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Robots

RV Connex from Thailand has developed the RVE-1 robot

Thai company RV Connex unveiled RVE-1 remote controlled robot for neutralize improvised explosive devices at Defense & Security 2017 in Bangkok, Thailand.

The RV Connex company has 25 years of experience in the defense industry, latest innovations and technologies in defense, security and aerospace.

Adaptable, convenient and versatile RVE-1 (Remote-controlled Vehicle for EOD) uses the latest technologies to support engineer working with EOD, which allows them to successfully and efficiently perform missions.

In addition, the RVE-1 is able to solve a wide range of monitoring/reconnaissance and hazardous tasks, allowing operators to penetrate inaccessible and/or potentially fatal areas by reducing the level of risk. It is extremely mobile, rapidly deploying and completely amphibious - and in general a very flexible modular multi-processor tool, capable of adapting to various possible scenarios and tactical requirements that it may encounter.

The system is controlled by a customizable joystick controller with the choice of user-friendly control modes.

The software is designed specifically for a Toughbook portable computer with touch screen support, with a user-friendly interface for increased efficiency.

The platform is optimized for high mobility under extremely harsh conditions, it is incredibly light and has high performance at small sizes, which makes it suitable for various tasks.

The system uses high-speed, IP-based wireless communication, which provides near-instantaneous feedback and real-time control to make faster decisions when performing a task.

The replaceable robotic arm can reach a total length of 1 meter. At the end of the arm is a powerful grip and a removable sensors and devices, which makes the arm extremely versatile.

Defence Industry

Patria delivers a new version of AMVXP to Slovakia as a part of a joint Slovak-Finnish 8x8 vehicle development programme

The Slovak and Finnish Ministries of Defence have agreed on a joint 8x8 infantry fighting vehicle (IFV) development programme, and Patria has been selected to deliver a new prototype version of AMVXP 8x8 chassis as part of the programme.

The selected industrial partners are Konstrukta Defence a.s. (prime contractor), Patria Land Systems Oy (vehicle) and EVPU a.s. (weapon system) by the Ministries of Defence of both countries.

The IFV development program includes a testing phase in Slovakia, and after the Slovakian test period the vehicle will be tested in Finland during this winter. Based on the results of this development program and successful tests, Slovakia plans to procure up to 81 IFVs as part of their military modernisation programme to be delivered in 2018-2024.

Patria AMVXP 8x8 vehicle includes NATO and EU proven solutions which fulfill customer's requirements. “During this program, we will develop together with EVPU a new version of an amphibious AMVXP integrated with Turra weapon system fulfilling requirements of both Slovakian and Finnish Defence Forces. We have had continuous production in our manufacturing network since 2003, which creates capability to short lead time deliveries. We have also a solid and strong experience of technology transfer programs and localization of manufacturing of vehicles, which creates work and business opportunities in Slovakia, when the serial delivery program will take place”, confirms Mika Kari, President of Land business unit in Patria.

Defence Industry

LAND 400 package for AME Systems

BAE Systems Australia today announced that it has awarded a package of LAND 400 work worth more than $20 million to AME Systems, supporting employment growth in regional Victoria.

BAE Systems has selected AME Systems to manufacture electrical wiring harnesses for the AMV35

Combat Reconnaissance Vehicle should BAE Systems' Land 400 bid be successful.

Today, as part of the announcement BAE Systems took the AMV35 to AME Systems' factory in Ararat to showcase the vehicle to more than 200 of its staff, eager to get a closer look at the combat proven vehicle they hope to work on.

BAE Systems Australia and Patria have offered the AMV35 Combat Reconnaissance Vehicle as part of their bid for LAND 400 Phase 2 – to replace the aging ASLAV fleet. With proven combat experience, the AMV35 is highly capable, survivable, and delivers value for money to its many users.

LAND 400 is the Australian Army's largest ever vehicle replacement program.

AME Systems is a leading Australian, privately owned designer and manufacturer of quality electrical wiring harnesses and assemblies. It employs more than 250 people and is the largest employer in the region.

BAE Systems Australia Chief Executive, Glynn Phillips, said: "We have worked with AME Systems for many years and we're pleased to be able to continue this relationship with our LAND 400 offering. It has a highly skilled workforce ready to work with us to deliver a high quality product for the Australian Army.

"Working with partners like AME will help us develop and maintain Australian Industry Capability on major projects like LAND 400 and to hit the ground running should we win the contract."

AME Systems Managing Director, Nick Carthew, said: "This opportunity will provide long-term employment with up to a dozen additional direct jobs at AME.

"As the largest employer in the region, this opportunity is incredibly important for the people of Ararat and the surrounding area."

Exhibitions

RENAULT TRUCKS Defense offers a new line of vehicles to internal security forces

While its Sherpa Assault Ladder and Dagger vehicles are already respectively in service in the GIGN and the RAID, the RENAULT TRUCKS Defense Group will be presenting a new line of ACMAT light tactical vehicles (ALTV) and a remote "connected glasses" support solution at MILIPOL 2017.

The ALTV line is a multi-mission line designed for Defence, as a liaison vehicle, and for Security, as a surveillance, and counter-terrorism platform. In its Station Wagon version, selected by the French Army to replace the P4, it is a spacious and robust all-terrain vehicle. Its modularity allows for multiple types of equipment, such as weapons and radio supports, to be installed on it.

Its Pickup version is characterised by high mobility thanks to its engine power of up to 200 hp. Available in single or double cab, it features a reinforced platform which has been developed for military use and many types of missions.

RENAULT TRUCKS Defense will also be presenting a "connected glasses" solution allowing remote operations between the wearer and a technical expert. The wearer of this device transmits an image in real-time and receives instructions concerning diagnosis and repair work to be carried out.

RENAULT TRUCKS Defense thus meets the need for real-time diagnostic support to contribute to the optimum operational availability of a fleet.

Defence Industry

Factory Tests Barys 8x8 Armored Vehicle Started In Kazakhstan

The Kazakhstan Paramount Engineering company has started the factory running tests of the Barys 8x8 armored wheeled vehicle.

This Armored Personnel Carrier (APC) is equipped with a stabilized remote-controlled turret with a 2A42 30-mm automatic gun and a 7.62-mm PKT coaxial machine gun, created by the Kazakhstan plant KAE, which produces defense electronic products, together with the Turkish company Aselsan.

After their completion, the Barys 8x8 will be presented to the experts of the Ministry of Defense of the Republic of Kazakhstan for military tests in extreme winter climatic conditions. The test program provides for shooting from standard weapons, both during the day and at night.

The new armored personnel carrier, which includes advanced technological solutions, was the result of development of Kazakhstan Paramount Engineering LLP jointly with the South African company Paramount Group.

Armored vehicle is multipurpose, mobile and meets the high requirements of ballistic and mine protection.

Barys 8x8 was first demonstrated during the IV International Exhibition KADEX, in June 2016 in

Astana, Kazakhstan.

Defence Industry

Otokar Submitted its Proposal for Serial Production of Altay Main Battle Tank

Otokar, Turkey's largest land defence systems manufacturer, submitted its proposal to the Undersecretariat for Defence Industries for the serial production of the main battle tank Altay, which the company designed and also produced prototypes.

Otokar, a Koз Group company, submitted its proposal for serial production of the main battle tank Altay to the Undersecretariat for Defence Industries within the scope of the "Modern Tank Production Project by using National Sources". Otokar was chosen as the main contractor in 2008 for Altay's design, prototyping and qualification process, called Phase 1. The qualification and acceptance tests of the prototypes produced in the first phase were successfully completed, and prototypes approved in February 2017. Meanwhile, the inspection and approval process of the Technical Data Package (TDP) by the Undersecretariat for Defence Industries is ongoing.

Otokar General Manager Serdar Gцrgьz commented on the serial production of Altay: "With over 50 years of experience and capabilities, Otokar has completed all the tasks it has undertaken with flying colours. We successfully designed and developed Altay, the national main battle tank for which we were the main contractor in Phase 1. With the investments we made in this process, the experience we gained, and enhanced R&D capabilities, Otokar captured a strategic momentum in its position in the defence industry. As Turkey's leading land defence systems company, with all the competencies required for the producing Altay, and strengthening the national defence industry's capabilities, we are up for the task. Our wish is for the main battle tank Altay to start serving the Turkish Armed Forces as early as possible."

ALTAY: New generation main battle tank

Designed and developed to meet the requirements and expectations of the Turkish Land Forces against present and future threats, Altay is the world's most modern main battle tank with its specifications. The main battle tank, standing out with its increased survivability, mobility and firing power, has delivered superior performance in challenging tests conducted in all climatic and terrain conditions for the last two years. Altay achieved very high accuracy in firing tests carried out for diverse scenarios in all kinds of climate conditions and distances.

Otokar has already worked on all the infrastructure requirements and planned the production lines to be prepared for launching production as early as possible with the signing of the agreement for Altay's serial production, and obtained the necessary Manufacturing Permit from the Ministry of Defence. In addition to planning the production of the 250 units of main battle tank Altay that the Land Forces requires over the course of five years, Otokar also made annual capacity plans for export potential as well as the possible need for modified and derivative vehicle functions including minesweeping, recovery and engineering vehicles. Furthermore, Otokar developed the Altay AHT - Urban Operation Tank for asymmetric combat conditions, and unveiled this version in May 2017 during IDEF International Defense Industry Fair.

The Undersecretariat for Defence Industries released the Call to Bid Document for Altay's 'Serial Production' work and 'Integrated Logistics Support' services in July.

Exhibitions

Supacat exhibits at the NIDV Symposium and Exhibition in Rotterdam, 30 November 2017

Supacat, the acclaimed UK designer and manufacturer of special forces vehicles, is exhibiting at the Netherlands Industries for Defence and Security (NIDV) Symposium and Exhibition on Thursday 30 November 2017. Having recently been awarded the Queen's Award for Enterprise (International Trade, for Outstanding Short-Term Growth), the NIDV event forms part of a global marketing effort aimed to capitalise on recent export successes.

Supacat will be exhibiting their Light Reconnaissance Vehicle 400 (LRV 400) at the event. The LRV 400 provides a highly versatile tactical capability for special forces; it can be transported centrally inside a CH-47 Chinook fully equipped and loaded, making it immediately and rapidly deployable. Also, it has the unique feature of being convertible from 4Ч4 to 6Ч6 to provide a flexible alternative configuration that increases payload, capacity and range to meet different operational requirements. Supacat intends to offer the LRV into a number of vehicle procurement programmes in the region and the NIDV show is seen as an ideal platform to showcase the capabilities on offer. Supacat has teamed with Rheinmetall MAN Military Vehicles Nederland B.V. to offer the LRV 400 into upcoming procurement

programmes in the Netherlands. If an order is received, then RMMV will assemble Supacat vehicles in-country.

With over 1000 specialist, battle-proven vehicles in service across the globe, Supacat designed the LRV400 to fill the gap in the market for an agile off-road vehicle sized between its HMT 400 Series (GVW 7600kg) and quad bikes. It carries a crew of 3 or 4 supported by an operational payload of 1700kg with a GVW under 5000kg. It can achieve high speeds on or off road and can operate up to 800km from the point of insertion, offering special forces a true long-range capability.

Phil Applegarth, Head of Supacat said "we have been very successful in winning a number of major export orders for our special forces vehicles in recent years and we would like to capitalise on that success by offering our products more widely". He added "there are a number of European procurement programmes emerging for vehicles in our capability space and we feel sure our battle-proven products will be highly attractive to the users. Supacat vehicles have already been sought out and purchased by some of the world's finest units and we would like to add more nation's armed forces to that list".

Future Technologies

Australian Minister for Defence Industry Publicly Announced Elbit Systems' Award of Additional BMS for the ADF

Canberra, Australia -- Elbit Systems of Australia Pty Ltd (ELSA), a wholly owned subsidiary of Elbit Systems Ltd., hosted the Australian Minister for Defence Industry, the Hon Christopher Pyne MP, Senator for the Australia Capital Territory, Zed Seselja, The Chief of the Army, Lieutenant General Angus Campbell, AO, DSC at its facility in Canberra, marking the award of Tranche 2 of the Australian Army's Land 75/125 program. Elbit Systems reported this contract award on September 27, 2017. The program is the extension and enhancement of the Australian Army's Battle Management System (BMS) originally procured under the Land 75/125 Program.

Bezhalel (Butzi) Machlis, President and CEO of Elbit Systems, commented: "Australia is an important market for Elbit Systems and we are proud to have been selected by the Department of Defence for the next phase of this major program. This additional award is a significant next step in digitizing the Australian Army and strengthens our continued strategic partner-relationship with one of the world's most advanced and modern fighting forces."

Elbit Systems is the prime contractor of the Australian Army's BMS and it supplies, integrates, installs and supports the Battle Group and Below Command, Control and Communications (BGC3) system for the Australian Army's Land 75/125 program. The BGC3 is comprised of a BMS for soldiers, Vehicle Mounted Commanders and Headquarters/Command Post Staff.

The project will be performed primarily by ELSA, employing over one hundred engineers across several company sites.

Defence Industry

Uralvagonzavod has prepared a new tank engine for serial production

Uralvagonzavod (part of the Rostekh Corporation) has published information that after the successful completion of all the tests it prepared for serial production new V-92S2F tank engine.

V-92S2F is forced diesel engine with the power of 1130 h.p., designed for integration in the upgraded and new T-72B3 tanks.

The V-92S2F is the result of a deep modernization of the V-92C2 engine, with which it has a high level of unification: it has the same overall dimensions and is installed in the power compartment of the main battle tank without any modifications of the hull.

But in comparison with the V-92S2, it has a more powerful crankcase, crankshaft, conrod-piston group, improved turbocharger, exhaust system and cooling system. The heads of the cylinder block are cast from a heat resistant aluminum alloy. The fuel system provides high efficiency and has a power limiting mechanism that reduces the load on the diesel engine when the temperature extremes are reached.

Defence Industry

Czech precision optical systems producer to support line-of-sight technology for BAE Systems' CV90

Czech optical specialist Meopta will support vital line-of-sight technology for BAE Systems' CV90 Infantry Fighting Vehicle (IFV) as part of a Memorandum of Understanding with defence and security company Saab.

The agreement, signed at NATO Days 2017 in

Ostrava, the Czech Republic, will cover potential local production of key components for the CV90's fire control system, of which Meopta and Saab are subcontractors.

The Universal Tank and Anti-Aircraft Fire Control System (UTAAS), developed by Saab with production supplier Meopta, is produced specifically for the combat-proven CV90. There are more than 1,200 CV90s in operation with seven nations: Denmark, Estonia, Finland, the Netherlands, Norway, Sweden, and Switzerland. BAE Systems is offering the CV90 to replace the Czech Army's fleet of BMP II IFVs, and has joined forces with Czech industry to strengthen the offer while promoting local investment and job creation. Adding Meopta to a team already consisting of numerous Czech companies, among them VOP CZ and Ray Service, further builds on BAE Systems' relationship with Czech industry.

"BAE Systems is committed to offering the Czech Army a modern, adaptable combat vehicle with cutting edge technologies," said Tommy Gustafsson-Rask, general manager of BAE Systems' Ндgglunds business. "As we continue to pursue the BMP II replacement program, we are pleased to see one of our key suppliers expand their own range of services in support of one of the nation's most important defence programs."

The modular integrated UTAAS technology provides direct fire capability, which is a critical operational feature. This allows the CV90's gunner to take aim independently of the vehicle's movements while the fire control system automatically aligns the gun. In combat situations, this means firing can commence quicker than with conventional target alignment technology, providing a crucial advantage in battle. Meopta's participation in BAE Systems' Czech CV90 offering could extend to other future opportunities.

BAE Systems recently participated in the Czech-Swedish Industry Days organized by the Czech Ministry of Defence in Prague. Representatives from 20 local Czech companies — including Meopta, Ray Service, and VOP CZ — were joined by Swedish businesses for a three-day event focused on building local industry relationships across the defence sector.

Robots

Lockheed Martin Autonomous Driving System Tops 55,000 Miles in Extended Army Testing

DALLAS – Lockheed Martin's Autonomous Mobility Applique System (AMAS) logged more than 55,000 testing miles during the U.S. Army Extended Warfighter Experiment (EWE) at Fort Leonard Wood, Missouri, and Fort Bliss, Texas.

"The testing was conducted by Soldiers and Lockheed Martin personnel over several months at two major military installations in a variety of mission scenarios," said Kathryn Hasse, Combat Manuever Systems director at Lockheed Martin Missiles and Fire Control. "Soldiers operating the AMAS vehicles provided us very positive feedback about how the system freed them up to do the job of a Soldier instead of the job of a truck driver."

AMAS is an applique kit comprising sensors, actuators and controls that can be installed on virtually any military tactical wheeled vehicle. AMAS provides driver warning/driver assist and semi-autonomous leader/follower capability, significantly increasing safe convoy operations for military vehicles. The system reduces manpower needs for convoy operations, freeing Soldiers up for other tasks and removing them from exposure to Improvised Explosive Devices (IEDs) and other enemy activity while on resupply missions.

The EWE was sponsored by the U.S. Army Training and Doctrine Command (TRADOC) and managed by the U.S. Army Tank Automotive Research Development and Engineering Center (TARDEC).

Testing of the AMAS system during the EWE included using Palletized Loading System vehicle convoys in which the lead vehicle was driven by a Soldier and the following vehicles (three to four) followed robotically.

"AMAS continues to prove itself as a valuable asset for our military by safely operating in complex environments," Hasse said. "We believe that AMAS is ready to move forward toward the ultimate goal of widespread fielding across multiple military applications."

Robots

After rigorous field testing, Germany takes delivery of 44 FirstLook Robots that are used by military and law enforcement worldwide

Chelmsford, Mass. -- Endeavor Robotics, the U.S.-based global leader in tactical ground robotics, recently delivered 44 FirstLook robots to the German Government after a highly competitive bid process. Endeavor bested the other competitors' offerings prior to successfully passing field tests comparing FirstLook's performance capabilities against the German Government's stated requirements.

"I'm really proud of the work our team is doing," says

Endeavor Robotics President Tom Frost. “The FirstLook is a critical tool used globally to keep soldiers and first responders safe from lethal threats. We are pleased to deliver the same critical capability to our allies in the German Government .”

FirstLook robots are used worldwide across multiple sectors, including military, law enforcement and the energy industry. The five-pound ‘throwable’ robot can be dropped 16-feet onto concrete without sustaining damage. The recordable day/night cameras and two-way audio provide the user with immediate awareness of their surroundings. FirstLooks are often used to clear buildings and detect IEDs. The robots can climb up to seven inches and can automatically ‘self-right’ when flipped over. The remote controlled robot acts as ‘eyes and ears’ allowing the human operator to increase their stand-off distance from potential threats. The camera’s audio and video recordings also provide critical post-mission analysis.

This recent deal marks the Chelmsford-based company’s second product to see widespread fielding with the German Government. Since 2006, Endeavor Robotics (formerly iRobot Corporation) has outfitted and sustained the German Federal Defense Force with a fleet of PackBot robots used to identify and dispose of explosive devices. Local sales and support for the fleet of robots is offered by Endeavor’s partner, European Logistic Partners (ELP GmbH).

“We are enthusiastic to continue our partnership with Germany and proud to have our robots protecting their military and law enforcement,” says Frost.

Future Technologies

Hawkeye lightweight SPH from Mandus Group will take part in MFIX

Mandus Group is extremely pleased to announce that the HMMWV/Hawkeye self-propelled howitzer will be participating in the Maneuver Fires Integrated Experiment (MFIX) at Ft. Sill, OK, December 4-13.

This is an opportunity for the Army to test and evaluate the Hawkeye in live fire demonstrations as part of the MFIX artillery focused mission scenarios. The Hawkeye will be operated by active duty Army soldiers which will allow both the Army and Mandus Group the ability to gain valuable feedback from experienced artillery crewmen on the performance of the self-propelled howitzer in actual field exercises.

HMMWV/Hawkeye Howitzer System incorporates advances in protection, payload, suspensions and life-cycle sustainment at an affordable price to meet the unique expeditionary requirements of global customers. It exemplifies the steady evolution of the HMMWV based on customer feedback, battlefield experiences, and innovation. AM General representatives will be on-hand to discuss this innovative vehicle system.

Key Features:

- The 105mm Mobile Weapon System (MWS) is the lightest weight, most highly maneuverable self-propelled howitzer in the world today.
- Hybrid Soft Recoil technology allows weapon to be paired with AM General HMMWV
- Lightweight at less than 2,400 lbs. (1,100 kg)
- Fires 360 degrees
- Direct fire scope is digital camera in conjunction with the digital fire control
- Most maintenance can be performed at unit level
- Electronically controlled elevation and azimuth work with digital fire control
- Growth potential for all features including a longer caliber cannon
- Reduced maintenance costs due to efficient design