

# Army Guide monthly



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## Defence Industry

**Aerojet Wins TOW Bunker Buster Warhead Contract**

SACRAMENTO, Calif. -- Aerojet, a GenCorp Inc. company, has been awarded a contract with Raytheon Missile Systems to assemble, qualify and produce TOW Bunker Buster warheads. Aerojet's contract is valued at more than \$8 million.

The Tube-launched, Optically Tracked, Wire-guided (TOW) Bunker Buster missile is intended to defeat urban structures and earthen bunkers on the battlefield. Aerojet's first delivery of the warhead is planned for September of 2006. Explosive loading will be accomplished at Aerojet's Camden, Ark. facility while final assembly will be conducted at the company's Socorro, N.M. facility.

In August, Aerojet announced a multi-year contract with Raytheon Missile Systems to fabricate warheads for the TOW Weapon System on the 2A and 2B missiles. Warhead production for those missiles will also be processed in Socorro, N.M.

"Aerojet is a long-standing supplier to Raytheon Missile Systems for the TOW program," said Aerojet President Michael Martin. "The Bunker Buster warhead produced by Aerojet continues the company's strong legacy as the supplier of choice for the TOW family of weapons ensuring critical offensive capability for the warfighter in the modern battlefield."



## Contracts

**General Dynamics Awarded \$13 Million Contract for Abrams Spare Parts**

STERLING HEIGHTS, Mich. - The U.S. Army TACOM Lifecycle Management Command has awarded General Dynamics Land Systems, a business unit of General Dynamics (NYSE: GD), a \$13 million contract for spare parts for the M1A2 Abrams tank continuous electronics evolution program.

The M1A2 Systems Enhancement Package platform is the latest, most technologically advanced Abrams tank. It has the latest command and control system, second-generation thermal sights and improved armor. This contract aligns with the overall M1A2 SEP tank upgrade program to integrate new information technologies to improve soldier warfighting capability with enhanced command and control features like color maps and displays, high-density computer memory, increased microprocessing speed and networked communications.



## Defence Industry

**Raytheon/NetFires LLC successfully Completes Preliminary Design Review for NLOS-LS Precision Attack Missile**

TUCSON, Ariz., -- Raytheon Company and the NetFires Limited Liability Company (LLC), a company composed of Raytheon Missile Systems and Lockheed Martin Missiles and Fire Control, successfully passed a preliminary design review for the Non Line of Sight-Launch System (NLOS-LS) Precision Attack Missile (PAM).

The successful completion of the PAM preliminary design review (PDR) represents the accomplishment of a significant milestone in meeting the design and performance parameters of the NLOS-LS PAM supporting FCS Spin Out 1. NLOS-LS is currently in the system development and demonstration (SDD) phase of the program for the Army.

Work under this contract began in 2004, and the PAM PDR was completed "right on schedule," said Scott Speet, executive vice president of the NetFires LLC and Raytheon's NLOS-LS program director. "The NLOS-LS PAM team, comprised of Raytheon and its component suppliers, worked very hard to meet this critical milestone, and this is a credit to the entire team."

The PAM missile, developed under a Defense Advanced Research Projects Agency

(DARPA) NetFires program, successfully conducted numerous flight tests during the DARPA program. That program focused on innovative design and performance of a compact, networked, precision attack missile launched from a self contained, platform independent launcher. The demonstrated flight performance success of the PAM during the DARPA program supported transition to the Army SDD and the decision by the Army to accelerate fielding of the NLOS-LS PAM and Container Launch Unit (CLU).

"We're very pleased with the manner in which the NLOS-LS team worked to reach PDR. They have demonstrated a preliminary design that meets all design and performance requirements for the Precision Attack Missile," said Col. Doug Dever, the Army's NLOS-LS program manager.

The NLOS-LS system consists of Raytheon's Precision Attack Missile (PAM), Lockheed Martin's Loitering Attack Missile (LAM) and a joint CLU. In 2004, the Army made the decision to accelerate the Raytheon PAM and CLU for incorporation into the Army's Evaluation Brigade Combat Team, Spin Out 1."

The Navy entered into a memorandum of understanding with the Army in 2004 for the NLOS-LS system. The Navy has selected the NLOS-LS PAM and CLU for integration on the Littoral Combat Ship, which is also scheduled for delivery in fiscal year 2008. Successful completion of the PAM PDR is a major step along the development path to support both services requirements for the system.

NLOS-LS provides a commander with immediate, precise and responsive fires on high payoff targets with real time target acquisition and battle effects. PAM is a

direct attack missile that is effective against moving and stationary targets at ranges from zero to 40 km and effective against hard and soft targets, bunkers and small boats. The missile includes a networked datalink that provides in-flight updates to each missile with ground and airborne sensor nodes and has a multi-mode warhead effective against both services' target sets.

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## Training And Simulators

### RUAG strengthens live simulation activities

Berne -- The RUAG technology group is to become one of Europe's top providers of high-quality two-way laser systems. On 1 January 2006 RUAG will take over the activities of the specialist laser technology company C.O.E.L. GmbH of Wedel, Hamburg.

C.O.E.L. was set up as a family-run business in 1990 by its managing partner, Wilfried Goda. RUAG has been working extremely closely with C.O.E.L. on a number of projects for several years. Now that the succession issue has been settled, RUAG's acquisition has secured the successful partnership. The purchase price is subject to a secrecy agreement.

C.O.E.L. employs about 60 people, the majority of whom are physicists and engineers. This year it will generate sales of around EUR 9 million. The company will be integrated into the Simulation and Training division of RUAG subsidiary RUAG Electronics. Wilfried Goda will remain managing director of C.O.E.L. until he reaches retirement age. RUAG Electronics employs 250 people in its Simulation and Training division and generates sales of CHF 80 million.

This acquisition will improve RUAG's position as a supplier of simulation and training equipment for security forces and make it one of the European leaders in the field.

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## Exhibitions

### Russian Defense Industries Export Products At DEFENSE 2005 International Exhibition

A Tri-Services Defense Exhibition for Land, Sea and Air, held since 1985 in cooperation and assistance of the Defense Ministry of Thailand, has stimulated an enormous amount of keen interest amongst military procurement officials and arms manufacturers throughout and far beyond the region. This year invitations have been sent to 53 countries to visit the Exhibition.

Russia participates in the Show for the third time. This year Russian official delegation at DEFENSE 2005, acting under the aegis of the Rosoboronexport State Corporation, the Organizer of the Russian national exposition, comprises several leading Defence Industries enterprises, among them the Instrument Engineering Design Bureau (Tula), Izhmash Plant Company

(Izhevsk), Novosibirsk Instrument Engineering Plant (Novosibirsk), 'Alfa' Company (Moscow).

A wide range of mock-ups, scale models, information and advertising materials on approximately 140 samples of Russian-made armaments and military equipment, as well as a variety of dual-use and civil-purpose export products are displayed at the Russian exhibition stand.

A comprehensive information on combat capabilities of the state-of-the-art and modernized military hardware for land forces, such as the T-90S main battle tanks, BTR-80A armored personnel carriers will be offered at the stand. The BMP-3 infantry fighting vehicle will be undoubtedly a highlight of the Russian exposition. The 300 mm 9K58 Smerch Multiple Rocket System, alongside with the organic munitions will be shown at the Company's stand. The MRS is capable to engage practically all types of ground targets with high accuracy and less ammunition allowance.

A wide gamut of armaments and military equipment of long-, medium- and short range air defense systems will be presented at the exposition. In regard to basic combat characteristics many of them significantly surpass foreign analogues, which makes them highly competitive in the world arms market. At the top of the list are the famous Oir-I1 and Buk-M1-2 medium-range SAM systems, as well as the Iгла MANPADS. The above ADM systems are capable of destroying all types of aircraft, helicopters and cruise missiles, as well as radio-contrast surface and ground targets.

In view of the growing demand for effective antiterrorist special-purpose weapons and equipment, a number of the highly competitive export versions of conventional and special-purpose small arms are demonstrated at the Russian exposition. Well-known samples of highly effective small arms, such as upgraded versions of the AE-101, AE-102, AK-103 and 5.56 mm AK-104 and 7.62 mm Kalashnikov assault rifles, Dragunov SVD and SVDS sniper rifles, 9 mm Kashtan and Bizon submachine guns are expected to be in the focus of visitors' traditional attention. Also available in full range at the stand are: portable and hand-held anti-tank grenade launchers, flame-throwers, submachine guns, pistols, various types of rockets, projectiles and shells, fuses and cartridges, modern optical sighting/vision devices and thermal imagers.

The ship-borne weaponry is presented by the Kashtan-M Air Defense Gun/Missile system and other unique and highly competitive anti-ship, air defense and anti-submarine systems, which are always in demand on the arms market.

In addition to the defense products, Rosoboronexport will introduce scores of advanced innovation projects and programmes of the Russian Defense Industries in such fields as machine-building, metering equipment, ecology, brand-new materials, biotechnologies, electronics and others. Among them unique water purification filters, super-strength nano-crystals goods, portable gas-level indicators, to mention a few. A unique 'BARS' transport aircraft, designed for airlifting various cargoes to remote and hard-to-get areas, is expected to be

## Contracts

## General Dynamics Awarded \$69 Million Stryker Reset Contract



STERLING HEIGHTS, Mich. - The U.S. Army TACOM Lifecycle Management Command has awarded General Dynamics Land Systems, a business unit of General Dynamics, a \$69 million contract for Stryker eight-wheeled combat vehicle sustainment or "reset" work.

Through this contract, General Dynamics will service, repair and modify 265 Stryker infantry combat vehicles which are returning from Operation Iraqi Freedom, restoring them to a pre-combat, like-new condition in advance of reissuing the vehicles prior to their next deployment. These vehicles have been in service in Iraq since October 2003, supporting two 3,900-soldier Stryker Brigade Combat Team rotations.

The reset work is slated to begin in mid-November by existing General Dynamics employees in Sterling Heights; London, Ontario, Canada; and at Fort Lewis, Wash. Work is expected to be complete by Sept. 30, 2006.

During their service in Iraq, these vehicles were driven more than six million miles, participating in assignments ranging from Fallujah, Baghdad and the Euphrates River Valley to the Tigris River Valley and Mosul. The vehicles maintained an operational readiness rate above 95 percent throughout their deployment in Iraq.

The armored vehicles enable Stryker Brigade Combat Teams to maneuver easily in close and urban terrain, while providing protection in open terrain. Performance highlights include C-130 transportability; networked command, control, computing and communications, intelligence, surveillance and reconnaissance (C4ISR) capability; integral 14.5mm armor protection and 152mm artillery airburst protection; self-deployment and self-recovery capability; reduced vehicle acoustic signature; ability to carry a nine-man infantry or engineer squad; and bunker and wall breaching capability.

Stryker is the Army's highest-priority production combat vehicle program and the centerpiece of the ongoing Army Transformation. The Stryker family of eight-wheel-drive combat vehicles can travel at speeds up to 62 mph on highways, with a range of 312 miles. Stryker vehicle configurations include carriers for mortars, engineer squads, infantry squads, command groups, and fire support teams; a nuclear, biological and chemical reconnaissance vehicle; anti-tank guided missile and medical evacuation vehicles; and the Mobile Gun System, a 105mm cannon mounted in a low-profile turret that is integrated into the Stryker chassis. The

an object of intense interest in many countries of the region. 'BARS' requires no permanent deport aerodrome and can operate from unprepared airfields with various surfaces. The aircraft features a very short take-off run and VTOL capability. Showcased at the stand will be a full-scale copy of the 'Marina' research submersible, designed for the littoral-shelf observation and on-condition evaluation of undersurface construction at depths down to 50 m. The underwater vehicle is also expected to attract a great deal of attention when she is converted for excursion purposes and marine-life studies.

In the context of successful results of the recent Russia-Thai Summit held in Moscow in mid-October this year on bilateral military-technical cooperation, the Rosoboronexport State Corporation considers participation of the Russian delegation in DEFENSE 2005 to be an important step in further extension of bilateral cooperation between the two countries in this domain, and a significant stage in promoting Russian armaments and military equipment to the dynamically developing markets of South-East Asia and Pacific region countries.

## Training And Simulators

### FATS, Inc. and Lockheed Martin Continue to Collaborate on Virtual Combat Convoy Training Systems



ATLANTA - Nov 9, 2005 - FATS, Inc. announced today that it has received a \$1.1 million order from Lockheed Martin to provide simulation training systems for the Virtual Combat Convoy Trainer (VCCT). The U.S. Army Combined Arms Command (CASCOM) ordered one complete VCCT suite from Lockheed Martin for delivery in November 2005.

In 2004, Lockheed Martin and FATS combined their expertise to develop the VCCT for the U.S. Army. The two companies utilized Lockheed Martin's Close Combat Tactical Trainer and FATS virtual small arms trainers, indirect fire trainers and close air support to form the first simulated convoy training system.

"As current events and training needs evolve, it is important that FATS continues to offer industry partners and customers alike the most up-to-date and advanced virtual training solutions and service support available," said Ron Mohling, FATS, Inc. chief executive officer. "This new contract is another great example of a successful, collaborative effort to meet the military's needs."

Army recently approved the Mobile Gun System and the Nuclear, Biological and Chemical Reconnaissance Vehicle for low-rate production, and the first MGS and NBCRV vehicles are slated for delivery to the Army this month.



### Contracts

## General Dynamics Awarded \$70 Million Contract to Provide Australia with M1A1 Abrams AIM Tanks



STERLING HEIGHTS, Mich. -General Dynamics Land Systems, a business unit of General Dynamics, was awarded the final \$42 million delivery order of a \$70 million foreign military sales contract from the U.S. Army Tank-Automotive and Armaments Command to provide 59 refurbished M1A1 Abrams Integrated Management (AIM) tanks to the Commonwealth of Australia.

The M1A1 AIM tanks will replace the Australian Land Forces' aging Leopard main battle tanks.

Survivable and affordable vehicles with excellent potential for network centric warfare, the Abrams M1A1 AIM tanks will provide Australian Forces with increased connectivity, mobility, firepower and survivability. Additionally, the M1A1 AIM provides a cost-efficient armor solution as it incurs low operational and support costs, and reports high operational readiness rates. Under this contract, M1A1 Abrams tanks from the U.S. Army inventory will be completely disassembled, overhauled and refurbished to like-new "zero-mileage" condition.

The tank has a cruising range of up to 480 kilometers, the ability to reach speeds of 66 kph on-road and up to 48 kph off-road (while carrying four crewman and ammunition). The primary weapon is a 120mm smooth-bore cannon; it is also equipped with a 50-caliber machine gun for the tank commander and two additional 7.62mm machine guns. The Abrams can fire an advanced kinetic energy tungsten penetrator round against vehicles and a multipurpose round for infantry support.

The Abrams' survivability is enhanced through its nuclear, biological and chemical protection system, crew compartmentalization from munitions and armored blow-off panels, which allow stowed munitions to vent to the atmosphere if detonated.

Work will be performed by existing General Dynamics and Department of Defense employees in Anniston, Ala.; Lima, Ohio; Scranton, Pa.; and Tallahassee, Fl. The 59 M1A1 AIM tanks are scheduled for delivery to Australian Land Forces in two shipments,

in June and December 2006. The tanks are part of a large worldwide fleet with known, stable operating costs, and are expected to be in service beyond 2020.

General Dynamics will offer the Commonwealth of Australia the same comprehensive material and logistics support available to the Abrams fleet worldwide. General Dynamics Land Systems-Australia, a subsidiary, will take the lead in working with the Commonwealth to structure and implement a robust logistics system for the vehicles.



### Contracts

## Kongsberg Protech has signed a contract with General Dynamics Land Systems



Kongsberg Protech has signed a contract valued at approximately MNOK 100 (15 MUSD) with General Dynamics Land Systems of Canada for the delivery of weapons control systems for the Canadian Army.

The weapons control system was developed to protect personnel in armored personnel carriers. Weapons and sensors are mounted on the outside of the vehicle, while the operator remotely controls the system from a protected position inside the vehicle. The system has previously been sold to Norway, the USA, Australia and Finland.

Kongsberg Protech has signed contracts for the delivery of the weapons control system for a total of MNOK 822 (123 MUSD) in 2005.



### Defence Industry

## First Turkish 'Armored Internal Security Vehicle' designed by Otokar



Otokar, the leader manufacturer of the Turkish Defense Industry added a new armored vehicle

among the globally known and preferred others. Otokar's new vehicle designed by the Otokar engineers according to developing homeland security concept.

The world wide presentation of the new vehicle will take place in IDEF 2005 Defense Industry Fair in Ankara between 27 and 30 September 2005.

Regarding to the new Otokar design armored vehicle Mr.Serdar GorguΓ§, Assistant General Manager of Otokar told the following:"The homeland security concept has totally changed in recent years with the different types of demands like new requirements, new design and new technologies. As the Homeland Security has become very important around the world, new demands started to emerge concerning a new vehicle suitable for these purposes. Otokar Armored Internal Security Vehicle is designed following this global requirements and these developments. With this vehicle, our primary objective is export markets. Otokar Armored Internal Security Vehicle perfectly matches with our objective and strategy which is to grow in defence and export markets."

With a capacity of 13 personnel, for long-waiting missions, the vehicle has an auxiliary power unit for equipments like air conditioner, refrigerator and hot water in order to keep the personnel in top condition and ready for mission in a comfortable way. On board mission equipment arrangement and high seating position of the personnel help to observe what's happening outside and ease the work of the personnel for analyzing the situation and planning.

Otokar Armored Internal Security Vehicle has a specially designed body for a usage in urban and residential areas, the number of the doors provides quick and easy access to the vehicle, and the smooth side body design makes it almost impossible to climb on the vehicle.

Besides, the high profile body design of the vehicle plays a discouraging and deterrent role and facilitates the security forces missions.

Otokar Internal Security Vehicle can be offered with different equipments and accessories on the same body and different versions suitable for different missions. For operation planning it can be arranged for a command vehicle role for 7 people with fax, computer, working table, wireless communication table and backup power supply or it can be designed for an explosive ordinance disposal vehicle which can tow the 2 ton bomb disposal trailer for the bomb disposal squad. In addition to these there can be different versions of the Internal Security Vehicle like Reconnaissance / Surveillance and Water Canon.

The most important feature of the Otokar Internal Security Vehicle is its bolt on armour which forms an additional protection against rifles and explosions.

Otokar Internal Security Vehicle is not designed only for city usage, but also with the help of the excellent off-road performance; it can be adapted to all kind of off-road operations. The vehicle has a very effective 4x4 traction and control capacity, these features provides

excellent performance. Optional automatic transmission gives a very controlled off-road driving experience. With the help of the long travel suspension tires may contact with the ground even in the adverse off-road conditions. With special differential system Otokar Internal Security Vehicle has the best off-road ability in its class.

With 4x4 engine Internal Security Vehicle can climb a 60 degree slope, and easily advance across a 30 degree side slope, the vehicle has a maximum wading depth of 1 meter. The vehicle offers a maximum speed of 110 km/h on road and a range of 680 km with full fuel tank, while the engine produces 286 hp.



## Training And Simulators

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This acquisition will improve RUAG's position as a supplier of simulation and training equipment for security forces and make it one of the European leaders in the field.



## Defence Industry

### Over 100 DURO vehicles for the United Kingdom



At the end of July the Defense Procurement Agency in the UK signed up for the delivery of 35 multipurpose military-type DURO vehicles from MOWAG GmbH. This is the third contract with the British Army within the last nine months. In total, 101 DURO vehicles have been ordered. Following completion of production and delivery of these three contracts, 198 DURO will be in operation in the UK.

At the beginning of 2003 MOWAG GmbH took over the DURO business sector from Bucher Industries. During the past two years MOWAG has further developed the original vehicle concept and is now present in the important 12 tonne market segment with the DURO III. Of the 198 vehicles ordered or already delivered by/to the UK, 124 are the smaller DURO II version with a maximum GVW of 9 tonnes, of which 6 vehicles are for ammunition disposal (mine clearance and bomb disposal) and 118 vehicles as carriers of communications systems. Of the 66 larger DURO III vehicles, 48 will also be applied as communications vehicles, whereas 18 DUROs will be equipped for bomb disposal. A number of these DUROs are already in operation with the British Army in Iraq for bomb disposal missions. Apart from the UK, in 2004 and 2005 Germany has already acquired a total of 30 of the further developed armoured DURO III P vehicles. These vehicles have proven their performance and reliability in Peace Keeping missions with the German Bundeswehr in Afghanistan. Based on the good experience gained in Peace Keeping missions abroad, MOWAG GmbH expects further orders from both the UK and Germany.

The CEO at MOWAG GmbH, Simon T. Honess, is very pleased with the close cooperation with the UK, and stated: „The three current contracts are proof of the customer's trust in the performance and reliability of the DURO, as well as the real partnership between the British procurement agencies and MOWAG GmbH“. This trust is also reflected in the fact that MOWAG is the only off-shore (non-British) company with a long-term Option Contract with the ( UK ) Procurement Agency. When asked to address the significance of these contracts for MOWAG GmbH, Honess stated: „With the further development and successful marketing of the DUROs, we have managed to establish a second independent product line in a completely different segment in parallel to the successful PIRANHA family of armoured wheeled vehicles. The creation of a second main pillar in parallel to the PIRANHA was also the strategic target when taking over the DURO segment from Bucher Industries. I am convinced that the DURO will be the source of much gratification for us in Kreuzlingen“. A large number of suppliers in Switzerland are also profiting from the current sales success of the DURO, as more than 80% of the vehicle parts are produced in Switzerland.



Krauss-Maffei Wegmann has signed a contract with representatives of the Federal Office for Defence Technology and Procurement (BWB) in Koblenz covering the delivery of a demonstrator for a new DINGO variant.



As part of a competitive bidding process for a protected command and mission carrier vehicle, the DINGO, which has gained a worldwide reputation for its unique level of protection, will for the first time be tested with an extended group compartment with mission-specific equipments offering space for up to nine personnel.

#### Modularity and maximum protection

The German Army intends to test the new DINGO 2 variant with different mission kits from early 2006. The total requirement of the German Army amounts to between 1,000 and 1,500 vehicles in this category. Modularised superstructures without sacrificing any of the high ballistic protection of the DINGO family allow universal applications of the DINGO 2 GFF in a wide variety of service branches. Thus, for instance, the DINGO 2 GFF is scheduled to replace the M113. “This contract represents a further milestone on the way to increasing the number of different variants in the DINGO programme. It at the same time underlines the leading position of our company in this field”, says Frank Haun, managing director and deputy chairman of the KMW Board of Management. “Over the past several years, we have consistently extended our product range towards wheeled vehicles and have thus adapted it to the new threat challenges facing the armed forces. Protected transport volume has been at the very top of the agenda and the modern system design of the DINGO 2 is the right answer in this respect”, continues Frank Haun.

#### The DINGO 2 – an export success story

The DINGO 2 with an extended group compartment has also been ordered by the Belgian armed forces which are equipping their troops with the DINGO as a mobile command post as well as an ambulance and radar command and control vehicle. Belgium has placed an order for a total of 220 DINGO 2 with an option for a further 132 vehicles. Furthermore and in addition to an ambulance variant, Austria intends also to acquire vehicles for NBC reconnaissance missions.

#### DINGO 2

The DINGO 2 is a consistent upgrade of the DINGO 1 all-protected carrier vehicle transport vehicle introduced

### Defence Industry

#### KMW delivers new DINGO variant to German Army

into service in the year 2000 and proven in many foreign missions. For as many as eight crew, it currently affords the highest level of protection against modern hand-held weapons, artillery fragments, anti-personnel and anti-tank mines as well as against NBC combat agents. With its highly mobile off-road chassis, it reaches maximum speeds of more than 90 kph and a radius of action of approximately 1,000 km. Moreover, the DINGO 2 is air-transportable on C160-Transall, C130 Hercules and the future A400M aircraft.

## Contracts

### US Army Invests US\$300M Plus To Maintain Shadow 200 As World's Leading Capability In TUAV Systems

The Shadow 200 Tactical Unmanned Aerial Vehicle (TUAV) System is set to remain at the forefront of battlefield operations and capability with the US Army committing more than US\$300M over the next five years to its ongoing evolution and development.

Being offered as part of BAE Systems' bid for Australia's JP129, continued investment in the Shadow system offers the Australian Defence Force a low risk, highly-capable solution providing full interoperability with US Forces.

Stephen Birrell, General Manager of BAE Systems said: "The transfer of technology is a key factor to consider. Any improvements the US Army makes to the Shadow will become available to the Australian Defence Force (ADF). This will allow Australia to consider system improvements without undergoing extensive prototyping, testing and final integration activities, ultimately enabling the ADF to maintain a state-of-the-art system at very minimal cost".

The Shadow 200 is the only solution offered for JP129 Phase 2 to be deployed in a tactical capacity anywhere in the world. It entered service with the US Army in 2001, with full-rate production commencing in 2003. Recognised as the latest in TUAV technology and capability, the system has significantly benefited from its "real-world" use in the combat environment of Iraq over the past 2 years. It has amassed more than 53,000 flight hours in Iraq alone, resulting in the identification of system enhancements and modifications. These enhancements and modifications are encapsulated in a six-month rolling block upgrade ensuring the Shadow 200 is at the leading edge of technology and capability. This ongoing product improvement program is a core component of maintaining the US Army's tactical battlefield surveillance and target acquisition capability.

BAE Systems is teamed with AAI Corporation, the manufacturer of the Shadow 200, and leading Australian SMEs for the ADF's TUAV System project, JP129. The team is offering a highly effective TUAV solution, tailored to meet the ADF's specific requirements.

"BAE Systems' unrivalled capability in Australia, coupled with the ongoing success of the US Army

Shadow TUAV System and the US Army's ongoing investment in Shadow, confirm the BAE Systems-AAI team as the most capable and lowest risk solution for JP129 now and into the operational future of the ADF's TUAV capability," said Stephen.

## Defence Industry

### BAE Systems Awarded Integrated Battle Command Contract By DARPA

BAE Systems has been selected by the Defense Advanced Research Projects Agency (DARPA) for Phase 1 of the Integrated Battle Command (IBC) Program.

The IBC Program will provide military commanders a comprehensive suite of software decision support tools. These tools will allow commanders and their staff to understand the Political, Military, Economic, Social, Information and Infrastructure (PMESII) effects of various potential courses of action that might be employed in a situation. IBC will leverage existing BAE Systems technologies in modelling and simulation, automated planning and visualisation.

"The program will provide new tools to aid commanders in planning strategic effects-based campaigns," said Dr. Nils R. Sandell, Jr., BAE Systems vice president and general manager for Advanced Information Technologies (AIT). "We are looking forward to working with DARPA, the Communications and Electronics Command (CECOM) and U.S. Joint Forces Command (JFCOM) to develop and demonstrate these new tools and transition them to our joint forces in the field."

BAE Systems in Burlington, Massachusetts, received one of two competing contracts –valued at \$3.5 million each – for Phase 1. Phase 2 will be competitively awarded to a single contractor at the conclusion of Phase 1 in June 2006. CECOM at Ft. Monmouth, New Jersey is the contracting agent.

The IBC tools will be installed and evaluated at the U.S. JFCOM in Suffolk, Virginia, during Phase 1.