

PREMIUM EDITION

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17 May 2012 • Issue 205

LM offers low cost alternative to Mk 41 VLS

Lockheed Martin has successfully demonstrated the latest variant of its new launching system that maximizes the use of existing hardware and electronics to reduce the integration costs of weapons by more than 50 percent.

During a May 5 test at the Woomera Test Range in South Australia, the new Extensible Launching System (ExLS) standalone variant successfully fired two Nulka Offboard Countermeasure missile decoy test rounds.

One decoy was provided by the US Navy and the other by the Nulka designer and manufacturer, **BAE Systems Australia**.

The test in Australia also successfully demonstrated the system's Nulka munition adapter, a new quad-Nulka missile launch canister that fits into and is launched from, the Mk 41 Vertical Launch System. This obviates the need for external Nulka launch canisters that are exposed to the elements.

Nulka quad canisters can thus be potentially deployed to the Mk 41 VLS-equipped FFGs, Anzac-class frigates and the AWDs now being built.

The Extensible Launching System can also now be deployed in a single cell (tactical length) launcher, or the ExLS standalone (Nulka length) launcher, meaning in future the 'Nulka' defence system can be deployed to other surface vessels without Mk 41 launching systems, such as the new LHDs (amphibious ships) and Sea 1180 OPVs.

BAE Systems teams with Pennant and RMIT for ADF ATT project

Apparently not wishing to telegraph its bid for the Australian Defence Force's Aviation Technical Training (ADF ATT) requirement, the tender for which closed yesterday (May 15, 2012), BAE Systems Australia has just announced that it has teamed with Pennant Training Systems Limited (Pennant) and RMIT University, to bid for the ADF ATT project, which will provide aviation and other technical tradespeople within the ADF with initial trade skilling and postgraduate technical training.

Earlier **Boeing Defence Australia (BDA)** announced that it had teamed with the **TAFE NSW Riverina Institute** and **CAE** and **Aviation Australia** likewise had joined forces to tender for the delivery of ADF Aviation Technical Training at RAAF Base Wagga Wagga.

According to the RFT, the provision of ADF ATT services includes initial and post-graduate aviation technical training for ADF aircraft related and other technical trades to meet national aerospace training packages and other Defence enterprise standards.

Services are to be provided to Navy, Army and Air Force personnel under the registration of the Contractor's RTO.

ADF ATT consists of approximately 44 courses and a throughput of approximately 1000 students annually.

The initial contract term will be five years plus the agreed phase-in period.

The contract term will include annual award extensions based on performance to a maximum of 20 years. The five year contract commences in December 2012 with the scope to extend to 20 years.

Simulation's role in Land 400 program development

Able supported by DSTO, industry and academia, the Australian Army is becoming a leader in the use of simulation systems, (constructive, live and virtual) for training, operational planning, decision making, concept evaluation, and modelling for options assessment.

Prompted by the sheer cost effectiveness of simulation over life in many of its potentialities, the Land 400 program looks to become a shining example of this take-up of simulation.

Last year DSTO investigated how changes in both survivability and lethality of vehicle options, in a Land 400 setting, affect mission performance.

This was done over two separate war-game cases with different vehicle options.

A DSTO L400 Headline experiment is to be undertaken next month (June 2012).

According to the concept of operations (CONOPS) Land 400 is to develop the future mounted close combat simulation system for the Land Combat Vehicle System (LCVS).

This simulation system is to be the foundation of future CAFS simulation requirements, in addition LCVS integration and training is to be tested and enhanced through the use of simulation. The simulation solution is to operate within the Defence Simulation Network being established by JP3028.

LCVS platforms should also be able to operate directly with the synthetic environment to allow in-field, pre-deployment, planning and mission rehearsal training to occur.

The potential for simulated collective training with allies will be considered.

As if that wasn't enough, the CONOPS itself will be further refined by Plan Beersheba wargaming/experimentation, capability solution experimentation and rapid prototype demonstrations.

And while we applaud live wires like Brigadier Nagy Sorial and Major General John Caligari for bringing Land 400 back to life we nevertheless are surprised that planning indicates the LCVS will not be introduced into service before 2025 which raises the question how relevant is DSTO's research on L400 survivability against weapons that have yet to be introduced?

As L400 progresses through its various requirements definition and costing phases, and later the exhaustive assessment and comparison of tender responses, perhaps there will be a growing realisation that some of the existing component systems of the CAFS are no longer up to the tasks ahead and that the L400 project should, in the first instance, be used to fast track the early acquisition of troop protecting combat vehicles—in particular the Infantry Fighting Vehicle (IFV) that originally featured as L400's primary requirement — *Tom Muir*

BAE Systems Henderson delivers LHD mast modules

Mast modules for the 27,000 tonne Landing Helicopter Dock (LHD), fabricated and constructed at BAE Systems Henderson (WA) facility are now completed and have arrived at BAE Systems shipyard in Williamstown, Melbourne.

The three mast modules, each weighing between 19 and 36 tonnes, will form part of the superstructure of the LHDs and will house equipment including communication and combat systems, navigation and air traffic control radars and infrared search and track sensors.

The mast modules will be consolidated with the superstructure being constructed at BAE Systems Williamstown.

The superstructure together with the masts, and all the control, combat and communications systems, will be installed, integrated and tested at BAE Systems Williamstown.

Director of Maritime for BAE Systems, Bill Saltzer, said it was decided to construct the mast modules at the Henderson facility because of its proven track record for fabricating vessel masts for the Royal Australian Navy and by keeping the superstructure build on BAE Systems sites we can ensure consistent quality in the LHD project.

He added that it made sense to utilise their workshops and personnel in West-

ern Australia in view of the amount of work currently being undertaken at the Williamstown yard.

BAE Systems is the prime contractor for the LHD Project. The first hull which is being constructed in Ferrol Spain is expected to arrive in Williamstown in the fourth quarter 2012.

WIN-T funds for other purposes?

The Army is eyeing plans to reprogram nearly half of its budget for the on-the-move network backbone system known as Warfighter Information Network Tactical Increment 2, a move that might signal a larger shift in the service's equipping strategy, according to officials.

While the Army has said nothing publicly about the motivation for the nearly \$415 million planned cut to WIN-T, several service officials behind the scenes say a strategy is at work which focuses on only buying what is needed — along with a need to pay for an unexpected spike in war-related transportation costs.

“It looks like WIN-T Increment 2 — as it stands now — is set to cough up \$414 million,” according to an Army source.

“We may end up being able to live with the cut if we are able to realign the strategy based on the reduction. We are working through that now.”

Proposing to cut the program by that much just as it begins operational tests at the White Sands Missile Range could jeopardize congressional support (despite the program manager's assessment on Monday that WIN-T faces no technical challenges) — *Inside Defense*

Nevertheless...

The US Army has begun a major test of its Warfighter Information Network-Tactical (WIN-T) communications backbone: a key element of the service's future networking strategy.

WIN-T Increment 2 is undergoing its Initial Operational Test and Evaluation event, which includes a large-scale brigade manoeuvre exercise from May 8-25 at White Sands Missile Range in New Mexico and satellite locations across the United States.

Meanwhile WIN-T is at the heart of **Raytheon Australia** and **GD C4 Systems** bid for JP2072 Phase 2B whose prime contract scope embraces the battlefield telecommunications network (BTN) which will provide connectivity across the battlespace from Bde HQ down to company and lower echelons.

Raytheon Australia's managing director, Michael Ward, has made no bones about what his team proposes for Phase 2B.

“We believe that the US WIN-T is the most viable MOTS solution for Phase 2B.

It is fielded and in service with the US Army, it has the form and size requirements sought by the Australian Army and has a publicly declared growth path," Ward said.

"There is also strong merit in selecting a system that is not only interoperable with the United States but can be integrated with US operations.

That the US Government has committed to invest in WIN-T for years to come is particularly beneficial."

GCV costs harbinger for Land 400?

A harbinger perhaps for our own Land 400 Land Combat Vehicle System (LCVS) program, independent cost analysts in the Office of the Secretary of Defense last summer estimated the average unit production cost for the Ground Combat Vehicle would be \$17 million — 30 percent higher than the \$13 million price tag the Pentagon's acquisition executive formally adopted in an August decision to modernise the Army's infantry fighting vehicle, according to a new DOD report.

The decision to go with the lower, more optimistic cost estimate drawn up by the Army — disclosed in the 2011 Annual Report of the Office of Cost Assessment and Program Evaluation (CAPE) — indicates both the optimism of the Pentagon's acquisition executive and the challenge that industry teams working on GCV technology development contracts face in wringing costs from their designs, due early next year.

CAPE's annual report to Congress — required by law — pulls the curtain back on the internal workings of Pentagon cost analyses and offers a new glimpse at how cost analyses shaped 2011 decisions about how to proceed with developing and procuring big-ticket weapon systems—Inside Defense

Raytheon's SM-3 flight test a success

Raytheon has completed the first successful flight test of its Standard Missile-3 IB, which introduces advanced sensors and a new, highly accurate steering mechanism to hunt down and destroy ballistic missiles.

The launch marks the 20th successful intercept for the SM-3, a ship-based system used by the US Navy to destroy missiles with ranges of 3500 miles or less.

It is a key part of the United States' missile defense plan, known as the Phased Adaptive Approach.

Raytheon's SM-3 Block IB maintains the reliability of the Block IA variant while incorporating a new, two-colour infrared seeker, an advanced signal processor and a new Throttleable Divert and Attitude Control System.

Essentially a rocket motor with ten nozzles, the TDACS provides the precision propulsion necessary to intercept incoming ballistic missiles with pinpoint accuracy.

SM-3 Block IB will be deployed in both sea-based and land-based modes as part of phase two of the Phased Adaptive Approach.

That plan, announced in 2009, calls for several layers of radars, missiles and sensors to protect both the United States and other countries.

Commonly referred to as 'hitting a bullet with a bullet', the SM-3 is designed to destroy incoming threat missiles by colliding with them.

Will Australia follow suit with AWD?

Australia's decision to purchase the Hobart-class Air Warfare Destroyer (AWD) equipped with the Aegis weapon system directly addresses the aircraft and cruise missile threat to naval forces.

Three ships are now under construction, with HMAS Hobart scheduled to be delivered in December 2015 and the other two ships, Brisbane and Sydney following over the next several years.

While these ships will be equipped with the SM-6 long range anti-aircraft missile it has been suggested by many in the past that it would make more sense if they were also be equipped with the SM-3 1B thus combining an anti-air and anti ballistic missile capability.

However the RAN is showing no enthusiasm for joining the growing Aegis ballistic missile defence community perhaps it is looking instead at a future SM-6 variant designed for ballistic missile intercept.

South Australia seeks defence investment from UK

A team of senior politicians and industry officials from South Australia is aiming to secure investment from UK defence companies during a trade mission to the UK that concluded on May 11.

The team, which is led by South Australian premier Jay Weatherill, has held talks in London with UK companies already established in South Australia - such as BAE Systems and Ultra Electronics - as well as potential investors in the region, which regards itself as Australia's 'defence state' — *JDW*

Engine failures prompt better powerplant for Shadow 200 UAS

The US Army is to equip its AAI RQ-7B Shadow 200 tactical unmanned aircraft system (TUAS) fleet with an upgraded propulsion system following a series of engine failures on aircraft operating over Afghanistan, a service spokesperson told IHS Jane's on May 4.

The decision to incrementally roll out the new heavy-fuel High Reliable Propulsion System (HRPS) is born out of the findings of a joint army and AAI 'Tiger Team' investigation into the engine failures that was launched in late 2011. —*JDW*

Inexpensive weapons threat to amphibious ops

The worldwide spread of precision weapons could jeopardise US amphibious operations unless naval forces acquire new survivable tools for communication and targeting, and develop unmanned systems not only to gather intelligence but also to spearhead perilous beach assaults in mine-laden waters, according to a draft briefing from a naval advisory panel.

The "present danger," the briefing states, is posed by missing arms in Libya, including thousands of surface-to-air weapons that reportedly could fall into terrorists' hands.

More broadly, however, the study developed by the Naval Research Advisory Committee, examines concerns about a new class of relatively inexpensive weapons dubbed "Guided Rockets, Artillery, Mortars, and Missiles (G-RAMM)," which officials worry could have the kind of huge impact on amphibious operations that improvised bombs did on land warfare in Iraq and Afghanistan.

"Precision weapon systems projected for the future threat environment present a realistic threat to the feasibility of future amphibious operations," states the document. —*Inside Defense*

New military laser capability tested

Northrop Grumman has tested the latest version of its Firestrike solid-state lasers. On May 1, the company announced that it had completed trials at its Redondo Beach laboratory of a more powerful and rugged generation of its slab lasers, that combine with improved sensor capacities to create a general laser component that can provide the military with a wide range of greatly enhanced defensive and offensive laser capabilities.

The Firetreak laser, announced in 2008, forms the backbone near-term laser

weapon systems from Northrop Grumman.

Combined with advanced electro optical and/or infrared sensors, the Fire-streak line replaceable units and their subsystems can provide military services with active defense, offensive precision strike and enhanced situational awareness capabilities, all in the same weapon system.

The Gamma is smaller than previous Firestrikes, weighing in at 227 kg and measuring about the same size as a pair of countertop microwaves.

The tests carried out at the Redondo Beach laboratory consisted of firing the Gamma laser at the skin of a surplus BQM-7 drone and other components at short range, under conditions that simulated a full-scale combat laser operating at a range of several miles.

The BQM-74 was formerly produced by Northrop Grumman for the Navy as a representative cruise missile threat and used for testing defensive systems.

USN: Most Super Hornets will exceed planned lifespan

With a service life extension program already in place for aging legacy F/A-18A-D Hornets, the Navy's fleet of F/A-18E/F Super Hornets has reached 30 percent of its originally planned 20-year life — an age most Super Hornets will "substantially exceed," a top Navy official told Congress last week.

The Navy bought both the legacy Hornet and Super Hornet with the idea to keep them in service for 20 years, but as the F-35 Joint Strike Fighter lags behind, the service is extending the 6000-hour Hornets to as many as 10,000 hours of service life, and the Super Hornet will probably have to stick around for a while as well, said Vice Admiral Mark Skinner, in written testimony submitted to the Senate Armed Services air-land subcommittee.

"The Super Hornet is already at almost 30 percent of its expected 20-year life," Skinner wrote. "It is reasonable to conclude, based on current trends that most aircraft will substantially exceed 20 years in service." —*Inside Defense*

Fears grow over future of Spanish carrier

The Spanish Navy (Armada Española) is preparing to lay up the aircraft carrier SPS Príncipe de Asturias and two frigates as part of further cutbacks in fleet strength and operational deployments, according to local reports.

The armada's chief of staff, Admiral Manuel Rebollo García, has already confirmed plans to decommission the Anaga-class coastal patrol craft SPS Grosa on June 6 and the Galerna-class submarine SPS Siroco on June 29. —JDW

US Cyber Security program for defense contractors set to expand

The Pentagon predicts that as many as 1,000 defense contractors may join a voluntary effort to share classified information on cyberthreats under an expansion of a first-ever initiative to protect computer networks.

After a pilot program that involved 36 contractors and three of the biggest U.S. Internet providers, the Obama administration approved a rule letting the Pentagon enlist all contractors and Internet providers with security clearances in the information exchange, according to Eric Rosenbach, deputy assistant

“This is an important milestone in voluntary information-sharing between government and industry,” Rosenbach said in a recent interview.

Richard Hale, the Pentagon’s deputy chief information officer for cybersecurity, said 1,000 companies may participate.

If the Pentagon’s effort succeeds in safeguarding defense contractors from cyberattacks, the administration may enlarge the program to companies in 15 other critical infrastructure categories through the Department of Homeland Security, Rosenbach said.

Cyberthreats facing the U.S. defense industry and its “unclassified information systems represent an unacceptable risk of compromise of DoD information and pose an imminent threat to U.S. national security and economic security interests,” according to the federal rule authorizing the expanded Defense Department program.

Information needs to be shared because hackers, especially in China, are accelerating efforts to penetrate computer networks such as those of defense contractors, Rear Adm. Samuel Cox, director of intelligence for U.S. Cyber Command, told reporters at a conference last month. – *Read a full report in The Washington Post*