Army Guide monthly

11 (38) November 2007

- Egypt - TOW IIA Anti-Armor Guided Missiles
- Winkelmann Electronic Device Detectors Contribute To Participants' Safety at CISM Military World Games
- Raytheon AFATDS Receives Top 5 DOD Program Award for Systems Engineering
- US Army Awards Rafael $52M Contract
- Force Protection Awarded $91 M Contract by U.S. Marine Corps for Field Service and Training Support
- LM's Guided MLRS Unitary Rockets Successful In Anti-Jamming Tests
- BAE Systems Receives New MRAP Vehicle Orders Worth $322 M from U.S. Marine Corps
- Raytheon to Proceed with the Warfighter FOCUS Program
- General Dynamics Receives $11 M Contract for Abrams Tank System Technical Support
- QinetiQ and Ricardo to demonstrate low cost, high performance battery technology for hybrid vehicles
- Raytheon Awarded $17 Million to Deliver Wireless TOW Missiles to Canada
- Green Light for the Puma - Rheinmetall and Krauss-Maffei Wegmann to supply Bundeswehr with new IFV
- Harris Awarded $3.3 M Contract By Latvian Defence Forces for Falcon II Radios
- U.S. Army Awards Force Protection $22 M Contract For Additional Buffalo Vehicles
- ATK Awarded $5 M Contract with U.S. Army to Manufacture Over 400 EPIAFS
- First Four M113AS4 Armoured Personnel Carriers Accepted Into Service
- New Trends Emerging for Land & Sea-Based EO Systems
- Deadly Precision: Snipers Get New Longer Range Rifles

www.army-guide.com

Defence Industry

Egypt - TOW IIA Anti-Armor Guided Missiles

On October 29, 2007 the Defense Security Cooperation Agency notified Congress of a possible Foreign Military Sale to Egypt of TOW IIA anti-armor guided missiles as well as associated equipment and services. The total value, if all options are exercised, could be as high as $99 million.

The Government of Egypt has requested a possible sale of 2,000 TOW 2A Missiles, plus 28 buy-to-fly missiles, containers, test sets and support equipment, spare and repair parts, publications and technical data, maintenance, personnel training and training equipment, U.S. Government (USG) and contractor engineering, technical and logistics support services, and other related elements of logistics support. The estimated cost is $99 million.

This sale will contribute to the foreign policy and national security of the United States by helping to improve the security of a friendly country that has been and continues to be an important force for political stability and economic progress in the Middle East.

Egypt needs these TOW 2A missiles and launchers to augment its current inventory and provide mechanized infantry and field artillery units with an anti-armor capability. Egypt will have no difficulty absorbing these additional missiles into its armed forces since it already has TOW missiles in its inventory, which were previously procured from the United States.

Defence Industry

Winkelmann Electronic Device Detectors Contribute To Participants' Safety at CISM Military World Games

Winkelmann UK, the specialist UK manufacturer of counter-surveillance and anti-terrorist equipment, supplied an initial five electronic device detector HAWK XD units to the Hyderabad police for use during the Conseil International du Sport Militaire's (CISM) Military World Games, which were held at Hyderabad and Mumbai, India, from the 14th to the 21st of October 2007.

The primary use during the games was to sweep for Improvised Explosive Devices (IEDs) covertly placed by dissident groups or terrorist organisations.

HAWK XDI ELECTRONIC DEVICE DETECTORS

The HAWK XDi uses advanced techniques, technology and intelligence to detect mines and IEDs within Explosive Ordnance Disposal (EOD) and counter-terrorist applications. It detects explosive devices containing electronic components such as remote control receivers, mobile phones, electronic timers, clocks, transceivers, electronic fuses and delayed-action units, whether they are powered or unpowered at the time of the sweep.

Nearly 4,600 military personnel from 89 countries competed in the Fourth CISM Military World Games; in addition there were 3,400 civilian and military volunteers, 17,400 security personnel from the Andhra Pradesh state police and 2,600 home guards involved in the event. Fourteen different disciplines were held: military pentathlon, shooting, parachuting, football, handball, volleyball, sailing, triathlon, athletics, swimming and diving, boxing, judo, and wrestling.

Defence Industry

Raytheon AFATDS Receives Top 5 DOD Program Award for Systems Engineering

Raytheon Company's Advanced Field Artillery Data System (AFATDS) program has been recognized by the Department of Defense and the National Defense Industrial Association (NDIA) as a 2006 Top 5 DoD program award winner for Systems Engineering.

AFATDS is the Army's system of record for planning, coordinating and controlling all mortars, close air support, naval gunfire, attack helicopters, offensive electronic warfare, field artillery cannons, rockets and guided missiles.

The Top 5 DoD award recognizes excellence in the application of systems engineering that results in highly successful programs. Members from Raytheon's joint government-industry team were presented with the award during NDIA's 10th Annual Systems Engineering Conference in San Diego.

This is the second time the AFATDS program has been recognized with this award, and the third award Raytheon has received in the past four years.

Raytheon is a technology leader specializing in defense, homeland security, and other government markets throughout the world. With a history of innovation spanning more than 80 years, Raytheon

provides state-of-the-art electronics, mission systems integration, and other capabilities in the areas of sensing; effects; command, control, communications and intelligence systems, as well as a broad range of mission support services.

Contracts

US Army Awards Rafael $52M Contract

Rafael Advanced Defense Systems Ltd. has been awarded a contract by the US Army worth $52M for the Simon (GREM) door breaching rifle grenade.

The Simon or GREM as it is known in the US is a lightweight, rifle-launched grenade specially adapted to breaching steel or wooden doors from a stand-off distance, and may be fired from a variety of rifles using regular bullets.

The Simon (GREM) is designed to breach a door or to enable breaking an entry into a building or an enclosed area, while posing minimum collateral damage or risk to the gunner and to troops following him. The warhead has a special dome shape and its explosion generates a shock wave which blasts the door and causes it to yield.

The Simon (GREM), developed and produced by Rafael, was chosen as one of 10 best projects and won the US Army's Award of Excellence in 2005.

Rafael Advanced Defense Systems Ltd. (former RAFAEL Armament Development Authority Ltd.) designs, develops, manufactures and supplies a wide range of advanced defense systems. Indicative production includes among other: naval, air and ground precision guided weapons, Electro-Optical systems, Electronic Warfare (EW) systems, Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) systems, acoustic defense systems and armored protection systems.

Contracts

Force Protection Awarded $91 M Contract by U.S. Marine Corps for Field Service and Training Support

Force Protection Inc. announced it has received a contract from the U.S. Marine Corps for the purchase of services in support of operation of the Mine Resistant Ambush Protected (MRAP) Vehicles University, which is a MRAP training program at Red River Army Depot, integrated logistics support, and field service representative support. Total approximate value of the contract is $91.8 million.

Force Dynamics, the joint venture between Force Protection and General Dynamics Land Systems, will perform the contract pursuant to the terms of the joint venture agreement. Consistent with that agreement, a subcontract for work to be performed by General Dynamics Land Systems will be forthcoming. Work is scheduled for completion by November 2008.

Critical to the optimal performance of Force Protection vehicles is the support they receive in the field. The company have worked continually to ensure that their logistics, maintenance, and training support network grows in parallel with the vehicle production and delivery.

Force Protection:

Manufactures the world's most advanced ballistic- and mine-protected vehicles. These specialty vehicles incorporate state-of-the-art technology with off-the-shelf American commercial automotive components that protect soldiers against attacks from IEDs, land mines, roadside bombs and hostile fire in Iraq, Afghanistan, Kosovo and other hot spots around the world.

Force Protection's vehicles are mission-configurable and can be used for operations including mine detection and clearance, troop transport, reconnaissance, command and control, explosive ordnance disposal (EOD), communications, urban weapons system, urban fighting vehicle, and lead convoy.

With the ever-changing face of modern warfare, emerging threats have caused government and military leaders to recognize the critical need for vehicles that can protect armed forces and security personnel today, and in the years to come.

Defence Industry

LM's Guided MLRS Unitary Rockets Successful In Anti-Jamming Tests

Lockheed Martin successfully conducted two Guided

Multiple Launch Rocket System (GMLRS) Unitary rocket Phase II Product Qualification Test flights recently at White Sands Missile Range, NM.

These "GPS2 jamming" tests demonstrated both GMLRS rocket performance while in a GPS jamming environment at long range, as well as the functionality of the warhead using the Point Detonating fuze within the jamming environment. All tests objectives were achieved.

The two missions were fired from the HIMARS launcher using one rocket per mission after the launch pod container was conditioned to the "hot" temperature extreme. The first rocket employed the GMLRS "vertical trajectory shaping" software that allows the rocket to impact the target vertically, while the second incorporated the "nominal trajectory shaping" software, which allows for the standard ballistic trajectory flight pattern. Both rockets flew their expected trajectories and functioned as designed in the target area.

These tests validated a very tough requirement. This means that GMLRS Unitary can be effectively and productively employed every time - when low collateral damage is a concern and in close proximity to friendly troops - given its surgical precision.

The tests further qualified the effects of the unitary warhead on the target following detonation, and continued to demonstrate that the Follow-On configuration hardware and software design complies with the program objectives and requirements.

This mission specifically demonstrated rocket performance and provided system performance data in a GPS jamming environment.

Contracts

BAE Systems Receives New MRAP Vehicle Orders Worth $322 M from U.S. Marine Corps

BAE Systems has received two new delivery orders from the U.S. Marine Corps totaling $322 million for 600 RG33 Mine Resistant Ambush Protected (MRAP) vehicles.

BAE Systems is currently contracted to build three of the five MRAP variants, and now under contract to deliver 1,462 Category I vehicles and 1,176 Category II vehicles.

Under the first delivery order, worth $278.4 million, BAE Systems will deliver 399 RG33 Category II 6x6 vehicles and 112 RG33 Category II 6x6 MRAP Ambulance variant vehicles. The second delivery order, worth $44.3 million, calls for the delivery of 89 RG33 Category I 4x4 MRAP United States Special Operations Command variant vehicles and vehicle sustainment Integrated Logistic Support.

Deliveries are expected to be completed by March 2008 for the Category I RG33 4x4 vehicles, and April 2008 for the Category II RG33 vehicles.

This award, when combined with previous contracts, brings the total value of the contracts BAE Systems has been awarded on RG33 MRAP vehicles to $627.5 million. The total number of vehicles ordered to date is 292 in the Category I 4x4 variant and 843 in the Category II 6x6 variant.

The new vehicle design and production was accomplished in record time as a result of the company's expertise and long history of designing mine protected and mine hardened vehicles in South Africa and providing high survivability combat vehicles in the U.S. The highly survivable RG33 incorporates a monocoque V-shaped hull design and compound armor recipe that leverages knowledge gained in recent and ongoing conflicts. This allows the vehicle to be driven away after being subject to threats that would completely destroy normal vehicles and disable other mine protected vehicles.

More than 1,500 BAE Systems employees in the US and 400 in South Africa are producing vehicles with the support of suppliers in more than 30 states across the U.S.

Training And Simulators

Raytheon to Proceed with the Warfighter FOCUS Program

General Dynamics joins the Warrior Training Alliance.

The U.S. Army has directed Raytheon Company to proceed with consolidating the Army's live, virtual and constructive training operations and support systems worldwide under the Warfighter Field Operations Customer Support (FOCUS) contract.

The Raytheon-led Warrior Training Alliance (WTA) will move forward with General Dynamics Information Technology as a key member of the team.

Contracts

General Dynamics Receives $11 M Contract for Abrams Tank System Technical Support

The U.S. Army TACOM Life Cycle Management Command has awarded General Dynamics Land Systems, a business unit of General Dynamics, an $11.2 million contract modification for Abrams Tank System Technical Support (STS).

The award will fund engineering studies on Abrams tanks to identify improvements and replace obsolete

parts to maintain the tanks at high operational readiness rates. The work will be performed by existing General Dynamics Land Systems employees in Sterling Heights, Michigan. It is expected to be completed by December 31, 2011.

Future Technologies

QinetiQ and Ricardo to demonstrate low cost, high performance battery technology for hybrid vehicles

Lithium-Ion (Li-Ion) battery technology shows significant promise for hybrid and electric vehicle applications in terms of its comparatively high power and energy density, and ability to retain charge for extended periods.

However, commercial challenges remain in terms of both cost and weight. QinetiQ and Ricardo have embarked on a two-year collaborative project part-funded by the UK Department for Transport, which aims to dramatically reduce the costs of Lithium-Ion batteries for hybrid vehicles while protecting or further improving vehicle performance.

The specific objective of the Reduced cost Li-Ion (RED-LION) project is to demonstrate the application of new Li-Ion cell chemistry in a hybrid vehicle battery with an estimated production cost one-third that of conventional battery technologies and around half the weight. If successful, this breakthrough technology could make hybrid and electric vehicles commercially more attractive and hence make a significant impact on global CO2 emissions.

In June 2006 Ricardo, QinetiQ and PSA Peugeot-Citroлn unveiled their 100g/km CO2 Efficient-C full hybrid diesel demonstrator vehicle based on a Citroлn Berlingo Multispace. While this vehicle provided an uncompromised package and superior performance compared with the equivalent current production turbo-diesel model, the project partners estimated that its incremental manufacturing cost needed to be reduced by around 50 per cent (to approximately €2,000) for the technology to become fully commercially viable based on prevailing fuel prices and consumer fiscal incentives.

The battery system represents around one-third of the incremental manufacturing cost of a typical hybrid vehicle as well as considerable addition to the vehicle mass. If successful, the RED-LION project will demonstrate commercially viable technologies that are capable of delivering sub-100g/km CO2 emissions with superior performance compared to the equivalent current production vehicle.

Mel Brooks, Managing Director of QinetiQ's Energy and Materials business said: "QinetiQ has a strong track record in delivering high-energy Lithium-Ion battery technology to military customers. This leading edge battery technology emanating from defence is now poised to make a significant difference to the viability of hybrid vehicles with the RED-LION project helping to ensure that cost does not stand in the way of more widespread commercial adoption."

Neville Jackson, Ricardo technology director said: “By incorporating the very latest high performance Li-Ion battery technology, which offers the potential for significant reductions in both manufacturing cost and weight, we aim to demonstrate that we have made significant progress in developing the commercial case for hybrid diesels. We have already demonstrated that acceptable package and superior performance is possible from a hybrid diesel powertrain and with this project, we aim to show that it can be made commercially viable too. This promising battery technology could deliver significant benefits to many vehicle types including electric and plug-in hybrid, as well as full diesel and gasoline hybrids.”

Financial support for the RED-LION project:

The RED-LION project is part-funded by the by the Energy Saving Trust’s Low Carbon R&D Programme on behalf of the UK government’s Department for Transport, with balancing contributions made by the participating companies. The Energy Saving Trust is a non-profit organisation, funded both by government and the private sector. It is one of the UK's leading organisations set up to address the damaging effects of climate change and its aim is to cut emissions of carbon dioxide (CO2) by promoting the sustainable and efficient use of energy.

Contracts

Raytheon Awarded $17 Million to Deliver Wireless TOW Missiles to Canada

TUCSON, Ariz., -- Raytheon Company has received a $17 million U.S. Army contract to build 462 TOW (Tube-Launched, Optically-Tracked, Wire-Guided) Bunker Buster missiles for the Canadian Army.

The Canadian contract is the first international sale of the TOW Bunker Buster missile, which employs a fragmenting, high-explosive warhead designed to breach or destroy a multitude of target sets -- particularly those in complex urban terrain.

Under this contract, Raytheon will deliver the new wireless radio frequency command data link version of the TOW Bunker Buster missile to Canada.

"The TOW missile system continues to be the most effective and affordable precision-assault missile system in the world," said Jim Riley, vice president of Raytheon's Land Combat Product Line. "Our international customers rely on its proven capabilities as they deploy their soldiers into hostile areas to fight the global war on terror."

Wireless TOW receives commands from the gunner through a wireless data link, rather than the wire connection that the system has used since it was introduced more than 30 years ago. The system performs exactly as the wire-guided version, enabling soldiers to continue using the proven weapon without changing tactics or incurring additional training.

Because the wireless system is built into the missile and the missile case, wireless TOW is compatible with all existing TOW 2-capable ground launchers including the Canadian Light Armored Vehicle with TOW Under Armor and the Improved Target Acquisition System, as well as the U.S. Army Stryker anti-tank guided missile vehicle with modified ITAS, and Bradley fighting vehicle with the Improved Bradley Acquisition Subsystem.

Raytheon Company, with 2006 sales of $20.3 billion, is a technology leader specializing in defense, homeland security and other government markets throughout the world. With a history of innovation spanning 85 years, Raytheon provides state-of-the-art electronics, mission systems integration and other capabilities in the areas of sensing; effects; and command, control, communications and intelligence systems, as well as a broad range of mission support services. With headquarters in Waltham, Mass., Raytheon employs 73,000 people worldwide.

The TOW weapon system, with the multi-mission TOW 2A, TOW 2B, TOW 2B Aero and TOW Bunker Buster missiles, is the world's premier long-range precision anti-armor, anti-fortification, anti-amphibious landing weapon system. TOW is in service with more than 40 international armed forces and integrated on more than 15,000 ground, vehicle and helicopter platforms worldwide. TOW is also the preferred heavy assault weapon system for NATO, coalition, United Nations and peacekeeping operations worldwide.

Defence Industry

Green Light for the Puma - Rheinmetall and Krauss-Maffei Wegmann to supply Bundeswehr with new IFV

The German Bundestag's budget committee cleared the way today for the procurement of 405 new Puma infantry fighting vehicles for the Bundeswehr.

For Dusseldorf-based Rheinmetall AG and Krauss-Maffei Wegmann GmbH & Co. KG of Munich, the order represents a combined total of some EUR3 billion in gross sales.

Rheinmetall and Krauss-Maffei Wegmann each hold a 50% stake in the company tasked with the project, PSM GmbH of Kassel. Both hailed the decision as a crucial step in re-equipping the German Army for the future as well as being vitally important to the German defence industry and a whole host of medium-sized subcontractors. With its unique balance of tactical and strategic mobility, survivability and lethality, the Puma gives the Bundeswehr a state-of-the-art infantry fighting vehicle systematically tailored to the current and future operational requirements of the German military both at home and abroad.

This is the biggest single order in the history of Rheinmetall company, and definitely confirms their status as Europe's top supplier of army technology.

The Bundestag set the project in motion in September 2002 when it awarded a development contract for the new IFV, followed in 2004 by a Ђ350-million procurement order for five pre-series vehicles and related services. These vehicles are currently undergoing intensive trials. The first serially produced Pumas are scheduled to enter service in 2010.

Today, more than thirty years after Germany first fielded the Marder IFV, the Puma is poised to significantly expand the Bundeswehr's capabilities spectrum, providing it with an entirely new category of tactical vehicle. In any international comparison, the Puma clearly represents the cutting edge in contemporary armoured vehicle technology.

Well-protected yet light enough to airlift, the Puma's modularity and expandability make it the perfect tool for international conflict management. No comparable vehicle provides its crew with such a high level of protection from typical conflict zone threats such as landmines, rocket propelled grenades and improvised explosive devices.

Defence Industry

Harris Awarded $3.3 M Contract By Latvian Defence Forces for Falcon II Radios

Agreement Highlights Expanding International Demand for Harris Tactical Radios
Harris Corporation, an international

communications and information technology company, has received a contract valued at $3.3 million from the Latvian Defence Forces for Falcon II tactical communications systems.

Harris has previously supplied the Latvian Ministry of Defence, National Armed Forces, and National Guard with its Falcon II radios for use in both national and international peacekeeping missions around the world.

Under the terms of the contract, Harris will provide its RF-5800H High frequency (HF), RF-5800V very high frequency (VHF), and RF-5800M Multiband VHF/UHF handheld radios and accessories.

The RF-5800H is an advanced HF-SSB/VHF-FM manpack radio that provides reliable tactical communications through enhanced secure voice and data performance, networking, and extended battery life. The RF-5800V-MP is the VHF manpack member of the Falcon II tactical radio family. The RF-5800M-HH is a small, lightweight multiband handheld that extends the outstanding performance of the Falcon II tactical radio family to the squad level. The RF-5800 series radios have integrated GPS and IP networking capabilities, thus guaranteeing seamless communication with other peacekeeping operations using the Harris Falcon II radios.

The Harris Falcon II family of tactical radios is designed for manpack, vehicular, base station, and handheld use. The software-based radios provide a common platform, operation, and logistics, and also feature upgradeable, embedded security.

Harris RF Communications Division is a leading supplier of secure voice and data communications products, systems, and networks to military, government, and commercial organizations worldwide.

About Harris Corporation

Harris is an international communications and information technology company serving government, defense and commercial markets in more than 150 countries. Headquartered in Melbourne, Florida, the company has annual revenue of over $4 billion and 16,000 employees — including nearly 7,000 engineers and scientists. Harris is dedicated to developing best-in-class assured communications™ products, systems, and services.

Contracts

U.S. Army Awards Force Protection $22 M Contract For Additional Buffalo Vehicles

Force Protection, Inc. announced that it has received a contract from the U.S. Army's Tank Automotive and Armaments Command for the production of an additional 29 Buffalo mine-protected vehicles. The approximate total value of the contract is $22.3 million.

Force Protection has delivered more than 140 Buffalo vehicles to date in support of route clearance missions in Iraq and Afghanistan.

"We are gratified to note the critical role the Buffalo continues to fill for our armed forces," said Force Protection President Michael Moody. "Since 2003, this vehicle has been used by route clearance teams to make thousands of miles of road safer for our troops. We are extremely pleased to know that the Buffalo will continue to support the warfighter in this important mission."

Contracts

ATK Awarded $5 M Contract with U.S. Army to Manufacture Over 400 EPIAFS

With Options, the Total Contract could exceed $10 Million. Alliant Techsystems was recently selected by the U.S. Army to manufacture the M1155A1 Enhanced Portable Inductive Artillery Fuze Setter (EPIAFS) which will provide additional in-theater capability for U.S. artillery units.

Under terms of the contract, valued at nearly $5 million, ATK will deliver over 400 EPIAFS systems to the U.S. Army. The Army will also have the option of extending the contract to 2011. The total value of the contract could exceed $10 million, if all options are exercised.

This innovative product will give the gunnery teams enhanced capability in-theater to set and fire 155mm conventional and precision-guided projectiles.

Defence Industry

First Four M113AS4 Armoured Personnel Carriers Accepted Into Service

The first four M113 Armoured Personnel Carriers (M113AS4) built by Tenix Aerospace and Defence have been accepted into service with the Australian Army's 7th Battalion, The Royal Australian Regiment (Mechanised Infantry), during a ceremony in Darwin.

These are the first of 350 vehicles procured under Project LAND 106 which is aimed at upgrading the

Army's in-service M113A1 vehicles. The upgrade provides significant enhancements in protection, firepower and mobility while also providing improved supportability.

There are seven variants of the M113AS4 being produced. The first four are the Armoured Personnel Carrier (M113AS4 APC). The designation AS4 (Australian Version 4) refers to the upgraded capability of the vehicle to the Australian standard as well as its increased carrying capacity. 171 APC variants will be upgraded to the 18-tonne M113AS4 standard.

Defence Industry

New Trends Emerging for Land & Sea-Based EO Systems

In a new analysis, "The Market for Land & Sea-Based Electro-Optical Systems," Forecast International is projecting that an estimated $8.36 billion will be spent on the development and production of key land- and sea-based electro-optical (EO) systems over the next 10 years.

The pressing need for the all-important troop-level systems, such as night vision goggles and thermal viewing systems, will drive procurement in this market segment for the next few years. Still, the introduction of some significant, new EO systems is fast emerging as a major market force for the years ahead.

The market leaders among land- and sea-based EO system providers are ITT, DRS Technologies, Northrop Grumman, Raytheon, Thales, and Australia's Electro Optic Systems. The Australian company is expected to produce an estimated 5,724 of its Electro-Optic Fire Control Systems (EFCS) over the next 10 years, at a value of $954 million. EFCS is being considered for some significant European and Middle Eastern programs, and is currently fitted to Singapore's Bionix infantry fighting vehicle (IFV).

ITT will likely continue to dominate the EO market for its key involvement in one of the most ubiquitous systems on the modern battlefield: the night vision goggle. Production of the company's PVS-14 for the U.S. military alone will run at 50,000-70,000 units per year well into the next decade. A recent $33 million order from Norway for 4,400 units will significantly boost the system's international production line.

DRS Technologies has moved into the top rankings of EO producers for its growing involvement in some of the most important land- and sea-based EO systems on the market. The company recently chalked up new orders for its version of the PAS-13 Thermal Weapon Sight, also known as the TWS II. Under the FY08/09 U.S. defense budget, annual funding rates for the TWS will be at an all-time high. Roughly $200 million per year will be pumped into purchases of the PAS-13 through 2011.

Meanwhile, French defense giant Thales is carving an important niche for itself in the development of new naval EO systems for some important emerging platforms. Since the deadly attack on the small craft, the USS Cole, in October 2000, there has been be a marked shift in development of sea-based EO systems from a focus on defense from airborne missile attack to an emphasis on the surveillance and targeting of small, sea-based threats. Thales has recently introduced the Artemis system for improved situational awareness and ship self-protection. The company has already secured a place for Artemis on the French Navy's complement of multifunction FREMM frigates, and stands a good chance of seeing orders for other international clients in the years ahead.

Army

Deadly Precision: Snipers Get New Longer Range Rifles

Snipers in the Army, Royal Marines and RAF Regiment are to get a new rifle that will give them lethal precision at even greater distances under a pound 4M contract.

The British firm Accuracy International Ltd will supply 580 rifles with day telescopic sights for snipers across the services, which will fire a larger calibre bullet than the existing weapon.

The new rifle is being supplied as part of a broader Sniper System Improvement (SSI) programme to give UK snipers more power, precision and stealth than ever before. All-weather new advanced day and night sights will mean snipers can operate round the clock in difficult conditions, and laser technology will allow distant targets to be accurately located.

Training units will familiarise themselves with the weapon and how it works with other parts of the sniper system. The rifle is due to be ready for operational use next spring.

Defence Industry

Acro Announces New Explosive Tester

The new tester detects a wide range of explosives, and complements the company's existing tester for improvised peroxide-based explosives.

New York, NY – November 19, 2007 – Acro, Inc., a developer of explosive detection solutions, today announced ACRO-N.E.T (Nitro Explosive Tester), an explosive detector for military and commercial explosives. ACRO-N.E.T complements Acro's ACRO-P.E.T peroxide explosive tester for improvised peroxide-based explosives such as TATP. Acro will provide explosive detection kits, comprising ACRO-N.E.T and ACRO-P.E.T, covering a broad spectrum of explosives.

ACRO-N.E.T is capable of identifying the majority of explosives currently in use, such as TNT, Tetryl, TNB, picric acid, dynamite, RDX, PETN, nitrocellulose smokeless powder, C4, Semtex, and others. In addition to military and commercial explosives, ACRO-N.E.T can detect homemade explosives based on nitrate.

"The ability to identify military, commercial and peroxide-based improvised explosives with pen-like testers is unique and constitutes a major contribution to security professionals engaged in homeland security," said Acro Chairman and CEO Gadi Aner.

ACRO-N.E.T is based on a long-proven technology used by many security forces around the world, that has been incorporated into Acro's innovative pen-like device.

ACRO-P.E.T identifies peroxide-based explosives, such as Triacetone Triperoxide (TATP), which are almost impossible to identify, since they do not contain nitro groups or colors and may appear in a variety of shapes and forms, including liquid. Improvised explosive devices based on materials containing peroxide have increasingly been used in recent years by various terrorist organizations. The US army recently acquired several hundreds of ACRO-P.E.T devices.

About Acro, Inc.

Acro, Inc. develops explosives detection technologies. The company has developed a unique patented technology for identifying peroxide-based explosives, such as TATP. Acro's Advisory Board includes Prof. K. Barry Sharpless, winner of the 2001 Nobel Prize for Chemistry, and Prof. Richard A. Lerner, President and CEO of The Scripps Research Institute, considered one of the world's most influential scientific institutes. For more information about Acro, visit www.acrosec.com.

Contracts

General Dynamics Awarded $89 Million for Improved Abrams SEP Reset

STERLING HEIGHTS, Mich. – The U.S. Army TACOM Lifecycle Management Command has awarded General Dynamics Land Systems, a business unit of General Dynamics, $89 million for work on the Abrams Improved Systems Enhancement Package (SEP) Reset (ISR).

As part of the reset program, M1A2 SEP Version One tanks are upgraded to the SEP Version Two configuration, which includes improved displays, sights, power, and a tank-infantry phone. It is the most technologically advanced Abrams tank and can accommodate future technology improvements to ensure compatibility with the Army's Future Combat Systems. Work on the 240 tanks will be performed in Anniston, Ala.; Tallahassee, Fla.; Lima, Ohio; Sterling Heights, Mich.; and Scranton, Pa. It is expected to be completed by September 2009.

Army

New precision "search and destroy" anti-armour weapon

The Army's current AS90 guns are to get a sophisticated new weapon that can more accurately seek out and destroy hostile armoured vehicles at long range (up to 22.5 km), day and night, in all weathers and in difficult terrain, such as forests and urban areas.

This new smart weapon, the Ballistic Sensor Fused Munition (BSFM), consists of a shell that can be fired from the AS90 artillery gun. Munitions drop by parachute, using sensors to seek out enemy targets as they drift down. This new smart technology will enable the artillery to target the enemy with much greater accuracy and will greatly reduce collateral damage.

Baroness Taylor, Minister for Defence Equipment and Support, said:

"I am pleased to announce the J83M contract award for the development and supply of Ballistic Sensor Fused Munitions (BSFM). We are equipping our army with the precision attack weapons to meet the challenges of modern operations.

"New technology is allowing us to use highly accurate, precisely targeted weapons, reducing both the numbers of weapons we need to deploy and the risk of collateral damage.

"The BSFM will be fired from existing AS90 guns and this project follows our investment in highly accurate long-range guided rockets now deployed by the Royal Artillery in Afghanistan."

Defence Industry

QinetiQ is part of UK industry team for FRES bid Generic FRES-type utility vehicle

A team led by BAE Systems that includes QinetiQ, Cranfield University, GE Aviation, SAIC, and SELEX Sensors & Airborne Systems has been assembled to deliver a battle-winning fleet of medium-weight armoured fighting vehicles for the British Army.

The team will compete for the role of Vehicle Integrator for the 'Utility' family of FRES (Future Rapid Effect System), the first and largest element of the programme. The successful bidder is expected to take an overseas vehicle design, and customise, manufacture and support it through life to meet UK Ministry of Defence (MoD) requirements.

The vehicle will be based on an eight-wheeled design currently being selected by the MoD and is expected to enter service from 2012. Some 7000 jobs will be sustained by the overall FRES programme.

BAE Systems Land Systems leads the FRES bid. Managing director Andrew Davies comments: "This team, and the know-how within our existing supplier base, can provide the British Army with a vital asset while giving the taxpayer value for money and ensuring the retention of key UK skills for the continued support and upgrade of all the British Army's in-service fleet of vehicles. We can also draw upon the global resources of BAE Systems, the world's largest land systems company."

"As the UK Defence Industrial Strategy states, and recent operational experience demonstrates, retention of key skills in the UK is vital if the front line is to be assured of receiving the service it needs. Over the past 18 months BAE Systems and its partners have responded on time to more than 80 Urgent Operational Requirements under which we have modified existing vehicles to meet new threats to our troops. These are some of the skills, resources and experience we would bring to FRES."

"QinetiQ is delighted to be part of this team which collectively possesses the necessary credentials to deliver such an important element of the FRES programme," added Clive Richardson COO of QinetiQ's EMEA operation. "Focussing on the needs of our armed forces is a top priority for QinetiQ. Therefore, being part of the FRES Utility Vehicle Integrator programme would present QinetiQ with an ideal opportunity to demonstrate pull through of its know-how, developed over many years in delivering MODs cutting edge research programmes that have shaped and underpin its current capabilities."

FRES is worth up to J16bn for the acquisition phase. It will provide the British Army with up to 17 vehicle variants in five families for a wide range of battlefield tasks. These vehicles will be heavily protected but light enough to be deployed by air. More at: baesystems.com/fres.

Exhibitions

KrAZ Trucks are Employed by the Ukrainian Ministry of Emergency Situations

KrAZ trademark model range was enriched by the whole family of trucks designed for fire extinguishing and relief actions in emergency situations.

Naturally, trucks have attained a success being estimated at their true worth. During the tender there were namely KrAZ trucks being given the preference of the Ukrainian Ministry of Emergency Situations. Consequently, 'AvtoKrAZ' Holding Company will deliver to the Ukrainian MES a batch of special-purpose trucks KrAZ-5233BE-019 (4Ч4) intended for prompt arrival to the place of explosive substances detection and special equipment transportation, as well as for mine clearance work and further transportation of heavy gauge explosive substances, their gross weight being more than 250 kg, to the destruction site.

The KrAZ-5233BE-019 truck is equipped with hydraulic crane (maximum boom extending is 8.25 m) and special equipment, in particular with Husqvarna 950K Active gasoline blow torch, Husqvarna 575 XP chain saw, GBH 11 DE BOSCH electric drill press, KGE 6500E electric station, radio station and GPS-navigator.

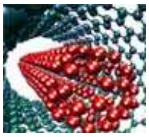
At the beginning of October AvtoKrAZ Holding Company took part in the Defense technology International Exhibition. The exhibited KrAZ trucks won primary prizes in the Ukrainian MES contest on best production for protection of civilians and territories from man-caused and natural emergency situations.

Future Technologies

ApNano launches Nano Armor subsidiary for amazing Bullet-Proof products

Israel-based ApNano's subsidiary develop the new NanoArmor line of nanotechnology bullet-proof jackets.

The Nano Armor products will be made of tungsten disulfide (WS2) nanoparticles and enable it to produce over 50% lighter weight armor products. The material was subjected to severe shocks generated by firing shots at it at impact velocities of up to 1.5 km/second. The nanospheres withstood the shock pressures generated by the impacts of up to 250 tons per square centimeter. The unique nanotubes of ApNano Materials are up to 4-5 times stronger than steel and about 6 times stronger than Kevlar.



Aharon Feuerstein, ApNano Materials' Chairman and CFO, commented: "The company has already started negotiations with investors, and already attracted huge interest from military, law enforcement and homeland security organizations and agencies in various countries".

ApNano Materials' mission is to become a leading nanotechnology company by developing valuable commercial applications based on its proprietary inorganic nanostructures. The unique nanoparticles, nested spheres and tubes, can be used in a broad range of products including lubricants, specialty coatings, thin films, powder metallurgy parts and polymer composites.

ApNano Materials (www.apnano.com), is a private nanotechnology company founded in 2002 by Dr. Menachem Genut, President and CEO and Mr. Aharon Feuerstein, Chairman and CFO. ApNano Materials was incorporated in the US and is headquartered in New York, USA. Its fully-owned Israeli subsidiary - NanoMaterials, Ltd., is located in the high tech science park adjacent to the Weizmann Institute campus in Nes Ziona, Israel. The company was granted an exclusive license by Yeda Research and Development Co. Ltd, the commercial arm of the Weizmann Institute of Science, Israel, to manufacture, commercialize and sell a new class of nanomaterials based on inorganic compounds that were discovered at the Institute.

Contracts

Czech Army buys Dingo 2 APCs

Prague, Nov 21 (CTK) - Czech military intelligence service (VZ) director Ondrej Palenik on Tuesday signed a contract with the MPI Group company on the purchase of four light APCs Dingo 2, Defence Ministry spokesman Andrej Cirtek has written on the ministry's web page.

The producer is to supply the vehicles worth about 135 million crowns (about $7.8 million) by the end of February 2008.

The server Euro Online previously said the ministry had decided to buy the four Dingo 2s without disclosing the conditions of the tender in question.

The VZ reportedly addressed six to eight companies within the selection proceedings, but only two finally competed for the order.

Cirtek has said that the order was placed in accordance with the law on public orders.

"The supply was needed urgently. It could not be met in a different kind of procedure for time reasons," Cirtek said.

He said the Dingo 2s should be used in Afghanistan by members of the Czech reconstruction team to be deployed in the Logar province next March.

Dingo 2s are not the first APCs the Czech military plans to buy. The ministry is also preparing a draft contract on the purchase of four light APCs Iveco, which are to be used by the Czech military police's special unit operating in the Afghan province of Hilmand.

The Ivecos order's cost is about 100 million crowns, according to the ministry.

The Americans have probably offered further help in this respect. According to the press, they are to lend over 20 Humvee vehicles to the Czech military which is to use them either in Iraq or Afghanistan.

The ministry says the planned purchase of eight light APCs will meet only the most urgent need. In the future, it will be necessary to buy tens of light APCs, for which public tenders will be launched, the ministry says.

Apart from the light APCs, the Czech military has bought 199 heavy APCs Pandurs worth more than 23 billion crowns from the Austrian company Steyr, which is one of the biggest orders in the Czech military's history.

Defence Industry

A further 26 MOWAG PIRANHA IIIC 8x8 for the Swiss Army

Kreuzlingen - MOWAG GmbH, a General Dynamics European Land Systems Company - integrated and well-established in Kreuzlingen, recently got an order from Swiss Army for the production of 26 PIRANHA IIIC 8x8 that shall be used as carrier vehicles for the Swiss Army battlefield management system and as communication vehicles.

They will be manufactured in Kreuzlingen and delivered in the years 2010 and 2011.

Information and communication are indispensable for

the military and civil guidance. The ever-increasing mobility, flexibility and modern communication technology require an infrastructure that ensures the timely delivery of reliable information. With the second development stage of the BMS (FIS HE) and with a further performance increase of telecommunication equipment, which has been approved in the "Rьstungsprogramm 2007" (procurement program 2007), guidability during the securing of the operational area and during missions in favor of the civilian population can be further enhanced.

Among other items, Parliament approved the procurement of a total of 26 carrier vehicles on the basis of the PIRANHA IIIC - which is successful all over the world - with this procurement program. Out of the ordered vehicles, 6 will be delivered as armored command vehicles for the BMS, 8 as armored communication vehicles, and 12 as so-called „armored Radio Access Point vehicles with increased functionality".

The selection of the PIRANHA IIIC as the carrier vehicle documents the close partnership and the confidence of the Swiss Army in the reliability of the PIRANHA, MOWAG and the GD ELS Group. Close to 900 vehicles of the PIRANHA family in various configurations are already in use in the Swiss Army.

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.

Defence Industry

Lockheed Martin And Sanmina-SCI Join Forces To Complete For U.S. Army's Upgraded Vehicular Intercommunications System

OWEGO, NY -- Lockheed Martin and Sanmina-SCI have signed a teaming agreement to compete for the U.S. Army program to upgrade thousands of existing tanks, trucks and tactical wheeled vehicles with a next-generation digital intercommunications system.

Lockheed Martin Systems Integration in Owego, NY, will be prime contractor and systems integrator with principal subcontractor Sanmina-SCI's Defense and Aerospace Systems Division, Huntsville, AL. Together, the two companies will offer an enhanced tactical vehicle version of Sanmina-SCI's proven TOCNET™ intercommunication system for the Army's Vehicular Intercommunication System – Extended (VIS-X) competition.

Winner of the $3.5 billion VIS-X contract will integrate and support intercom systems in 54,000 vehicles worldwide, among them Abrams tanks, Bradley Fighting Vehicles, up-armored HMMWVs and Army-operated commercial trucks. The VIS-X solution will provide vehicle crews with significant improvements in speech intelligibility and hearing protection, and will enable true on-the-move, command-and-control, over-the-horizon data and voice communications. The U.S. Army's Communications-Electronics Command (CECOM), Ft. Monmouth, NJ, is expected to award a five-year indefinite-delivery/indefinite-quantity contract by mid 2008.

"The Lockheed Martin/Sanmina-SCI team will offer the U.S. Army a low risk, off-the-shelf digital system designed for the battlefield environment, along with the testing, fielding, training and maintenance, and logistics to ensure global supportability," said Michele Evans, vice president of Aircraft Systems at Lockheed Martin Systems Integration – Owego.

"We are extremely excited to team with Lockheed Martin and to have the opportunity to continue to provide the U.S. Army with the proven and extremely capable TOCNET™ intercommunications system," remarked Jim Cocke, senior vice president, Sanmina-SCI's Defense and Aerospace Systems Division.

Sanmina-SCI's digital TOCNETTM system is already successfully integrated on multiple U.S. Army vehicular and Tactical Operations Centers (TOCs) platforms, including Command Post Platform, Division, Brigade and Battalion TOCs. TOCNET™ is deployed on U.S. Marine Corps light armed command and control vehicles integrated by Lockheed Martin, and on Marine Corps Mine Resistant Ambush Protected (MRAP) vehicles in Iraq, and has been selected as the Joint Intercommunications System for the MRAP vehicle. The system also is operating on a host of command and control air platforms, including VIP Blackhawk helicopters in Iraq.

Headquartered in Bethesda, Md., Lockheed Martin employs about 140,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services.

Sanmina-SCI Corporation is a leading electronics contract manufacturer serving the fastest growing segments of the global Electronics Manufacturing Services (EMS) market. Recognized as a technology leader, Sanmina-SCI provides end-to-end manufacturing solutions, delivering unsurpassed quality and support to OEMs primarily in the communications, defense and aerospace, industrial and medical instrumentation, multimedia and consumer, computer and storage, and

automotive technology sectors. Sanmina-SCI has facilities strategically located in key regions throughout the world. More information regarding the Company is available at http://www.sanmina-sci.com.

Training And Simulators

Blackwater Worldwide Joins International Association of Peacekeeping Training Centers

Moyock, NC - Blackwater Worldwide, a global leader in advanced law enforcement and military peacekeeping training is pleased to announce its membership in the International Association of Peacekeeping Training Centers (IAPTC).

The aim of the Association is to facilitate communication and an exchange of information among various peacekeeping training centers and/or among people responsible for and interested in peacekeeping training. It is intended to broaden contacts between various international organizations, peacekeeping training centers and institutions, universities, and other interested groups, leading to more effective peace operations.

Guided by integrity, innovation, accountability, and a desire for a safer world, Blackwater Worldwide leverages state-of-the-art training facilities, professional program management teams, and innovative manufacturing and production capabilities to deliver world-class, customer-driven solutions

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 verhicles 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 todays hot spots. KMW’s strategy is to expand its leading position in this business segment. Both contracts are herbey 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 amored personel 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.

Krauss Maffei Wegmann

Krauss-Maffei Wegmann is Europers market leader for armored wheeled and tracked vehicles. At production sites in Germany, Greece, the Netherlands and the United States, a workforce of 2,800 manufactures and supports a product range extending from airportable and highly protected wheeled vehicles (MUNGO, DINGO and BOXER) to reconnaissance, air defense and artillery systems (FENNEK, GEPARD, short-range air defense systems, PzH 2000 and armored ground mobility vehicles) all the way to heavy battle tanks (LEOPARD 1 and 2), armored infantry fighting vehicles (PUMA) and bridgelaying systems (LEGUAN and PSB2). Moreover, KMW has comprehensive system expertise in the area of commercial and military simulation as well as command and control systems and remote-controlled gun mounts with reconnaissance and observation equipment for day-time and night-time missions. The armed forces of more than 30 nations worldwide rely on KMWrs operational systems.

Army

NAMSA Signs MOU with Israel

On 21 November, in a ceremony held at NAMSA, the Agency signed a Memorandum of Understanding (MOU) on Logistic Support Cooperation with Israel.

The MOU is of particular importance to many NATO nations currently operating equipment of Israeli origin as it facilitates access to Israeli industry for the acquisition of unique spares and services. Currently NAMSA has to go through a lengthy authorisation process to acquire these. It is expected that the MOU will permit to simplify and expedite this process, for the benefit of NATO members.

In addition, the MOU offers an opportunity for Israel to cooperate in the domain of Trust Fund demilitarization projects where NAMSA is the Executing Agent.

Israel is the second Mediterranean Dialogue (MD) nation to sign an MOU with NAMSA. Cooperation between NAMSA and MD nations contributes to NATO's efforts for peace and stability in the Middle East.

The MOU was signed by H. E. Mr Ran Curiel, Ambassador of the State of Israel to EU, and by Mr Karl-Heinz Мьnzner, NAMSA General Manager. Mr Bruno Cantin, NATO Secretary General Liaison Officer to NAMSA, also attended the ceremony, thus underlining NATO's interest in the NAMSA-Israeli cooperation.

Contracts

The DGA orders 117 VBCI armoured vehicles

On 19th October 2007, the DGA (the French armement procurement agency) issued a purchase order to Nexter for the delivery of 117 infantry combat armoured vehicles (VBCI).

This order completes the initial order for 65 vehicles, the first 41 of which will be delivered to the French Army during the second half of 2008, in accordance with the initial schedule.

These 117 vehicles will thus be produced within a period of one year, starting early in 2008, and the assembly line has the potential to provide a further substantial increase in production rate to meet any export contract requirements.

Future Technologies

Major German Bundeswehr order for SFC fuel cells

Brunnthal -- SFC Smart Fuel Cell AG, market leader in fuel cell technologies for mobile and off-grid power applications, has been awarded a major follow-up contract by the German Bundeswehr.

The order amounts to approx. 2.5 million Euro.

The follow-up order builds on the success of the existing cooperation between the German Bundeswehr

and SFC Smart Fuel Cell. Its purpose is to establish the use of fuel cells as a compact portable power source for the soldier. In addition, further fields of application are to be addressed, e.g. the use in vehicles as a non-detectable on-board power source and the general use as a universal autonomous energy provider in replacement of conventional generators and batteries. In all these contexts fuel cells offer exceptional advantages as a silent, lightweight and emission-free power source. To add to this, the enormously high energy density of the SFC products provides significant cost and emission reductions in the logistics area.

An extensive SFC product qualification program is dedicated to ensuring reliable operation under defense conditions. In this context, the use in high altitudes and the operation in extreme climates are addressed.

With this follow-up order SFC fuel cells have again demonstrated their superior benefits for the solution of one of today's most urgent problems of modern defense organizations: the availability of power in the field. The use of fuel cells allows immediate reductions of up to 80 percent of the weight of power supplies carried by the soldier. "This new Bundeswehr order is expression of our leadership in the development and production of portable power systems for a large number of defense organizations worldwide", says Dr. Peter Podesser, CEO of SFC Smart Fuel Cell AG. „We are very proud of the confidence placed in us and are looking forward to a long term cooperation with the Bundeswehr as their reliable partner."

A significant part of this order will contribute to this year's turnover of SFC.

About SFC Smart Fuel Cell

SFC Smart Fuel Cell AG (www.sfc.com) is market leader in fuel cell technologies for mobile and off-grid power applications serving the leisure, industrial and defense markets. As one of Germany's technology pioneers, SFC has won numerous innovation awards. In a U.S. Navy Assessment in 2005, SFC was awarded the highest score for technical maturity of all fuel cell products. SFC has cooperation agreements with the German Bundeswehr, the U.S. Army, the U.S. Air Force and other leading military organizations. Unlike most other fuel cell manufacturers, who are in the research and development phase or run subsidized demonstration projects, SFC has shipped fully commercial products to industrial and private end users for four years, and has created a convenient fuel cartridge supply infrastructure. SFC is DIN ISO 9001:2000 certified.