

# Army Guide monthly



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## Exhibitions

### Thailand's Defence Technology Institute partners with Ricardo on new 8x8 vehicle



Black Widow Spider 8x8 concept on display at the Defence & Security 2013 exhibition, Bangkok

The Defence Technology Institute (DTI) – the Thai ministry of defence's research and development agency – today announced that it will partner with Ricardo on the next phase of development of its Black Widow Spider 8x8 armoured vehicle programme in support of the Royal Thai Army.

DTI was set up to develop Thailand's defence technology capability and to help build the local defence industry; the Black Widow Spider represents its first major military vehicle programme. DTI and Ricardo have already completed the initial phase of technology development for the Black Widow Spider 8x8, and displayed the vehicle configuration at the recent Defence & Security 2013 exhibition hosted in Bangkok. The vehicle has been designed to provide protected firepower and extreme mobility in reconnaissance, command and control and fire support roles.

"DTI and Ricardo have agreed to work together to develop the next phase of the Black Widow Spider 8x8 project," confirmed Colonel Tawiwat Veeraklaew, DTI's executive director of R&D. "I am looking forward to working closely with Ricardo on this important project for Thailand's defence industry."

"Ricardo is proud to have been selected by DTI to partner with it on this key vehicle programme," commented Andy North, Ricardo chief engineer, defence. "This work builds upon our extremely strong reputation for the design, development and production of class-leading, agile and highly crew-protected defence vehicles, including the Foxhound, WMIK and Vixen platforms used by British forces. We look forward to working with DTI on this important programme and helping to develop a truly world-class defence vehicle."

contract, which was signed in December 2012, now comes into full force following the successful completion of all legal formalities.



Along with 103 thoroughly overhauled and modernized Leopard 2 main battle tanks, the order encompasses 42 upgraded Marder 1A3 infantry fighting vehicles and 11 various armoured recovery and engineering vehicles, plus associated documentation, training equipment and additional logistical support. Furthermore, the order includes an initial supply of practice and service ammunition. Indonesia thus becomes the 18th Leopard 2 MBT user nation.

Delivery to the Indonesian Army will take place progressively during the 2014-2016 timeframe.

With a population of some 240 million, Indonesia is one of the world's largest democracies. It plays an increasingly important role as a regional superpower and source of stability in South East Asia. The decision to procure these vehicles reflects Indonesia's need to modernize its ability to respond to potential threats to its territorial integrity. Moreover, in order to take part in UN peacekeeping and peace enforcement missions, Indonesia requires equipment that corresponds to the military standards of its partner nations.

Rheinmetall has over forty years' experience in developing and manufacturing main battle tanks, infantry fighting vehicles and related combat support systems. The Leopard 2 continues to set the standard for modern MBTs, with over 3,600 now in service.

The Rheinmetall Group played a decisive part in developing and producing Leopard 2 tanks ordered by the armed forces of Germany and the Netherlands. Of the 2,125 A4 versions of the Leopard 2 built, Rheinmetall completely manufactured 977 of these systems in Kiel, all of which went to the German and Dutch armies.

When teamed with the Leopard 2 MBT, Rheinmetall's Bffel/Bufalo 3 armoured recovery vehicle forms a veritable "Main Battle Tank System". The Group's extensive portfolio of Leopard-based vehicles and associated armament and ammunition attests to its unsurpassed systems engineering capabilities and extreme competence in the world of combat and combat support vehicles.

## Defence Industry

### Indonesia orders tracked armoured vehicles from Rheinmetall worth around €216 million

The Indonesian Ministry of Defence has contracted with the Rheinmetall Group of Dsseldorf to supply it with tracked armoured vehicles, logistical support and ammunition worth roughly €216 million. The

## Defence Industry

### Denel and Patria announce an Agreement on Armoured Wheeled Vehicles to South Africa

Denel Land Systems and Patria have signed an agreement regarding Patria AMV 8x8 armoured

wheeled vehicle serial production and delivery to South Africa. The agreement includes 238 vehicles, out of which 5 pre-series vehicles have already been delivered during the development phase. The first 16 serial vehicles will be assembled by Patria in Finland, Hämeenlinna. Thereafter the assembly will be migrated to South Africa to Denel Land Systems.

These vehicles are specially designed and customized to meet the unique requirements of operational deployment in the demanding African environment. The vehicle, known as Badger in South Africa, is a best-of-breed in its class and will contribute to the modernization of the South African National Defence Force (SANDF), providing its troops with effective protection and mobility.

“This agreement is a continuation of the good co-operation of the last several years. We have in Patria unique technology, know-how and a proven track record. We simply provide a vehicle with very high standards and we believe that Denel is the best partner to customize the vehicle to meet the unique needs of the South African National Defence Force”, says Seppo Serppälä, President, Patria Land Systems and Patria Land Services.

Denel Land Systems is a leading defence contractor in its domestic market and a key supplier to SANDF acting as an original equipment manufacturer (OEM). Denel Land Systems also provide overhaul, maintenance, repair, refurbishment, and upgrade services for the SANDF’s equipment arsenal.

Patria has decades of experience in armoured wheeled vehicles and its products are under continuous development and fitted with the latest technology. Patria AMV has been the unrivalled market leader of modern 8x8 armoured wheeled vehicles for the last decade with nearly 1400 units contracted, selected by seven different nations and combat proven in real mission environment.

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### Defence Industry

#### MBDA Delivers First MPCVs In Surface-To-Air Configuration



Bourges, France -- MBDA has just completed the integration and factory acceptance test of the first Multi-Purpose Combat Vehicle (MPCV) vehicles designed to operate the Mistral surface to air missile.

Built for export, these vehicles represent the first production batch. In the next few days, they will be shipped for delivery to the customer country before the end of the year, as announced at the contract signing in February 2011.

In parallel, MBDA is completing the installation of a final assembly line in the customer country so that the

customer will be able to carry out the final integration of its own combat vehicles using MBDA provided MPCV kits. In Bourges, MBDA personnel have also trained the customer’s technical staff during the integration of the first MPCV’s.

On the occasion of the delivery, Antoine Bouvier, CEO of MBDA, said: “With the MPCV program, MBDA once again demonstrates its mastery of the architecture of air defence systems. Self-funded by MBDA, the MPCV was developed in four years. It then took less than three years after the signing of the first contract to integrate the systems on a vehicle chosen by the end customer, deliver at the agreed date and implement a technology transfer under which the customer will be able, in complete autonomy, to keep its equipment in operational condition.”

With this first version in full production, MBDA is now ready to move ahead with a land combat version of the MPCV. This will deploy the totally new MMP surface attack missile which is currently being developed by MBDA.

The MPCV, developed by MBDA in cooperation with Rheinmetall Defence Electronics (RDE) of Germany, has been designed to meet emerging requirements for a highly mobile weapon system which can be adapted for different missions, either air defence or land combat, depending on the type of missiles it operates. The first development, which is now being delivered, is aimed at air defence and comprises a motorized and stabilized turret that includes electro-optical sensors, a small caliber gun and four, ready-to-fire Mistral missiles with four more missiles stored in the vehicle for re-loading. Additional versions dedicated to land combat are planned for development.

This automatic system in its air defence configuration was validated by several Mistral missile firings, including the engagement in only a few seconds, of two targets approaching simultaneously from two different directions. The success of this test demonstrated MPCV’s ability to counter a saturating attack.

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### Defence Industry

#### Selecting BAE Systems` Canadian Close Combat Vehicle (CCV) partners



A November planning session in Ottawa was the latest development in BAE Systems’ drive to ensure Canadian industry has a major role to play in the Close Combat Vehicle (CCV) program.

BAE Systems has selected a coast-to-coast Canadian team of companies which would play a major role in the

program if its CV90 is selected. These strategic partners include:

- ABB
- DEW Engineering
- Mil-Quip
- SAAB Canada
- Calian (SED Systems)
- Thales
- Valco Manufacturing
- Dumur
- Soucy

“Our goal was – and remains – to offer to the customer the highest-quality, highest-performing, Canadian solution. And that meant seeking out Canadian companies that could meet our strict criteria on performance, capabilities and price,” explains Caroline Elliott, General Manager for Group Business Development in Canada.

“Our Canadian CCV team was handpicked after an exhaustive industry scan – a cross-Canada tour and review of some 178 companies, in fact. Early in the game we sought out Canada’s best and, quite simply, that’s why they’re on our team.”

Representatives from all partner companies came together for the Ottawa planning session so that if successful with CV90, the group can hit the ground running to meet Canada’s programme delivery and IRB requirements.

“Holding these types of meetings is in-line with our usual, proven practice of engaging and supporting local industry early in a programme so we minimise cost, risk and timescales further down the line,” said Elliott. “But it is also a great opportunity for face-to-face conversations around shared and individual best practices and experiences.”



Envoy’s new features include a full MIL-STD-188-110A/B high-speed modem for secure communications up to 9600bit/s, and upgraded IP connectivity that enables remote control / operation over minimal bandwidth links. Envoy’s USB capability has also been enhanced to enable fast and convenient fill of up to 256 encryption keys direct from USB memory sticks.

“With unique features and software upgradeability, Envoy provides today’s features and tomorrow’s capabilities in the one radio. We have designed the Envoy so it can always evolve with new innovations and our customers’ needs without increasing their costs,” said Paul McCarter, Codan’s Executive General Manager of the Radio Communications Division.

Codan is committed to the evolution of Envoy, investing in research and development to ensure Envoy is continuously at the forefront of HF communication innovation.

More information on

[http://hf-ssb-transceiver.at-communication.com/en/codan/hf\\_ssb\\_transceiver\\_codan\\_envoy\\_sdr\\_software-define-d-radio.html](http://hf-ssb-transceiver.at-communication.com/en/codan/hf_ssb_transceiver_codan_envoy_sdr_software-define-d-radio.html)



**Army**

**Ricardo joins forces in UK partnership to sustain and upgrade the Mastiff**



Ricardo is one of three leading defence companies that have formed an exclusive partnership to bid for the continued support and upgrade of the UK Ministry of Defence’s Mastiff, Ridgback and Wolfhound fleet of Protected Patrol Vehicles (the Mastiff family of vehicles).

The three companies - Morgan Advanced Materials, Ricardo and Ultra Electronics - are all UK-based and owned, with their technology development in the UK. Their combined expertise, experience and history of innovation provides an outstanding option to support and enhance the unique capabilities of the Mastiff family of vehicles for the foreseeable future.

“Ricardo is extremely pleased to be joining forces with Morgan and Ultra in what represents a highly effective and all-British partnership, drawing together world-class engineering capabilities and extensive experience in military vehicle design, development, manufacture and overhaul,” commented Ricardo UK managing director Martin Fausset.

Morgan Advanced Materials’ Composites and Defence Systems business (formerly NP Aerospace) has

**Defence Industry**

**Codan Envoy Evolution Has Arrived**



Envoy is the world’s most advanced commercial HF radio, featuring digital voice for hiss-free communication, market-leading RF performance, Ethernet and USB connectivity, and a large high-resolution display with a smart phone like user interface. A true SDR, Envoy protects the value of the customers’ investment through its extensive feature set and future upgradeability.

world-leading expertise in specialised armour technologies. It designed, developed and integrated UK-specific, specialised armour protection and electronic systems into the entire Mastiff family of vehicles from base platforms purchased from the USA. Morgan also implemented and operated the spares support processes, including configuration management, stocking and supply chain management, which kept the fleets running during combat operations.

Ricardo is renowned for its automotive engineering expertise and was responsible for the initial design, development and engineering of the Foxhound vehicles, manufacturing all 376 units ordered to date. Ricardo was prime contractor on the Vixen and RWMIK+ upgrade programmes and has also undertaken a project for the Defence Science & Technology Laboratory (DSTL) to identify improvements to the fuel efficiency of Mastiff vehicles.

Ultra Electronics is an international pioneer in vehicle information and power systems and has worked extensively on behalf of customers including the MoD, US Department of Defense and leading Tier 1 suppliers into the defence sector. Ultra is currently under contract to provide multiple electronic systems for the Warrior Capability Sustainment Programme and Scout SV development. It is the only Tier 2 supplier involved in all aspects of Generic Vehicle Systems Architecture (GVSA), Generic Soldier Architecture (GSA) and Generic Base Architecture (GBA).

The three businesses are complementary in their technological capabilities, maintain critical competencies in-house and have the financial backing of substantial parent companies. This has enabled them to demonstrate remarkable agility and innovation in meeting demanding requirements for protecting UK soldiers over the last decade. This collaboration creates an agile partnership which maintains that capability in the UK and offers the possibility of optimising electronic and power system synergies between vehicle, future soldier and base systems.

The MoD will shortly award contracts for Post Design Service, Coherence and future upgrade work. Morgan will lead the group and is bidding as prime contractor.

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