

# Army Guide monthly



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## Defence Industry

### Oshkosh Corporation Awarded Contract to Provide Replacement Defense Vehicle Parts

OSHKOSH, Wis. -- Oshkosh Corporation) announced that Oshkosh Defense has been awarded a sole source contract with the Defense Logistics Agency (DLA) to provide replacement parts for medium and heavy tactical vehicles.

This annual contract has a potential duration of 10 years, if all option years are exercised, and a value of up to \$1.12 billion. This follows a one-year contract that included seven option years, each of which were exercised, that ended in December 2008.

Under the contract, Oshkosh Defense will supply the DLA with replacement parts to support Oshkosh's medium and heavy tactical vehicles, which include the Medium Tactical Vehicle Replacement (MTVR), Heavy Expanded Mobility Tactical Truck (HEMTT) and Palletized Load System (PLS). Oshkosh also supplies replacement parts for other manufacturers' medium and heavy-payload vehicles.

"Oshkosh Defense vehicles provide the superior performance and reliability that our military customers demand, and we are proud to support those vehicles with our top-of-the-line aftermarket parts and services," said Robert G. Bohn, Oshkosh Corporation chairman and chief executive officer. "Our customers always know their vehicles are backed by an extensive and dependable network of parts and support services with Oshkosh."

The first contract order is valued at \$17.5 million and is for approximately 2,300 replacement part numbers to support Oshkosh's tactical vehicles.

Oshkosh Defense provides aftermarket service, repair and parts distribution to its customers around the world. With factory-trained technicians, Web-based parts support and service centers worldwide, customers are covered 24/7 whether their vehicles are in the field or in garrison.

#### About Oshkosh Defense

Oshkosh Defense, a division of Oshkosh Corporation, is an industry-leading global designer and manufacturer of tactical military trucks and armored wheeled vehicles, delivering a full product line of conventional and hybrid vehicles, advanced armor options, proprietary suspensions and vehicles with payloads that can exceed 70 tons. Oshkosh Defense provides a global service and supply network including full life-cycle support and remanufacturing, and its vehicles are recognized the world over for superior performance, reliability and protection.



## Defence Industry

### QinetiQ North America announces new orders for TALON robots and parts totalling \$58.5 million

QinetiQ North America today announced that its

Technology Solutions Group has been awarded a total of \$58.5 million in funding for additional TALON robots and replacement parts. The total represents awards from the US Army and Navy made during the six-month period 1 May to 1 November 2008.



The new delivery orders include \$48 million against the new \$400 million IDIQ (indefinite delivery, indefinite quantity) contract awarded last May by the Robotic Systems Joint Program Office (RSJPO) administered by the Program Executive Office – Simulation, Training and Instrumentation (PEO-STRI) and \$10.5 million against the \$295 million IDIQ awarded by the Navy's Explosive Ordnance Disposal Technology Division (NAVEODTECHDIV).

A total of 2,500 TALON robots are now deployed around the world, with a significant number of them in Iraq and Afghanistan. They are used primarily to assist military personnel with the extremely dangerous job of detecting and disabling roadside bombs – the Improvised Explosive Devices (IEDs) planted by hostile forces to attack troops. TALON robots have been used in more than 100,000 counter-IED missions to date, saving countless lives in the process.

"TALON continues to play a vital role in the defeat of roadside bombs and IEDs in Iraq and Afghanistan," said Dr. William Ribich, President of the Technology Solutions Group. "In addition, our soldiers and marines are constantly exploring new ways to deploy the robots and maintain their own safe standoff distances in all types of challenging situations. We're pleased that the partnership of soldier and TALON is proving to be so durable and successful."

The mid-size TALON robot is the mainstay of the family of TALON robots developed by QinetiQ North America in response to the needs of military customers.



## Defence Industry

### BAE Systems Awarded \$115 Million For Caiman Spare Parts



HOUSTON, Texas -- BAE Systems has received six contracts worth \$115 million from the U.S. Army Tank-Automotive and Armaments Command for replacement parts, including complete engines,

transmissions, axles and self-recovery winches, for Caiman Mine Resistant Ambush Protected (MRAP) vehicles.

This order fulfills urgent requirements for spare parts to maintain approximately 1,650 Caiman MRAP vehicles operating in Iraq.

“The Army’s request for sustainment spare parts helps maintain the assets needed to keep vehicles in the fight and meet theater demand,” said Chris Chambers, vice president of Medium/Heavy vehicles for BAE Systems.

Replacement parts are ordered and received from the original equipment manufacturers who supply parts for the Caiman production line vehicles. The completed engines are comprised of the Caterpillar engine, which has accessory parts such as alternators, starters, and hoses installed at BAE Systems’ Sealy, Texas facility. BAE Systems then preserve, mark and package the parts to military specifications before shipping to Red River Army Depot (RRAD) in Texarkana, Texas. RRAD send the parts to Iraq to fill MRAP repair part orders from the various Army units. Work filling the contract orders will be completed by August 2009.

“This work ensures the proper sustainment parts are included to keep the vehicles operating,” said Shane Burns, Caiman project manager at BAE Systems. “The Caiman has a 95 percent operational readiness rate and these items are helping to maintain that rate now and improve it. Every item on this contract, with exception of rear axle, is currently needed in Iraq.”

BAE Systems has hired an additional 20 employees in its Sealy, Texas facility to help fulfill the orders. Two of the new hires are permanent employees. The remaining 18 are temporary hires. The additional employees will contribute an estimated \$1.66 million in generated business and income to the greater Houston area for the year.

BAE Systems employs more than 2,500 people in Sealy, Texas and has nearly 900,000 square feet of manufacturing and office space on approximately 200 acres. The Sealy facility has a long history with wheeled vehicle products and has established itself as a world-class designer, volume manufacturer and through-life supporter of high-quality, best value, military tactical trucks and wheeled vehicle systems with payload capacities from 2.5 to 18 tons. Today, BAE Systems is the exclusive manufacturer of the Family of Medium Tactical Vehicles and is the producer of three Mine Resistant Ambush Protected variants, the Caiman, the RG33 and the RG31.

that are fitted to the muzzle of a firearm or cannon to redirect propellant gases with the effect of countering both recoil of the gun and unwanted rising of the barrel during rapid fire. Muzzle brakes are very useful for combat and timed competition shooting, and are commonly found on rifles firing very large cartridges (often big-game rifles), as well as some artillery and tank guns. They are also commonly used on pistols for practical pistol competitions, and are usually called compensators in this context.

Muzzle brakes are simple in concept. One of the simplest designs can be found on U.S. 90 mm tank guns. This consists of a small length of tubing mounted at right angles to the end of the barrel. Brakes most often utilize slots, vents, holes, baffles, and similar devices to redirect and control the burst of combustion gases that follows the departure of a projectile. Another method, called porting involves ports or holes in the barrel near the muzzle that vent gas prior to the departure of the bullet. A third method involves slowing the departure of combustion gases rather than redirection. Slowing of the gases is the method used on suppressors and linear compensators. In conventional designs, combustion gases depart the brake at an angle to the bore. This counteracts the rearward movement of the barrel due to recoil as well as the upward rise of the muzzle. The effect can be compared to reverse thrust systems on aircraft jet engines. The mass and velocity of the gases is significant enough to move the firearm in the opposite direction of recoil. On the AKM assault rifle, the brake is angled slightly to the right to counteract the sideways movement of the gun under recoil.

Construction of a brake or compensator can be very simple; the AK-47, for example, some models used a diagonal cut at the muzzle end of the barrel to direct some of the escaping gases upwards. Another simple method is porting, where holes or slots are machined in the barrel near the muzzle to allow the gas to escape.

More advanced designs use baffles and expansion chambers to slow down the escaping gases; this is the basic principle behind a linear compensator. Ports are often added to the expansion chambers, producing the long, multi-chambered recoil compensators often seen on IPSC raceguns.

There are advantages and disadvantages to muzzle brakes. Recoil is a subjective concept. One shooter may perceive it as pain, another as movement of the sights, and another as rearward thrust. Recoil energy can be sharp if the impulse is fast or may be considered soft if the impulse is slower, even if the same total energy is transferred.

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### Term of the day

## Muzzle Brake



Muzzle brakes and recoil compensators are devices

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### Defence Industry

## SAIC Awarded \$97 Million U.S. Army Delivery Order For Military Mobile VACIS(R) Inspection Systems

Systems Enable Deployed Soldiers to Search Vehicles and Cargo for Weapons, Explosives and Other Threats.

Science Applications International Corporation today announced that it has received a delivery order from the U.S. Army, valued at more than \$97 million, for Military Mobile VACIS(R) inspection systems plus associated maintenance services. The systems produce digital images of the contents of vehicles and cargo for analysis, enabling Army personnel to search for weapons, explosives and other threats. SAIC will manufacture the systems near San Diego, California, and will deliver them throughout 2009 and 2010.

Based on SAIC's commercial VACIS(R) inspection technology, the Military Mobile VACIS is built around an armored high-mobility multipurpose wheeled vehicle (HMMWV). This rugged system allows users to perform non-intrusive vehicle inspections in remote locations not accessible by conventional mobile systems, and provides added protection for operators and drivers during scanning and transportation.

"Since 1994, SAIC has provided hundreds of VACIS systems in fixed and mobile configurations to military forces, customs agencies and other security organizations around the world," said Alex Preston, SAIC senior vice president and business unit general manager. "We are pleased that the Army has once again chosen SAIC's VACIS(R) inspection systems to help protect troops overseas, secure vital assets and aid in the fight against terrorism."



### Defence Industry

#### MILKOR announces new Lightweight Under Barrel Grenade Launcher



Exhibiting at this year's IDEX, South African company MILKOR (Pty) Ltd, announces it's new Lightweight Under Barrel Grenade Launcher.

Due to a worldwide growing demand for a simple, easy to operate, robust but light-weight single shot Under Barrel Grenade Launcher "UBGL", MILKOR set about improving on their tried and tested US-Mk 4.

The original US-Mk 4 has a mass of 1,68 kg (empty) compared to that of the new US-Mk 4 S which weighs 750g with an Aluminium Barrel or 1kg with a Steel barrel.

Unique features include a "Push Button" trigger mechanism as opposed to a conventional Trigger. Users stated the need to differentiate between firing mechanisms on the rifle and the Under Barrel as the soldier invariably, under duress, gets confused if faced

with two triggers.

Another feature is the "Swing- to- the- side" opening mechanism enabling the user to easily load all types of ammunition without having the rifle's magazine interfering or the slide mechanism not opening sufficiently to load a longer round.

Milkor will exhibit their new US-Mk4S at IDEX 2009, stand 12D10 (SA Pavilion).



### Defence Industry

#### Contract for weapon control systems to Slovenia valued at MNOK 100



Kongsberg has signed a contract with Patria for the Protector weapon control system for delivery to the Slovenian Army. The order is valued at approx. MNOK 100. The delivery of the systems will take place from 2009 to 2011.

The Protector weapon control system protects military troops by allowing the vehicle's weapons to be operated from a protected position inside the vehicle.

KONGSBERG is a multinational, knowledge-based group with more than 5000 employees in more than 25 countries. The Group delivers high-technology systems to discerning customers engaged in offshore oil and gas production, the merchant marine, and the defence and aerospace industries. KONGSBERG is listed on the Oslo Stock Exchange (Ticker: KOG), and posted operating revenues of NOK 8.3 billion in 2007.



### Defence Industry

#### BAE Systems Delivers the 1000 CV90 Combat Vehicle



Ornskoldsvik, Sweden - BAE Systems has delivered the 1,000 CV90 Infantry Fighting Vehicle, marking a milestone for a vehicle that has been in production since 1991.

CV90, an agile, multi-role combat vehicle with all-target capabilities ranging from small targets to larger threats, has been continuously developed to meet the challenges of today's threat scenario.

The 1,000 vehicle was delivered to the Netherlands,

which has a contract in place for 184 CV9035 MkIII. The CV90 is also in service with the armies in Sweden, Norway, Denmark, Switzerland and Finland and is and has been deployed with UN and NATO operations abroad.

"CV90 has been such a success globally due to its flexibility and upgrade potential for the past 17 years," said Tommy Gustafsson-Rask, marketing and sales director for BAE Systems. "Initial CV90 designs were focused towards providing high mobility and high firepower, but more recent designs have focused on high survivability in order to adapt to more recent threats. Our track record of successful offset programs, connected to the CV90, is a testament to our understanding of our customers and the needs of their countries industrial bases."

There have been a number of design upgrades over the years to improve flexibility of the vehicle and increase survivability and other capabilities, the most recent version being the MkIII. The large fleet of vehicles around the globe gives existing and new customers considerable advantages such as a broader base for cost-sharing of future upgrades and spare parts and international interoperability. Production of current CV90 contracts end in 2011 with future versions of the vehicle currently in development.

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### Contracts

#### BAE Systems Awarded \$112.5 Million For Bradley Fighting Vehicle Repairs And Upgrades



ARLINGTON, Virginia -- The U.S. government has awarded BAE Systems \$112.5 million to purchase long-lead items, such as bearings, brackets, armor and adapters, for repairs and upgrades to more than 600 Bradley Fighting Vehicles. This award is in addition to a previous long-lead item award of \$375 million for parts in 2008. The contract is being managed by U.S. Army Tank and Automotive Command (TACOM).

During Bradley reset, BAE Systems replaces parts that are either worn or need to be upgraded and restores the vehicle to like-new condition. This contract provides the parts which allow BAE Systems to perform the reset.

"We're ordering these parts now to expedite the reset process and get the Bradleys back to the soldiers who need them," said Mark Willhoft, Director of Bradley Programs.

Bradley reset takes place at three locations. Initial teardown is done at Red River Army Depot outside Texarkana, Texas. Second phase teardown is conducted at the BAE Systems facility in Fayette, Pennsylvania and

final production and assembly is done in York, Pennsylvania.

Bradley Combat Systems continue to provide outstanding survivability, mobility and lethality to U.S. soldiers in close-combat urban situations as well as in open-combat. The Bradley fulfils five critical mission roles – infantry fighting vehicle, cavalry fighting vehicle, fire support vehicle, battle command vehicle and engineer squad vehicle – for the Army's Heavy Brigade Combat Teams.

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### Contracts

#### BAE Systems Awarded \$70 Million Contract To Finalize Artillery Development For Sweden And Norway



KARLSKOGA, Sweden -- BAE Systems has been awarded a \$70 million contract to finalize the development of the Archer artillery system for the Swedish and Norwegian armed forces. This order consists of final development of the self propelled gun, development of ammunition handling system and modular charges. Construction of a final prototype gun is expected to be completed by September 2009.

"When combined with the Excalibur GPS-guided munition, Archer is a state-of-the-art artillery system and will provide enhanced capabilities," states Magnus Ingesson, president of BAE Systems AB. "Norway's inclusion in Archer's final development will help solidify the Nordic Battle Group's artillery capabilities."

The Archer system is based on construction equipment modified with a self loading system and crew protected cockpit. It provides the crew with the ability to move to a safe distance 90 seconds prior to firing and remain protected throughout the deployment, firing of six rounds and redeployment.

As part of the contract, both governments hold an option to purchase 24 Archer systems each, for a total of 48, in September 2009. Construction for these systems is expected to be completed by 2011.

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### Defence Industry

#### Scania to deliver 91 trucks to the Finnish Defence Forces

According to a recently concluded purchasing agreement, Scania has been commissioned to supply 91 trucks to the Finnish Defence Forces during 2009 and 2010. The deal also includes a five-year repair and maintenance agreement and an

option for another 197 vehicles within a 4-year period.

During 2008, Scania won several orders from the Finnish Defence Forces: 21 all-wheel-drive off-road trucks in July and earlier in the year an order from the Finnish Border Guard for 26 engines powering 13 new patrol boats.

Scania has supplied around 200 trucks to the Finnish Defence Forces during the past 10 years and Scania's Finnish subsidiary, Oy Scan-Auto Ab, recently signed a deal for a six-year repair and maintenance agreement covering vehicles already delivered.

"Scania's ability to supply special-purpose trucks for demanding transport tasks directly from the factory has been an advantage, and naturally so has the quality and performance of the trucks," says Markku Lipsonen, Managing Director of Oy Scan-Auto Ab. "Combined with our comprehensive network of professional service workshops and the availability of repair and maintenance agreements, these have been decisive factors for the choice of Scania."

#### Technical vehicle data

The vehicles on order form part of Scania's modular product range and are to be supplied ready-for use, including bodywork. Some adaptations have been made to make these standard vehicles suitable for their intended use.

All vehicles comply with the Euro 5 emission standard, which enters into force within the European Union on 1 October 2009.

- 13 two-axle Scania P 400 4x2 trucks with the Scania CrewCab, a cab with seating for 6 persons. The engine is a 13-litre inline six producing 400 hp and 2100 Nm. Featuring high leaf-suspended chassis with fixed platforms, the vehicles will be used for driving school purposes with dual controls. Since 2007 more than 40 vehicles with the Scania CrewCab have been ordered by the Finnish national defence and several of them will be used for driver training.
- 25 three-axle Scania G 480 6x2 trucks with Scania's high forward-control G-series sleeper cab. The engine is a 13-litre inline six producing 480 hp and 2500 Nm. Built on high leaf-suspended chassis and equipped with hooklifts, the vehicles will be used for driving school purposes with dual controls.
- 16 three-axle Scania G 480 6x4 tandem-drive trucks with Scania's high forward-control G-series sleeper cab. The engine is a 13-litre inline six producing 480 hp and 2500 Nm. With high heavy-duty chassis, leaf-spring suspension and hooklifts, the vehicles are intended for equipment transport.
- 37 four-axle Scania G 480 8x4 tandem-drive trucks with Scania's high forward-control G-series sleeper cab. The engine is a 13-litre inline six producing 480 hp and 2500 Nm. With high heavy-duty chassis, leaf-spring suspension and hooklifts, the vehicles are intended for equipment transport.

In addition to these 97 trucks, the agreement comprises an option for another 197 vehicles. Furthermore, in July 2008 the Finnish Defence Forces

ordered 21 Scania G 420 8x8 all-wheel-drive off-road vehicles with the same type of repair and maintenance agreements, as well as training.

## Contracts

### Austrian Army Orders 150 IVECO LMV



WIEN -- Austrian Defence Minister Mag. Norbert Darabos announced that on December 29th, 2008 the Austrian Ministry of Defence and IVECO Defence Vehicles signed a contract for the delivery of 150 Light Multirole Vehicles (LMV) in 7 different configurations and related logistics support.

By a specific request of the customer, all the vehicles are equipped with a ELBIT weapon station.

During the press conference, Defence Minister Mag. Norbert Darabos underlined that award of contract had been made following a competitive procurement, according to the principle of the best bidder. It was not the better-priced vehicle to be selected, but selection was made according to the best cost-performance ratio. IVECO DV was betterperforming and better-priced – also declared Mag.

Norbert Darabos, IVECO's Sales & Marketing Director, Flavio Marchesoni, stated: "This contract rewards our commitment to meet customers' requirements through a programme of continuous development and innovation. In particular, the LMV offered to the Austrian Army incorporates the latest technology and enhancements to performance and protection".

#### The Light Multirole Vehicle

Designed to offer high tactical mobility together with high maximum road speed and optimal off-road and cross-country performance, the LMV has high protection levels against anti tank and anti personnel mines with an emphasis on crew protection rather than vehicle integrity. High reliability, ease of maintenance and low through life costs were key considerations during the design of LMV. Built in and external diagnostics allow timely identification of impending malfunctions, allowing preventive maintenance to be undertaken, whilst the facility to collect functional data allows effective whole fleet management. The use of Commercial off the Shelf main assemblies such as the gearbox and engine ensure that performance and reliability have been proven over many millions of road miles in demanding environmental conditions.

**Contracts**

**Patria Received Additional Vehicle Order from the Croatian Ministry of Defence**



The Croatian Ministry of Defence has on 22 January 2009 informed that they have extended the vehicle deal by additional 42 Patria AMV vehicles for the Croatian Army.

Patria and Duro Dakovic Special Vehicles as consortium partners and the Croatian Ministry of Defence signed the agreement covering 84 Patria AMV 8x8 vehicles including an option for additional vehicles already in October 2007.

Patria AMV 8x8 - with well over 1200 vehicles contracted and several hundreds of them delivered - is the choice of the Polish, Finnish, Slovenian, South African, Croatian and United Arab Emirates' armies.

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.



**Term of the day**

**Anti-tank Rifle**



An anti-tank rifle is a rifle designed to penetrate the armour of vehicles, particularly tanks. The usefulness of rifles for this purpose ran from the introduction of tanks into the Second World War, when they were rendered almost entirely obsolete. Vehicle armour became too thick to be penetrated by rigid projectiles from rifles that could be carried by a single soldier, and anti-tank rifles were replaced with shaped charge weapons of which the best-known is the bazooka.

The first tanks, beginning with the British Mark I, launched against the German trenches in World War I were nearly impregnable to ordinary rifle fire. Most armored cars were similarly invulnerable, but troops rarely faced armored cars, as they could not navigate the landscape of trench warfare very well. Though tanks and armored cars were vulnerable to artillery, mortars, and grenades, infantry was at a significant disadvantage when facing armored fighting vehicles, since they had no effective direct fire weapon.

The first attempt at boosting penetrating power was the so-called 'reversed bullet'. This used the same cartridge and bullet as the regular round, but the bullet was reversed and an increased propelling charge was used.

The next development was a special armour-piercing bullet, the K bullet (in German Patrone SmK Kurz 7.92 mm), which also could be fired from the regular infantry rifle. It had an increased propelling charge and a steel cored bullet. This had about a 30% chance of penetrating the 8 mm armour of current tanks if it struck the armour at a perpendicular angle.

The K bullet round was more expensive to produce, and therefore it was generally only issued to snipers and other advanced marksmen, who could use it more effectively. The ordinary infantryman had to make do with the reversed bullets which were far less effective and had to be used closer to the target. Other anti-tank weapons such as grenades, mortars, or cannon were preferred. Both types of round damaged the rifles. In the first place there was shortened life through high barrel wear. Secondly, the higher pressure created in the chamber would jam the bolt and only hammering at the stuck bolt would open it. This could lead to the extractor claw failing to extract the cartridge, only breaking off the cartridge rim and leaving it stuck in the gun. The strain of firing the increased charge could also burst the chamber of weaker and older rifles, at best destroying the rifle, at worst injuring or killing the rifleman. For these reasons, the K-bullet and reversed bullet were not popular with the troops. Nevertheless, it gave the infantry a chance to stop a tank in an emergency, or at least injure or kill some of the crew if a bullet penetrated.

Even as the rounds were introduced, tanks were being designed and built with thicker armour rendering these rounds largely ineffective, though they remained in use against the older designs and armoured cars. The first purpose designed infantry anti-tank rifle was designed by Germany. This large-calibre rifle was capable of penetrating the armour of these new generations of tanks and allowed a chance at stopping them. Other techniques were still preferred. The high recoil of the rifle was very hard on the firer, sometimes breaking the collar bone or dislocating the shoulder. Although the rifle was unique to its role, it was a development of the Mauser rifles and high-powered British sporting rifles that had preceded it. The calibre of roughly 12-13 mm was not unusual either; some 0.5 inch firearms having been fielded in land warfare with the relatively new and more powerful (as compared to black powder) smokeless powders of the era.

During WWI, a half-inch high velocity round was being developed in the US at the same time for use against aircraft. It would be used with the Browning-designed .50 calibre machine gun. This round was based on current US .30-06 calibre infantry ammunition. When word of the German anti-tank shell spread, there was some debate as to if it should be copied and used as a base for the new machine gun cartridge. However, after some analysis the German ammunition

was ruled out, as its performance was inferior to the modified Springfield .30-06 round and was semi-rimmed, making it difficult to feed into an automatic weapon. The Browning M2 .50 cal machine gun would, however, go on to function as an anti-armour machine gun.

At the start of World War II, most nations had an anti-tank rifle based on a high velocity large calibre round (eg. the British Boys Anti-tank Rifle). These were effective at the start of the war against the early tank designs (light tanks like the German Panzer I and Panzer II). As armor became thicker on the newer models, the effectiveness of a man-portable rifle lessened. A notable exception was against the light tanks employed by the Japanese in Malaya, where the Boys rifle was used with some success. At first small cannons up to 20 mm calibre were used, but the anti-tank role soon required more powerful weapons which were based on the application of chemical energy in the form of the shaped charge anti-tank rifle grenade. To these were added rocket launchers, recoilless rifles such as the Panzerfaust and rocket-propelled grenades such as the bazooka. Some anti-tank rifles, like the Finnish L-39, were still used by snipers to harass the enemy, like firing phosphorus bullets at tanks' open hatches, or to smoke an enemy sniper out of his position.

The Soviet PTRS-41 and PTRD of World War II vintage were used by North Korean and Chinese forces during the Korean War as they lacked more modern infantry anti-tank weapons.

The weapon is the conceptual ancestor of anti-tank weapons wielded by modern infantry, and both large-calibre sniper rifles and anti-materiel rifles owe some part of their design heritage to it.

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## Defence Industry

### Next-Generation GD6000 Vehicle-Rugged Notebook by General Dynamics Itronix Hits the Road Running

SPOKANE VALLEY, Wash. -- The new GD6000 vehicle-rugged notebook, by General Dynamics Itronix, is now available for field technicians, law enforcement personnel and others whose offices are in trucks, patrol cars, utility vans or other vehicles.

Designed to work on the road, GD6000 notebooks combine high-performance computing with secure, wireless-network connectivity at a price that balances durability and affordability.

Based on the award-winning General Dynamics Itronix GoBook® VR-2, new GD6000 notebooks will soon be in the hands of field-service technicians working for CPS Energy in San Antonio, Texas.

"We needed a durable notebook for our field-service technicians that could withstand the bumpy conditions of a truck environment as well as all types of Texas weather and we opted to go with the GD6000," said James Trevino, manager of Technical Services and Electrical

Engineering for CPS Energy based in San Antonio, Texas. "It offered excellent display 'viewability' in direct sunlight and exceeded our requirements for computing performance so we can manage work orders in the field."

John Schneider, business unit director for General Dynamics Itronix, said, "The GD6000 is our next generation of rugged notebook, designed especially for a mobile workforce. It meets their very specific requirements for durability and superior performance, while supporting increasingly complex applications."

Commenting on the new notebook, David Krebs, director, Mobile and Wireless Practice of VDC Research Group, said, "When it comes to the reliability and performance of notebooks for the mobile worker, General Dynamics Itronix delivers a highly effective solution. The new GD6000 is well designed for vehicle deployments and provides computing performance that supports the increasingly sophisticated applications being used by mobile users, from the utilities technician to the police officer."

#### GD6000 Vehicle-Rugged Features and Specifications

- Meets the fully rugged MIL-STD 810F standards for temperature range, vibration resistance, dust ingress protection and humidity
- 13.3" DynaVue® touch screen display technology for increased outdoor viewability
- Dual task lights and optional white keyboard for low light working conditions
- Quick-launch buttons for emergency applications
- Spill-resistant keyboard
- Shock mounted hard-drive and display

#### Additional GD6000 Features and Specifications

- High-performance Intel® Core™ 2 Duo T9400 processor; 120GB hard-drive; and up to 4GB memory
- Integrated GPS and wireless connectivity with Wi-Fi (WLAN), cellular data (WWAN) and Bluetooth
- Ergonomic design, weighing in at only 6.2lbs
- EnergyStar® and EPEAT™ certified
- Trusted Platform Module (TPM) 1.2 and optional embedded Computrace® software provide enhanced platform security

The new GD6000 is the first General Dynamics Itronix computer to use the 'GD' nomenclature.

#### About General Dynamics Itronix

Based in Spokane Valley, Wash., General Dynamics Itronix is a leading developer of wireless, rugged computing solutions for mobile workers, offering a full range of field computing systems including laptops, ultra mobile notebook PCs and tablet PCs. The company is part of General Dynamics C4 Systems, a business unit of General Dynamics (NYSE: GD).

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## Contracts

### Elbit Systems Awarded Israeli Ministry of Defense Contract Valued at \$40



## Million to Supply Skylark® I LE Mini-UAV



Haifa, Israel, January 26, 2009 – Elbit Systems Ltd. (NASDAQ:ESLT) announced, further to its announcement dated December 16, 2008, that it was awarded an approximately \$40 million contract by the Israeli Ministry of Defense to supply the Skylark® I LE mini-UAVs for all Israel Defense Forces (IDF) Ground Forces battalions, including training and logistics support.

The project is to be delivered over the next few years, subject to the IDF's requirements and procurement process.

Elbit Systems' Skylark® I LE was selected by the IDF following an extensive evaluation process, including operational ability to comply with the demanding requirements of the IDF, based on its extensive operational experience.

During its recent Operation "Cast Lead", the IDF used its already operational Skylark® mini-UAV family, in gathering vital intelligence and enhancing collaboration and connectivity between the different operating forces.

### About Elbit Systems

Elbit Systems Ltd. is an international defense electronics company engaged in a wide range of defense-related programs throughout the world. The Company, which includes Elbit Systems and its subsidiaries, operates in the areas of aerospace, land and naval systems, command, control, communications, computers, intelligence surveillance and reconnaissance ("C4ISR"), unmanned air vehicle (UAV) systems, advanced electro-optics, electro-optic space systems, EW suites, airborne warning systems, ELINT systems, data links and military communications systems and radios. The Company also focuses on the upgrading of existing military platforms and developing new technologies for defense, homeland security and commercial aviation applications.

### Defence Industry

## General Dynamics Awarded \$12 Million for MK47 STRIKER40 Weapon System Production

CHARLOTTE, N.C. -- General Dynamics Armament and Technical Products, a business unit of General Dynamics, has been awarded a \$12 million contract from the U.S. government for production of the MK47 STRIKER40® Weapon System.

"The MK47 is a lightweight grenade launcher capable

of firing airbursting munitions. Integrating the latest sensing, targeting and computer-programming technology, the MK47 is a reliable, portable 40mm grenade weapon system suited for mobile, tactical combat soldier units. It provides forces with a decisive technological advantage over enemies equipped with older crew-served weapons," said Jeff Gramse, program manager of gun systems for General Dynamics Armament and Technical Products.



Production work will be performed at General Dynamics in Saco, Maine, with program management being shared with the company's Burlington, Vt., facility.

### Contracts

## General Dynamics Wins \$81M for Abrams Tank Upgrade

General Dynamics Land Systems, Sterling Heights, Mich., was awarded on Jan. 21, 2009, a \$80,741,022 firm fixed price contract for Award Program-Year Two (PY 2), Increment Two of the Abrams Multi-Year Contract for a quantity of 24 M1A2 Systems Enhancement Package Version Two (SEPV2) Upgrade Vehicles.

This action also provides for Increment One of PY 3 for a quantity of 6 M1A2 SEPV2 Upgrade Vehicles. Work will be performed at Sterling Heights, Mich., with an estimated completion date of Jun. 30, 2012. One bid was solicited and one bid received.

Tank & Automotive Command (TACOM) Life Cycle Management Command, Warren, Mich., is the contracting activity (W56HZV-06-G-0006).

### Defence Industry

## BAE Systems To Provide Transparent Armored Gun Shields For U.S. Marine

SANTA CLARA, California -- Under a \$9.9 million contract, BAE Systems will provide 442 Marine Corps Transparent Armored Gun Shield (MCTAGS) turret kits used to protect service members in close urban environments.

"The proven design of our MCTAGS provides direct vision while providing protection against blast fragmentation and small arms fire to the crew while in the turret," said Ann Hoholick, vice president

Amphibious Vehicles & Armor Kits for BAE Systems. "To date more than 6,000 MCTAGS kits have been installed on various military vehicles to provide added protection for the men and women in uniform."

The kits will be shipped to a Marine Corps base by BAE Systems' current workforce where they will be installed on High Mobility Multipurpose Wheeled Vehicles (HMMWV) by the U.S. Marine Corps.

Work under the contract will begin immediately in York, Pennsylvania and Santa Clara, California and activity for the initial delivery order is anticipated to be completed in June 2009. The contract is managed by the Marine Corps Systems Command.

BAE Systems' transparent armored gun shield units have been configured for a wide range of vehicles, including Bradley, M1 Abrams, M113, HMMWV, Medium Tactical Vehicle Replacement, Logistics Vehicle System, Assault Amphibious Vehicle – Personnel and for the Stryker Common Ballistic Shield.

### Training And Simulators

#### Boeing Receives STOC II Training Contract From US Army

ST. LOUIS -- The Boeing Company announced it has received the U.S. Army Program Executive Office for Simulation, Training and Instrumentation's Omnibus Contract II (STOC II).

STOC II is a multiple-award, indefinite delivery/indefinite quantity (ID/IQ) contract with a \$17.5 billion cap over as many as 10 years. As awardees, Boeing and wholly owned subsidiary Tapestry Solutions are eligible to bid over the life of the program on a variety of delivery and task orders, depending on the Army's needs.

Boeing Integrated Defense Systems' Training Systems and Services business unit will manage the STOC II program from St. Louis. Tapestry Solutions will manage its portion of the program from its facility in San Diego, focusing on simulation and exercise support.

"This contract allows us to provide a wide array of services for the warfighter, as well as expand further within the training and simulation markets," said Training Systems and Services Vice President Mark McGraw. "Boeing is uniquely qualified to respond to the quick turnaround time required by ID/IQ contracts."

Boeing uses a Streamlined Management and Response Tool to reduce response time on ID/IQ requests by quickly matching contract requirements to a database of suppliers. The company also can provide the high levels of technology and integration required to respond to all areas of STOC II: Boeing will use its Contractor Integrated Technical Information Service to provide a common, secure and controlled process of sharing data, applications and Web sites with external customers, suppliers and partners.

"Boeing's management organization is key to keeping costs down while enhancing our 'performance to plan,'" said McGraw. "We strive for continuous improvement,

and our quality-management systems will help us meet the customer's schedule and cost requirements."

Boeing will work in close partnership with the Army Program Executive Office to provide management and oversight of all delivery and task orders awarded to the company within the STOC II environment.

### Army

#### Upgraded Oplot MBT to Enter Service with the Ukrainian Army



The upgraded version of the Oplot main battle tank is undergoing government trials, which include comprehensive testing of the tank's firing, mobility and protection capabilities.

After completion of the trials, if successful, the Oplot will enter small-scale production, with the first batch of 10 vehicles planned to be produced in 2009. The production will take place at the Malyshev Plant in Kharkov.

The upgraded Oplot MBT differs from the basic Oplot version in having a commander's panoramic sight incorporating daylight and thermal imaging channels, new-generation explosive reactive armour based on a new principle of defeating kinetic and chemical energy attacks (with special focus on increasing the hull side and turret side protection level to enhance the tank's survivability in urban conditions), more environment-friendly 1200 hp 6TD-2E diesel engine instead of original 6TD-2 engine, complex movement control system with a new steering wheel and an upgraded digital panel for the driver, new radio equipment, and more powerful (10 kW rather than 8 kW) auxiliary power unit.