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PRESIDENTIAL ELECTION

National security after the A\$ crash

2008 AUSTRALIAN LAND WARFARE CONFERENCE EDITION

HORSES FOR COURSES

'Adaptive Army' set to join the 21st century

■ Nick Merrett/CANBERRA

The Chief of Army, Lieutenant General Ken Gillespie, announced 27 August his intention to progress an extensive restructuring of the Australian Army's higher command and control structures – in the form of a new 'Adaptive Army' initiative – and seeking to better position the Army to generate land forces attuned to 'contemporary' operations.

Gillespie says such 'contemporary' operations are characterised by "the need for our deployed land forces to work amongst the people, and establish a broad relationship with the supported population. Simultaneously, these same soldiers need to be ready to conduct a range of operations to deprive our adversary of his support base."

Consistent with messages from the PM and lead Government ministers, formal adoption of 'an expanded concept of national security is expected within the current session of Parliament. Gillespie similarly acknowledges future operations will require the "extensive deployment of civil-military cooperation, humanitarian assistance and other non-warlike roles, as well as the synchronization of conventional land operations within a joint or coalition – and often interagency – environment."

Likely response mechanisms will therefore be "small teams of highly skilled and flexibly employed soldiers, who can rapidly transition between different types of operations." In short, the scenario is more commonly known as 'three block warfare', where deployed forces simultaneously (and particularly in confined urban spaces) might become engaged in full-on conflict, peacekeeping and stabilization & reconstruction activities.

**Key Points**

- **Prime Minister Rudd has told the RSL** Australia needs "a first rate and flexible land force - one capable of taking on challenges from contributing to high-end military engagements, through to delivering post-conflict reconstruction support.
- **The Attorney-General says the Rudd Government** has adopted a new and expanded concept of 'national security', which includes "threats, such as pandemics, economic shocks and climate change, as well as the more traditional threats ... (and) involving in response "a wide range of agencies and activities."
- **The Chief of Army foresees deployed land forces** increasingly needing to work amongst the people ... simultaneously conducting a range of operations to both deprive the adversary of their support base, while supporting extensive civil-military cooperation & humanitarian assistance, and other non-warlike roles.
- **In fulfilment of these new tasks, LtGen Gillespie** has unveiled an 'Adaptive Army' plan that will see, over the next two years, a restructuring of Army's functional command structures and approaches to temporal learning cycles, as a means to more effectively generate forces via higher standards of manning, equipping and collective training.

Gillespie also sees future warfighters increasingly needing to accommodate the laws of armed conflict, humanitarian issues and international law in the roll-out of effective operations, whilst exercising command decision-making under the watchful eyes of national and international media (both traditional, and new media) – all beamed back home to ensure consistency with broad community expectations.

All this, says Gillespie, "leads us to an environment in the fu-

ture that demands we prepare our people for levels of contextual awareness, flexibility, expertise, sensitivity and precision which have rarely been required of the soldier in past conflicts."

Accordingly, the Army's current Functional Command – put in place over 30 years ago by then General Hassett – from January 2009 will move to an interim structure of three functional commands: Headquarters 1st Division – to undertake higher level collective training for directed missions

and contingencies (whilst retaining command of the 1st, 3rd & 7th Brigades); Special Operations Command – which retains its extant mission & functions; and a revamped Forces Command – to be responsible for the conduct of individual & collective training (force generation) for a large proportion of Army.

Gillespie says the higher level preparation of land force elements for operations in future will be executed by a new Land Combat Readiness Centre (LCRC), charged with preparing and certifying Forces Command (and possibly, SOCOM force elements in the future) for current operations. Transition to the final 'Adaptive Force' structure – where all Brigades will fall under the Forces Command, and Headquarters 1st Division will become the primary mounting, assessment & certification authority (via the LCRC) for all individuals and conventional force elements deploying on operations – is planned for early-2011.

Concomitant with his release of an 'Adaptive Army' public information paper, Gillespie told a function in Canberra, "initiatives that will prepare our soldiers for this new environment are key to our ongoing development as an Army. Our contemporary, and likely future operations are about rebuilding (and often building for the first time), and influencing civil societies. Hence, our operations will often be less about killing the enemy, than about making them irrelevant to the population."

Reaffirming that conventional warfighting skills would continue to provide "the essential foundation for all other types of operations we may undertake," Gillespie explained "the role of conventional operations in this context is to keep the enemy at arm's length, while others undertake the capacity building essential to re-starting societies. This will require a level of precision and discrimination for non-kinetic operations that we have previously demanded from kinetic operations."

Gillespie went on to advise that the Army's development of doctrine for counter-insurgency operations "is now at an advanced level. Combined with the training

and equipping of our soldiers, the intellectual foundation for contemporary operations that [the 'Adaptive Army'] doctrine provides, will help to ensure our soldiers remain among the best prepared troops in the world."

Moving forward, this essentially means efforts will be focused to develop an Army that:

- is ready, and able, to deploy at short notice with our joint and in-

teragency partners to undertake a range of missions anywhere in the world our Government requires;

- is both physically and mentally hardened against the rigours of modern close combat and the austere physical environments into which the Australian army deploys;

- first and foremost recruits, trains and retains the finest Australian men and women, and gives

them the physical and intellectual wherewithal to complete the missions we assign them;

- thinks that the status quo is never, ever good enough, and is continually seeking to adapt and improve its performance – at all levels ... on operations ... in force generation and preparation – while at the same time retaining important lessons from the past;

- supports the families of sol-

diers, in good times and bad; and
 • never forgets the ideals and aspirations of the nation we serve, and it acts in a manner which brings credit upon itself and Australia.

All these principles were necessary for a future Land Force, that Gillespie said over the next few years would introduce "a range of capabilities that will improve our firepower, mobility, survivabil-

CORPORATE PROFILE:

Asset base falling into place to pursue 'Adaptive Army' objective

One successful Australian defence company, Adelaide-based Sydac, has long been involved in supporting Army training efforts, and its business development manager, John Dawson, believes his company has some immediate ideas as to how LtGen Gillespie might quickly find efficiency and output advantages in his quest to boost the quality of the Army's combined arms collective training capability.

■ Canberra Bureau Report

Teamed with Lockheed Martin (LM) in rolling-out project Land 907 M1A1 'Abrams' main battle tank (MBT) simulators, Sydac is currently engaged in enhancing Relocatable Advanced Gunnery Training System (RAGTS) capability at Hopkins Barracks in Puckapunyal (Vic), and Permanent Advanced Gun-

nery Training Systems (PAGTS) at Robertson Barracks in Darwin (NT), to provide a tactical collective training capability.

Building upon the technical gunnery capability of the RAGTS and PAGTS, Sydac has been contracted to integrate a computer generated forces and free manoeuvre/driver capability. This will allow tactical training of single or networked 'Abrams' crews with their own forces, and opposing

forces 'rounded out' by the computer generated forces (CGF).

The Sydac/LM team is similarly delivering M1A1 Tabletop Advanced Gunnery Training Systems (TAGTS) – which is being demonstrated in a networked M1A1 and LAV 25 configuration at this year's Land Warfare Conference – to both Hopkins and Robertson Barracks. These systems have stations for the commander and gunner, and can be used in either a stand-alone mode, or networked with other TAGTS and the PAGTS and RAGTS.

Dawson says that under a contract to the Australian Defence Simulation Office (ADSO), Sydac has developed a C4I Gateway

that enables simulations – such as JSAF, and potentially OneSAF – to stimulate command & control (C2) systems, such as the Battlefield Command Support System (BCSS) that is currently used by the Australian Land Force, the Global Command & Control System – Maritime (GCCS-M), and potentially other systems (eg: Northrop Grumman Mission Systems' Force XXI Battle Command Brigade and Below – FBCB2 – battle management system).

Using Sydac's C4I Gateway, data messages can be filtered for the C2 domain and subject exercise force (Red, Blue, White), with the reporting frequency being matched to available bandwidth and command and control capacity in order to support multiple instances of the Common Operating Picture (COP).



MORE EFFECTIVE LAND FORCE TRAINING: LtGen Gillespie's 'Adaptive Army' plan envisages the creation of a new Land Combat Readiness Centre to support Headquarters 1st Brigade, and the consolidation of all standing Army units under a revamped Forces Command. The consolidation accordingly offers Defence new opportunities to leverage individual and collective training asset investments. Sydac's analysis of the 'Adaptive Army' intent has revealed an opportunity to draw on existing physical training infrastructure and software developed under contract to the Australian Defence Simulation Office (ADSO), to integrate a number of existing and planned armoured vehicle and army weapon systems trainers to drive more effective ADF force generation.

(L to R) 'ABRAMS' TANK & GUNNER (DEFENCE PHOTOS) & SYDAC TRAINING SYSTEMS (VENDOR PHOTOS)

ity and our capacity to collect and analyse information. Platforms such as the 'Tiger' armed reconnaissance helicopter, upgraded Armed Personnel Carriers, the Bushmaster, new troop-lift helicopters, unmanned aerial vehicles, and new communications systems will challenge our training and maintenance systems."

Since early this year, a team of planners from across the Army

have developed and war-gamed a range of options to ensure that Army's generation and preparation of land forces is conducted more effectively and efficiently, and in better alignment with the new joint command framework.

The move to revamp the Forces Command is thus designed to provide focus on the force generation of Army individuals and collective organisations.

The construct currently supports OTH Gold (Contact Report, Expanded Contact Report, Joint Unit Report, Position & Intended Movement Track Report, and Group Message) and ASMTF (Location Statistics, Enemy Observation Report, Electronic Warfare Report and Logistical Situation Report), and can be expanded to support other message formats such as Variable Message Format (VMF) and TADIL J.

Under another ADSO contract, Sydac has developed a Joint Logistic Federate (LOGFED) that can be used in stand-alone mode or federated with existing constructive simulations such as JSAF, and potentially other Higher Level Architecture enabled constructive simulations, such as OneSAF.

LOGFED models the National Support Base, Logistics Bases (Permanent, Forward, Deployed, Dumps, Seaborne and Pre-positioned), Combat Service Support organisation (individual, vehicle, task teams, force command), Logistics transport methods (sea, air – helo & fixed wing – and land), weapon effects damage to nodes, and logistic supply level changes.

Information can then be exchanged between LOGFED and the constructive simulation, and can be transmitted out to the command and control system through the C4I Gateway. Future developments of the LOGFED solution could include engineering and maintenance, health services, personnel support and skills tracking.

Dawson notes that in resourcing simulation-based training for the Land force, the Department of Defence has already made major investments in 'Abrams' MBT, ASLAV, and project Air 87 'Tiger' armed reconnaissance helicopter systems, with further training asset investment planned for the new M113AS4 fleet.

Defence also envisages a substantive training investment for the project Land 17 self-propelled howitzers, and prospectively, the future family of replacement armoured vehicles to populate project Land 400, as will ultimately be influenced by developments with the United States' Future Combat System (FCS) initiative.

In short, says Dawson, an outlook that initially provided M1A1 'Abrams' MBT technical training for the commander and gunner, and – with networking – some collective training (albeit technical rather than tactical in nature) through the introduction of computer generated forces and free manoeuvre, will be able to deliver tactical collective training by harnessing available Australian technologies like the C4I Gateway, thus bringing into play an even wider training audience.

He further sees there is "ready potential for Army to bring together other new and upgraded weapons systems on-line to support more effective tactical and combined arms training, which would help utilise to the maximum, the established training infrastructure."

Dawson cautions that in proposing to build a more efficient

Gillespie adds, "Our individual training at present is world-class and has been a key determinant in our operational success. However, our systems for collective training require improvement. As such, unifying our collective training with individual training within a single Command aims to bring our systems for collective training up to the same high standards as those for individual training." **ADBR**

simulation federation around extant weapons platforms supported by CGF and Sydac's C4I Gateway, "it is important for Army procurers to take leadership in ensuring data sets are consistent and can be cross-ported between the virtual simulators, and with the constructive simulation federation bringing together the C2 systems (such as BCSS and FCB2), and utilising the C4I Gateway to draw in HLA compliant data from JSAF and OneSAF, and logistics status reports sourced out of LOGFED."

Given that LtGen Gillespie will no doubt be looking to conserve resources in a tighter defence funding environment courtesy of the global financial crisis, the move to the new functional command structure announced in August appears to offer immediate savings given it is proposed that force units having just returned from operations "should not expect to have the same levels of manning and equipment allocation as those further along in the force preparation process".

Recognising Defence's growing funding pressures under the 3% real growth cap when adjusted for internal efficiency and savings initiatives, Dawson believes the more effective utilisation of virtual and constructive simulation drawing on innovations such as Sydac's model, "offers a ready mechanism to get the most out of individual and collective training in support of more effective Australian Defence Force generation and sustainment initiatives."

ADBR

Writing on the wall for legacy armour upgrades?

The FY2009 US Defense budget, passed on 24 September by the House of Representatives by a vote of 392-39, authorised US\$3.6 billion to continue development, and begin production, of the US Army's Future Combat System. FCS, a computer-networked array of 14 types of manned & unmanned ground and aerial vehicles, is to replace the Army's current fleet of combat vehicles, including M-1 'Abrams' tanks and M-2 'Bradley' infantry vehicles, beginning in 2015.

Initial Army estimates put the program cost at US\$230 billion, although the Defense Department's Cost Analysis Improvement Group sees this more likely top \$300 billion. With critics now assailing the program on several fronts, the US Army has moved to shore-up the program (with Deputy Secretary of Defense, Gordon England having given his endorsement) by advocating the movement of billions of dollars from existing/legacy armoured vehicle programs of record (ie: 'Abrams', 'Bradley' & 'Stryker') into FCS program coffers.

The FCS is an important driver for concept definition in relation to the ADF's project Land 400 Future Army Combat Vehicle System, currently focused on replacing the ASLAV & M113 vehicle fleets from around 2020.

Avalon airshow on show at LWC

Representatives of the 'Avalon 2009' Australian International Airshow and Aerospace & Defence Exhibition – scheduled for 10-15 March 2009 near Geelong (Victoria) – will be exhibiting (Stand 73-74) at LWC. The 2009 international airshow will again incorporate high profile 'land forces' exhibition component under the 'LanDef 2009' banner, and designed to profile air/land interface systems, equipment and technology to the thousands of trade visitors that attend the show. **ADBR**