

21 June 2011

MBDA UNVEILS PERSEUS, THE MULTIROLE LAND AND NAVAL STRIKE CONCEPT MISSILE SYSTEM

MBDA today unveils the output of the Concept Visions process for 2011; CVS 401 Perseus concept missile system, which represents the group's vision of a multi-role strike weapon system for 2030 and beyond.

To replace the current generation of heavy anti-ship and cruise missiles, a new system will be required that is capable of launching anti-ship strikes, land attacks and engaging time-sensitive targets such as relocatable missile launchers in an ever more complex tactical environment and with the minimum risk of collateral damage. This new system will also have to be modular and deliverable from a maritime environment, namely from a surface vessel, a submarine, a carrier-based platform or a maritime patrol aircraft.

Perseus features multiple operating modes against a wide land and maritime target set with the added capability of being able to overcome the most effective of enemy missile defences. It is designed to be a tactical weapon system operated through an advanced Operations & Mission Planning System at the crossroads of naval, land and air warfare. The advanced supersonic (up to Mach 3), agile and stealthy airframe is powered by a revolutionary ramjet motor built around a highly compact Continuous Detonation Wave Engine. This revolutionary solution, at the very edge of propulsion technology, opens up the possibility of developing a smaller airframe with more energetic efficiency. This airframe will make Perseus an unrivalled penetrator of enemy defences and an effective weapon for use against fast moving, relocatable targets that it will be able to reach in a matter of minutes even at ranges of up to 300 km.

An advanced dual-mode sensor package (comprising an Active Electronically-Scanned Array or AESA radar combined with a laser radar or LADAR) allows for all-weather operations in all configurations of terminal engagement. Radar modes such as SAR (Synthetic Aperture Radar) and DBS (Doppler Beam Sharpening) allow for long range target detection and discrimination in complex land and naval tactical environments including those involving advanced counter measures.

Overall weapon system robustness is reinforced by an advanced, hybridised navigation system. The lethal package includes two guided effectors that are ejected from the modular payload bay and a third warhead remaining on-board for a dispersed lethal effect on large or multi-element targets such as a major warship or a ground based missile system. Moreover, the missile's new modular composite structure allows for reductions in the overall mass of the weapon and fosters opportunities for through-life capability enhancement, simplifying maintenance operations through the whole life cycle and supporting the eventual development of a family of products.

Perseus features a highly original shape providing to optimise key performance characteristics and adaptability for integration on a range of naval and air platforms. The weapon's general performance with regard to its flight characteristics, its manoeuvrability, its propulsion as well as the detection capabilities of its sensors and the efficiency of its multiple military warhead have all been evaluated through digital simulations. As Perseus will be a tactical missile, the question of its operational

deployment and access to tactical theatre data has also been considered so that a coherent and efficient weapon system architecture can be proposed.

A team of nine British, French, German and Italian engineers from MBDA, together with representatives from the Royal Navy and the French Navy, has evaluated the requirement and the solution for Perseus from operational analysis through to key performance specifications. The project has also benefited from the innovative mindset that exists within MBDA and which is fostered by the group's Innovation Challenge initiative that was also called on to contribute ideas.

Steve Wadey, Executive Group Director Technical and Managing Director MBDA UK, stated:

"The aims of MBDA's Concept Visions process are to promote innovation with our Customers, supply chain and employees to shape the future of the missile systems market. By bringing together and synthesising the know-how of our diverse group of highly talented engineers with that of equipment end-users, MBDA is able to offer the market a radical and accomplished vision of future missile system concepts and a demonstration of world leading innovation".

CVS 401 Perseus is the second project that MBDA has exhibited to show its vision of the future within the framework of a company initiative known as Concept Visions. This initiative was presented for the first time at last year's Farnborough Air Show when MBDA displayed its CVS 101 concept comprising a family of urban combat missiles, the 1 kg Sniper and 5 kg Enforcer, capable of being operated in a network-centric environment and enabling the delivery of a heavy punch at the lower levels of a force structure.

Notes to editors

The Perseus weapon system is named after the ancient Greece mythological hero who founded Mycenae, killed the Gorgon Medusa (thus drawing on the symbol of the most radical of defence systems) and saved Andromeda from the sea monster (symbol of the most advanced warships) sent by Poseidon in retribution for Queen Cassiopeia declaring herself more beautiful than the sea Nymphs.

While Perseus used the sandals of Hermes to enable him to fly, the CVS401 weapon system relies on an advanced aerodynamic and propulsion concept for high velocity and manoeuvrability. Perseus wore the helm of Hades for invisibility however, CVS401 implements stealth technologies and shape. Perseus was given an adamant sword with two tips by Zeus, comparing with the lethal system delivering two guided effectors. Perseus was given a polished shield by Athena that he used to see Medusa whilst avoiding her lethal gaze. This is the perfect illustration of the advanced long range and high resolution sensor package of the CVS401.

With industrial facilities in four European countries and within the USA, in 2010 MBDA achieved a turnover of € 2.8 billion with an order book of € 10.8 billion. With more than 90 armed forces customers in the world, MBDA is a world leader in missiles and missile systems.

MBDA is the only group capable of designing and producing missiles and missile systems that correspond to the full range of current and future operational needs of the three armed forces (land, sea and air). In total, the group offers a range of 45 missile

systems and countermeasures products already in operational service and more than 15 others currently in development.

MBDA is jointly held by BAE SYSTEMS (37,5%), EADS (37,5%) and FINMECCANICA (25%).

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