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Volume 8 Number 08 - Wednesday, 24 February 2016

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Slovak Republic: Defence Budget and Doctrine



According to official estimations the defence budget of the Slovak Republic for 2016 will be significantly increased. These additional financial resources will be primarily

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allocated in modernization programs. In 2008 Slovak Republic was spending 8% of the total defence budget to modernisation programs. In 2013 this amount rose to 16% and in 2016 it is expected to reach 19%. Thanks to this progressive increase the country managed to kick off some of the largest modernization projects in the history of the country's armed forces, such as the purchase of Black Hawk multi-purpose helicopters or Spartan aircraft.

More on that Slovak Republic made, through the U.S. Government's Foreign Military Sales (FMS) and Foreign Military Financing (FMF) programs, and the NATO Support and Procurement Agency (NSPA), some important purchases of defence equipment. Towards this direction Mr Martin Glváč stated that "In buying the Sikorsky UH-60 Black Hawk helicopters, we took advantage of the U.S. Government's FMS program, and obtained the helicopters for the actual purchase price paid by the U.S. Armed Forces. The price was, therefore, lower than that if we had procured them directly from the manufacturer". Under the leadership of Mr Glváč military equipment costing approximately US\$ 280 million have so far been contracted via the U.S. Government's programs.

The country's armed forces are trying to provide security for the citizens and to guarantee defence for the state. Additionally, they actively participate in international missions promoting peace and stability in the world, prevention of conflicts and settling of crisis situations according to the international law and confidence building measures. The purpose of this preventive policy is to avoid thwarting the security interests of the Slovak Republic, which include averting of an armed conflict from its territory.

Finally, it is worth mentioning that the country is deliberately trying to harmonize/realize its basic defence policy goal in accordance with its Euro-Atlantic orientation, as the NATO and EU membership of the country has considerably changed its security position, and provided qualitatively new conditions for realization of its security interests. Slovakia has become an integral part of the Euro-Atlantic security community and thus it has gained treaty-bound security guarantees.

Kyriazis Vasileios, Epicos Newsletter Head Editor

Slovak Republic: Defence Industry Current Situation



The Slovak aerospace and defence industry focuses on the design, development and manufacture of ammunition and artillery systems, armoured combat and transport vehicles, short- and long-range radar and navigation systems, mine-clearing equipment and small arms. Additionally, there are several

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Slovak companies that produce ultra-light aircraft and aircraft turbines components. The main part of the Slovak defence production is concentrated in the DMD Holding Group, which was established in 1995. DMD Holding comprises the following arms producing firms: ZTS - ŠPECIÁL, a.s. EN which is mainly specialised in the production of artillery systems, howitzers, rocket launchers, mortars, medium and light combat turrets – turret system DVK-30 and gun barrels – 30 to 155 mm. KONŠTRUKTA - Defence, a.s. EN which operates as an artillery system design house. Finally, ZVS holding, a. s. EN is mainly focussing on the development, production and sale in area of mechanical engineering, electronics and ammunition.

During the Cold War, the Slovak regions were the center of the Czechoslovak defence industry. Czechoslovak arms production peaked in 1980's when the country was an important exporter of defence equipment. It is indicative that in the 1980's Czechoslovakia was on average exporting 837.1 million in US\$ m. at constant (1990) prices per year. After the fall of the communist regime and the "velvet divorce" with Czech Republic, Slovak defence industry experienced a sharp decrease in the volume of exported defence equipment. In the period 1990-2015 Slovak Republic exported on average 25.3 million in US\$ m. at constant (1990) prices per year. The main reason was that the country's aerospace and defence industry had difficulties to develop a strong customer base since the dissolution of its biggest customer, during the communist era, the former Soviet Union.



Source: SIPRI Database

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Currently, the majority of the Slovak defence manufacturers and suppliers are members of the Security and Defence industry Association (ZBOP). ZBOP was established in 2000, with a principal mission to promote the development of domestic manufacturing capabilities, with the aim of building a solid national defence technological and industrial base, which should constitute one of the pillars of national defence, while at the same time meeting the stringent requirements of foreign markets.

A comprehensive list of products and services supplied by ZBOP members is available in English at <u>http://www.zbop.sk/files/ZBOP-catalogue-katalog.pdf</u>

Kyriazis Vasileios, Epicos Newsletter Head Editor

Epicos "Industrial Cooperation and Offset Projects"

Cpicos.com Epicos "Industrial Cooperation and Offset Projects" provides a unique set of online tools enabling the structure, identification and implementation of comprehensive Offsets programs, through a searchable database. By introducing different offset projects and ideas proposed by local A&D industry it ensures the optimum cost for Prime Contractors and reassures that the priorities of local industry are fully met...

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Titanium-based Powder Injection Molding Parts for Aircraft/Jet Engine Applications



A company with extensive experience in the development of advanced products and materials applications using Powder Injection Molding (PIM) (complex shape metallic, cermets and ceramic parts), is proposing the development of a titanium alloy forming process based on PIM, for applications that meet the most demanding standards of the aerospace sector. This process development will ultimately lead to the production of complex shape airframe and jet engine parts, while the capability for

manufacturing other critical parts (e.g. surgical implants), will also be established.

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Design and set up of aircraft jet engine overhaul and test facilities



engine maintenance and test facilities.

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company with extensive А experience in Engineering Projects the aerospace sector, for is proposing, in the frame of an offset program, cooperation with depot level maintenance centers for the design and set up of aircraft jet

News from our A&D Business Network Rheinmetall to upgrade 128 Polish Leopard 2 main battle tanks





Rheinmetall has booked another

major modernization order for heavy tanks. Poland has just awarded the Düsseldorf-based Group a contract for overhauling 128 Leopard 2 MBTs. In cooperation with Poland's Polska Grupa Zbrojeniowa

(PGZ) and ZM Bumar-Łabędy S.A., Rheinmetall will serve as a strategic partner, supplying crucial key capabilities, including electronics and weapon technology. The project represents roughly €220 million in sales volume for Rheinmetall.

During the course of modernization, the 128 Leopard 2 A4 main battle tanks purchased in 2002 by the Polish Army from surplus Bundeswehr stocks will be upgraded to Leopard 2 PL standard, which corresponds to the German Leopard 2 A5 and A6.

Following Canada and Indonesia, Poland is now the third Leopard user nation to turn to Rheinmetall as the technology partner of choice for a major modernization programme. Besides the Bundeswehr, the armed forces of 17 countries now have Leopard 2 tanks in their inventories.

Rheinmetall's willingness to share technology and operate in tandem with local industry proved decisive in prompting the Polish government to select Rheinmetall as its strategic partner. For Poland, the contract will mean the creation of highly skilled jobs as well as obtaining valuable defence technology know-how.

On 28 December 2015, the Armament Inspectorate of the Polish armed forces awarded PGZ (as general contractor) and ZM Bumar-Łabędy S.A. (as integrator) a contract to upgrade the combat effectiveness of the Leopard 2 A4. Rheinmetall played a key role in preparing the upgrade package, having already established itself as a strategic partner by this point. Just signed, the contract lays out the details of Rheinmetall's role in the modernization package.

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CAE to acquire Lockheed Martin Commercial Flight Training



CAE today announced that it has concluded a conditional agreement with Lockheed Martin Corporation to acquire Lockheed Martin Commercial Flight Training (LMCFT). The closing of the transaction is subject to usual conditions, such as employee related consultation procedures and

regulatory approvals. Specific details of the transaction are not subject to release at this time.

With this acquisition, CAE will expand its customer installed base of commercial flight simulators and obtain a number of useful assets including full-flight simulators, simulator parts and equipment, facilities, technology and a talented workforce.

"We look forward to servicing an expanded customer installed base with this relatively small bolt-on acquisition and view positively the opportunity to pick up certain useful assets and to create synergies with our existing business," said Marc Parent, President and Chief Executive Officer, CAE. "CAE's sole focus is training, and with a near 70-year track record, we are the only pure-play company resolutely committed to the long-term training and simulation needs of our customers in Civil, Defence and Healthcare.

About CAE

CAE is a global leader in the delivery of training for the civil aviation, defence and security, and healthcare markets. We design and integrate the industry's most comprehensive training solutions, anchored by the knowledge and expertise of our 8,000 employees, our world-leading simulation technologies and a track record of service and technology innovation spanning nearly seven decades. Our global presence is the broadest in the industry, with 160 sites and training locations in 35 countries, including our joint venture operations, and the world's largest installed base of flight simulators. Each year, we train more than 120,000 civil and defence crewmembers, as well as thousands of healthcare professionals worldwide.

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Epicos NewsRoom



TAQNIA Aeronautics and Sikorsky Sign Agreement to Explore Helicopter Busine Opportunities in Saudi Arabia

Sikorsky, a Lockheed Martin Company today signed an agreement with Taqnia Aeronautics to jointly explore helicopter production opportunities in the Kingdom of Saudi Arabia.

The new agreement outlines the investment, technology and skills needed to establish production jobs for Saudi citizens, and could lead to direct involvement in the assembly of Sikorsky S-70 BLACK HAWK helicopters in the Kingdom.

The agreement was signed on the opening day of the AFED Local Manufacturing Exhibition in Riyadh by Major General (retired) Ali Al-Ghamdi, Taqnia Aeronautics CEO and Anand Stanley, Sikorsky Vice President for Europe, Middle East and Africa, in the presence of His Highness Prince Dr. Turki Al Saud, President of King Abdul Aziz City for Science and Technology (KACST) and Chairman of Taqnia, Alan Chinoda, Chief Executive Lockheed Martin Saudi Arabia, and Steve O'Bryan, Vice President, Lockheed Martin Mission Systems and Training.

"Entering into this agreement will give Taqnia Aeronautics the foundation to create a helicopter assembly operation in Saudi Arabia and assist in developing local content", said Major General (retired) Ali Al-Ghamdi, Taqnia Aeronautics CEO. "Together we are forging a relationship with a company owned by Lockheed Martin, a global technology leader, which can help grow Saudi involvement in capabilities that are important to the Kingdom's sustained economic growth."

"Since Lockheed Martin first partnered with the Kingdom in 1965, we've been privileged to be part of a significant transformation occurring in Saudi Arabia," said Alan Chinoda, Chief Executive of Lockheed Martin Saudi Arabia. "We are proud to be facilitating the kind of knowledge-based collaboration that accelerates job growth, technology sharing, and industrial partnership in the Kingdom."

Sikorsky's Anand Stanley added: "We have today laid the foundation for a potential new business where Saudi nationals will support the Kingdom's continued need for rotary wing products for many years to come."

In Saudi Arabia, Lockheed Martin partners with King Abdulaziz City for Science and Technology, King Abdullah University for Science and Technology and Al-Faisal University in Riyadh, helping to develop the next generation of talented young Saudi professionals. The company has also partnered with Babson College to launch a Center for Entrepreneurial Leadership in the Kingdom.

Saudi Arabia's Ministry of Defense, Ministry of National Guard and Ministry of Interior currently operate a fleet of Sikorsky BLACK HAWK helicopters. The Ministry of Interior also operates Sikorsky's S-92[®] commercial heavy lift helicopters. Sikorsky is under contract to

deliver SEAHAWK[®] helicopters via the U.S. Government's Foreign Military Sales program to the Ministry of Defense.

About Sikorsky, a Lockheed Martin company

Sikorsky, a Lockheed Martin company, based in Stratford, Connecticut, is a world leader in aircraft design, manufacture and service. Headquartered in Bethesda, Maryland, Lockheed Martin is a global security and aerospace company that – with the addition of Sikorsky – employs approximately 126,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services.

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Source: Epicos, Lockheed Martin

Cubic Awarded \$44 Million in Additional Contract Orders for I-MILES IWS by the US Army

Cubic Global Defense (CGD), a business unit of Cubic Corporation (NYSE: CUB), today announced it was awarded contracts valued at \$44 million for its Instrumentable-Multiple Integrated Laser Engagement System Individual Weapon Systems (I-MILES IWS) from the U.S. Army's Program Executive Office for Simulation, Training and Instrumentation (PEO STRI). I-MILES IWS is critical to the quality of home-station training as it offers heightened realism during exercise scenarios.

I-MILES IWS uses laser transmitters attached to military weapons and body sensors to detect hits and perform real-time casualty assessments to replicate combat and record data for later review. The user-friendly system features small, lightweight components for individual soldiers and requires less time to attach the Small Arms Transmitters and align to the weapon than previous versions. It also maintains alignment during an entire exercise.

"We are pleased to be able to provide ongoing support to the U.S. Army's PEO STRI to help ensure readiness now and for the unknown next mission," said Bill Toti, president of Cubic Global Defense. "Cubic's I-MILES IWS enables increased confidence in the tactics practiced during training as it allows soldiers to train as they fight and do so more efficiently and effectively."

Cubic's I-MILES IWS advanced technology is flexible, upgradeable and interoperable. It's delivered with the option to add range instrumentation solutions to support recording and playback of exercise results and maneuvers.

About Cubic Corporation

Cubic Corporation designs, integrates and operates systems, products and services focused in the transportation, defense training and secure communications markets. As the parent company of two major business units, Cubic's mission is to increase situational awareness and understanding for customers worldwide. Cubic Transportation Systems is a leading integrator of payment and information technology and services to create intelligent travel solutions for transportation authorities and operators. Cubic Global Defense is a leading provider of realistic combat training systems, secure communications and networking and highly specialized support services for military and security forces of the U.S. and allied nations. For more information about Cubic, please visit the company's website at www.cubic.com or on Twitter @CubicCorp.

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Source: Epicos, Cubic Corporation

Embraer Phenom 300 is most-delivered business jet in the world for the third consecutive year

The Embraer Phenom 300 was the most-delivered business jet in the world in 2015 for the third consecutive year, with 70 aircraft received by customers around the globe.

"We would like to thank our customers for their confidence and continuing relationship, which has enabled the Phenom 300 to enjoy successful acceptance worldwide since its launch," said Marco Tulio Pellegrini, President & CEO, Embraer Executive Jets. "The Phenom family's design was based on the highest industry requirements, combining the attributes of a best-in-class aircraft. To have the most-delivered business jet in the world for the third consecutive year is a true recognition that we have achieved our commitment to design game-changing products to meet operators' needs."

Recognized as one of the most desirable light jets by fractional programs, charter services, corporate flight departments and owner-pilots, 320 Phenom 300s are in operation in 28 countries. To date, the fleet has accumulated close to 300,000 flight hours. The Phenom 300 also was the most-delivered business jet in 2013 and 2014.

The General Aviation Manufacturers Association recently released its 2015 worldwide yearend aircraft shipment and billing report, which showed Embraer Executive Jets' market share had grown to 17% in terms of unit deliveries. In 2015, Embraer's executive aviation division delivered 120 aircraft, including jets in the Phenom, Legacy and Lineage families, the highest number in five years.

About the Phenom 300

The Phenom 300 performs among the top light jets, with a high speed cruise of 453 knots and a six-occupant range of 1,971 nautical miles (3,650 km) with NBAA IFR reserves. With the best climb and field performance in its class, the Phenom 300 costs less to operate and maintain than its peers. The aircraft is capable of flying at 45,000 feet (13,716 meters), powered by two Pratt & Whitney Canada PW535E engines with 3,200 pounds of thrust each.

The Phenom 300 offers a spacious cabin, designed in partnership with BMW Designworks USA, and the largest baggage compartment in its category. The largest windows in the class deliver abundant natural lighting in the cabin as well as in the private lavatory in the back of the aircraft. The comfort of the seats, with recline and full movement capability, is enhanced by the best pressurization among light jets (6,600 ft. maximum cabin altitude). The Phenom 300 features distinct temperature zones for pilots and passengers, a wardrobe and refreshment centre, voice and data communications options, and an entertainment system.

The pilot-friendly cockpit enables single-pilot operation and offers the advanced Prodigy Touch Flight Deck. The features it carries from a class above include single-point refueling, externally serviced lavatory, and an air stair.

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Source: Epicos, Embraer

General Atomics Confirms Orders for Radiation Monitoring Systems to Support NRC Order EA-13-109

General Atomics Electromagnetic Systems (GA-EMS) announced today the company has been awarded multiple contracts to deliver Radiation Monitoring Systems (RMS) to support the U.S. nuclear power plants required to conform to Nuclear Regulatory Commission (NRC) Order EA-13-109, which calls for the installation of reliable radiation monitors and Hardened Containment Vent Systems (HCVS) at plants with Boiling Water Reactors (BWR) with Mark I and II containments per post-Fukushima Daiichi safety recommendations.

"We are extremely proud to have our RMS products selected by over one-half of all the operating BWR plants with Mark I and II designs undergoing HCVS upgrades in the U.S. today," stated Dr. Vivek Lall, Vice President, Global Commercial Strategic Development at GA-EMS. "As new plants come on line, and as existing plants are being tasked for service life beyond 40 years, customers demand highly reliable systems that meet the requirements for extended operating lifecycles. Our reputation for unequaled product quality, reliability, and customer support has been the determining factor in customers continuing to select GA-EMS not only to help implement mandates such as EA-13-109, but to provide new product designs to suit changing plant requirements."

There are currently 27 U.S. BWRs which require the HCVS modification. To date, GA-EMS has received RMS orders for installation in 18 units in plants across the U.S. GA-EMS is also working with plant operators internationally to evaluate RMS requirements for facilities looking to install a HCVS in effort to align themselves with the U.S. NRC safety guidelines.

The NRC Order is a direct result of lessons learned from the Fukushima Daiichi accident in 2011. The installation of the HCVS and radiation monitoring systems at facilities with BWR Mark I and II containment designs provides plant operators with the ability to open vents, release pressure, and monitor radioactivity to prevent and mitigate core damage and containment failure. The HCVS and radiation monitoring systems are a prime example of the industry's dedication to safety, as these systems offer additional critical capabilities during emergency conditions for operators to minimize danger and protect public health and safety.

About General Atomics Electromagnetic Systems

GA's Electromagnetic Systems Group is a global leader in the research, design, and manufacture of first-of-a-kind electromagnetic and electric power generation systems. The company's 60 year history of research, development and technology innovation has led to an expanding portfolio of specialized products and integrated system solutions supporting aviation, missile defense, power and energy, and processing and monitoring applications for critical defense, industrial, and commercial customers worldwide.

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Source: Epicos, General Atomics

ManTech Awarded \$175 Million Contract to Deliver Technical Support to Royal Saudi Air Force

ManTech International Corporation (Nasdaq:MANT) in association with Saudi-based Jadwalean International Operations & Management Company has been awarded a contract to deliver technical assistance and advisory services enabling operational capability, including maintenance planning and oversight, systems and equipment support, and training solutions, to the Royal Saudi Air Force (RSAF). ManTech and Jadwalean will fulfill the F-15 technical support requirements by providing highly qualified and experienced personnel in the Kingdom of Saudi Arabia. The contract has a 5-year period of performance, with a potential value to ManTech of approximately \$175 million.

"The technical support program for the Royal Saudi Air Force is a critical component to sustaining its mission readiness," said Dan Keefe, president and chief operating officer, ManTech Mission Solutions and Services Group. "We are privileged to contribute our technical and professional skills in support of the Royal Saudi Air Force."

About ManTech International Corporation

ManTech is a leading provider of innovative technologies and solutions for mission-critical national security programs for the Intelligence Community; the Departments of Defense, State, Homeland Security, Energy, Veterans Affairs, and Justice, including the Federal Bureau of Investigation; the health and space communities; and other U.S. federal government customers. We provide support to critical national security programs for approximately 50 federal agencies through approximately 1,000 current contracts. ManTech's expertise includes cyber security; command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) solutions and services; information technology (IT) modernization and sustainment; intelligence/counter-intelligence solutions and support; systems engineering; healthcare analytics and IT; global logistics support; test and evaluation; and environmental, range, and sustainability services. ManTech supports major national missions, such as military readiness and wellness, terrorist threat detection, information security and border protection. Additional information on ManTech can be found at <u>www.mantech.com</u>.

Source: Epicos, ManTech