

# Army Guide monthly



## # 12 (15) December 2005

- General Dynamics Awarded \$60 Million Contract to Supply RG-31 Mine Protected Vehicles to the Canadian Military
- Lockheed Martin Receives 2005 Governor's Award For Modeling And Simulation
- Canada Takes Delivery Of First M777 Howitzers
- DRS Technologies Awarded \$18 Million Contract To Produce Infrared Assemblies For U.S. Army Combat Vehicles
- Rosoboronexport has signed a contract on supply of air defence systems to Iran
- Unique Autonomous Unmanned Ground Vehicle (AUGV) The Spotter Unveiled
- SEP T2 – a milestone in the development of a new Swedish military vehicle
- General Dynamics Delivers First Production Stryker NBC Reconnaissance Vehicles
- Elbit Systems of America`s Subsidiary, Kollsman, Awarded \$33.6 Million Initial Orders for Long Range Thermal Imagers for the USMC
- Denmark selects the EAGLE IV as their new Armoured Patrol Vehicle
- 100 DURO IIIP for the German Bundeswehr
- ORCWS 25-30 Unmanned Turret System Completes Field Trials
- BAE Systems Wins GBP J123 Million Armoured Vehicle Contract
- New Armoured Infantry Fighting Vehicle (AIFV) for the German Army: The Puma on the road to success – Prototype presented to the customer
- Saab Wins MSEK 140 Order for Fire Control System
- New anti-armour weapon system for the Swedish Armed Forces

## Contracts

### General Dynamics Awarded \$60 Million Contract to Supply RG-31 Mine Protected Vehicles to the Canadian Military



LONDON, Ontario, Canada - The Government of Canada has awarded a CAD \$60.3 million (US \$51.3 million) contract to General Dynamics Land Systems - Canada to provide 50 RG-31 Mine Protected Vehicles with an option for 25 additional vehicles.

General Dynamics Land Systems, the Canadian company's parent corporation, is a business unit of General Dynamics.

Under this contract, General Dynamics Land Systems - Canada will provide program management and engineering and logistics support while BAE Land Systems OMC of South Africa will manufacture the vehicles. The vehicles will incorporate a Kongsberg Protector M151 Remote Weapon Station, equipped with a day and night sighting system, which allows the operator to fire the weapon while remaining protected within the vehicle. Deliveries will occur from February to April 2006.

The RG-31 tactical vehicle offers excellent ballistic and mine blast protection, and will be used by the Canadian Forces in their upcoming operations in Afghanistan.

John Ulrich, senior vice president of General Dynamics Land Systems - Canada, said, "We are pleased to once again have an opportunity to provide the Canadian Forces with another world-class product to assist and protect Canadian soldiers as they undertake the challenge of another overseas mission."

General Dynamics Land Systems - Canada is currently delivering 148 RG-31 vehicles to the U.S. Army in fulfillment of a contract awarded earlier this year. The Canadian Army has previously deployed three RG-31 vehicles as part of its contribution to the International Security Assistance Force in Afghanistan. In addition, the vehicles have been extensively used by NATO forces in the former Yugoslavia as well as by the United Nations in Lebanon, Georgia, Syria, Bosnia and Herzegovina, and Kosovo.

## Training And Simulators

### Locheed Martin Receives 2005 Governor's Award For Modeling And Simulation

ORLANDO, FL, November 30, 2005 -- Lockheed Martin received the 2005 Florida Governor's Award for Modeling and Simulation during a ceremony at the Interservice/Industry Training, Simulation and Education Conference in Orlando.

Lockheed Martin was recognized in the acquisition category for developing and delivering the Virtual Combat Convoy Trainer (VCCT) system through a streamlined, non-traditional acquisition process that enabled the rapid fielding of the system in 2004. VCCT systems currently are used by the U.S. Army and U.S. Marine Corps and to date have trained more than 25,000 troops.

Now in its seventh year, the Governor's Award recognizes an organization, program or project for outstanding achievement in the field of modeling, simulation and training (MS&T) exercising innovative efforts that achieved a significant impact on the advancement of MS&T during the year. All aspects of MS&T are topics for award consideration, including pioneering acquisition. Award nominees may represent government, industry or academia.

With many wartime casualties occurring during convoy operations, the U.S. Army's Program Executive Office for Simulation, Training and Instrumentation (PEO STRI) made industry aware of a critical requirement to train Soldiers headed for duty in hot spots including Baghdad, Tikrit and Fallujah. Lockheed Martin worked with the Army to execute an innovative acquisition process that enabled the company to expeditiously develop and deliver the Virtual Combat Convoy Trainer to the field.

Lockheed Martin delivered convoy trainers to various Army and Marine Corps training sites in 2004 and 2005. The U.S. Air Force recently awarded a contract for a VCCT system so that Airmen can experience the same critical training as their Soldier and Marine counterparts.

Nominations for the Governor's Award are made through the National Center of Simulation to an awards committee of the National Training Systems Association.

## Defence Industry

### Canada Takes Delivery Of First M777 Howitzers

SHILO, Manitoba - The 1st Regiment Royal Canadian Horse Artillery conducted an inaugural

### Canada Takes Delivery Of First M777 Howitzers

SHILO, Manitoba - The 1st Regiment Royal Canadian Horse Artillery conducted an inaugural firing today of the first 155mm, M777 towed howitzers delivered to the Canadian Department of National Defence (DND).

The four guns of six to be delivered were supplied by the United States Marine Corps under a Foreign Military Sales (FMS) contract between the U.S. and Canada. The howitzers will be deployed to Afghanistan in support of Operation Archer, following training and integration with a digitized gun management system, in Canada.

The M777 howitzer is manufactured by BAE Systems at facilities located at Barrow in Furness in the UK and Hattiesburg, Miss., in the U.S. The howitzer is the first ground combat system to make extensive use of titanium and titanium castings. At approximately half the weight of comparable systems, the M777 howitzer offers improved transportability and mobility for rapid deployment.



The M777 was designed and developed by BAE Systems, and is a joint program between the U.S. Army and Marine Corps to replace the M198 towed howitzer.

missions involving deterrence, protection, maneuver and strike. SADA II and other HTI programs supported by DRS remain central to the Army's modernization strategy and its goal to dominate the expanded battle space in the 21st century."

The SADA II assemblies produced under this contract will incorporate the latest optical improvement modifications, representing state-of-the-art FLIR detector performance. DRS's SADA II meets or exceeds all specifications with excellent on time delivery and quality ratings and also provides such benefits as long-term cost reduction, lower production cycle times and easier implementation in the manufacturing process.

## Defence Industry

### Rosoboronexport has signed a contract on supply of air defence systems to Iran



On behalf of the Government of the Russian Federation Rosoboronexport State Corporation has signed a contract on supply of air defence systems to Iran.

Negotiations on this subject had been going on for four years.

Delivery of the air defence systems is planned to be completed by 2009.

The nomenclature and cost of the contract is a commercial secret.

## Contracts

### DRS Technologies Awarded \$18 Million Contract To Produce Infrared Assemblies For U.S. Army Combat Vehicles

Parsippany, NJ, -- DRS Technologies, Inc. announced that it has been awarded an \$18 million contract to produce optically improved, Standard Advanced Dewar Assembly (SADA) II assemblies for use on the U.S. Army's M2A3 Bradley Fighting Vehicles and M1A2 Abrams Main Battle Tanks.

The contract was awarded to DRS by Raytheon Company Network Centric Systems, located in McKinney, Texas. For this award, DRS will produce and deliver SADA II assemblies for the Army's Horizontal Technology Integration (HTI) B-Kit systems, which provide common advanced infrared imaging capabilities across several ground vehicle platforms. SADA II is used in the HTI Second Generation Forward Looking Infrared (2nd Gen FLIR) Thermal Imaging System, also produced by the company. Work for this order will be performed by the company's DRS Infrared Technologies unit in Dallas, Texas. Product deliveries are expected to begin next month and continue through April 2007.

"DRS is a key supplier in support of U.S. Army programs incorporating advanced Second Generation infrared products," said Fred L. Marion, president of DRS's Surveillance & Reconnaissance Group. "The leading edge technology of SADA II contributes to the strategic responsiveness, forward engagement and force projection capabilities of the U.S. Army, which is key to

## Robots

### Unique Autonomous Unmanned Ground Vehicle (AUGV) The Spotter Unveiled



Holon, Israel -- Tadiran Electronic Systems, a member of the Elisra Group and a recognized expert in C4I systems for the modern battlefield, has just debuted the Spotter, a new and unique tele-operated Autonomous Unmanned Ground Vehicle (AUGV) that is the state-of-the-art in its field.

World known for the unmatched quality and reliability of its cutting-edge C4I systems, Tadiran Electronics Systems has joined forces with Autonomous Solutions Inc., a leading US developer of unmanned vehicle and robotic technology, to create an advanced, intelligent vehicle that can meet many of the defense and security needs of modern military scenarios.

"Within the world trend toward ever wider use of unmanned vehicles, on land, sea and air, the Elisra Group can provide complete, fully integrated solutions to meet a very wide range of operational requirements", said Itzhak Gat, Elisra Group's CEO. "The Spotter is based on a broad systemic concept developed by a group of our experts, whose rich experience enables them to really understand emergent operational needs and find the most suitable answers for them", added Itzhak Beni, President and CEO of Tadiran Electronic Systems. Mr. Beni anticipates that this new development will further strengthen his company's position as a major player in the world of unmanned vehicles.

#### Computerized Mission Planning

Tadiran Electronic Systems' Spotter AUGV is a direct response to the increasingly lethal, dynamic arena of recent combat encounters, where the critical need for intelligence gathering on forward ground developments often exacts a heavy price on survivability of troops.

The Spotter can be programmed either by downloading GPS waypoints or by simply driving and recording a path. The vehicle then retraces the path in a totally autonomous fashion.

#### Reducing Risks Without Sacrificing Security

Rugged and robust, the Spotter is ideal also for unmanned on- and off-road reconnaissance and surveillance missions, and it can go through rough terrain that manned vehicles cannot normally traverse.

Among its most important missions, the Spotter is designed to perform routine guard and border-patrolling duties without putting soldiers' lives in risk. The advanced digital communications system installed on the Spotter relays video and sensor readings back to the headquarters and to a forward command post. The line-of-sight operations range can be extended over long distances. Portable control and display devices enable moving the forward command center close to the theater of operations, while still keeping at a safe distance from potentially perilous areas.

#### Advanced Obstacle Avoidance Capabilities

The Spotter offers advanced automatic obstacle

avoidance capabilities, supported by sophisticated yet affordable sensors, such as 3D laser, land radar, and stabilized cameras.

These ruggedized control systems constantly analyze the Spotter's surroundings and automatically steer the vehicle along a safe path. As the project leader for the concept and implementation of the solution, Tadiran Electronics Systems drew on decades of experience in digital technologies, C4I, and unmanned vehicles at the cutting edge of technology. The vehicle is fully deployable, as was demonstrated recently to IDF senior echelons and potential end-users, exhibiting its performance for effective, real-time reconnaissance and surveillance missions without endangering lives.



### Future Technologies

#### SEP T2 – a milestone in the development of a new Swedish military vehicle



SEP T2 Land Systems Haggblunds has taken an important step in the development of SEP, the Swedish military vehicle of tomorrow.

The 22nd of November a newly developed tracked version of the SEP prototype was handed over to Director-General Gunnar Holmgren, Defence Material Administration (FMV).

– SEP T2 represents a milestone in the project and is a high technical step forward, says Sven Kagevall, Managing Director of Land Systems Haggblunds. SEP will be good business for Sweden, as well as our all terrain vehicles and CV90Bs are.

– During the last 10 years Haggblunds has generated export business to an amount of approximately 20 thousand millions SEK thanks to successful sales of all terrain vehicles and combat vehicles. We have proven that we can both develop and export successful vehicle concepts. With a future development order for SEP we have the possibility to continue to generate export income to at least the same extent for "Sweden Corp."

SEP is a flexible modular vehicle which will replace several older vehicles. SEP has a low total weight (17 tonnes), is available in both tracked and wheeled configurations and can carry out several tasks. SEP has an ingenious load changing system which implies that specialized mission modules with different tasks (towing, ambulance etc.) can be shifted between the vehicles. In the development work strong emphasis is put on reducing maintenance and running costs and adjusting the vehicles towards the environmental demands of today.

– With SEP T2 we have reached a new technical level in our development work, says Sven Kagevall, and

mentions three essential improvements: A new generation of electric drive that improves the steering qualities, an improved signature management and a replaceable role module.

Another important advantage is that the fuel consumption is reduced compared to conventional vehicles in the same weight class. The use of rubber tracks reduces the wear on roads and nature and also improves the work environment.

Commercial components and sub-systems are to a large extent used in the development work which gives a lower total cost of the vehicle system.

#### International interest

Sven Kagevall is also delighted about the great international interest in SEP.

– There are many connections in the development of SEP and the British FRES project. This is not at least emphasized by the great number of visits by British generals at Hagglunds. Also the EU authority EDA (European Defence Agency), which restructures and coordinates the work of future defence products in Europe, has shown its interest in SEP as well as Norway and Australia have.

---

### Defence Industry

#### General Dynamics Delivers First Production Stryker NBC Reconnaissance Vehicles

STERLING HEIGHTS, Mich. --- General Dynamics Land Systems, a business unit of General Dynamics, delivered its first two low-rate initial production (LRIP) Stryker Nuclear, Biological and Chemical Reconnaissance Vehicle (NBCRV) variants to the U.S. Army yesterday at Anniston (Ala.) Army Depot. General Dynamics will deliver 17 NBCRV variants during low-rate production, through March 2006.

The vehicles will be used for various tests and user evaluations through the fourth quarter of 2007. The Army is expected to make the decision to begin full-rate production (called "Milestone C") of the NBCRV in the fourth quarter of 2007.

The NBCRV provides the Stryker Brigade Combat Team with the Department of Defense's newest nuclear, biological and chemical detection equipment on the Stryker chassis. The NBCRV variant locates, marks and reports NBC contamination on the battlefield. It detects and collects contaminated material in the vehicle's immediate environment on the move through point detection and at a distance with a stand-off detector. It automatically integrates contamination information from detectors with input from on-board navigation and meteorological systems. It also automatically transmits digital NBC warning messages to warn follow-on forces.

Stryker is 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. It operates with the latest C4ISR equipment as well as detectors for nuclear,

biological and chemical weapons. In addition to the NBCRV variant, Stryker vehicle configurations include: the Mobile Gun System; medical evacuation and anti-tank guided missile vehicles; and carriers for mortars, engineer squads, command groups and fire-support teams. The vehicles have more than 85 percent common components with the rest of the 310 Strykers in a brigade combat team, which eases the unit's training and logistics burden.

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. The Army will have six Stryker Brigade Combat Teams by 2008. Stryker is the Army's highest-priority production combat vehicle program and the centerpiece of the ongoing Army Transformation. 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.

General Dynamics, headquartered in Falls Church, Va., employs approximately 71,900 people worldwide and had 2004 revenue of \$19.2 billion. The company is a market leader in mission-critical information systems and technologies; land and expeditionary combat systems, armaments and munitions; shipbuilding and marine systems; and business aviation.

---

### Contracts

#### Elbit Systems of America's Subsidiary, Kollsman, Awarded \$33.6 Million Initial Orders for Long Range Thermal Imagers for the USMC

HAIFA, Israel --- Elbit Systems Ltd. reported that its U.S. subsidiary Kollsman, Inc., was awarded initial orders in the amount of \$33.6 million to provide high-performance Thermal Binocular System Long Range Thermal Imagers (LRTI) for the U.S. Marine Corps.

The LRTI is a portable binocular, hand-held, battery-operated thermal imager for long-range observation and reconnaissance. Initial deliveries will be made in 2006 and 2007. The majority of the work under the contract will be performed by Kollsman in Merrimack, New Hampshire, with support being provided by Elbit Systems Electro-Optics Elop Ltd., a wholly owned Israeli subsidiary of Elbit Systems Ltd. The initial orders were placed under an indefinite delivery/indefinite quantity (IDIQ) contract awarded by the U.S. Marine Corps Systems Command, Infantry Weapons Branch in Quantico, Virginia. Under the IDIQ contract the U.S. Government may purchase up to 5,000 LRTI's as well as spare parts, contractor maintenance and training items over a five-year period. Therefore, there is the potential for up to \$250 million in additional

orders to Kollsman under the IDIQ contract. According to Elbit Systems of America's President and CEO Tim Taylor, "The LRTI will provide ground troops with an effective means of operation that is a crucial part of field operations.

We are very proud that Kollsman has been selected for this important program in support of the Marine Corps." Kollsman, Inc., an Elbit Systems of America company, headquartered in Merrimack, New Hampshire, is a multi-disciplined research, development, manufacturing and support organization which provides advanced electro-optical and avionics systems to U.S. and foreign commercial and military markets. Elbit Systems Ltd. is an international defense electronics company engaged in a wide range of defense-related programs throughout the world, in the areas of aerospace, land and naval systems, command, control, communications, computers, intelligence, surveillance and reconnaissance, advanced electro-optic and space technologies.

The company focuses on the upgrading of existing military platforms and developing new technologies for defense and homeland security applications.

## Defence Industry

### Denmark selects the EAGLE IV as their new Armoured Patrol Vehicle



Hjorring, Denmark - On December 09, 2005 the Danish Army Materiel Command (DAMC) and MOWAG GmbH - a General Dynamics company - signed a contract for the delivery of 85 units plus a small number for training and logistic reserve EAGLE IV 4x4 Armoured Patrol Vehicles (APV), including initial logistic support and services with a total value of close to 50 Million Swiss Francs (approx. US\$ 38 Million).

After five contracts for EAGLE I 4x4 and PIRANHA III 8x8 between 1995 and 2004, this contract adds the latest development of the Swiss company to the fleet of MOWAG vehicles operated by the Danish Army.

In May 2005 the Danish Army Materiel Command (DAMC) had announced the procurement Program for new Danish Army Armoured Patrol Vehicles. Key requirements included the ability to carry 5 people, be fitted with an Overhead Weapon Station and provide ballistic and mine protection to the crew and engine compartment.

Out of 11 companies that were selected to bid, four finally received an invitation to send their vehicles to undergo trials in Denmark. In September and October 2005, customer tests over an 8000 km distance were

conducted including extensive off-road driving in all types of terrain, long distance on-road driving including German Autobahn, testing at the tough WTD 41 test facilities in Trier, Germany and troop trials on the isle of Bornholm. The outstanding performance of the EAGLE IV in the areas of on- and off road mobility, driving safety, crew comfort and vehicle versatility at an affordable price made the EAGLE IV the winner in this competition.

MOWAG's CEO, Simon T. Honess, was proud and pleased about the selection of the EAGLE IV by Denmark, and he declared: "This contract is a great success for MOWAG as it marks a further proof of our customers' confidence in the performance and reliability of our products and company.

The EAGLE IV, to be equipped with an Overhead Weapon Station, Communication and Battle Management System and various other equipment will further enhance the military capability of Denmark to participate in international operations. The threat situation in such missions specifically calls for a high level of protection for the vehicle crews against mines and ballistic weapons. With the EAGLE IV, the technology-minded company from Kreuzlingen, Switzerland offers a new product based on the well proven DURO family of vehicles, which fulfils this high-ranking requirement of protection, comfort and mobility.

Production will take place at MOWAG's facility in Kreuzlingen and deliveries will commence in August 2006. Danish companies will be involved in the supply of various components and assemblies.

Facts about the EAGLE IV 4x4:

With the EAGLE IV MOWAG is on the way to set another standard in the domain of armoured wheeled vehicles in the weight class up to 8 tons. The EAGLE IV is 5.37 m long, 2.16 m wide and offers seating space for 4-5 people. On the road, the EAGLE IV reaches a speed of 110 km/h; it manages gradients of up to 60% and obstacles with a height of up to 40 cm. The 245 HP Cummins engine, in connection with the Allison 5-speed automatic transmission, the unique De Dion axles with patented Roll Stabilizer, the tire pressure regulation system, and permanent all-wheel drive give the EAGLE IV an incomparable mobility both on- and off road.

## Defence Industry

### 100 DURO IIIP for the German Bundeswehr

Kreuzlingen - at the end of November the Kreuzlingen based technology enterprise MOWAG GmbH received an order from the German Rheinmetall Landsysteme GmbH, Kassel (RLS) for the production of 100 DURO IIIP basic vehicles.

RLS will mount user-specific mission modules on the vehicles. In the German Bundeswehr, the DURO IIIP is intended to replace existing soft-skinned vehicles currently in service and will in that way provide German

troops with greater protection when deployed in harm's way. The ordered basic vehicles will be delivered from the end of 2006 until 2008.



After the first delivery of 31 DURO IIP in the years 2004 and 2005, this is the second contract with the German Bundeswehr. The DURO IIP is a state-of-the-art 6x6 multipurpose wheeled armored vehicle in the weight class of 12 tons with protection against ballistic threats, integrated anti-landmine protection and enough space for up to ten crewmembers. Within the German Bundeswehr the delivered DUROs are in successful operation among other in peacekeeping mission "ISAF" in Afghanistan. Of the 100 ordered vehicles, 31 will be configured for medical services, 23 for Military police and 21 for bomb disposal (EOD). The other 25 DUROs will be equipped with other mission specific modules.

Simon T. Honess, CEO at MOWAG GmbH, is very pleased with the actual sales success in Germany and stated: "This order is an impressive proof of the performance and reliability of our DURO, which is doing a very good job with the German Bundeswehr on the ISAF peace-keeping mission in Afghanistan. Furthermore, this second order indicates the excellent experiences of the German Bundeswehr under mission conditions as well as the strong partnership with Rheinmetall Landsysteme, Kassel." When asked to address the significance of these contracts for MOWAG GmbH, Honess stated: "This order is also a further important milestone for a continuous improvement of our marketing activities in the difficult German market. Besides the worldwide successful PIRANHA family of Armoured Wheeled Vehicles our DURO is establishing as a real second main pillar. I am convinced that the DURO will be also in future a source of much gratification for us in Kreuzlingen, especially due to the fact that our multipurpose wheeled armored vehicle optimally meets the greater demand by the armed forces on protected transport capacity."

---

### Defence Industry

#### ORCWS 25-30 Unmanned Turret System Completes Field Trials

Haifa, Israel: Elbit Systems has reported that its Overhead Remote Control Weapon Systems ORCWS 25-30 has successfully completed a series of firing tests. The ORCWS 25-30 is a fully stabilized, dual-axis overhead unmanned turret system with 25 or 30 mm automatic cannons.

The first firing test series was of an ORCWS-25 system, which consists of a 25mm cannon installed on an M-113 armored personnel carrier (APC) platform. During the test series, the ORCWS 25 system's integration with the APC platform was performed and demonstrated, as well as live firing at an Israel Defense Forces (IDF) firing range.



A second firing test series was held in Switzerland in cooperation with the Swiss company Mowag, a leading manufacturer of wheeled platforms. As part of this test series an ORCWS system with a 30mm cannon was installed on a Piranha IV armored wheeled vehicle.

The tests in Switzerland included a demonstration of the ORCWS 30 system on the wheeled platform facing different levels of obstacles, stabilization tests, live firing to varying distances and shooting dozens of rounds in a formal firing range of the Swiss company Oerlikon.

The ORCWS 25-30 systems include proprietary technology covered by Israeli and international patent applications. They represent a true step function in response to the asymmetric warfare challenges posed by the urban landscape.

The unique design is based on extensive battlefield experience in full scale and low intensity conflicts and attests to the Elbit Systems Group's leadership in the field of Turret and Fire Control systems on all IDF battle tanks, including the Merkava.

The ORCW 25-30 is a dual-axis stabilized system (cannon and sight) with 25 or 30 mm cannons, capable of carrying two anti-tank missiles. All weapon functions are remotely and electrically operated from within the crew compartment using Commander and Gunner handles and color-display monitor, which enables performing all shooting operations of the cannon, machine-gun and missiles.

The ORCWS 25-30 is a light weight, low profile Unmanned Turret, installed and integrated with no deck penetration on wheeled and tracked vehicles, enabling firing on the move, marine operation and C-130 air transportability.

---

### Contracts

#### BAE Systems Wins GBP J123 Million Armoured Vehicle Contract

BAE SYSTEMS has won a J123 million order to supply 45 CV9035 Infantry Fighting Vehicles to the

Danish Army. This latest order brings the number of CV90 series customers to six, underlining its position as the European combat vehicle alternative.



Danish company Hydrema Export A/S will partner BAE Systems for production of the vehicles. The two companies will jointly investigate the possibility of through-life support for both maintenance and upgrades.

The CV9035, built by BAE Systems' Land Systems Hagglunds, is a new-generation CV90, with improved fire power, protection, mobility and ergonomics plus an advanced electronics architecture.

"The CV90's competitiveness has much to do with its flexible construction, which enables specific configuration adjustments to meet the specific requirements of individual customers," states Sven Kegevall, President of Land Systems Hagglunds. "With the ability for us to partner with domestic industry in each of our customer countries, it has gained a strong market position as the European combat vehicle of choice."

The BAE Systems CV90 has been successful in gaining orders in Norway, Finland, Switzerland, Holland and now Denmark. Interest remains high in a number of other potential export markets both in Europe and beyond.

Total orders for 1,170 CV90s to six countries gives existing and future customers coordination advantages for upgrades and spare parts handling as well as interoperability for international missions.

The 4th generation CV90; CV9035 MkIII, bought by Denmark, is today's most modern combat vehicle.

The vehicle's main armament is a Bushmaster III 35/50 canon including ammunition programmer, controlled by a computerized fire control system. Both gunner and commander have stabilized day and night sight with a 3rd generation thermal night camera for the gunner. The vehicle has a crew complement of 3 and capacity for a further 7 personnel.



Despite an extremely tight timescale which called for demanding engineering solutions, the most important procurement project of the German land systems industry is on the road to success.



PSM (Projekt System and Management) is a joint venture of Krauss-Maffei Wegmann and Rheinmetall Landsysteme, two of Europe's leading systems engineering companies for armoured wheeled and tracked vehicles, each holding a 50% stake in the company. Rheinmetall Landsysteme is a subsidiary of the Dusseldorf-based Rheinmetall AG.

The Army is to receive a total of 410 vehicles representing a total value of approximately 3 billion euros. The political decision on whether the Armoured Infantry Fighting Vehicle will go into series production is expected for 2007. A contract has already been awarded for the delivery of five pre-production vehicles as well as logistic and training services.

The AIFV Puma is considered a key project of the German land systems industry and highlights the technological position of excellence of German army technology in this field. The vehicle offers an internationally unequalled performance standard, especially also in terms of crew protection in combat missions.

The Puma combines the military requirement for high strategic and tactical mobility with maximum protection as well as distinctive combat potential. It enables task forces to respond appropriately and flexibly at all times and at any level of intensity.

Designed to consistently meet the future needs of the armed forces, air-transportability on the new A400M transport aircraft is a key characteristic of the PUMA, as is its flexibility and ability in combat.

The PUMA affords its crew a level of protection never before achieved by a comparable vehicle against mines and anti-tank weapons which are in widespread use in areas of crisis. The newly developed 800 kW engine, the unmanned turret as well as the programmable ammunition are setting new standards for armoured vehicles worldwide. More than 30 years after the Marder armoured personnel carrier was commissioned with the German Army, the PUMA with its extended performance spectrum is now establishing an entirely new category of vehicles.



## Defence Industry

### New Armoured Infantry Fighting Vehicle (AIFV) for the German Army: The Puma on the road to success – Prototype presented to the customer

Kassel. A prototype of the new AIFV Puma for the German Army was today presented to the contracting authority. PSM GmbH, Kassel, responsible as prime contractor, has thus met an important contractual milestone with the presentation of the so-called system demonstrator on 20 December 2005.



## Defence Industry

### Saab Wins MSEK 140 Order for Fire Control System

Saab Systems has received an order worth MSEK 140 from Land Systems Hagglands AB for the UTAAS Fire Control System for the Danish Army's CV9035 Combat Vehicles.

"Our excellent cooperation with Land Systems Hagglands AB has once again been successful, and this order consolidates Saab Systems' position as a leading supplier of fire director and fire control systems for tanks and combat vehicles," says Dan-Eke Enstedt, President of the Saab Systems business unit. UTAAS (Universal Tank and Anti Aircraft System) is a modular fire director and fire control system for tanks and combat vehicles.

The system offers direct fire capability, which means that the gunner can take aim independently of the vehicle's movements while the fire control system automatically aligns the gun. Saab has over 50 years' experience of developing and manufacturing advanced optical sights, working with the very latest night vision technology. A total of over 1,000 systems have been sold for the CV90 to Sweden, Norway, Switzerland, Finland, the Netherlands and Denmark. Saab is one of the world's leading high-technology companies, with its main operations focusing on defense, aviation and space.

The Group covers a broad spectrum of competence and capability in systems integration.

## Defence Industry

### New anti-armour weapon system for the Swedish Armed Forces

Following a joint development project between Sweden and the United Kingdom, FMV has placed an order for the NLAW (Next Generation Light Anti Armour Weapon) to be known as RB 57.

On assignment from the Swedish Armed Forces, FMV has been working on the procurement of a new anti-armour weapon system with delivery to commence in 2006. The new system will be known in Sweden as Robot 57, (RB 57) and will be supplied in the first place to army units requiring an anti-armour capability. RB 57 will complement existing systems by providing the individual soldier with a weapon, intended primarily for use at relatively short ranges, which is capable of defeating most types of vehicle including tanks.

According to the Swedish Army's requirements, RB 57 must be capable of defeating tanks and other armoured vehicles, have a low acoustic pressure signature when launched, be capable of engaging targets at ranges down to 20 m, have minimal environmental impact with international operations in mind and weigh less than 12.5 kg.

RB 57, known internationally as NLAW (Next Generation Light Anti-Armour Weapon), is the result of a collaborative project lasting several years between Sweden and the United Kingdom. This collaboration

with the United Kingdom began at an early stage with an exchange of information and the harmonisation of requirements. This led to the merging of the Swedish and British procurement programmes in 2002 when a joint development contract was placed.

The joint project and this contract were led by the DPA (Defence Procurement Agency), FMV's equivalent in Britain, which FMV has found to be a very satisfactory collaborative partner. RB 57 will be produced by Saab Bofors Dynamics in collaboration with mainly British subcontractors. This order is worth approximately SEK 500 million.

## Defence Industry

### General Dynamics Delivers First Production Stryker MGS Vehicles



STERLING HEIGHTS, Mich. - General Dynamics Land Systems, a business unit of General Dynamics, yesterday delivered the first two of 72 low-rate initial production (LRIP) Stryker Mobile Gun System (MGS) variant vehicles to the U.S. Army at Anniston (Ala.) Army Depot.

The Stryker MGS variant is a direct-fire infantry assault platform with a 105mm cannon mounted in a low-profile, fully stabilized, "shoot-on-the-move" turret and integrated into the Stryker chassis. It carries 18 rounds of NATO-standard 105mm main gun ammunition; 400 rounds of .50 caliber ammunition; and 3,400 rounds of 7.62mm ammunition. It destroys enemy vehicles, equipment and hardened positions with its bunker and wall-breaching capability.

The MGS LRIP vehicles will be used for various tests and user evaluations through the fourth quarter of 2007. The Milestone C decision to begin full-rate production of the MGS variant is slated for the fourth quarter of 2007 as well.

Stryker is 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. It operates with the latest C4ISR equipment as well as detectors for nuclear, biological and chemical weapons. In addition to the MGS, Stryker vehicle configurations include: the nuclear, biological and chemical detection vehicle; anti-tank guided missile and medical evacuation vehicles; and carriers for mortars, engineer squads, command groups, and fire-support teams. The Mobile Gun System has more than 70 percent common components with the rest of the 310 Strykers that

comprise a brigade combat team, which eases the unit's training and logistics burden.

The Army will have six Stryker Brigade Combat Teams by 2008. Stryker is the Army's highest-priority production combat vehicle program and the centerpiece of the ongoing Army Transformation.

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.



---

### Defence Industry

#### **Patria Requests An Investigation On Portuguese Vehicle Deal**

Patria has submitted a request for investigation to the Public Attorney's Office of the Administrative Court in Lisbon regarding the contract signed between the Portuguese State and Steyr Daimler Puch GmbH for the delivery of 260 Pandur II wheeled armoured vehicles.

Patria believes it has firm evidence on misconducts during the tender and contract formation procedures, which caused that the products defined by the contract were ultimately different from what was originally defined by the public tender requirements. Patria wishes, that the Public Attorney will investigate the claims to achieve a transparent and fair assessment of the case.

Any non-fulfilment of any essential requirement should have caused the exclusion of such proposal and the respective competitor from the Portuguese tender procedure. This regulation was not correctly applied to Steyr.

