

# Army Guide monthly

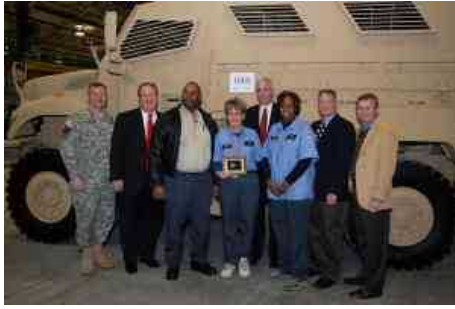


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## Defence Industry

## 1,000th MAXXPRO™ MRAP Vehicle From NAVISTAR AFFILIATE Presented To Military



Special ceremony to present MRAP vehicle honors men and women of the military; elected officials, military personnel, navistar employees and executives gather to commemorate event.

WEST POINT, Miss. -- At a special ceremony today to honor the men and women of the nation's Armed Services, assembly-line workers proudly presented military personnel with the 1,000th International® MaxxPro™ Mine Resistant Ambush Protected (MRAP) vehicle from International Military and Government, LLC, a wholly owned affiliate of Navistar International Corporation (Other OTC: NAVZ).

Elected Officials, military personnel and numerous Navistar employees gathered together at the company's West Point, Mississippi plant where final assembly of the MaxxPro™ MRAP vehicle occurs to mark the special occasion and pay tribute to the troops serving in harm's way. MaxxPro MRAP vehicles are designed to protect troops from roadside bombs and other threats.

"We gather today at Navistar to honor the service and sacrifice of the troops with a special presentation of our 1,000th MaxxPro MRAP vehicle," said Archie Massicotte, president of International Military and Government, LLC. "The men and women of Navistar who build the MaxxPro MRAP vehicle are proud to know that we're doing our part to help protect those who serve in harm's way, and it's a privilege."

In just five months of production Navistar delivered its 1,000th MaxxPro MRAP vehicle to the military, and next month the company will reach another production milestone of 500 MRAP vehicles in a single month. Moreover, the company's swift production ramp up is set to manufacture 1,000 MaxxPro vehicles in the months of March and April – combined. Currently, there are more than 700 MaxxPro MRAP vehicles in theater.

In December 2007, Navistar captured nearly 50 percent of the industry-wide orders announced by the military – 1,500 MRAP vehicles and parts support valued at nearly \$1.2 billion – in its single largest order to date of MRAP vehicles. Overall, Navistar's MRAP orders (vehicles and support) total nearly \$3 billion since the first production contract was awarded in May 2007. Navistar's total order is 4,471 Category I MRAP vehicles to be delivered by the end of July 2008.

Navistar has delivered more than 60,000 parts pieces,

components and other field support services to keep the MaxxPro MRAP vehicles mission ready. Parts and service contracts thus far total nearly \$300 million. In recent months, the Tank-Automotive and Armament Command (TACOM) of the U.S. Army has also awarded the company nearly \$80 million in truck orders including water and fuel tankers. In fiscal year 2007, more than 90 percent of Navistar's total military sales were non-MRAP vehicles to both the U.S. military and U.S. allies.

With dealerships in Iraq and Afghanistan, Navistar has nearly 1,000 dealership locations worldwide with facilities in 75 countries outside North America.

In the past, Navistar has built more than 160,000 commercial trucks and school buses and 560,000 diesel engines in a 12-month period.



## Defence Industry

## QinetiQ agrees to purchase two Australian defence consulting companies



Acquisitions will provide a strong regional presence in Canberra, Melbourne, Sydney, Brisbane and Adelaide.

QinetiQ Group plc, an international defence and security technology company, announces today that it has signed agreements to purchase two Australian defence consulting businesses, Ball Solutions Group Pty Ltd and Novare Services Pty Ltd. These acquisitions are being acquired for a total cash consideration of A\$20 million and are subject to regulatory approval. They represent QinetiQ's first investment in Australia and provide the company with a presence of 185 staff located in Canberra, Sydney, Melbourne, Brisbane and Adelaide.

Ball Solutions Group is a provider of professional and consulting services, primarily to the Australian Department of Defence, has annual revenues of A\$29 million and is being acquired from Ball Aerospace & Technologies Corp of Broomfield, Colorado, USA. It operates in three main practice areas: business systems and applications; data acquisition and management; and operations research and analysis.

Novare provides engineering and logistics services to the Australian Department of Defence, its prime contractors and selected commercial partners. It has annual revenues of A\$6.1 million and is being acquired from its management, who will remain with the company. Novare's core expertise is in explosive ordnance and weapons, aerospace systems, advanced technical data management and performance based contracting.

These acquisitions represent the continuing execution

of QinetiQ's strategy to grow its Europe, Middle East and Australasia (EMEA) capabilities. They will enhance QinetiQ's portfolio of defence and security based expertise, provide additional routes to market and broaden QinetiQ's customer base through existing relationships and contractual arrangements.

Commenting on the acquisitions Graham Love, group chief executive officer of QinetiQ said: "These acquisitions reflect our confidence in the strength of the Australian defence market and will establish QinetiQ as a leading provider of independent advice services within the country. We will also be seeking to leverage synergies between these companies and our businesses in the UK and USA to provide additional benefits to our Australian customers."

Dick Hedges, managing director of Ball Solutions, welcomed the acquisition of his business by QinetiQ. "We have worked with QinetiQ for some time and we share the common objective of providing independent defence services in Australia, the United Kingdom and the United States."

Greg Wilcock, managing director of Novare, stated that his team very much look forward to being a part of QinetiQ and drawing on a strong international technology base.

The acquisitions are subject to Australian and US Government regulatory approval and are expected to complete by the end of February 2008, after which the companies will trade as QinetiQ Consulting Pty Ltd.

"For the beyond-line-of-sight mission, we believe that the chemical energy warhead, with proven lethality against the primary target of threat armor, is the best solution," said Rodger Elkins, director of advanced tactical weapons for Raytheon's Advanced Programs product line. "It provides better effects against the secondary targets of buildings, fortifications and light armor than a less versatile kinetic energy penetrator."

Raytheon's aggressive cost control initiatives provide the Army with a proven, low-risk, affordable product as it enters into the system design and development phase. Such innovative cost solutions are easily transferable to Raytheon's other precision-guided projectiles, such as the company's highly successful, combat-proven Excalibur 155 mm artillery projectile.

During the past 50 years, Raytheon has delivered more than 1.3 million precision-guided munitions, and General Dynamics Ordnance and Tactical Systems has been involved with the development and production of more than 3 million 120 mm tank cartridges. This vast development and production experience, coupled with the expertise gained in the development, production and fielding of Excalibur, ensures the Army will receive the world's best array of gun-fired, precision-guided weapons.

Work on the Mid-Range Munition will be performed at Raytheon facilities in Tucson, Ariz.

## Contracts

### Raytheon Wins \$232 Million Army Precision-guided Projectile Development Contract

TUCSON, Ariz. -- Raytheon Company, teamed with General Dynamics Ordnance and Tactical Systems, has been selected by the U.S. Army to develop the XM 1111 Mid-Range Munition for the Future Combat Systems' Mounted Combat System.

Valued at \$232.3 million, the 63-month contract covers system design and development.

"This award establishes Raytheon as the leader in the development of affordable precision-guided projectiles," says Louise Francesconi, president of Raytheon Missile Systems. "We embrace our role as the primary provider of precision projectiles for the United States, and we look forward to working in partnership with the Army, General Dynamics Ordnance and Tactical Systems and our suppliers as we develop this revolutionary capability for the Army's current and future forces."

Mid-Range Munition incorporates proven technology using a dual-mode seeker suite comprising an imaging infrared sensor and a digital semi-active laser seeker. The dual-mode seeker was developed and successfully demonstrated during a two-year, Army-managed science and technology program.

In its proposal, Raytheon chose a multipurpose chemical energy warhead for the Mid-Range Munition.

## Future Technologies

### IdaTech Introduces the 250 Watt iGen™ System



BEND, ORE., USA, December 31, 2007 – IdaTech, plc, a global fuel cell solutions provider, is pleased to announce the launch of the iGen™ fuel cell system, a CE certified 250 watt integrated power generation solution for charging batteries in industrial applications. Operating on a liquid fuel, the compact iGen™ system is the newest addition to IdaTech's family of reliable fuel cell power products for critical power applications.

Designed to work with battery packs and renewable energy systems such as solar and wind power, quietly and efficiently providing seamless power in challenging environments, the iGen™ system incorporates IdaTech's patented fuel processor, purifier and fuel cell stack in a compact, rugged, outdoor package. By operating on HydroPlus, IdaTech's methanol-water fuel mixture, the iGen™ system provides a dependable and flexible solution for critical power needs. Potential applications

for the iGen™ system include automated battery charging in signaling, sensing and telemetry, security, and telecommunications applications, including PV and wind hybrid configurations.

"As an integrated system operating on a compact liquid fuel source, the industrial iGen™ system provides IdaTech customers with another attractive solution for a wide range of applications. The commercial launch of the compact iGen™ battery charging fuel cell system marks a significant milestone for IdaTech. This compact system extends IdaTech's product and market capabilities significantly, addressing the sub-kilowatt power range," said IdaTech President and CEO Hal Koyama.

**About IdaTech**

IdaTech is a global leader in the development and manufacturing of clean and reliable PEM fuel cell solutions for telecommunications, commercial and industrial backup power from 1 to 15 kW. IdaTech's unique technologies provide solutions for a wide range of applications from portable to off grid power and directly support efforts towards sustainable energy.

IdaTech's portfolio of industry-certified fuel cell solutions are based on the company's fuel processing, fuel cell stack and power module and fuel cell system integration capabilities. With the support of strategic partners and customers, the company's energy solutions are being deployed domestically and internationally for stationary, portable and other advanced applications.



**Future Technologies**

**TASER Device Used to Avoid Tragedy in Edmonton**



SCOTTSDALE, Ariz. -- TASER International, Inc., a market leader in advanced electronic control devices, released the following News Alert:

According to an article in the December 27, 2007 edition of the Edmonton Sun, Edmonton police are crediting the use of a TASER(r) device for avoiding tragedy after a knife-wielding fugitive ran into a crowded toy store on Wednesday.

"This is one (incident) where I truly feel the TASER saved a lot of grief," said Edmonton Police Staff Sgt. Denis Jubinville. He added that the police may have had to shoot the man with a handgun had they not had the TASER device.

According to the article, when the police confronted the man, who was wanted on a deportation warrant, he ran across the road and into the Toys "R" Us where the man threatened a bystander with a knife.

The incident ended when an officer used a TASER device to incapacitate the man. No one, including the fugitive, was injured in the incident.

According to the article, Staff Sgt. Jubinville added that the end result is proof of the usefulness of the stun gun. "Had we not had it, it could have led into a standoff," Jubinville noted.



**Defence Industry**

**BAE Systems Awarded Long-Lead Contract For Bradley Reset**

The US\$375.2m contract, awarded by the US army's TACOM Life Cycle Management Command, calls for the procurement of long-lead materials in preparation for an anticipated contract to rest 639 vehicles, BAE says.

The contract will involve the reset of 451 Bradley A3 vehicles and 188 Bradley Operation Desert Storm vehicles.



**Defence Industry**

**Technology and safety of the light multirole vehicle (lmv) in all markets**



The Light Multirole Vehicle (LMV), the tactical vehicle with full-time all wheel drive called "Lince" by the Italian military and "Panther" by the English, continues to be an active player on the international scene.

The LMV, entirely designed and assembled by Iveco Defence Vehicles in Bolzano, avails itself of sophisticated technology whose strong points are its outstanding mobility let alone its anti-mine protection properties, proved on many occasions in its diverse peace keeping role.

Besides the Italian armed forces and Civil Protection, Iveco has supplied numerous LMVs to the armed forces of Great Britain, Belgium and Croatia. Now also the Spanish Ministry of Defence, in the area of an ambitious long term plan of improving the tactical and logistic safety, has opted for the armoured, anti-mine version of the LMV.

Added to this is a new important vehicle supply agreement for Norway and the Czech Republic and the fact that the LMV is the only light armoured vehicle on



the market that has passed the stringent tests of mobility, performance and reliability demanded by the British Ministry of Defence, that will officially put the LMV in its service early in 2008. The approval tests are renowned as very arduous in which the vehicle is subjected to repetitive simulated operational activities, monitoring reliability and off-road mobility versus an elevated objective normally used for tracked vehicles.

### The Characteristics of the LMV

The LMV is equipped with a Common Rail Diesel engine rated at 190 hp, connected to a 6 speed automatic gearbox with a hydrodynamic torque converter and a 2 speed transfer box mounted in common with the rear axle differential. Front and rear air-hydraulic disc brakes. Independent front and rear suspension coupled with axle load apportioning and optimised torque distribution provide for the best in class off-road mobility for this category of vehicle.

Regarding protection of the crew, the LMV is constructed using a highly innovative concept with the objective of maximising the safety of those on board in the case of explosion by anti-personal, anti-armoured vehicle or other improvised mines.

The internal safety in relation to the threat posed by mines is assured by an energy absorbing structure aided by the application of internal seating protected by armoured plating.

Thanks to the Iveco patents, the vehicle exploits a modular construction allowing a bespoke ballistic ant-mine protection application according to the perceived operational threat with the possibility to apply protection for each theatre of operation.

The LMV is a vehicle of extremely agile mobility and is able to operate in extremely diverse environments according to a range of climatic, terrain and geographical conditions; operation is permitted in a range of temperatures from -32°C to +49°C

The base version of the LMV has a maximum permitted mass of 7000 kg and a payload of 2300 kg. Thanks to its constructional versatility, the vehicle exists in 4 door long cab and 2 door short cab versions, LMV can be equipped as a command post or a protected field ambulance, amongst others.

The LMV is equipped with a CAN electrical network permitting data communication between the engine, transmission, ABS, etc electronic controllers in order that real-time data in support of fault diagnostic and maintenance is available. The LMV possesses, therefore high reliability and economic maintenance regimes that slim down the logistic support necessary and the relative operational management costs.

The order is estimated to have a maximum value in excess of \$400 million. The initial delivery order against the ID/IQ contract is \$4.9 million and is scheduled for delivery in early 2008.

The order is for the Family of Ballistic Plates for Body Armor Load Carriage System (BALCS). ID/IQ orders allow the government a great deal of flexibility as to exact quantities that will be ordered and timing. This ID/IQ order is estimated to have less than a \$6 million minimum value and a maximum value in excess of \$400 million. It is Ceradyne's policy to only book an order as firm backlog that has committed delivery dates, such as the above initial \$4.9 million delivery order.

David P. Reed, Ceradyne President North American Operations, commented: "We are extremely pleased to have received this multi-year BALCS order from the Special Operations Command (SOCOM). We have been supplying lightweight ceramic armor to SOCOM since the late 1990's and believe our past history of high quality and on-time deliveries helped us in this recent 'win.' Our armor production capacity in Lexington, Kentucky, and Costa Mesa, California, will allow us to meet SOCOM's requirements. Based on past practice and non-binding conversations with the government, we believe there will be a series of delivery orders issued in 2008 against the blanket ID/IQ contract."

### Future Technologies

#### EADS in Spain delivers the first squad of the Spanish Future Soldier (COMBatiente FUTuro, COMFUT)



EADS in Spain has delivered the system for the first COMFUT (COMBatiente FUTuro) squad, the future Spanish Army soldier modernisation programme, to the Ministry of Defence's Procurement Office (Dirección General de Armamento y Material, DGAM). The squad comprises twelve individual comprehensive kits.

The delivery took place on time and represents the first important milestone of the contract, which was launched in September 2006 with the choice of EADS as the best bidder from the COMFUT competition for the design and development phase.

### Contracts

#### Ceradyne Receives New ID/IQ Body Armor Order

COSTA MESA, Calif. -- Ceradyne, Inc. has been awarded an indefinite delivery/indefinite quantity (ID/IQ) five-year order from the United States Special Operations Command (USSOCOM), MacDill

EADS acts as the prime contractor and leads a group of Spanish subcontractors, amongst which are Indra, Fedur, GMV, Iturri y Amopack. It is the responsibility of EADS to integrate their elements into the overall COMFUT system.

Pablo de Bergia, Head of the EADS Defence & Security Division in Spain, stated: "The COMFUT programme turned out to be a keystone for our division, as it does not only prove that we are a leader in systems integration and a company that drags the Spanish industry in this sector, but as it also represents a blueprint for similar programmes that are about to begin in other European countries. In particular, I want to refer to the Swiss IMESS programme for the modernization of infantry soldiers, that recently has been awarded to EADS."

A new phase of the programme will start now, during which the industries and the Programme Office, based at the Academia de Infantería in Toledo, will conduct a first series of COMFUT trials. These tests will support the validation of the contractual requirements and will proof the performance of the newly developed equipment. Based on the same contract, the optimization of the design and the production of equipment for two further squads will follow.

The COMFUT programme is aimed at enhancing efficiency and protection of the Spanish soldiers and has required the development of special systems. The most important innovations have been reached with advanced solutions for:

- Optronics
- Command and control
- Energy sources
- Ballistic equipment and protection
- Field training duel and other support systems.

The new equipment will enable the soldier to be part of integrated, network centric operations. Thanks to new sensors and a data link providing information received from other team members of the squad, the COMFUT-equipped soldier will gain full situational awareness. Exact real-time information about his own position on the battlefield as well as the location of other squad members and of his enemies will outstandingly increase his efficiency. At the same time, thanks to the ballistic protection and the appositely designed equipment, the "soldier of the future" will enhance his security and comfort, being able to operate day and night, and under any meteorological conditions.

The delivery of the COMFUT systems to the remaining squads, which will complete the section, is scheduled for the end of 2008.

This R&D programme is financed with a budget of € 24,5 million by the Subdirecció de Tecnologia y Centros (SubTeCen), belonging to the DGAM.

EADS Defence & Security Division (DS) is a systems solutions provider combining military air systems, missile systems, communications and intelligence systems, global security solutions, sensor and avionics systems, as well as test and support solutions into a single effective network. In 2006, DS – with its around 23,000 employees – achieved revenues of € 5.9 billion.

EADS is a global leader in aerospace, defence and related services. In 2006, EADS generated revenues of € 39.4 billion and employs a workforce of about 116,000.

## Defence Industry

### Plasan Sasa Will Supply International Military and Government, LLC with Critical MRAP Vehicle Protection for the US Marines

KIBBUTZ SASA, Israel --- Plasan Sasa - a global leader in the field of combat-proven ballistic armor solutions for vehicles, airborne platforms and personnel, - will supply US firm International Military and Government, LLC with its advanced critical MRAP vehicle protection for 1,200 armored vehicles International has been awarded a contract to provide US Marines with.

The armored vehicles are to be delivered by the end of February 2008.

According to Plasan Sasa's CEO, Mr. Dan Ziv, "We are very pleased to take part in this important contract. It is a testament to the know-how and extensive field experience we have accumulated over the years regarding protective solutions against mines and IEDs, as well as the unique technologies we have developed - all focused on the protection of personnel and property against the current and future threats faced in the world's combat zones. The choice of Plasan as the armored protection supplier for this contract again positions the company as a world leader in its field."

International Military and Government, LLC, is a recognized industry leader with which Plasan has successfully cooperated on numerous previous projects.

As sub-contractor to IMG in this project, Plasan will supply armored vehicle solutions that will increase survivability and mobility, decrease vulnerability, and reduce casualties among Marines operating in often chaotic, non-contiguous combat zones - protecting them and their vehicles from IEDs (Improvised Explosive Devices), RPGs (Rocket Propelled Grenades) and SAFs (Small Arms Fire).

These cutting-edge solutions will support multiple missions, including convoys, troop transports, ambulances, EOD (Explosive Ordnance Disposal), and urban combat operations.

Established in 1985, Plasan Sasa designs, develops, and manufactures customized armor systems and chassis-up armor solutions - as well as Add-On Armor Protection Kits [APKs] for lightweight military tactical trucks and APCs [Wheeled & Tracked] for fixed and rotary wing aircraft and commercial vehicles, and is a major supplier of personal protection armor.

## Defence Industry

### DRS Receives a \$9M Contract to Provide Infrared Sighting Systems

DRS Technologies, Inc. announced today that it

received a \$9 million contract from the Raytheon Company's Network Centric Systems business in McKinney, Texas, to provide internal components and assemblies within Horizontal Technology Integration Second Generation Forward Looking Infrared (HTI SGF) sighting systems used aboard U.S. Army tanks and combat vehicles.

DRS will manufacture and provide Block 1 B-Kits for Improved Bradley Acquisition Systems (IBAS) and Commander's Independent Viewers (CIV), and Circuit Card Assembly sets for the Abrams Commander's Independent Thermal Viewer (CITV) installed on M1A2 Abrams Main Battle Tanks and M2A3 Bradley Fighting Vehicles.

The work for this contract will be accomplished by the company's DRS Sensors & Targeting Systems - Optronics Division in Palm Bay and Melbourne, Florida. The work will begin in March 2008 with completion expected by December 2009.

DRS' advanced high-resolution HTI SGF sighting technology within IBAS, CIV and CITV systems, helps the commanders of ground forces detect, identify and engage tactical targets during both day and night. Its SGF technology is dramatically superior to the first generation and doubles the distance at which soldiers can identify a target, greatly increasing crew survivability and reducing fratricide. The technology also contributes to information dominance by providing digital battlefield imagery to soldiers and helps promote interoperability among military platforms.

"The DRS technology within these sighting systems is critical to helping the Army 'own the night,' and helps commanders in their land vehicles successfully execute their missions," said James M. Baird, president of DRS' Reconnaissance, Surveillance & Target Acquisition (RSTA) business segment. "Employing the latest HTI technology into night vision systems is central to the Army's modernization strategy."

The RSTA business segment develops, manufactures and supports electro-optical technologies, including advanced cooled and uncooled thermal-imaging solutions for soldier systems, ground vehicle, airborne, and maritime as well as for industrial, security, public safety and firefighting applications.

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### Contracts

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### Contracts

#### Plasan Will Supply Protection to 1,500 Additional U.S. Marines Vehicles as part of MRAP Project



Kibbutz Sasa, Israel -- Plasan - a global leader in the field of combat-proven ballistic armor solutions for vehicles, airborne platforms and personnel, will supply US firm International Military and Government, LLC with its advanced critical MRAP vehicle protection, for an additional 1,500 armored vehicles.

The armored vehicles are to be delivered by the end of July 2008. This is a contract in excess of \$200 million. This contract continues and builds on last June's order



for 1,200 units awarded by the U.S. military to International and Plasan. The previous award sent shockwaves through the rest of the competing group of American companies. "This second order reinforces and affirms the high level of satisfaction by the client, and it helps to secure Plasan's position as a world leader in ballistic protection," says Plasan's CEO Dani Ziv.

Plasan, while enjoying international acclaim for its achievements and rapid growth, recognizes the importance of providing employment not only to workers and suppliers in Israel but to workers and suppliers in every one of its user countries. Plasan purchased manufacturing companies in both France and the U.S. "We maintain", points out Ziv, "and expand our ongoing cooperation initiatives with local companies in our client countries." Ziv goes on to say, "This is an integral aspect of our mode of operation. We recognize the need to generate employment and to contribute to the further development of technological know-how and manufacturing capabilities everywhere our systems are sold."

The ballistic protection solutions which Plasan will provide the Marines under this expanded order build on those which it has already provided to the U.S. military, to the defense and security forces of Israel, and to others worldwide. These solutions are well known for their ability to provide protection and high survivability to both vehicles and the troops in them, in various battlefield scenarios and in particularly dangerous areas of conflict like those experienced daily by the American Armed Forces. These vehicles will be protected and provided with the ability to take part in a broad cross section of mission profiles such as convoy travel, troop transport, IED removal, and close quarter battle.

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## Defence Industry

### Northrop Grumman and Oshkosh Truck Corporation Join Forces to Pursue Joint Light Tactical Vehicle Program

RESTON, Va. and OSHKOSH, Wis. -- Northrop Grumman Corporation and Oshkosh Truck Corporation have teamed to compete for the U.S. military's next-generation family of lightweight vehicles.

Under the agreement announced today, if selected for the Joint Light Tactical Vehicle Technology Demonstration (JLTV) program, Northrop Grumman's Mission Systems sector will be the prime contractor and systems integrator. Oshkosh Truck's Defense Group will be responsible for designing, engineering and manufacturing the vehicle.

The innovation and experience of both companies, along with the technology, power and an innovative approach, set this team apart from other providers.

"Northrop Grumman brings enormous experience in the design, development and systems integration of complex mission equipment on military platforms," said Ronald D. Sugar, Northrop Grumman chairman and

chief executive officer. "The fusion of this expertise with Oshkosh Truck's unparalleled capability in advanced extreme-duty vehicles enables our team to deliver the best JLTV solution to our nation's warfighters."

The urgent need to meet JLTV survivability requirements and situational awareness without sacrificing mobility requires an innovative approach to vehicle development. "Oshkosh Truck has proven its vehicles work in actual rugged conditions -- and not just on a tradeshow floor. By working together with Northrop Grumman and our partners, Oshkosh can provide the total package to meet the military's vehicle needs and ultimately help protect soldiers and Marines," said Robert G. Bohn, chairman and chief executive officer of Oshkosh Truck Corporation.

The U.S. Department of Defense plans to acquire the JLTV for use by the U.S. Army and U.S. Marine Corps. As currently envisioned, the JLTV will be stronger and more survivable than current tactical vehicles in its class. It also will be more mobile and maneuverable than the mine-resistant ambush-protected vehicle, or MRAP, being widely deployed in Iraq.

Northrop Grumman integrates a broad spectrum of critical joint combat and C4ISR platforms. Among other technologies, it currently supports the ground component tactical commander as the prime contractor for the Army's Command Post Platform, a high-tech tactical operations center used by brigade-level battlefield commanders to direct operations and control forces. The company is also the prime contractor for the combat-proven Force XXI Battle Command Brigade and Below (FBCB2)/Blue Force Tracking (BFT) and Command and Control Personal Computer (C2PC) programs that have enabled tactical battle command throughout the theater of operations for both Army and Marine combat formations.

Oshkosh Truck has nine decades of proven experience developing advanced automotive systems, on/off road capabilities, extreme-duty vehicle platforms, military vehicles and integrated armor solutions. Oshkosh Truck's JLTV vehicle development capabilities were recognized in 2005 with the award of a design concept contract for the JLTV by the U.S. Office of Naval Research. Oshkosh Truck has advanced on-board vehicle power capabilities on two prototype vehicles: the Marine Corps' Medium Tactical Vehicle Replacement (MTVR) and the U.S. Army's Heavy Expanded Mobility Tactical Truck (HEMTT). Dubbed the HEMTT A3, the vehicle is equipped with ProPulse(r) diesel-electric drive technology which improves fuel efficiency by at least 20 percent over current HEMTT models. Both prototypes have the capability to produce 100 kilowatts or more of military-grade electric service for external use.

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## Contracts

### BAE Systems Wins U.S. Army Contract For New Engineering/EOD Vehicles Worth Potentially \$2.288 Billion



YORK, Pennsylvania – BAE Systems has been selected by the U.S. Army to be the sole producer of the new Medium Mine Protected Vehicle (MMPV), and has been awarded an initial \$20 million delivery order under the \$2.288 billion MMPV program.



The MMPV contract envisions production of up to 2,500 vehicles for use by U.S. Army Engineers and Explosive Ordnance Disposal teams through 2015.

Under the initial order, 9 MMPV test vehicles, test support, armor testing packages, vehicle basic issue items, such as first-aid kits and repair tools, training, and various contract data are due for delivery between May and August 2008.

“Our MMPV design is tailored specifically for the roles and missions of its users, and we believe it possesses the best balance of payload capacity, protection and performance,” said Michael E. O’Connor, BAE Systems MMPV program manager.

MMPV is a multi-purpose, mine protected, 6x6 wheeled vehicle based on BAE Systems' next generation RG33 family of vehicles which U.S. Army engineers will use to conduct route and area clearance missions, command and control, mount mine clearing systems, and conduct explosive hazards reconnaissance. MMPVs will also be used by Explosive Ordnance Disposal teams to neutralize Improvised Explosive Devices, mines and other unexploded ordnance.

BAE Systems was competitively selected by the U.S. Army as the prime contractor. The selection was announced and the first delivery order was made December 19 by the U.S. Army TACOM Life Cycle Management Command.

Under a strategic Public/Private Partnership Agreement, BAE Systems and the Letterkenny Army Depot will perform automotive and final assembly production operations of these vehicles in facilities on and adjacent to the Letterkenny Army Depot facilities in Pennsylvania.



### Defence Industry

#### Entire order volume at more than 120 MioEUR

Subsidiary of Rheinmetall and Diehl concludes procurement contract for SMARt munition with British and Australian armed forces.

Intelligent artillery munition SMARt 155 valued at more than 120 MioEUR was ordered by the armed forces of Great Britain and Australia at GIWS mbH, a joint subsidiary of Rheinmetall AG, Dusseldorf and Diehl

Stiftung & Co. KG, Nurnberg. Production and integration is carried out by Diehl and Rheinmetall, both 50% shareholders of GIWS.



The sensor fused munition SMARt 155, DM 702 A1 was originally developed for the Bundeswehr and has been operative there since 2000. Moreover, SMARt 155 is operative in Greece and in Switzerland.

The sales success in England and Australia underscores the leading global position of Diehl and Rheinmetall in the segment of modern artillery munition.

The new munition is an important component of the British armed forces' IFPA programme (Indirect Fire Precision Attack) and the development of SMARt with a new explosive is planned to be compliant with the UK's Insensitive Munition (IM) policy.

SMARt 155 provides the artillery with greater operational accuracy while simultaneously reducing collateral damage and logistic burden when compared to current high explosive rounds. Moreover, it enables protection as well as an effective increase of the combat forces' capability to prevail at considerably higher cost effectiveness.

SMARt can be fired from any 155 mm piece of artillery. Equipped with high-performance sensors as well as intelligent signal processing, the munition seeks its targets independently – regardless of weather conditions and any hour of day and night. Modern artillery units acquire a new capability with this technology jointly developed by Diehl and Rheinmetall: High-precision impact on static and mobile targets with soft or strong armament even in difficult terrain. This saves munition and reduces the danger of collateral damage. In case no target is identified, the munition destroys itself. Consequently duds are ruled out.



### Defence Industry

#### ArmorWorks Completes Delivery of Advanced Armor to Canadian Forces

Chandler, Ariz. (USA) - January 7, 2008- ArmorWorks, a leading provider of advanced survivability products, today announced the early completion and delivery of a production contract to deliver vehicle armor to Canadian special operations forces.

These are the same type of advanced armor protection provided by ArmorWorks and currently used by U.S. Army and U.S. Marine Corps forces in Iraq and Afghanistan.

ArmorWorks' vehicle armor systems provide advanced ballistic protection against small arms fire, Improvised Explosive Devices (IEDs), and mines. This contract adds to the thousands of HMMWVs and other military vehicles already equipped with ArmorWorks' advanced, lightweight armor.

"We feel honored and privileged to receive the confidence of DND Canada to provide them with the finest protective equipment technology," stated Bill Perciballi, president and CEO of ArmorWorks.

SANTA CLARA, California -- BAE Systems has been competitively selected to develop and produce prototypes of the next generation of Mine Resistant Ambush Protected (MRAP) II vehicle with the award of a \$5.7 million contract from the MRAP Joint Program Office.

Under the MRAP II program, the government could order the production of up to 20,500 MRAP II vehicles, testing, spare parts and logistics support.

As one of only two contractors chosen, BAE Systems will produce Category I MRAP II test vehicles based on the company's Caiman 6x6 design and Category II MRAP II test vehicles based on the company's RG33 6x6 vehicle. Six Category I MRAP II vehicles, along with improved armor solutions, will be provided to the customer in March 2008 for testing under the contract's initial delivery order.

"The RG33 and Caiman vehicles have the right balance of payload capability, automotive performance, and blast protection, and have proven extremely capable of handling the significantly increased requirements of MRAP-II," said Matt Riddle, vice president of Wheeled Vehicle Programs. "Our designs offer mobility upgrades that significantly increase payload capacity and enable the integration of superior survivability enhancements across the threat spectrum."

The award was announced by the MRAP JPO on December 18, 2007, after considering offers from four bidders.

The MRAP II program is a joint effort across BAE Systems leveraging technologies from across the globe to create the best vehicle for soldiers in the field. Caiman vehicles will be produced in Sealy, Texas; Fairfield, Ohio; and Phoenix, Arizona, while RG33 vehicles will be produced in Santa Clara, California; York, Pennsylvania; Aiken, South Carolina; and Anniston, Alabama. In addition, BAE Systems in Alexandria, Virginia, will provide the vehicle's Rocket Propelled Grenade armor solution.

MRAP II vehicles provide an enhanced blast resistant underbody designed to protect the crew from mine blasts, fragmentary and direct fire weapons. Category I vehicles support operations in urban environments and other restricted/confined spaces, including mounted patrols, reconnaissance, communications, and command and control. Category II vehicles provide a reconfigurable vehicle that can support multi-mission operations such as convoy lead, troop transport, explosive ordnance disposal, ambulance, and route clearance.

### Defence Industry

#### MNOK 250 order for weapon control systems to the Netherlands



KONGSBERG has been awarded an order (valued at 250 millions of Norwegian kronas) by Stork PWV B.V. for the delivery of PROTECTOR weapon control systems to the Dutch BOXER 8x8 vehicle program.

The Netherlands will be the 10th country to choose PROTECTOR to safeguard its military vehicles.

Besides, KONGSBERG has booked an order valued at 336 millions of Norwegian kronas from the US Army. The order is part of the Common Remotely Operated Weapon Stations (CROWS) program (valued at 8 billions of Norwegian kronas).

### Contracts

#### BAE Systems Wins Contract To Develop And Produce Next Generation MRAP II Test Vehicles



### Contracts

#### A further 21 MOWAG PIRANHA IIIC for the Spanish Marines

Madrid, Spain - General Dynamics European Land Systems (GDELS) announces that on December 20, 2007 the Spanish Ministry of Defence and MOWAG GmbH signed a contract for a further batch of 21 units of the PIRANHA IIIC 8x8 in the amphibious version.

Until today 18 PIRANHA IIIC 8x8 are in operation with the Spanish Marines and this second order will summarize to a total fleet of 39 units. The vehicles will be manufactured in Kreuzlingen and delivered from the year 2009 until 2014.



The newly signed contract comprises 21 PIRANHA IIIC 8x8 in nine variants to solve specific operational tasks: APC, Fire Capability, Command Post, Engineering, Ambulance, Recovery and Reconnaissance. MOWAG's CEO, Christoph Frei, was proud and pleased about the close cooperation with Spain, and he declared: "This contract is further proof of our customers' confidence in the performance and reliability of our PIRANHA, and of the good strategic partnership between the Spanish authorities and MOWAG GmbH".

The PIRANHAs will be used primarily within the framework of international missions of the Spanish Army. 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 PIRANHA IIIC 8x8, the technology-minded company from Kreuzlingen offers a proven vehicle, which fulfils this high-ranking requirement of protection. With its second order, the Spanish Marines continue to trust in the reliability and performance of the successful product from Kreuzlingen.

#### **The MOWAG PIRANHA IIIC 8x8 - a well-proven platform**

The PIRANHA IIIC has a length of 7.30 m, a width of 2.66 m, and a GVW of 22 t. The vehicle reaches a speed of up to 100 km/h on the road. The PIRANHA IIIC easily manages gradients of up to 60%, and fording depths of up to 1.50 m. The 400 HP engine, together with the 7-speed automatic transmission, the modern independent wheel suspension, the tire pressure control system, and the disengageable all-wheel drive, give the PIRANHA IIIC a high degree of mobility even in difficult terrain. Moreover, the protection against ballistic threats and against mines provides the crew with a maximum degree of protection in a mission. The vehicle is equipped with all necessary features (NBC system, autonomous power supply, A/C system, etc.) that are required for the 24-hour operation of the integrated systems.

ROCHESTER, NY, January 16, 2008 — Harris Corporation, an international communications and information technology company, has received several new orders for its Falcon family of radios worth \$158 million.



The orders came from multiple branches of the U.S. Department of Defense and cover a broad range of tactical applications:

- A \$118 million order from the U.S. Army to supply Falcon II high-frequency (HF) vehicular radio systems for HMMWV's and other vehicles. The purchase allows the Army, Army Reserves and National Guard to continue expanding their use of Harris HF tactical radios for mobile, beyond line-of-sight communications.
- Orders worth up to \$26 million from the U.S. Air Force to supply JTRS-approved Falcon® III AN/PRC-152(C) handheld tactical radio systems. The orders were placed under the previously announced \$2.7 billion Consolidated Interim Single Channel Handheld Radio (CISCHR) IDIQ contract awarded to Harris by the Joint Program Executive Office for the Joint Tactical Radio System. The AN/PRC-152(C) offers users a wide range of capabilities such as SINCGARS interoperability, ultra high-frequency (UHF) ground-to-ground line-of-sight communications, close-air support and programmable encryption.
- A \$14 million order from the U.S. Marine Corps for Falcon III AN/VRC-110 vehicular radio systems to support Mine Resistant Ambush Protected (MRAP) and other tactical vehicles. The vehicle systems incorporate JTRS-approved AN/PRC-152(C) handheld radios. This is the third order under the \$212 million Tactical Handheld Radio (THHR) IDIQ contract awarded last summer following a competitive bidding process.

"Demand for our Falcon radios remains robust and is driven by a broad range of customers within the U.S. Department of Defense as well as throughout our international markets," said Dana Mehnert, president of Harris RF Communications. "Our opportunity pipeline continues to be very robust and reflects our ability to meet the advanced communications requirements of our customers. We have further increased our production capacity to address the higher expected demand in the second half of fiscal 2008 and beyond."

#### **Contracts**

**Harris Corporation Announces Falcon Radio Orders Exceeding \$150 Million; Includes Orders under JTRS Program CISCHR Contract**

#### **Contracts**

**ITT Wins \$174.7 million U.S. Army Order for Night Vision Devices**

ITT Corporation announced that its night vision business was awarded an order from the U.S. Army Research, Development & Engineering Command



Acquisition Center totaling \$174.7 million.



The order is for the AN/PVS-14 night vision monocular—ITT's most versatile night vision unit—and spare image tubes. It is the latest order for the Omnibus VII contract awarded by the U.S. Army in September 2005.

The AN/PVS-14 allows users to adjust the gain control in varying light conditions in both urban and rural settings. These versatile devices can be hand-held, head or weapon mounted, or fitted to a camera. The spare image tubes will support the Army Life Cycle Management Command's reset initiatives to refurbish battle-worn goggles.

The Omnibus VII contract has been an important tool for the Army to equip every serving unit with crucial night vision technology in support of night and low-light missions.

In addition to the AN/PVS-14 monocular devices, image tubes for AN/PVS-7 and AN/PVS-14 goggles will be delivered through this latest order. ITT's Omnibus VII contract has a total potential value of \$1.39 billion.

By the end of 2007, ITT had received Omnibus VII orders for more than 250,000 AN/PVS-14 monocular devices, 3,000 AN/PVS-7 goggles and 100,000 associated spare image intensifier tubes.

ITT Night Vision ([www.nightvision.com](http://www.nightvision.com)) is the world's leading developer, producer and supplier of Generation (Gen) 3 image intensifier technology for U.S. and allied military forces as well as the homeland security market. ITT has served the U.S. military with premier night vision solutions for more than 45 years and delivered its one millionth Gen 3 image tube in 2007.

#### About ITT Corporation

ITT Corporation ([www.itt.com](http://www.itt.com)) supplies advanced technology products and services in several growth markets. ITT is a global leader in water and fluid transport, treatment and control technology. The company plays a vital role in international security with communications and electronics products; space surveillance and intelligence systems; and advanced engineering and services. It also serves a number of growing markets—including marine, transportation and aerospace—with a wide range of motion and flow control technologies. Headquartered in White Plains, N.Y., the company employs approximately 40,000 people and generated \$7.8 billion in 2006 sales.



The Swedish procurement authority, FMV, and The Netherlands Ministry of Defence procurement authority have placed orders with Rheinmetall for the Kodiak armoured engineer (breaching) vehicle.



The total value of the orders is approximately EUR100 million. Signed on January 16, 2008, the contracts include ten systems for the Dutch Army, and six for the Swedish Army. The vehicles will be delivered during the period 2011-2012.

Apart from its prime function as a heavy-duty combat engineer vehicle for use in military operations and disaster relief, the Kodiak can serve in a mine-clearing role, protecting troops deployed in harm's way. Rheinmetall manufactures and markets the Kodiak in a consortium together with Swiss defence contractor RUAG Land Systems.

Based on a bilateral agreement between the two countries, the joint orders represent an innovative way of reducing costs. The two nations have effectively harmonized their procurement programs, particularly with regard to the configuration of the vehicles and uniform logistics.

Although both governments have signed separate, equally valid contracts with Rheinmetall, the programme is being carried out jointly on the basis of a harmonized central plan. This makes it possible to substantially reduce the non-recurring costs as well as bringing advantages with regard to purchasing and production. Following the Swiss Army, the Dutch and Swedish will be among the first to augment their existing inventories of Leopard 2 main battle tanks and "Bergepanzer 3" armoured recovery vehicles with the new Kodiak armoured engineer vehicle, which will increase their engineer capacity significantly.

Built on a Leopard 2 chassis, the Kodiak armoured engineer vehicle can be fitted with a mine-plough for clearing lanes through minefields.

The Kodiak is equipped with a high performance hinged-arm excavator with a quick-release coupling for deploying additional combat engineering tools. It also features a bulldozer blade with adjustable cutting and tilt angles as well as a double-winch system consisting of two 9 t capstan winches.

To defend itself, the Kodiak is armed with a remote control weapon station and smoke grenade launcher. Moreover, it features the same level of anti-landmine protection as the Leopard 2 main battle tank. For the Dutch vehicles the crew compartment will have additional bomblet protection.



## Contracts

### Sweden and the Netherlands Order Kodiak Armoured Engineer Vehicles from Rheinmetall

**Tank Desant**



Tank desant is a military combined arms tactic, where infantry soldiers ride into an attack on tanks, then dismount to fight on foot in the final phase of the assault. Desant is the Russian word for airborne or parachute drops, but it can be used more generally, describing amphibious landings or "tank desant".

The tactic was institutionalized by the Soviet Red Army during the Second World War. Tank desant troops (tankodesantniki) were specialist infantry, trained in the technique. From WWII until the 1970s, Soviet tanks were built with hand-holds for this purpose. In the northern winter, similar tactics were used by Soviet infantry riding the skids of aerosans, or towed behind them on skis.

Riding on tanks during actual combat is very dangerous; soldiers are very vulnerable to machine gun and high explosive fire, and the high silhouette of most tanks would draw enemy fire. Smoke and covering fire may be used to reduce the hazards, but this tactic is mostly used by forces with a shortage of motor transport or armoured personnel carriers, as it enables troops to move about the battlefield faster than on foot.

Today, tank desant is considered a wasteful and human-costly improvisation, adopted by the Soviets because they failed to appreciate the problem of tank-infantry co-operation.[1] Almost universal mechanization has rendered this tactic mostly obsolete, with infantry riding special-purpose armoured personnel carriers or infantry fighting vehicles into battle. The use of explosive reactive armor, which creates a danger zone around an armoured vehicle by detonating an explosive charge when the tank suffers a serious hit, makes tank desant impossible.



**Future Technologies**

**120mm Ammunition Handling System Demonstrated**

IRVINE, 17 December 2007—A major subsystem of the Future Combat Systems` Manned Ground Vehicles was put through its paces on December 4, 2007, at Meggitt Defense Systems` Irvine headquarters before representatives of the Army, General Dynamics Land Systems (GDLS), the FCS Lead Systems Integrator team of Boeing and SAIC, PM-Main Armament Systems, ARDEC, Alliant



The Mounted Combat System`s (MCS) 120mm fully automated Ammunition Handling System (AHS) demonstrated a wide spectrum of its capabilities in advance of its delivery to GDLS in the first quarter of 2008.

The AHS will be integrated into the MCS Firing Fixture and subsequently will undergo rigorous Turret Motion Based Simulator (TMBS) testing and firing tests. Representatives who witnessed the demonstration were pleased by what they saw. During the post-demonstration outbrief, one official commented that the FCS program already has demonstrated that the XM360 Primary Weapon Assembly is a 'go,' and here was an initial demonstration that a suitable Ammunition Handling System will be available to service it. Meggitt Defense Systems, Inc. (MDSI) was awarded the SDD contract by GDLS in October 2005 and is supported in its development work by General Dynamics Armament and Technical Products and Curtiss Wright Controls and Embedded Computing as well as the MCS Integrated Product Teams at GDLS. Additional test systems will be delivered by MDSI to GDLS in 2008, and pre-production systems will begin delivery in early 2010. Because the MCS is a compact, lightweight vehicle operating with a crew of three, automation of vehicle functions is mandated.

The MCS AHS performs the full spectrum of ammunition handling functions including: vehicle ammunition complement upload, round identification and inventory management, rapid fire loading of the main gun, ejection of spent cases and misfires, downloading of the gun, and off-loading remaining vehicle ammunition. These heretofore manual, labor-intensive tasks are performed by the MCS AHS that in essence acts like a robotic fourth crewman.



**Contracts**

**Force Protection Receives \$74 M ILS Contract From U.S. Marine Corps**



Ladson, SC. -- Force Protection, Inc. announced that it has received through its wholly owned subsidiary, Force Protection Industries, Inc., a \$74,130,482 million contract for integrated logistics support (ILS) on the Company's Cougar MRAP Category I and Category II vehicles.

"Force Protection recognizes the importance of supporting the vehicles' performance in the field," said Force Protection Industries' Vice President for Integrated Logistics Support, Phillip Owens. "The Company's ILS business segment has kept pace with the rush to field these life-saving vehicles. This contract is indicative of our continued efforts to ensure troops have the vehicles in service and to provide them the maximum protection possible."

Force Protection Industries' ILS division focuses on the maintenance and replacement parts support of the Company's Cougar and Buffalo armored vehicles deployed in Iraq and Afghanistan. The vehicles have been delivered to the U.S. government in record numbers in the past year.

The Company's Cougar and Buffalo vehicles have been regarded as the gold standard in troop safety since their initial deployment in 2003. They have withstood more than 3,000 blast attacks while being used by explosive ordnance disposal, route clearance, and other first response units.

### Defence Industry

#### Tenix sells defence businesses to BAE Systems Australia



Tenix has agreed to sell its defence businesses in their entirety to BAE Systems Australia, which is a subsidiary of BAE Systems Plc (BAES).

The sale of these defence businesses is subject to regulatory and other approvals, and is expected to be finalised during the first half of the 2008 calendar year.

BAES is a global defence and aerospace company delivering products and services for air, land and naval forces, as well as advanced electronics, information technology solutions and customer support services.

"BAES is one of the largest defence companies in the world with a record of innovation and leadership in the defence sector," said Tenix Chairman Paul Salteri.

"BAES's purchase of Tenix's defence businesses will position these operations for the future through access to enhanced R&D, expanded distribution networks and access to greater capital.

"BAES has the scale, the depth of production activities and the experience to achieve the objectives that we set at the start of this sale process of fostering international growth for Tenix's defence businesses.

"From a personal perspective, once completed, this sale will bring to an end my family's long association with the defence industry and I would like to thank all the men and women who have worked so hard for Tenix over the years and helped make these defence operations

the great businesses they are.

"I wish Tenix's defence employees all the very best for what I expect to be a bright future," Mr Salteri said.

The sale process involving Tenix's infrastructure business is ongoing.

### Robots

#### U.S Army Accelerates Testing of iRobot's Future Combat Systems Small Unmanned Ground Vehicle

BURLINGTON, Mass. -- iRobot Corp. announced that the U.S. Army has accelerated its testing schedules for iRobot's Future Combat Systems (FCS) Small Unmanned Ground Vehicle (SUGV) robot development program.

The updated plan calls for iRobot to deliver a total of 25 FCS SUGV robots by April 2008. The Army Evaluation Task Force (AETF) will begin evaluation and testing of the robots in May 2008. This effort is intended to provide an early capability of SUGV to soldiers in the field. The SUGV Systems Development and Demonstration program will continue to mature the SUGV with its full network capability.

The initial soldier evaluations will determine the capabilities and limitations of the SUGV platform. These evaluations will support the Army's production decision, which is expected in September 2008. FCS will procure a select number of these early SUGV units and then transition to the full network-capable SUGV as scheduled by the FCS program.

"We continue to receive a tremendous amount of positive feedback from soldiers in theater that iRobot PackBot is an essential tool for ensuring mission readiness and improving situational awareness to keep soldiers out of harm's way," said Vice Admiral Joseph Dyer (U.S. Navy, Ret.), president of iRobot's Government & Industrial Robots division. "We see this acceleration as clear evidence of the U.S. Army's recognition of the critical role robots play in arming soldiers with the best intelligence and combat options to provide clear advantage on the battlefield."

FCS SUGV is a tactical reconnaissance robot designed to assist soldiers in obtaining intelligence in dangerous or otherwise inaccessible areas. Modeled after the combat-proven iRobot PackBot, the SUGV offers multiple video sensors for real-time day/night tactical situational awareness. At just 30 pounds, SUGV's portability, modularity and agility make it an essential component of the individual soldier's gear in the integrated FCS program.

iRobot is currently under contract agreement to develop the next-generation SUGV for the FCS program with Science Applications International Corp. (SAIC), which serves as the FCS Lead Systems Integrator with Boeing. This decision marks the first significant delivery of SUGVs to military customers.

To date, iRobot has delivered more than 1,200 PackBot robots to a broad range of military and civilian



customers worldwide.

### Defence Industry

## Elbit Systems Awarded \$40 M in Several Contracts for the Supply of Thermal Imaging Systems



Haifa, Israel -- Elbit Systems Ltd. announced that its subsidiary, Elbit Systems Electro-Optics Elop Ltd. (Elop), recently has been awarded contracts valued at a total of approximately \$40 million from several customers for the supply of its CORAL and CORAL-CR hand-held lightweight Thermal Imaging cameras.

The projects covered under the new contracts include applications for infantry, scouts and special units, night sight and target acquisition, security and perimeter defense and target acquisition for infantry commanders. Elop foresees substantial potential for follow-on orders.

The systems are members of the industry-leading CORAL family, already in service around the globe. CORAL is a dual FOV Thermal Imaging camera, based on Elop's advanced, proven 3-5 $\mu$ m FPA InSb detector technology, already utilized in many of Elop's other Thermal Imaging products. It produces a thermal image of outstanding quality based on Elop's unique image processing circuitry and software algorithms implemented in the system. CORAL-CR is a hand-held Thermal Imaging system that includes target acquisition capabilities in order to identify self positioning and detected target position. These capabilities are achieved by a laser range finder, a digital compass and a GPS which are mounted and boresighted together with the FLIR. The CORAL-CR has a 1:5 continuous optical zoom, high resolution, 3-5 $\mu$ m FPA InSb detector and advanced algorithms.

According to Elbit Systems Electro-Optics Elop General Manager, Haim Rouso: "Building on previous sales, this latest string of orders continues our momentum as a major force in the field of Thermal Imaging. The CORAL hand-held systems deliver significant added value to our customers, providing outstanding performance and covering the full spectrum of military and homeland security applications."

### Defence Industry

## QinetiQ conducts environmental trials on MAN military trucks

QinetiQ has just completed a series of rigorous environmental trials on 12 different types of MAN military logistic trucks in its test chambers at MOD Boscombe Down, part of an independent 18-month evaluation contract for the new supply vehicles fleet for the MOD's General Support Vehicles IPT.



Over three separate six-week phases, the 12 vehicle types have been subjected to temperatures of between +49°C and -46°C to ensure reliable operation. The first simulated desert hot / dry conditions going to +49°C with solar levels for a typical day cycle reaching 1120 watts per metre square. The second phase created tropical hot / wet conditions at around +40°C but with relative humidity levels of 80%.

The final phase saw temperatures plunge to recreate Arctic temperatures of -46°C for specially prepared winterised vehicles and a chilly -32°C for the standard fleet. During each of the phases every piece of equipment, on each of the vehicles, was regularly tested to ensure it functioned consistently in the various conditions. This included engine starts and crew heating and cooling systems, right down to operating the wiper blades and brakes. All ancillary items including winches, pumps and cranes were similarly tested to the same exacting standards. Further testing is planned in early 2008 on the winterised variant.

In addition to testing military and other land vehicles, QinetiQ's climatic environment chambers can accommodate other similarly large equipment including large commercial road and rail vehicles plus can simulate the conditions aircraft, their systems and the aircrew regularly experience.

QinetiQ's main temperature control chamber measures 24.5m x 25m x 5.4m high with a 6.75m high recess for aircraft fins. Environmental conditions can be constantly controlled between +70°C to -70°C. Humidity control is between ambient and 95%  $\pm$  5% Relative Humidity (RH) at +40°C and sun effect (using solar arrays) are available throughout most of the temperature range. A second temperature control chamber measuring 5m x 4m x 7.5m is also available with similar humidity and sun-effect control. The size of the large chamber also means that a number of pieces of equipment may be tested simultaneously – for example a small fleet of vehicles. In addition the facility can host habitability trials where the man to vehicle interface and survivability can also be examined.

The environmental chambers can be used for checking electrical and hydraulic systems using ground test rigs and supply of cold air to run auxiliary power units.

Propellers (but not rotors) can also be run continuously while maintaining the test environment. Exhaust gases can be ducted to the outside of the building allowing trials to be conducted with Auxiliary Power Units (APUs) and engines running. Layers of ice can also be applied to the test equipment within the chamber to check its operation under icing conditions.

The military logistic vehicle supply contract between MOD and MAN is worth around J1.3 billion, is the biggest truck procurement programme in Europe for 25 years and currently includes over 7000 vehicles in 4x4, 6x6 and 8x8-wheel variants. The vast majority of the trucks are destined for the Army, but there will also be new vehicles for the Royal Marines and RAF. The trucks are expected to be in service for at least 20 years, are designed to carry around 400 defined loads and will replace a diverse fleet of carriers, some of which date back to the 1970s.

These new support vehicles will become the logistic workhorse for the military and are considerably more technically advanced than their predecessors. The trucks are fitted with more comfortable cabs, air conditioning and the latest in diagnostic and fault finding systems. They can also be fitted with an armour pack to protect crew from small arms fire and mine blasts.

Lord Drayson, the then Minister of State for Defence Equipment and Support, when announcing delivery of the first 161 vehicles back in August 2007 said: "These trucks will give our front line forces a much improved vehicle for moving vital supplies such as ammunition, food and water while on operations. They will be able to operate across rough terrain, in extreme environments of hot and cold, and can drive ashore from landing craft."

QinetiQ operates a diverse variety of test and evaluation facilities across various UK sites that deliver strategic capabilities of national importance and cost effectively deliver through life analysis of systems – from concept to disposal – to increase reliability and fitness for purpose. These include: ElectroMagnetic Compatibility (EMC) chambers; various real-time simulators covering all types of vehicle; test and vibration rigs; land, sea and air test and evaluation ranges; a suite of human physiology testing facilities and specialist materials and physical testing capabilities.

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### Defence Industry

#### BAE Systems Announces Closure of Pinzgauer Manufacturing In The UK

Farnborough, United Kingdom -- BAE Systems plans to discontinue the production of the Pinzgauer 1 vehicle and close its manufacturing facilities at Guildford and Fareham, with the potential loss of up to 102 jobs.

The plans are based on a thorough review of current and future potential workload, the current cost base of Pinzgauer vehicle production, duplication of capability across BAE Systems sites, and how the product fits within BAE Systems' wheeled vehicle strategy.

The Company plans to establish a new Pinzgauer support business - as part of its successful military vehicle support business - at the Guildford site that will retain a core team of about 25 people to continue supporting Pinzgauer fleets, primarily in the UK and New Zealand.



BAE Systems acquired Pinzgauer in August 2007 as part of the Armor Holdings acquisition.

The development of the new Pinzgauer 2 vehicle will be transitioned to the BAE Systems South Africa business, which has the infrastructure to continue to develop, manufacture and market these light utility vehicles.

Assembly of the final Pinzgauer 1 and Vector vehicles for the UK Ministry of Defence will be carried out at Guildford and Fareham, and will be completed at another BAE Systems site, which remains to be confirmed.

BAE Systems will enter consultation with employees as soon as feasible on these plans. Where possible, every effort will be made to mitigate any job losses through redeployment of employees within BAE Systems. To help employees seeking suitable alternative employment, an outplacement support service will be established.

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### Defence Industry

#### KMW delivers 10 FENNEK to German Bundeswehr



Krauss-Maffei Wegmann GmbH & Co KG (KMW) has been commissioned by the German Ministry of Defence to supply ten brand new FENNEK reconnaissance vehicles to the Joint Fire Support Teams (JFST) of the Armed Forces, resulting in a 31.3 million Euro deal for KMW.

Furthermore KMW has received a contract to deliver four highly protected DINGO 2 patrol vehicles to the Czech Republic. Next to Belgium, Germany and Austria, Czechia is now the fourth user nation that protects its soldiers with the DINGO 2. The contract also contains

deliveries for training services and special tools.

“The importance of protection and mobility remains unaltered high for allied armed forces in today's hot spots. KMW's strategy is to expand its leading position in this business segment. Both contracts are hereby important steps with regard to the opening of new markets and new business opportunities”, says Frank Haun, CEO of Krauss-Maffei Wegmann.

### **FENNEK Joint Foire Support Team**

The Joint Fire Support Teams coordinate indirect fire from the army, the air force and the navy, thereby assisting each of the individual forces through efficient and tactical fire support. The FENNEK, with its low height and a minimised infrared and radar signature comes fully equipped with top-of-the-range reconnaissance systems. From an operational, economical and time management point of view, the FENNEK is most qualified as it is specifically designed to meet the armed forces' requirements and demands, now and in the future. A FENNEK vehicle is a defence system that is capable of undertaking the most demanding tasks in international conflict management. Proof of its ingenuity is the fact that FENNEK vehicles were deployed as artillery observer vehicles by the ISAF peacekeeping forces in Afghanistan in 2004.

The JFST version, a FENNEK vehicle developed and manufactured by Krauss-Maffei Wegmann and its subsidiary in the Netherlands, is equipped with an extraordinarily efficient observation and reconnaissance system with a very wide range so that targets can be located and identified during day or night time. The vehicle is also equipped to interact with the army, navy and the air force through voice and data link, and can therefore remain in direct contact with each of the three individual forces. A state-of-the-art laser designator enables the crew of the FENNEK to identify targets for the air force and guide laser-controlled missiles to their targets.

By adding the new JFST FENNEK to their fleet, the armed forces will have a vehicle at their disposal that is not only resistant to fire from hand-held weapons and anti-personnel mines, but that is also protected against nuclear, biological and chemical warfare. With a range of nearly 1000 kilometres, the three-man crew of the FENNEK is able to operate autonomously for a period of up to five days. In addition, thanks to its ability to be airlifted a FENNEK vehicle can be deployed in remote areas, quickly and smoothly.

The Corps of Engineers of the German and Dutch armies were equipped with the first JFST version vehicles in 2005. The ten new FENNEK vehicles will be delivered to the German Armed Forces by November 2009.

### **DINGO 2**

The DINGO 2 provides, for up to eight persons, the best currently available level of protection in its class against modern small arms, shell splinters and shrapnel, anti personnel and anti tank mines and NBC weapons. Orders for more than seven hundred vehicles have already been placed by both Germany and a number of

international reference customers, including Austria and Belgium. In addition the vehicle has proofed its outstanding protection in various military missions like in Bosnia, Kosovo, Afghanistan or Libanon.

The DINGO 2 in its armored personnel carrier variant is also backed up by further variants such as the mobile command post, the AC detector version or the battlefield ambulance. All mission variants of the DINGO 2 provide the same outstanding degree of security and safety, i.e., maximum protection against ballistic, explosive and NBC weapons.

The DINGO 2's all terrain UNIMOG chassis permits top speeds of more than 90 km/h and a range of around 1000 km for all vehicle variants. All DINGO 2 versions can also be air transported in C160 Transall, C130 Hercules and A400M aircraft.



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## **Defence Industry**

### **Vectronix Laser Technology for Accurate Range Finding and Location of Distant Targets**

In December 2007 Vectronix AG received an order from the UK Ministry of Defence to deliver 580 PLRF15C Pocket Laser Range Finders as part of the British Sniper System Improvement (SSI) Programme.

The contract includes user and service training. Deliveries are scheduled to start in February 2008 with completion expected at the end of 2008.

The Vectronix PLRF15C measures distances to terrain features and objects from a minimum of five meters up to three kilometers. Its 1550 nm laser is class 1 eyesafe according to IEC 60825-1 and consumes very little energy. The PLRF15C incorporates a compass for azimuth and elevation measurement. It is easy to operate, extremely compact in size, waterproof, and functions reliably in harsh environments. Environmental conditions are tested to MIL-STD-810F.



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## **Contracts**

### **Textron Marine & Land Awarded \$228 M for 329 Additional U.S. Army M1117 Armored Security Vehicles**



New Orleans, LA. -- Textron Marine & Land Systems (TM&LS) has been awarded a contract modification for \$228 million to build an additional 329 M1117



Armored Security Vehicles (ASV) by the U.S. Army Tank-Automotive & Armaments Command (TACOM).

"With this additional order, our customer has again chosen the ASV to protect soldiers," said Tom Walmsley, general manager, Textron Marine & Land Systems. "Our partnership with TACOM has allowed these vehicles to be delivered with the latest fragmentation protection kits, improving the system survivability even more."

The ASV has been in continuous combat for almost 60 months with an organic Operational Readiness Rate consistently greater than 90 percent.

With this award, the total number of ASVs produced to date for the U.S. Army or remaining to be delivered under contract with the U.S. Army is now at 2058 vehicles. Production and deliveries of the ASV continue at the normal production rate of 48 vehicles a month with firm contracts through May 2009.

The ASV is used by the U.S. Army for its Military Police, convoy protection and Field Artillery Combat Observation and Lasing Teams (COLT). Its record of performance, reliability and survivability in the field is excellent. More than 1040 ASVs have been deployed in combat missions in support of the Global War on Terrorism. Textron Marine & Land Systems has built more than 1270 vehicles for the U.S. Army as of January 2008.



**Defence Industry**

**Integrated HF Radio system for Armoured vehicles**



In response to customer demand, Q-MAC developed a higher power, heavy duty variant of the HF-90M radio system for application on armoured (tracked and wheeled) fighting vehicles.

The new system configuration was released in 2005 and comprised:

- The popular and combat proven 50 watt HF-90M Frequency Hopping transceiver.
- A newly designed military build standard HF-150M 150 watt booster amplifier.
- A newly designed military build standard TA-91M Antenna Tuning Unit
- A new NATO/US standard 4.2 metre vertical whip antenna with heavy duty Base.

The new system offered a linear 150 watt output across the whole 2 MHz to 30 MHz HF band and maintained full compatibility with the company's highly

secure Frequency Hopping option, thereby maintaining a high degree of communication security.

Furthermore, in appreciation of real-world operating conditions, the new Amplifier features "off tune" and "missing antenna" protection and in the event of the 150 watt amplifier failing for any reason the system can revert to bypass mode. Some two years later, it can be reported that this heavy duty configuration has found favour with both new and existing military customers and has entered service in tracked and "big-wheeled" vehicles for domestic and peace keeping UN roles.

Furthermore, to meet additional customer demand, Q-MAC worked extensively with systems integrators to develop the following products:

- Associated anti-vibration shock mounting platforms for all system elements
- Vehicle Intercom systems
- Combat helmets (army green, UN blue, others)

Contracts to the value of many millions of Dollars have now been completed and Q-MAC is confident approaching any military vehicle project.



**Defence Industry**

**Patria's AMV vehicle selected for United Arab Emirates**



The United Arab Emirates' Armed Forces have ordered Patria AMV 8x8 armoured wheeled vehicles.

"We are most contented that Patria AMV has now been chosen by the UAE Armed Forces. This is a significant breakthrough for Patria in entering again a new market. We see the Arabian Peninsula as one of our focus areas in the near future", states Mr Jorma Wiitakorpi, President and CEO of Patria.

Patria AMV 8x8 - with well over 1200 vehicles contracted and some 200 already delivered - is the choice of the Polish, Finnish, Slovenian, South African, Croatian and now also United Arab Emirates' armies. Patria AMV is currently in serial production in three countries – Finland, Poland and Slovenia - and production will be starting soon in Croatia and South Africa.

Being fully NATO compatible, Patria AMV offers effective protection, increased mobility, modularity and combat proven performance. The vehicle is very easy to operate and maintain. Patria AMV is one of the few wheeled vehicles in the world capable of carrying also heavy weapon systems, like the 105 mm cannon or the 120 mm mortar turrets without reducing the mobility of

the vehicle.

Patria AMV is the only vehicle in its kind to have passed the demanding ARMSCOR mine tests in South Africa. The AMVs (Rosomaks in Polish) are currently in active use in the mission in Afghanistan by Poland. The experiences have been very positive and shown that Patria AMV vehicles deliver what they promise: excellent mobility, protection and performance.

Patria AMV is tested successfully in most demanding conditions in several countries among others in Finland, US, Brazil, South Africa, Kuwait, United Arab Emirates, Poland, Slovenia, Malaysia and Croatia with outstanding results.

Patria is a defence and aerospace group with international operations delivering its customers competitive solutions based on own specialist know-how and partnerships. Patria is owned by the State of Finland and the European Aeronautic Defence and Space Company EADS N.V.



### Contracts

#### BAE Systems Delivers MOKYS Prototypes to Slovak MoD

Bratislava, Slovakia -- BAE Systems has delivered the first seven prototypes of a mobile military communications system (MOKYS) to the Slovak Ministry of Defense (MoD).

After a series of successful tests, armored vehicles, including a Slovak TATRAPAN and a BAE Systems RG-32M equipped with MOKYS communications and information systems technologies were handed over in an official ceremony in Presov.

"This has been a great team effort with our partners, including the MoD, to deliver these prototypes on time and to budget," said John Barter, BAE Systems director for the Slovak Republic. "MOKYS utilizes the most modern communication technology and will ensure that the Slovak Armed Forces can operate throughout the entire spectrum of NATO operations, both military and non-military."

"We have agreed to a number of projects which will deliver significant value to the Slovak economy," said Barter. "We look forward to delivering this challenging program."

Included with the MOKYS prototypes, was a BAE Systems RG-32M mine-hardened vehicle to the Slovak MoD. This vehicle has been fitted with MOKYS equipment and is the first of seven such vehicles to be ordered by the Slovak MoD for this role.

The MOKYS system supports secure data transfer of audio, text, and video and will meet force requirements at the tactical-command level. It is designed to be modular, highly mobile, and independent of changes in configuration of forces.

The Slovak Ministry of Defense will conduct military trials during March after which BAE Systems expects to be awarded an initial production contract.



### Contracts

#### DRS Receives a \$13 M Order from the U.S. Army to Manufacture Tactical Quiet Generators

Parsippany, N.J. -- DRS Technologies, Inc. (NYSE: DRS) announced today that it received a \$13 million order from the U.S. Army's Communications-Electronics Command (CECOM) at Fort Monmouth, New Jersey to manufacture Tactical Quiet Generators (TQG).

CECOM placed the order on behalf of various Army, Navy and Air Force units via the Army's Program Executive Office for Command, Control and Communications Tactical, and its subordinate office of Project Manager for Mobile Electric Power at Fort Belvoir, Virginia.

The award is part of a current Indefinite Delivery/Indefinite Quantity contract with CECOM, and part of a long-term production program for the Army, which initially began as a development program in 1997.



### Defence Industry

#### Lockheed Martin Receives \$512 Million Contract for High Mobility Artillery Rocket System, Guided Multiple Launch Rocket System



DALLAS, TX -- Lockheed Martin has received a \$512 million contract to provide the High Mobility Artillery Rocket System (HIMARS) and the Guided Multiple Launch Rocket System (GMLRS) to the U.S. Army and to the U.S. Marine Corps.

Work on the contract will be performed at the company's facilities in Camden, AR, and Grand Prairie, TX, and is scheduled for completion in 4th quarter 2010. Specific quantities of vehicles and rockets were not disclosed.

"The HIMARS system brings much more mobile and lethal dimension to Soldiers and Marines," said Lt. Col. John Chicoli, U.S. Army Precision Guided Munitions and Rockets Product Manager. "HIMARS's exceptional mobility and transportability, together with the newest evolution of the MLRS family of munitions, bring long-range, precision fires, all-weather,

near-vertical impact to theater and greatly reducing collateral damage."

HIMARS can accommodate the entire family of MLRS munitions, including all variants of the Guided MLRS rocket and Army Tactical Missile System (ATACMS) missiles. Designed to enable troops to engage and defeat artillery, air defense concentrations, trucks, light armor and personnel carriers, as well as support troop and supply concentrations, HIMARS can move away from the area at high speed following missile launch, well before enemy forces are able to locate the launch site.

Because of its C-130 transportability, HIMARS can be deployed into areas previously inaccessible to heavier launchers and provides a force multiplier to the modular brigade. It also incorporates the self-loading, autonomous features that have made MLRS the premier rocket artillery system in the world.

HIMARS carries a single six-pack of MLRS rockets, or one ATACMS missile. Its fire control system, electronics and communications units are interchangeable with the existing MLRS M270A1 launcher, and the crew and training are the same. HIMARS units are currently deployed by the U.S. Army and U.S. Marine Corps in support of the Global War on Terrorism.

"In theater, the GMLRS Unitary rocket has earned the nickname the 70-kilometer Sniper Rifle, and continues to live up to that reputation mission after mission," said Lt. Col. Mark Pincoski, U.S. Army Product Manager, Precision Guided Missiles and Rockets. "Guided Unitary has reshaped the way indirect fires are applied throughout the battlefield thanks to its 24-hour, all-weather availability and pinpoint accuracy."

Guided Unitary MLRS is the newest variant which leverages the GMLRS experience and investment to integrate a unitary warhead with a multi-mode fuze to expand the MLRS target set to include point targets within urban and complex environments. In January 2005, the U.S. Army issued an Urgent Need Statement for acceleration of GMLRS Unitary deliveries in support of counter fire operations. Lockheed Martin delivered the first 72 GMLRS Unitary rockets in June 2005 satisfying the requirements of the Urgent Need Statement. The first 900+ rockets were delivered to the U.S. in 2005 and 2006.

"The successes of these systems speak for themselves," said Rick Edwards, vice president of Tactical Missiles at Lockheed Martin Missiles and Fire Control. "HIMARS and GMLRS, coupled with a world-class logistics footprint, are becoming ubiquitous to the urban and counter insurgency fight whenever surgical precision is needed."

GMLRS is an all-weather, precision strike, artillery rocket system that achieves greater range and precision accuracy requiring fewer rockets to defeat targets, thereby reducing the number of rockets necessary to defeat current targets as well as limiting collateral damage. GMLRS is a Future Force system that provides

the joint warfighter with immediate, precision fires to engage, destroy and deny terrain to the enemy.

GMLRS is effective against counter fire, air defense, light materiel and personnel targets. GMLRS incorporates a Global Positioning System-aided inertial guidance package integrated on a product improved rocket body. Additionally, small canards on the Guided Rocket nose add basic maneuverability to further enhance the accuracy of the system.

