Martin also announced in early February that it had been selected to build an LM4x4 technology demonstration utility vehicle for the second phase of the U.S. Army's FTTS Advanced Concept Technology Demonstration. The company will deliver the vehicle to the Army this fall and the truck will then undergo a Platform Systems Demonstration and a Military User Assessment. The results of these evaluations will be used to refine the requirements for the next generation of tactical wheeled vehicles.

Defence Industry

## First Export Order for Caesar Artillery System

VERSAILLES-SATORY -- Giat Industries has just been awarded a contract by Thailand for 6 Caesar systems and their environment to equip an artillery battery of the Thailand Army.

Caesar is an innovative 155mm/52 calibre weapon, based on a 6X6 truck with an armoured cab, fitting the fire control, a significant amount of ammunition and the gun crew in one piece in order to ensure autonomy and reactivity.

Mobility, firepower, ease of operation and survivability are the key features of this new system. Caesar is a fully interoperable artillery howitzer. It can be carried in a single load in a C-130 cargo aircraft. Compared with towed guns, the time required for combat readiness is dramatically reduced: in less than two minutes, Caesar fires a burst of six rounds and comes out of action, beginning that way its "escape move" necessary to avoid counter-battery firings from the enemy. The system has a firing range of 40 km.

The versatility of Caesar makes it suitable to deliver fire support to all types of motorized, mechanized and armoured military units, especially those designed for rapid deployment.

"This export contract of the Caesar system is the first major result of our export efforts for this system" said Luc Vigneron, Chairman and Chief Executive Officer of Giat Industries.

Giat Industries has been present in Thailand for more than 15 years, providing 105 mm artillery systems, associated ammunition and also medium caliber equipment for the Royal Thai Forces.

Giat Industries' mission is to meet the requirements of the French Army as well as other armies worldwide. Giat has acquired unrivalled expertise in all the components of modern air-land systems: protection, command, mobility, fires, and support. Giat Industries generated revenues of 731 million euros in 2005 and allocates 14 % of sales invested in research and development. Giat Industries equipment and customer's services: MBTs as Leclerc, armoured vehicles as VBCI, artillery systems as Caesar, ammunition as Bonus, Battlefield Management Systems as SIT V1, innovative customer services and upgrades are in service in over 100 countries.

Defence Industry

## RUAG: Major order from the Dutch army

Berne -- RUAG Ammotec, a subsidiary of the RUAG technology group, has bested international competition to secure a major order.

RUAG, the European leader in small calibre ammunition, will be manufacturing ammunition worth up to CHF 80 million for the Dutch army over the next five years.

RUAG is already supplying the Dutch police and army. However, this new order is the biggest single order in RUAG Ammotec's history. The company's facility in Thun manufactures a comprehensive range of 5.56 mm ammunition for the Dutch armed forces. The big new order will secure 35 jobs for a period of 5 years and will help to stabilize the fall in volume being experienced by such products as the GP 90, which is purchased by the Swiss Armed Forces.

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Future Technologies

## New Material Developed to Enhance Soldier Protection

Parliamentary Secretary to the Minister for Defence, Senator Sandy Macdonald, has today witnessed a demonstration of a new ballistic material that could enhance protection for Australian soldiers in the future.

Senator Macdonald was visiting the Defence Science & Technology Organisation (DSTO) where the Australian Defence Apparel company displayed samples of the ballistic material being developed under the Capability & Technology Demonstrator Program.

The Lightweight Ballistic Armour project is applying a number of new ceramic and composite materials and fabrication technologies to produce lightweight, low-cost, high-performance helmet and body armour for Australia's Defence personnel.

Senator Macdonald said Defence was working with industry to develop the most suitable equipment and materials that would improve safety for Australian soldiers.

"We are constantly striving to introduce new capabilities that will reduce the burden on our soldiers and allow them to operate more effectively and safely, and this development shows promise in that direction," he said.

The Lightweight Ballistic Armour project is a collaborative arrangement between the Department of Defence, Australian Defence Apparel Pty Ltd., CSIRO and the Victorian Centre for Advanced Materials Manufacturing of Deakin University.

The Capability and Technology Demonstrator (CTD) program was established in 1998 to enable industry to demonstrate how advanced technology can provide significant enhancement in priority areas of Defence capability.

Senator Macdonald said since 1998 the government had invested more than $140 million in the CTD program. There are now 35 active CTD projects being developed.

"The government funds up to $26 million each year on this program to encourage companies to come forward with proposals that can enhance Defence capabilities," Senator Macdonald said.

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Defence Industry

## Arotech's MDT Awarded Record $22 Million Orders for DAVID Combat Armored Vehicles

Arotech Corporation announced that its Armor Division has recently entered into a $22 million supply agreement for providing "David" combat vehicles to the Israel Defense Force (IDF).

The "David" was designed in Israel by Arotech's MDT Protective Industries in collaboration with the IDF and will be built in MDT Armor's Alabama facility.

With this supply agreement, Arotech's backlog stands at $39 million.

MDT Armor's "David" combat vehiclesThe new supply agreement follows the successful completion of a recently received pilot order from the IDF for MDT's "David" armored vehicles, most of which were delivered in the first quarter. The "David" is specifically designed as an urban combat vehicle, a result of years of MDT experience in designing armored vehicles.

"The demand for MDT's "David" indicates that there is a clear need for a new armored solution for urban military applications. The 'one-size-fits-all' concept that was well demonstrated with the non-armored HMMWV cannot be applied to armored vehicles in today's urban warfare scenarios. Constraints caused by the added weight of armor need to be addressed with the vehicle's mission in mind," said Robert S. Ehrlich, Chairman and CEO of Arotech Corporation.

"We are proud that the IDF has decided to equip its soldiers with our armored vehicles. We believe the "David" can be appropriate to many urban warfare situations, and we are planning on presentations of the David to other militaries facing similar urban warfare situations."

The "David" is an ultra-light armored personnel carrier for combat missions designed for the urban low intensity conflict. With a small footprint (considerably shorter, lighter and narrower than the up-armored HMMWV) it is ideal for operating in urban and other densely populated areas. Its flexible design allows for several armor options, seating arrangements and equipment installations, all designed to meet specific operational tasks. It can carry 4, 5 or 6 soldiers in full battle gear. Gun ports (in all 4 directions) allow for accurate return

fire as soldiers have full view of gun sites and surrounding area through the armored windows.

Defence Industry

## More Stryker wheeled combat vehicles for US Army

STERLING HEIGHTS: The U.S. Army has placed its 2006 fiscal year order for 306 Stryker wheeled combat vehicles from General Dynamics Land Systems, a business unit of General Dynamics.

The order is valued at $463.9 million and is an extension of a November 2000 contract to provide more than 2,100 armored vehicles. To date, approximately 1,500 Strykers have been delivered.

Work will be performed in Anniston, Ala.; Lima, Ohio; and London, Ontario, Canada, by existing General Dynamics employees. Vehicle deliveries are slated for April 2007 through March 2008.

Stryker, a family of eight-wheel-drive combat vehicles that can travel at speeds up to 62 mph on highways with a range of 312 miles, is the Army's highest-priority production combat vehicle program and the centerpiece of the ongoing Army Transformation. Stryker's current combined fleet operational readiness rate is in excess of 96 percent with more than 6 million miles accumulated through two completed Operation Iraqi Freedom rotations. Stryker vehicle variants have more than 70 percent common components within the 300- plus Strykers comprising a brigade combat team, increasing cost-effectiveness of the fleet by easing the unit's training and logistics burden.

Stryker operates with the latest C4ISR equipment and an integrated armor package protecting soldiers against improvised explosive devices, rocket propelled grenades and a variety of infantry weapons. The Mobile Gun Systems and Nuclear, Biological and Chemical Reconnaissance Vehicles, the newest Stryker configurations, were delivered in late 2005. Other Stryker vehicle configurations include: the anti-tank guided missile and medical evacuation vehicles; and carriers for mortars, engineer squads, command groups and fire- support teams.

Significantly lighter and more transportable than existing tanks and armored vehicles, Stryker fulfills an immediate requirement to equip a strategically deployable (C-17/C-5) and operationally deployable (C-130) brigade capable of rapid movement anywhere on the globe in a combat-ready configuration. Stryker Brigade Combat Teams have operated with "historically high" mission availability rates in Iraq since October 2003, demonstrating the value of a force that can move rapidly as a cohesive and networked combined- arms combat team.

Contracts

## U.S. Marine Corps Awards General Dynamics $44 Million Expeditionary Fighting Vehicle Contract

STERLING HEIGHTS, Michigan. – The U.S. Marine Corps Systems Command in Quantico, Virginia., has awarded General Dynamics Land Systems, a business unit of General Dynamics (NYSE: GD), a $44.4 million contract to complete the systems development and demonstration (SDD) phase of the Expeditionary Fighting Vehicle (EFV) program.

General Dynamics will provide all required materials, services, personnel and facilities to complete EFV design and development, perform studies and analyses, manufacture and test all SDD prototypes, prepare for production, initiate logistics support and successfully complete the SDD phase.

Work will be performed by General Dynamics Amphibious Systems, an operating unit of General Dynamics Land Systems, in Camp Pendleton, Calif.; Aberdeen, Md.; Sterling Heights, Mich.; and Woodbridge, Va. Work is expected to be completed by September 2009.

The EFV is an amphibious assault vehicle with a breakthrough design that provides the Marines with a transformational leap in technology and capability resulting in dramatically improved land and sea performance.

The Marines are currently executing a multi-phased land, sea and force-on-force Operational Assessment (OA) of the EFV. Last month, the EFV successfully completed the gunnery phase of the assessment at Camp Lejeune, N.C.

Off-shore ocean operations testing will be conducted in June and July near Camp Pendleton, Calif., to be followed by land and force-on-force combat maneuvers at Twenty-Nine Palms, Calif., July through September. Once deployed, the EFV will help the Marines sustain inland combat operations by maximizing tactical surprise; minimizing vulnerability on land; providing improved firepower, lethality, and survivability; and providing command, control, communication, computer and intelligence (C4I) on-the-move capability.

On land, the EFV will maneuver and fight as an integrated part of the joint services ground combat force. The vehicle is capable of speeds up to 45 mph allowing it to complement the Abrams main battle tank during offensive maneuvers to inland objectives. The EFV's land mobility and communications capabilities provides Marines the ability to exploit enemy force vulnerabilities.

Off shore, the EFV allows Marines to implement their

Operational Maneuver from the Sea doctrine. The EFV can launch forces from 20 to 25 nautical miles at sea, carrying its crew of three and 17 combat-ready Marines to shore at speeds in excess of 20 knots, three times faster than the current AAVP7-A1. This provides a significant increase in operational flexibility and agility.

The Marine Corps awarded General Dynamics the EFV contract in 1996. The vehicle entered the SDD phase in 2001. Production of 1,013 vehicles is planned to begin in fiscal year 2007 and continue until 2020.

Defence Industry

## CMI to receive orders for LCTS90 turrets from Belgian National Defence

The Belgian Group Cockerill Maintenance & Ingenierie (CMI) is very glad to hear the official notification of the contract signed between the Belgian National Defence and the Swiss company Mowag, contract based on the supply of infantry armoured vehicles.

"We are subcontractors of the Swiss company for the supply of LCTS90 turret/gun systems which will equip 18 of the 138 vehicles of the Belgian program's first batch. This good news, already foreshadowed since the green light was announced by the Council of Ministers, end of January, is now an assurance", has commented Bernard Serin, CEO of the CMI Group.

CMI Defence is business branch specialised in gun systems for Light Armoured Vehicles (LAV). Both designer and integrator of turrets, CMI Defence is the word leader in 90mm gun manufacturing since 1974. The turrets will be designed in CMI Defence facilities, near Liege. They will be assembled in the workshops situated nearby the headquarters of the CMI Group. EMI, a subsidiary located in the South of Belgium, will manufacture the turret's hulls and will assemble 120 units of the Mowag vehicles.

The delivery of the vehicles equipped with the CMI turrets to the Belgian Government will be spread out from 2008 to 2012. The Belgian program foresees the order of 104 supplementary vehicles as well, in two batches. These optional stages have to be notified in 2006 and 2010, for a delivery before 2016. They would include 22 vehicles equipped with the CMI gun systems. "Considering the industrial compensation programs foreseen by Mowag, the business opportunities linked to the order weigh more than 300 millions Euros for the CMI Group during the 10 forthcoming years", emphasises Jean-Francois Levaux, Vice President Sales & Marketing, CMI Group.

Besides the 90mm calibers, CMI Defence has recently developed a 105 mm weapon system (the CT-CV Weapon System), that is to say the biggest airtransportable caliber in the world. CMI Defence range of products includes also multi-use intermediate calibers products. "The 90mm caliber achieves performances roughly equivalent to a classic gun of 105mm, but it allows to reduce the weight of the vehicles and offers less maintenance costs", specifies Bernard Serin.

Defence Industry

## Kalashnikov Against US Double Standards

On April 15, 2006 a briefing for Russian and foreign journalists with participation of the chief designer of Izhmach Concern JSC, Rosoboronexport State Corporation director general adviser, president of the Union of Russian gunmakers, lieutenant-general Mikhail T. Kalashnikov was held in the Moscow office of Rosoboronexport.

At the briefing top-managers of Rosoboronexport and Izhmach Concern JSC applied to public.

An occasion of the meeting was the article published in the American newspaper "The Washington Times", which referring to an anonymous source in the US Administration gave information that Russia had sold to Venezuela a batch of supposedly refurbished AK-47 assault rifles instead of the promised new ones.

Speaking at the briefing the chief of administration staff of Rosoboronexport director general Dmitry Shugaev declared that in May 2005 on behalf of the Government of the Russian Federation the Rosoboronexport State Corporation concluded a contract with Venezuela to deliver a batch of a new generation AK-103 Kalashnikov assault rifles. Izhmach Concern JSC is an executive of the contract. Dmitry Shugaev marked that Russia strictly observed her obligations in full compliance with specified terms of delivery.

In the framework of the briefing questions concerning protection of Russian small arms designers' intellectual property were raised, public attention was drawn to the facts of unlicensed production and selling of Kalashnikov weapons. Every year illegal circulation of unlicensed light weapons reaches up to 2 bln US dollars. Infringing Kalashnikov assault rifles made in the worst traditions of unlicensed manufacturing constitute up to 80-90 %. Thus, an unjustified damage is caused to the image of Russia as a leading exporter of up-to-date armament and military equipment, the world-famous Russian brand of Kalashnikov assault rifles is discredited.

Dmitry Shugaev underlined, that when small arms were delivered with overdue licences or without such at all, intergovernmental agreements and norms of international law were roughly broken. Russia does her best to provide protection of intellectual activity results in the sphere of high defence technologies. This is a

matter of special importance on the eve of Russia's joining World Trade Organisation.

The spokesmen expressed a common hope that international legal institutions would intensify their activities to finally regulate relationship between Russia and foreign states in the field of licence production and work out effective instruments to counteract illegal forms of arms trade.

Contracts

## AM General, L.L.C. Awarded a Contract for M1152

AM General L.L.C., South Bend, Ind., was awarded on April 12, 2006, a $10,004,324 modification to a firm-fixed-price contract for M1152 (2-Door) High Mobility Multipurpose Wheeled Vehicles.

Work will be performed in South Bend, Ind., and is expected to be completed by Dec. 31, 2007. Contract funds will not expire at the end of the current fiscal year. This was a sole source contract initiated on July 17, 2000. The U.S. Army Tank-Automotive and Armaments Command, Warren, Mich., is the contracting activity (DAAE07-01-C-S001).

Defence Industry

## DRS Test and Energy Management, Inc. to Provide Embedded Diagnostics Kits for Bradley A3 vehicles

DRS Test and Energy Management Inc., Huntsville, Ala., was awarded on April 14, 2006, a delivery order amount of $22,941,600 as part of a $34,412,300 firm-fixed-price contract for chassis modernization/embedded diagnostics kits for the Bradley A3 vehicles.

Work will be performed in Huntsville, Ala., and is expected to be completed by Feb. 28, 2008. Contract funds will not expire at the end of the current fiscal year. This was a sole source contract initiated on Nov. 15, 2005. The U.S. Army Tank-Automotive and Armaments Command, Rock Island, Ill., is the contracting activity (DAAE20-03-G-0001).

Defence Industry

## ATK to Provide Mk44 30mm Cannon to Czech Republic

Minneapolis -- Alliant Techsystems has received a contract valued at approximately $20 million for Mk44 30mm cannon weapon systems that will be mounted on the Czech Republic's PANDUR II Wheeled Armored Vehicles.

The Mk44 will be mounted in the RCWS-30 (Remote Control Weapon System) manufactured by RAFAEL Armament Development Authority Ltd.

The RCWS-30 increases the fighting capability and survivability of armored fighting vehicles. It includes ATK's 30mm Mk44, a launcher pod for two Rafael SPIKE LR Multi-Purpose-Guided-Missiles, and a coaxial 7.62mm General-Purpose Machine Gun. The Mk44 gun system is a highly reliable weapon with low life-cycle costs that incorporates a simple and user-friendly design to ensure ease of operability.

The Czech Republic Army put the RCWS-30, integrated with the Mk44 30mm weapon system, through a series of rugged tests before determining that it was the choice for their PANDUR II. The test regime included integration capability on both the PANDUR II and Patria Armoured Modular Vehicle (AMV); open-water crossings; test drives on paved and off-road surfaces; and on-loading and off-loading in a C-130 Hercules aircraft. This success is a result of long-term cooperation between RAFAEL and ATK.

ATK's Mk 44 30mm weapon system is already the choice of nearly 2,000 land vehicles, aircraft, and ship-board weapon systems for the United States and allied nations including Finland, Norway, Poland, Singapore, Switzerland, and the United Kingdom. "The MK44 cannon is the international standard for ground and naval platforms," said Jed Holzapfel, ATK Vice President, International Business Development. "In partnership with Rafael and others, we look forward to providing ATK's entire family of Chain Gun® weapon systems to our allies around the world."

Defence Industry

## Howitzer 2000 Tank Increases Range by More than 40 Percent

Howitzer 2000 Tank Increases Range by More than 40 Percent - Howitzer 2000 Tank fires V-LAP projectile more than 56 km - Successful test series in South Africa.

The Howitzer 2000 Tank fired the long-range V-LAP ammunition from DENEL over a distance of more than 56 kilometers during ammunitions tests in South Africa. This result was achieved with six DM72 propellant system modules. This new benchmark for the PzH2000 represents an increase of more than 40 percent compared

to ranges of 40 kilometers previously achieved with base-bleed artillery projectiles. The performance certificate was arranged by the German Federal Office of Defense Technology and Procurement (BWB) on behalf of Krauss-Maffei Wegmann at the Alkantpan test range (South Africa). Site boundaries of the testing grounds limited the elevation to a maximum of only 737 mils. Based on sea level standard conditions, the system has a potential range capability of more than 60 km using an elevation of 980 mils. This capability extends the operational envelope of the Howitzer 2000 Tank as a classic 155 mm / 52 Cal. tube artillery weapon into the domain previously reserved for rocket artillery.

### V-LAP Ammunition

V-LAP technology combines base drag reduction and rocket propulsion, and is deployed for both the Assegai and ERFB families of Denel 155mm Artillery projectiles. The V-LAP projectile shares an identical external interface with all other projectiles from each particular projectile family. VLAP projectiles use the identical fuzes, charges, packaging, storage and logistics that are required for the total projectile family.

The Assegai V-LAP projectile inlcudes an Insensitive warhead main filling as well as PFF (Pre Formed Fragmentation) warhead technology and is compatible with most 39-, 45- and 52-calibre artillery systems.

### Howitzer 2000 Tank

The Howitzer 2000 Tank, a product of Krauss-Maffei Wegmann, is currently the most modern tube artillery system in the world. It is used by Germany, Greece, Italy, and The Netherlands, which is why the Howitzer 2000 Tank is also referred to as the Euro-howitzer. A superior technical concept makes this system so successful. The Howitzer 2000 Tank is characterized by a complete autonomy in navigation and fire control, high shooting cadence, and a previous range of more than 40 kilometers. A highly precise weapons aiming system and stable weapons platform enable a high cadence and precise striking position. The Howitzer 2000 Tank is an essential element of combat support, even in future application and crisis scenarios.

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Future Technologies

## DRS Technologies Introduces M6000 and E6000 Thermal Imaging Engine and Module

DALLAS -- DRS Sensors & Targeting Systems - Infrared Technologies Division, a unit of DRS Technologies, Inc., announced today the product launch of the M6000 and E6000 uncooled thermal imaging engine and module. DRS's M6000 and E6000 are the first 640- by 480-pixel thermal imaging engine and module with a 25-micron pitch - a "first of its kind" product, representing a significant advancement in the developing uncooled infrared technology marketplace.

"DRS's M6000 and E6000 are totally unique and unmatched in technology in today's market, and we are very excited about the release of these products," said James M. Baird, president of DRS's Reconnaissance, Surveillance & Target Acquisition (RSTA) business. "Entering the market with this breakthrough technology is a testament to the technical superiority of the team at the Infrared Technologies Division. The technical advancement embodied in these products is what makes us the established leader in uncooled microbolometer technology."

The M6000 and E6000 utilize the market-preferred VOx microbolometer technology and provide the highest resolution available in thermal imaging at a 30 Hz frame rate. Measuring only two inches in diameter, the M6000 is well suited for applications requiring minimal space, small packaging, high resolution and strong performance. The E6000 has low power requirements and offers a variety of lens selections, making it ideal for commercial applications where image clarity is a top priority.

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Future Technologies

## Raytheon to Develop Hard-Kill Active Protection System for FCS Vehicles Under $70 Million Award

MCKINNEY, Texas -- Raytheon Company has been awarded a contract worth up to $70 million from BAE Systems to develop the hard-kill Active Protection System (APS) for Future Combat System (FCS) vehicles under a three-phase agreement. The initial phase is pegged at $10 million.

The Boeing Company, FCS Lead Systems Integrator, announced the selection of Raytheon as the APS developer earlier this month.

APS is a key element in a full-spectrum suite of "hit avoidance" technologies designed to keep FCS manned ground vehicles and their troops safe from harm. Using FCS's sensors and its common radar, the APS detects, tracks and defeats enemy threats with precision munitions in the blink of an eye.

"This selection will tap Raytheon's sensor, fire control and interceptor expertise to accelerate APS's development and integration with FCS manned ground vehicles and 'spin out' to current force vehicles," said Dennis Muilenburg, FCS program manager and Boeing vice president.

"BAE Systems is pleased to have a world-class product developer like Raytheon on the team to develop this critical element of FCS technology. We are looking forward to working with Raytheon on the development and integration of the active protection hard-kill subsystem into the overall vehicle suite of defensive capabilities. Raytheon brings a comprehensive systems engineering approach and innovative technology options to the APS development effort," said Sam Cole, FCS Manned Ground Vehicle program manager for BAE Systems.

"APS will shield warfighters and their vehicles from enemy threats," said Glynn Raymer, vice president of Raytheon Combat Systems. "Using a combination of sensor technologies and precision counter munitions

instead of heavy armor, the new system will also help FCS meet its survivability requirements."

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Contracts

## DRS Technologies Receives $222 Million U.S. Army Contract to Provide Communications Services for Multi-National Forces in Iraq

PARSIPPANY, N.J. -- DRS Technologies, Inc. announced today that it received a $222 million two-year contract from the U.S. Army to provide a scaleable, integrated, open-standards Command and Control Information Technology Infrastructure (C2ITI) for the Multi-National Forces - Iraq (MNF-I), a coalition military command responsible for providing security in Iraq and for assisting with the ongoing reconstruction program.

Two funding actions with a combined value of approximately $16 million were received by DRS on this program to provide program management, architectural design and engineering, installation, operation and maintenance, network management and systems administration support.

Work for this order will be performed by the company`s DRS Technical & Management Services Co. (DRS TAMSCO) unit in Beltsville, Maryland and DRS Spacelink International unit in Dulles, Virginia, along with a number of subcontractors, including Raytheon Company, Artel Inc., Information Management Group (IMG) and Oberon Associates. This most recent funding is a follow-on order to previously awarded contracts received in 2005 and 2004 to support the communications needs of the MNF-I and the Coalition Provisional Authority (CPA), the former governing body of Iraq. The program has been managed by the company`s Fort Monmouth, New Jersey, Program Management Office since its inception.

"This new award draws upon our team's extensive track record in the design and operation of communications systems, network management and support for the U.S. military to provide vital stabilization and rebuilding of Iraq`s governmental infrastructure," said Daniel A. Rodrigues, president of DRS`s Sustainment Systems & Services Group. "Our state-of-the-art technical engineering and support solutions, in combination with the depth of our team`s experience, provide a reliable, proven and unique resource to the U.S. Army." The company`s DRS TAMSCO unit is a leader in information technology (IT) with expertise in telecommunications and IT services, integrated logistics support services, systems integration and electronics manufacturing.

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Future Technologies

## BAE SYSTEMS Awards Contract to Raytheon to Develop Active Protective Subsystem, Supporting Hit Avoidance Program for FCS Manned Ground Vehicles

SANTA CLARA, Calif. -- BAE Systems has awarded a phased subcontract worth up to $70 million to Raytheon's Network Centric Systems business with headquarters in McKinney, Texas, to develop the "hard-kill" Active Protection Subsystem (APS) portion of the Hit Avoidance System for the U.S. Army's Future Combat System (FCS) Manned Ground Vehicles (MGVs).

BAE Systems leads the hit avoidance integrated product team for FCS MGVs, and with support from MGV teammate General Dynamics, is responsible for integrating the Raytheon-developed hard-kill APS with soft-kill countermeasures, obscurants, and decision aid software into the overall MGV protection system. Boeing and partner Science Applications International Corporation (SAIC), the Lead Systems Integrator for FCS, selected Raytheon earlier this month after an extensive evaluation process.

"BAE Systems is pleased to have a world-class product developer like Raytheon on the team to develop this critical element of FCS technology. We are looking forward to working with Raytheon on the development and integration of the active protection hard-kill subsystem into the overall vehicle suite of defensive capabilities. Raytheon brings a comprehensive systems engineering approach and innovative technology options to the APS development effort," said Sam Cole, MGV program manager for BAE Systems.

"Soft-kill" electronic countermeasures such as jammers and decoys and "hard-kill" counter-munitions make up a portion of a layered hit avoidance suite that will enable full-spectrum survivability against rocket-propelled grenades (RPGs), anti-tank guided missiles (ATGMs), high-explosive anti-tank (HEAT) rounds, top attack munitions and tank-fired kinetic energy (KE) rounds.

BAE Systems, as part of the FCS One Team, is teamed with General Dynamics to develop and field a family of transportable, deployable, lethal, and survivable Manned Ground Vehicles. The next generation of combat vehicles will provide the majority of the firepower in the FCS-equipped Brigade Combat Teams and will be critical nodes in the overarching network that allows future soldiers to effectively complete their missions. The two companies have formed integrated design teams to develop and demonstrate the family of eight manned ground vehicles featuring a common platform design with common components and subsystems, such as hit avoidance, with unique mission modules and all the variants linked together by networked battle command.

Under the FCS MGV contracts, BAE Systems has responsibility for five of the eight MGV variants: Non-Line-of-Sight Cannon (NLOS-C); Infantry Carrier Vehicle (ICV); Medical Vehicle (MV); Non-Line of Sight Mortar (NLOS-M), and FCS Recovery and Maintenance Vehicle (FRMV).

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Defence Industry

## Armor Holdings, Inc. Receives $11.6 Million Order for Ceramic Body Armor Inserts

JACKSONVILLE, Fla. -- Armor Holdings, Inc. (NYSE: AH), a leading manufacturer of security products and vehicle armor systems serving military, law-enforcement, homeland security and commercial markets, announced today that it has received a contract modification from the U.S. Marine Corps Systems Command.

The new delivery order, which is drawn from a $66 million indefinite delivery/indefinite quantity (ID/IQ) contract announced previously, includes approximately $11.6 million for additional quantities of protective ceramic body armor plates to be delivered through 2006. Work under this contract will continue to be performed by the Armor Holdings Aerospace & Defense Group at its Phoenix, Arizona facilities.

Robert Schiller, President of Armor Holdings, Inc., said, "We are extremely pleased with this additional order for our light-weight body armor from the U.S. Marine Corps. This additional order demonstrates the U.S. Marine Corps' continued confidence in the performance of our light-weight body armor system and in our ability to deliver that performance when and where it is required."

Defence Industry

## Ukraine Is Planning 77 Defence-related Research and Development Projects in 2006

When meeting the military representatives accommodated in Ukraine, Vladimir Grek, Director of Department of Research and Procurement of Arms and Military Equipment, has announced that 77 defence-related research and development projects are planned to be carried out in 2006.

The projects being planned include conduction of government trials of 23 examples of arms and military equipment. Additionally, 28 more examples will undergo preliminary trials. Nine projects are in the initial technical design phase. Ten new projects are planned to be started.

The State Programme of Development of Arms and Military Equipment of the Armed Forces of Ukraine till the year 2009 envisages modernisation of T-64 tanks into the T-64 BM Bulat configuration, as well as modernisation of BMP-1 infantry fighting vehicles, BTR-70 armoured personnel carriers and BRDM-2 armoured reconnaissance vehicles (they will be fitted with new uniform fighting modules, active and passive protection systems). It is also planned to purchase training simulators for these vehicles' crews. This year, an order will be placed for six first BM Bulat MBT crew member training simulators, which underwent government trials last year.

Vladimir Grek has also said that it is planned to develop a new armoured personnel carrier.

Also carried out is modernisation of multiple launch systems and development of a new self-propelled howitzer, new high-precision ammunition and new sub-calibre round for tank gun.

Development of new guided missiles has been completed, while development of new anti-tank missile systems is about to be completed.