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A New Memorial for an Old War: The Boer War Memorial is Dedicated in Canberra

By Grace Turner

The Second Boer War, fought between the British Empire and the South African Boer free settlers, is largely a forgotten war in Australia's military heritage. Yet, it was the first war where Commonwealth as well as State military forces were sent overseas to the aid of an ally, and the first war in which Australia participated as not just colonies, but as a nation. However, despite the dedication of a site in 2008, there had been no formal memorial on ANZAC Parade in Canberra to honour those that served in its contingents.



A mounted section on patrol

The 31st of May 1902 saw the signing of the Treaty of Vereeniging that ended the Second Boer War, which had been battled over two and a half long years. It is thus fitting that Australia's memorial to those who fought as representatives of the states of Australia, and then of Australia itself should be dedicated on the 115th anniversary of this auspicious date. On a cold Canberra morning, on 31st May 2017, exactly nine years after the dedication of the site to a memorial, over 1500 people arrived to witness the historical unveiling more than twenty years in the making, to those who first fought as not just colonials, but Australians.

At 10.30am, led by Master of Ceremonies Major General Iain Spence, the dedication commenced with the arrival of the Governor General Sir Peter Cosgrove and Lady Cosgrove. Mounted members of the Light Horse Association NSW and NSW Mounted Rifles reenactors were also present behind the memorial in a display of respect.

To open proceedings, the catafalque party mounted the Memorial, as a guard to stand watch over a memorial that's existence had been fought for tirelessly for so long. Those present were welcomed by Colonel

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Coming Events



16 November 2016	RAACA AGM	TBA
18 November 2016	Cambrai Dinner	Royal Automobile Club

A Wonderful Gift to all Australians



On 31st May 2017, exactly 115 years after the signing of the Peace Treaty of Vereeniging that ended the Boer War, the National Boer War Memorial on Anzac Parade, Canberra was dedicated by His Excellency, General the Honourable Sir Peter Cosgrove AK MC (Retd), the Governor General of Australia.

The event was the culmination of almost 20 years of effort by the National Boer War Memorial Association. Not only was this wonderful memorial dedicated by His Excellency, it was also accepted by him as a gift to all Australians, a gift that will be a 'must see' for all visitors to Canberra for many future generations.

During his address at the ceremony, Colonel John Haynes OAM, the National President of Boer War Memorial Association, passed on his congratulations to the dozens of people from all States of our Commonwealth who worked so hard to achieve the completion of the memorial during the Anzac Centenary period.



Colonel Haynes also paid special thanks to Mr Michael Crouch AC who, as Chairman of the Fund Raising Committee, was invaluable in leading the task to raise over \$4.3 million to fund the memorial design and construction. Also singled out was the Commonwealth of Australia who gave a major donation in recognition of the Boer War's role as the birth of today's Australian Army.

The outstanding craftsmanship of sculptor, Mr Louis Laumen, was also recognised by Colonel Haynes; This noted Melbourne artist was assisted by a team of historians to ensure that the intricate details of all the accoutrements on each of the 4 mounted troopers were as accurate as possible.

The four bronze statues of the mounted troopers, on Waler horses are each 1.5 times life size and represent a section of the Light Horse on patrol in the South African veldt. A fitting tribute to so many of our colonial and Australian forebears.

John Haynes, a predominant figure and instigator in pushing for the creation of the memorial for the last two decades, and President of the National Boer War Memorial Association.

After this the memorial was dedicated by Sir Peter and Lady Cosgrove, unveiling a plaque to accompany the cast bronze figures of the memorial itself. Michael Crouch, Chairman of the National Boer War Memorial Fund, then presented the gifting address. He thanked those present, and all who had contributed – nearly two thirds of the cost of the memorial having been received via public donations.

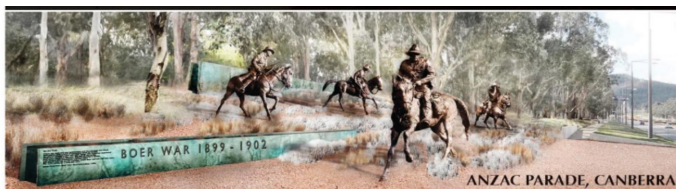


The many gathered were then led in a Prayer of Remembrance. The Recessional Hymn was sung, followed by the Dedication prayer and requiem with the Ode being read by Robert Dick, National President of the Australian RSL. A minute of silence was held after the playing of the Last Post, the Benediction being bestowed after this moment of silence. Afterwards, those present were then led in the singing of the National Anthem.

Diplomatic envoys from participants on both sides of the Boer War presented wreaths in dedication of the memorials, with descendants and others also being invited to place a wreath to remember those who had first fought for Australia.

With their job complete, the catafalque party dismounted, having ensured the protection of this most hard won of memorials, to permanently commemorate the service of Australia's first soldiers.

Grace Turner is a graduate of the University of Canberra with a keen interest in the Boer War.



NATIONAL BOER WAR MEMORIAL ASSOCIATION

National Patron:

Air Chief Marshal Mark Binskin AC, Chief of the Defence Force

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Technical Notes & News

Subject: **REINSTATEMENT OF B SQN 3/4 CAV REGT**

Gentlemen,

It is with great delight I inform you of a Facebook Post by Maj Greg Hooper CSM at SOA on behalf of the HOC Brig Christopher Mills, relating to the reinstatement of B Sqn 3/4 Cav Regt: viz



FACEBOOK POST BY MAJ GREG HOOPER 19 MAY 17:

To all members I'm proud to announce the following:

Approval to Rename Support Squadron –School of Armour to B Squadron 3rd/4th Cavalry Regiment

To all RAAC personnel and friends of the Corps and particularly the 3/4 Cavalry (including supporting Corps)fraternity in your many forms.

Most will be aware that B Sqn 3/4 Cav Regt has been in transition since 2014 when it ceased to be operational in Townsville.

From 2014 until now, it has been under the custodianship of the RAAC HOC.

The RAAC HOC is pleased to announce that with effect 15 May 2017 the Chief of Army has approved the renaming of School of Armour's Support Squadron (SPT SQN) to B Sqn 3/4 Cav Regt.

SPT Sqn SOARMD is a Regular Army RAAC sub-unit that operates and maintains a multiple vehicle fleet to support AFV training.

The Sqn will remain a sub-unit of the SOARMD and will perform the same role as it currently does; however, SPT Sqn personnel will adorn the traditional 'Stinger' hat badge. This Sqn will now become the custodian of the fine traditions of the 3/4 Cav and ensure a lasting legacy.

It is planned for the a re-naming parade to be conducted on the weekend of 8/9 July 2017 in Puckapunyal – more details once this is firmed up.

All RAAC, and in particular, former 3rd /4th Cavalry personnel are welcome to attend.

Resolute & Tenacious
RAAC HOC

As a Foundation member (19680 of the Sqn when it was redesignated B Sqn 3 Cav and having served with the Sqn in SVN during my first tour of duty (1969) and in later years in TSV 1977-79), at which time I took part in the badge-changing parade, the Sqn has always held a very special place in my heart for many reasons.

The decision to reinstate the Sqn is a most welcome one and I can say on behalf of my fellow members of the B Sqn 3/4 Cav Association that we will do our utmost to support the Sqn again in the same manner as when it was on active service in Afghanistan.

Interestingly the fact the Sqn had its genesis at Puckapunyal during those frantic days in 1956 when 1 Tp 4/19 PWLH was getting ready to deploy to SVN, followed by 1 APC TP and subsequently 1 APC Sqn all raised in Puckapunyal, certainly gives weight to the old RAAC adage that "All roads lead to Pucka."

The renaming of Spt Sqn sees this adage as being a fitting end to a long 52-year journey which has come full circle back to Puckapunyal.

As the great Horace Rumpole was wont to say over a glass of Chateau Pomeroy, "Oh frabjous day!!"

Yours in Armour

Noel Mc Laughlin

Chairman
RAAC Corporation



The School would like to thank all those who came to support the renaming parade as Support Squadron had the honour to become B Squadron 3/4 Regiment.

Introducing the Corps newest Stingers.
(School of Armour photo from FB)



March on the Guidons!



The Guidons of 3rd/4th Cavalry Regiment are marched on parade on today's ceremony at The School of Armour.
Welcome back 'B' Squadron, 3/4 CAV!

Support Squadron, SOA is now redesignated as 'B' Squadron, 3rd/4th Cavalry Regiment.

The above two photos are from Cavalry Sitrep FB Group
(Photo Credits: Joe Lindford)



On Saturday 26th November 2016, a century of Australian battle honours and military traditions were recognised at a parade to present the new Guidon of the 4/19th Prince of Wales's Light Horse Regiment

Photo courtesy of "Plumes" April 2017

Message Board

From: David Mercer [mailto:davidmercer@adam.com.au]

Subject: FW: CALLING ALL TANKIES



The 1 AR Assn has embarked on a major exercise to compile a Nominal Roll of all those who served regardless of Corps, with the Regiment from its formation in 1946.

The 1st Armoured Regiment association has embarked on a project to produce a nominal roll of all uniformed personnel (regardless of corps), who served with the 1st Armoured Regiment from the time it was formed in 1946 (1st Australian Armoured Car Squadron) to the current day. Two (2) older ex Warrant Officers (too slow to move one pace backwards) have volunteered to manage the project and coordinate the collection of data to achieve the mission. Russ James (WO1) and Dick Stanios (WO2) were both Chief Clerks who served in the Regiment – Russ from 1967 to 1979, and Dick from 1977 to 1990.

Why – to preserve the history of the Regiment, fostering Esprit de Corps, recognising the importance of the Regimental Family, to assist formers members and their families in time of need, paying appropriate recognition at funerals, and as an aid in determining the bona fides of those wishing to join the Association.

To ensure that we do not infringe on Privacy legislation we intend, as far as possible, to collect only Regimental (Army or PM Keys) number, surname, given names, ranks and dates of service with the Regiment. In some cases, we have been provided with nicknames, appointments and Squadrons, troops and call signs. We need some of this information to specifically identify individuals.

Please contact either Russ James on 0419 331 401 or at RF.James@bigpond.com or Dick Stanios on 0488 026 881 or at leopardas.1@hotmail.com to ensure that you have been included or to nominate anyone that you either served with or recall from the past.

David Mercer

Hon Secretary
South Australian Mounted Rifles Association Inc
Representing the Royal Australian Armoured Corps Corporation Limited in S.A.
davidmercer@adam.com.au

From: Jack Parr [mailto:coralreunionlist@gmail.com]

To: mikebutler181@optusnet.com.au

Subject: Anniversary of Coral

Gentlemen,

This day 49 years ago, that we all remember so well, units and sub-units of 1ATF Vietnam moved to establish a new Fire Support Base named CORAL 'somewhere' north of Bien Hoa and Saigon. Most of us did not have a clue where that was or had even heard of the terms of 'Catchers Mitt', 'War Zone D' or even the Rocket Belt. Song Dong Nai could have been anything. Those amongst us, the Veterans of 1RAR from their tour in 1965 new different. They knew that anything north of the Song Dong Nai was nasty country with lots of 'bad guys' (in 1965).

Little did we know that we were about to create some Australian Military history that stands alongside some of the great Australian actions in all wars. Here is the message that Col. Bennett sent on the 13th May: "Today this call sign (1RAR) with G10 (102 FD BTY) and G98 (12FD REGT) upheld the honour and traditions of those before us. I now know that an enemy battalion has been severely mauled and our losses are more than accounted for. I congratulate you all on a job well done with steadiness and bravery second to none. We will remember this day with pride of our achievements. Let us thank God for the courage which has added to the honour of our country."

Read it carefully and reflect on the meanings of '... upheld the honour and traditions of those before us.' and '... steadiness and bravery second to none' and '... added to the honour of our country'.

Gentlemen take a bow, you are to be saluted and as 'Bones' sometimes reminds me..... "We done Good!"

In a few days we will meet in Hobart, we will remember the fallen and read out their names so they will never be forgotten.

Attached is today's letter from the Governor General to 1RAR. (refer page 7)

'Rest Easy'

Jack P.



Having driven from Nui Dat, a journey of some 120 kilometres through hostile territory and across ten bailey bridges, none of which were rated to carry the weight of a 54 ton tank, relieved Centurion crews of C Squadron, 1st Armoured Regiment, arrive at Coral on the afternoon of 23 May 1968. [AWM P01768.010]



His Excellency General the Honourable Sir Peter Cosgrove AK MC (Retd)
Governor-General of the Commonwealth of Australia

To the Commanding Officer and all ranks of 1st Battalion,
The Royal Australian Regiment

On Friday 12 May 2017, Greetings on the 49th
Anniversary of the Battle of Coral. On that long ago day,
the men of the Battalion and its attachments fought a
mighty battle against a large force of determined and
courageous enemy, over several days.

The Battalion prevailed, with some tragic losses but the
gallantry, skill and endurance shown by the men of the
Big Blue One and their supporting troops entered the
legends of the Army and the Regiment. As you pause
today to reflect on that part of your illustrious history,
know that your one-time CO and now Commander-in-
Chief salutes you all.

Duty First

Peter Cosgrove

P J Cosgrove
Governor-General

Leopard 2 Main Battle Tank, Germany

Leopard 2 is a main battle tank developed by Krauss-Maffei, now Krauss-Maffei Wegmann (KMW), of Munchen, Germany. The Leopard 2 is a successor to the successful Leopard 1.

Leopard 1 was first produced in 1963 by Krauss-Maffei for the German Ministry of Defence. More than 6,000 vehicles have been exported to Belgium, Denmark, Germany, Greece, Italy, Canada, the Netherlands, Norway, Turkey and Australia.



The successor to the Leopard 1, the Leopard 2, was first produced in 1979 and is in service with the armies of Austria, Canada, Chile, Denmark, Finland, Germany, Greece, the Netherlands, Norway, Poland, Portugal, Singapore, Switzerland, Sweden, Spain and Turkey, with more than 3,200 tanks produced.

In June 2010, KMW unveiled its next-generation main battle tank, Leopard 2 A7+. The tank was successfully tested and qualified by the German Army. Its main features include a modular protection kit, improved sustainability and increased mobility.

In July 2011, a deal to sell around 200 Leopard 2 A7+ to Saudi Arabia was approved by Germany's Federal Security Council.

International orders for Leopard 2 and its variation models

The Finnish Army has bought 124 tanks and the Polish Army has bought 128 used Leopard 2A4 tanks from Germany. In August 2005, Greece placed an order for 183 used Leopard 2A4 and 150 Leopard 1A5 tanks from German Army reserves. In November 2005, an agreement was signed for the sale of 298 German Army Leopard 2A4 tanks to Turkey. In March 2006, Chile signed a contract for the acquisition of 140 Leopard 2A4 tanks from the German Army. The first was delivered in December 2007.

The Leopard 2A6 includes a longer L55 gun, an auxiliary engine, improved mine protection and an air-conditioning system. The German Army is upgrading 225 2A5 tanks to 2A6 configuration, the first of which was delivered in March 2001. The Royal Netherlands Army upgraded 180 of its 2A5 tanks to the 2A6 configuration, the first of which entered service in February 2003. In March 2003, the Hellenic Army of Greece ordered 170 Leopard 2 HEL (a version of the 2A6EX). The first 30 were being assembled by KMW, with the remainder by ELBO of Greece. The first locally built tank was delivered in October 2006. The Leopard 2A6 HEL entered service with the Hellenic Army in May 2008.

Spain has ordered 219 Leopard 2E (a version of the 2A6 with greater armour protection), 16 recovery tanks (CREC) and four training vehicles. The first 30 were built by KMW and the rest licence-built in Spain by General Dynamics, Santa Barbara Sistemas (GDSBS). The first tank was handed over to the Spanish Army in June 2004 and deliveries concluded in 2008.

Another variant is the Leopard 2(S), which has a new command and control system and passive armour system. 120 Leopard 2(S) have been delivered to the Swedish Army. Deliveries concluded in March 2002.

In December 2006, it was announced that Singapore would buy 66 refurbished Leopard 2A4 tanks from the German Army, plus 30 additional tanks for spares. The tanks entered service with the Singapore Army in September 2008. In April 2007, Canada purchased up to 100 Leopard 2 tanks from the Dutch Army and leased 20 Leopard 2A6M tanks from the German Army. KMW delivered the first of the leased 2A6M tanks, which has been upgraded with improved mine protection and slat armour, in August 2007. The tank was deployed to Afghanistan later in August 2007. The Dutch Army retains a fleet of 110 2A6 tanks.

In October 2007, Portugal purchased 37 Leopard 2A6 tanks from the Dutch Army. The first eight were delivered in October 2008 and deliveries concluded in 2009.

In October 2010, Canadian armed forces took delivery of the first 20 Leopard 2A4M CAN modernised battle tanks from KMW. These tanks were deployed in Afghanistan to provide a high-level of protection and firepower to the Canadian soldiers. As of January 2011, five of the 20 tanks were sent to Afghanistan as a replacement for Leopard 2 A6M CAN, deployed there since 2007.



Rheinmetall Group received an order worth \$289.6m from the Indonesian Ministry of Defence in November 2013 to deliver tracked armoured vehicles and to provide logistical support services and ammunition.

Rheinmetall will deliver 103 overhauled and modernised Leopard 2 main battle tanks under the contract. It will also deliver 42 upgraded Marder 1A3 infantry fighting vehicles, 11 various armoured recovery and engineering vehicles, associated documentation, training equipment, logistical support services and an initial supply of practice and service ammunition.

Indonesia received first eight of 61 Leopard 2 RI (Republic of Indonesia) main battle tanks from Rheinmetall, in May 2016.

Rheinmetall received a €220m order from Poland in February 2016 to upgrade 128 Leopard 2 MBTs to Leopard 2 PL standard.

Mine protection system for improved crew safety

KMW has developed a mine protection system for the Leopard 2, following a concept definition by an international working group from Germany, Switzerland, the Netherlands, Sweden and Norway, under the lead of the German procurement agency BWB. An order placed in September 2003 involved the modification of 15 Leopard 2A6 tanks for the German Army and ten Leopard 2A5 (Strv 122) for Sweden. The first mine-protected tank was delivered in July 2004.

The kit consists of add-on armour elements including a new plate under the tank floor, new vision systems and re-stowage arrangements for ammunition.

Trials in February 2004 demonstrated that, with the new armour package, Leopard 2 tank crews could survive the detonation of an anti-tank mine under the tank without suffering any injuries.

Construction of the Leopard 2 battle tank

The hull comes in three sections: the driving compartment at the front, the fighting section in the centre, and the engine at the rear of the vehicle.

The driver's compartment is equipped with three observation periscopes. Space to the left of the driver is provided for ammunition stowage. A camera with a 65° horizontal and vertical field of view positioned at the rear of the vehicle and a television monitor provide a reversing aid for the driver.

The turret is located in the centre of the vehicle. There is an improvement programme which provides third-generation composite armour and additional reinforcement to the turret frontal and lateral armour, with externally mounted add-on armour modules. In the event of weapon penetration through the armour, the spall liner reduces the number of fragments and narrows the fragment cone. The spall liner also provides noise and thermal insulation. The reinforcement provides protection against multiple strikes, kinetic energy rounds and shaped charges.

Fire control capabilities of the main battle tank

The commander's station has an independent periscope, a PERI-R 17 A2 from Rheinmetall Defence Electronics (formerly STN Atlas Elektronik) and Zeiss Optronik. PERI-R 17 A2 is a stabilised panoramic periscope sight for day / night observation and target identification, which provides an all round view with a traverse of 360°. The thermal image from the commander's periscope is displayed on a monitor.

The PERI-R17 A2 can also be used for weapon firing as it is built into the tank's fire control system. The image from the gunner's thermal sight can also be transmitted to the commander's PERI-R17 periscope so the commander can switch the gunner's video image to the commander's monitor. This enables the commander and the gunner to have access to the same field of view of the combat range. The gunner's station is equipped with a Rheinmetall Defence Electronics EMES 15 dual magnification stabilised primary sight. The primary sight has an integrated laser rangefinder and a Zeiss Optronik thermal sight, model WBG-X, which are both linked to the tank's fire control computer.

The thermal sight uses standard US Army common modules, with 120 element cadmium mercury telluride, CdHgTe (also known as CMT) infra-red detector array operating in the eight to 14 micron waveband. The infra-red detector unit is cooled with a Stirling closed-cycle engine.

The sight is fitted with a CE628 laser rangefinder from Zeiss Optronik. The laser is a Neodinium Yttrium Aluminium Garnet, (Nd:YAG) solid state laser.

The rangefinder can provide up to three range values in four seconds. The range data is transmitted to the fire control computer and is used to calculate the firing algorithms. Also, because the laser rangefinder is integrated into the gunner's primary sight, the gunner can read the digital range measurement directly. The maximum range of the laser rangefinder is less than 10,000m with accuracy to within 20m.

The command and fire control procedure known as first echo selection is used for laser range-finding for anti-helicopter operations. The principal weapon uses electronic firing to reduce reaction times.

Main armaments and weapons on Leopard 2

A new smoothbore gun, the 120mm L55 Gun, was developed by Rheinmetall Waffe Munition of Ratingen, Germany, to replace the shorter 120mm L44 smoothbore tankgun on the Leopard 2. The extension of the barrel length from calibre length 44 to calibre length 55 results in a greater portion of the available energy in the barrel being converted into projectile velocity increasing the range and armour penetration. The L55 smoothbore gun, equipped with a thermal sleeve, a fume extractor and a muzzle reference system, is compatible with current 120mm ammunition and new high-penetration ammunition.

As a result of tactical requirements, Rheinmetall Waffe Munition developed the improved kinetic energy ammunition known as LKE 2 DM53. With the DM53 round the L55 gun can fire to a range of 5,000m. The effect of the kinetic energy projectile on an enemy target is achieved by the penetrator length and projectile mass and the impact velocity, and the interaction between the projectile and the target.

The penetrator material is heavy tungsten powder in a monoblock structure. The improved kinetic energy ammunition has higher muzzle energy and recoil forces. Especially when using the new DM 53 KE round, the L55 enables a 30% increase in performance compared with conventional systems. For example, a muzzle velocity can be achieved in excess of 1,750m/s.

Leopard 2 is equipped with a land navigation system from the company LITEF of Bonn, Germany, which is a subsidiary of Northrop Grumman (formerly Litton) of USA. The hybrid navigation system consists of a global positioning system (GPS) and an inertial navigation system.

KMW's MBT Leopard 2 support systems and tank engine

A programme has been put in place to replace the H-WNA improved hydraulic system with E-WNA, which is an electrical weapon follow-up system. The replacement with the E-WNA provides the following advantages: the turret has no pressurised hydraulic fluid, lower noise level and lower power consumption and heat generation, improved reliability and lower maintenance and service requirements, saving in operating costs, and good long-term storage properties.

The crew compartment is equipped with a fire and explosion detection and suppression system which has been licensed by the company Deugra Ges. fur Brandschutzsysteme of Ratingen, Germany, from the UK company Kidde-Graviner of Slough, Berkshire. A fireproof bulkhead separates the fighting compartment from the engine compartment at the rear of the vehicle.

The engine is the MTU MB 873 diesel engine, providing 1,100kW (1,500shp), with a Renk HSWL 354 gear and break system. An enhanced version of the EuroPowerPack, with a 1,210kW (1,650shp) MTU MT883 engine, has been trialed on the Leopard 2.

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What does the future hold for tanks?

By Dr Gareth Evans, Jan 3 2017

Article Courtesy of Army-Technology.com

Having been a mainstay of modern militaries for so long, will the tank continue to play a role on tomorrow's battlefields? And if it does, how will tanks and armoured fighting vehicles (AFVs) need to change to meet the challenges of future warfare?

The Battle of the Somme has gone down in history as one of the bloodiest ever fought, with over a million men killed or wounded in the course of the largest action on WW1's Western Front. Less well known, however, is that the third phase of that 141-day long offensive also marked the battlefield debut of the tank.

Although its direct military impact on 15 September 1916 was almost negligible, within a few short years the tank had risen from a ponderous, breakdown-prone novelty to a potent platform that was to dominate battlefields throughout the rest of the 20th Century and beyond. To this day, nothing makes such a bold statement of military might as the sight of massed armour, but the face of war has changed over the past 100 years, and radically so over the last 20. So how are tanks keeping up?

Defence contractors and military research establishments, from the Defence Advanced Research Projects Agency (DARPA) in the US to Britain's own Defence Science and Technology Laboratory (DSTL), are busily working to find the answers.

From the outset, one thing seems very clear; all the experts are sure that tanks will still be around for their bi-centenary in 2116.

"Looking out beyond Challenger 2 all the 'future' studies indicate that there will be an enduring need for mobile and survivable fighting vehicles," says William Suttie from the UK's DSTL. "Whatever we do, the chances are other nations will continue to field heavy main battle tanks, hence we will continue to need something that can do what current MBTs can do, even if it looks different from current vehicles."

John Puddy, technology lead at BAE Systems Land UK, agrees. It is, he asserts, all about relevancy and that is driven by the complexity of the modern battlespace, and the very broad range of threats today, compared with the more structured battlefields of the two World Wars.

"I definitely see tanks and armoured vehicles having a role for the next 100 years, as important [as], and possibly more important than, they have had in the last 100 years," Puddy says. "Tanks are like heavy-weight boxers, able to throw big punches, and take big punches in their own right and that's still going to be relevant, but there is a whole host of other roles for armoured vehicles."

The nature of that armour could be very different in future. Modern tanks and AFVs enjoy unprecedented levels of protection, but as armour evolves, so too do armour piercing weapons. Although adding more weight of armour brings incremental improvements, it hampers speed and mobility, as well as driving up both development and deployment costs. As DARPA's Ground X-Vehicle Technology programme manager Major Christopher Orlowski recently said, it is now about defying "the 'more armour equals better protection' axiom that has constrained armoured ground vehicle design for the past 100 years".

Unsurprisingly, DSTL has plenty of its own ideas about this too. Active protection systems that can destroy or mitigate incoming fire, or novel materials that marry high protection with low weight, could remove the need for heavy armour, and so boost vehicle speed and agility. Stealth technologies and novel drive systems that reduce engine heat signatures could also enhance survivability without the need to bolt on more metal, by making tomorrow's tanks and AFVs harder to detect and more difficult targets to hit.

Of course, the obvious way to improve survivability is not to put anyone in danger in the first place, and a number of possible visions of the future battlefield feature unmanned armoured ground vehicles playing their part. In many respects, this represents the logical extension of the growing move towards greater automation which has made familiar items of drones and already brought unmanned turrets and remote control to armoured vehicles.

This trend is likely to continue, possibly even evolving to enable future armies to deploy a ground swarm of drone vehicles in support of conventional MBTs and AFVs, but that is perhaps as far as it is likely to go.

"I don't think we're going to see a future like 'Terminator' with humans completely devoid from the decision point," Puddy says. "Instead robotics will help human operators to have a better understanding of the battlefield whilst keeping them out of immediate harm's way."

Suttie echoes this view. He feels that robotic systems are likely to be an important part of the mix of future ground-based warfighting capabilities and key contributors to reducing the risks to troops and also, by improving sensing and targeting, cutting the danger of collateral damage. "There will, however, be an enduring need for 'boots on the ground' to interact with the local population," Suttie says, "and policy is that all engagement decisions will have a 'human in the loop' – hence no autonomous weapons."

So, if killer robots are not yet around the corner, what about that other mainstay of dystopian sci-fi – ray guns?

"There have already been successful demonstrators," Puddy says, "and lasers and energy weapons are an area that both the DSTL and industry are investing in at the moment." He suggests that part of the appeal could come from their potential against the escalating threat posed by UAVs, and that ultimately while they are unlikely to replace a tank's main armament any time soon, lasers could well become an important part of the whole defensive measures system.

"Lasers and energy weapons are an area that both the DSTL and industry are investing in at the moment."

"There is a lot of scope to complement the traditional munitions and traditional weapons systems," he explains. "We can continue the evolution and revolution of the traditional weapons base, while complementing it with some of the more novel weapons – it might be lasers, it might be audio – to help in an increasing way."

One thing is clear; with its potential array of active electric armour, massively enhanced situational awareness sensors, high-speed electro-hybrid drive train and mounted laser emitters, tomorrow's tank is going to call for a lot of on-board power. Developments in light, high-capacity batteries will play as much a part in the bi-centennial MBT as any advance in light, effective armour – but will it still look like a tank?

The familiar tracked, weapon-turreted, rear-engined silhouette has remained essentially the same since Renault produced its FT17 towards the end of WW1, but some of the new designs that have been put forward look more like Mars rovers than earth-bound weapon platforms. It seems when it comes to the future, nothing is sacrosanct; the tank of 2116 could well be wheeled rather than tracked, and those wheels might even be on the end of long, flexible ant-like legs, like one concept showcased by BAE.

Predicting what armoured vehicles will look like is as difficult as forecasting the threats that they will face, but it does appear that the long-standing axiom is finally going to be laid to rest; the days of simply adding more armour are over.

"The technology is becoming available to take a very different approach to MBT design using advanced materials, novel automotive systems, new weapon systems and active protection systems, resulting in much lighter, more agile platforms," Suttie says. "There will always be the issue of affordability and robustness that comes with increased complexity, as these advanced solutions must be able to operate reliably in all environments and be resilient to all types of threat."

Tomorrow's tank may be a very different beast indeed.

Russia Unveils the Future of Drone Warfare – the Uran-9 Drone Tank

Sep 19, 2016 George Winston

Russia would appear to be a leader in the use of unmanned autonomous combat vehicles with the unveiling at the Army 2016 military technical forum of the Uran-9 drone tank. It is due to enter military service by the end of this year.



The Vikhr is an unmanned combat ground vehicle (UCGV) giving Russia's military an advantage while keeping the country's armed forces clear of danger using technological innovation.

It's based on the BMP-3 infantry fighter vehicle (IFV) sporting a new name that translates to "Whirlwind" stressing the confidence that Russia with its new secret weapon will change the rules on the battlefield.

Weighing in at 14.7 tons, the self-sufficient combat system is similar to something appearing in an action movie that aims automatically to engage aerial targets to protect strategic facilities and also against ground forces.

As a robotic system, it can either be controlled by an operator or do certain tasks autonomously, explained Dmitry Bogdanov, deputy CEO at Impulse-2 Scientific and Technical Center in Sevastopol. For example, it can reach a set destination without the assistance of a person and bypass obstacles on its own.

The vehicle can move at a quick 60kph on land and is capable of moving through deep water. It is armed with a 2,000 round coaxial machine gun, a 300 mm automatic cannon 2A72 with 500 rounds, and a half a dozen anti-tank missiles. In addition to the Vikhr, Russian defence contractor Rosoboronexport unveiled the Uran-9 tracked vehicle controlled remotely by an operator with a 30-millimeter cannon capable of firing 350 to 400 rounds shooting high explosive incendiary and munitions capable of piercing armour.



The Uran is only 10-feet high and was expected to enter military service next year or in 2018. However, reports indicate it will be ready for service the end of 2016. Russia intends to export the fireproof tank that has some defence analysts worried that it will upset traditional ground war models with its formidable lethality without harm coming to the operator controlling the system remotely. It may be the start of futuristic drone warfare.

In January, Russian military expert and chief editor of the Arsenal Otechestva magazine, Viktor Murakhovsky, said that the usage of perspective models of combat robots by the Russian Armed Forces in Syria is already a well-established practice. At that time, he also noted that the newest Uran-9 robotic warfare system also could be tested in the Syrian Arab Republic.

“It is not a secret that Russia tests a number of robotic products in Syria: not only the Uran-6 mine clearance systems, but also the Soratnik and Nerehta unmanned vehicles. With regard to the specific model, noticed by British media, – yes, I do not exclude that the Uran-9 and other systems may appear in Syria,” Murakhovsky told the RIA Novosti news agency in January of this year.



About a month later, it was reported that the Uran-9 was allegedly spotted in Syria (source). However, after a closer examination of the video at a higher resolution, the newest Uran-9 robotic warfare system turned out to be the old T-62M main battle tank, also arrived from Russia. However, maybe, we will also have a chance to see the Uran-9 in Syria in the near future.

The Uran-9 unmanned ground vehicle is designed to support the Special Forces with its firepower, as well as to implement intelligence activities. The robotic warfare system is armed with the 2A72 automatic cannon, a 7.62-mm machine gun and the M120 antitank guided weapon of the Ataka system. The Uran-9 is capable to fight a battle and effectively destroy enemy tanks at a distance of up to 8 kilometers. In addition to the combat module, the unmanned ground vehicle is also equipped with a laser guidance system. Experts believe that the Uran-9 can be used in anti-terrorist operations and local armed clashes.

The Veteran web Network providing information to Australian veterans, ex-service and service personnel. Reaching more than 12,400 readers daily and growing.

All service and ex-service personnel can subscribe to the Veteran web Network cost free. Information is provided via email from various reliable sources. Veteran web is an information service, while is not a forum you are welcome to contribute.

Some interesting statistics of veterans by electorate can be found at:
http://www.dva.gov.au/sites/default/files/files/publications/datastatistical/fedprofile/Electorates_Mar2016.pdf

Lost Souls

If anyone knows the whereabouts of the following members would they please contact the RAACA Office

Members Name	Last Address
COL B.R (Bern) Sullivan (RL)	PO Box 3172, Weston Creek, ACT 2611
Mr. R.G. Palmer	124 Deridon Village, 36 Empire Bay Dr., Daleys Point NSW 2257
Mr. A. (Adrian) May	6 Judith Crescent, Morphett Vale, SA 5162
Mr. R (Raymond) Doo	20 Murphy St., Romsey, VIC 3434
MAJ Bruce Scott	190 Borgas Rd Highbury WA 6313
Mr. Michael J Sparozvich	39 Headland Rd., North Curl Curl NSW 2099
Mr Peter D Morse	“Garrat” PO Box 123, Harden NSW 2587
MAJ Robert J Morrison	65 Officer Cr., Ainslie ACT 2602
MAJ Wolfgang Klimisch	456 Cedar Creek Rd., Belli Park QLD 4562
Mr. Chris Dawson	36 Cranbrook Rd., Rose Bay NSW 2079
Mr. G. F. (Fred) Chivers	32 Ketch Close Corlette NSW 2315
Mr. William R Byrne	19 Oxford St., Glen Innes NSW 2370
Mr. Godfrey Camenzuli	14 Ann St., Pascoe Vale VIC 3044
Mr. Ken Walker	PO Box 401 Raymond Terrace NSW 2324
Dr. Kevin D Smith OAM	PO Box 440 Armidale NSW 2350

The Canberra Boer War Memorial – The beginning

By George Baczocha

During the late 1990s I became involved with the 6th Light Horse mounted troop which was part of the Australian Light Horse Association and under that banner we were involved in a number of very successful recruitment marches and ANZAC parades throughout the central and western districts of NSW plus the Sydney metropolitan area.

Support from horsemen in NSW was excellent and we always could rely on a troop of horses (ie 32 riders), this to a large extent was due to the fact that the core membership was made up of ex-servicemen and that the troop leader, Sgt Frank Morgan was himself a WW2 serviceman who's military career began as a trooper in the 6th Light Horse Regiment, Trundle troop.

The executive committee of the 6th Light Horse at the time, was very entrepreneurial and always on the lookout for new projects. As it was coming up to the 100th anniversary of the Boer War and a number of our members had relatives who had served in the war, a proposal was put forward to commemorate this event.

A steering committee was formed with Ray Atkinson as the Chairman, myself as Secretary/ Treasurer, Events Planner Warren Beasley and Bob Pankhurst and Andy Clarke as committee members. The group was fortunate enough to have found support for this venture from Peter Alexander the then President of AVADSC.

The members who had relatives who served during those years served with the Imperial Bushmen's Contingent, thus it was decided to use this unit as the basis for the upcoming commemoration.

Given that most people's time was limited, the exercise would be kept to a 5 day camp which would include a training component. With Peter Alexander's help, the committee was able to receive financial support from DVA as part of "Their Service Our Heritage" program. Additionally in the 1890s, the original Imperial Bushmen's Contingent received financial support from a number of local businesses so the committee decided to follow the same approach. Of the original sponsors still in existence only John Fairfax was prepared to provide support, however together with DVA funding it allowed the us to proceed with the formation of the Imperial Bushmen's Contingent.

Prior to the Boer War, Australia consisted of six colonial states but during the Boer War, Federation of the states took place and the colonial militias were formed into an Australian Army. Thus this period can be considered the birth of the Australian Army. With that in mind and the fact that I had served as a trooper in an armoured regiment, the Armoured Centre was approached. While they could not provide financial support, LTCOL Salmon (CO of Armoured Centre at the time) agreed to provide help in the way of materials and manpower.

The Imperial Bushmen's Contingent was structured as follows; the Executive, Atkinson, Beasley and myself; an Operations Group consisting of LTCOL Mike Annetts (CO), WO1 Greg Hooper (RSM), WO2 Bill Baxter (SSM A Sqn), SGT Andy Clarke (SSM B Sqn). The final on strength count was 270 horsemen from all the states and territories including representatives from other Commonwealth Countries. The UK, NZ, Canada and South Africa responded. However, South Africa would only agree if we marched with their present flag rather than the one used at the time.

Base camp was set up at the Canberra showgrounds and reflected as much as practical an army camp of the 1900s. To that effect Standing Orders were developed together with a mounted training program. The two mounted sqns were formed according to the organisation tables for commonwealth forces of the early 1900s ie 4 troops to a sqn, each troop consisting of 32 mounted horsemen, including one officer and a troop Sgt.

A typical day consisted of;

Reveille 0630
Mess Parade 0730
Boots & Saddles 0800
Parade and inspection 0830
Training 0845
Lunch 1230
Training
Evening meal 1830
First post 2145
Last post 2200



Day 1 Allocation of troopers to troops, general administration and equipment checks.
Day 2 was set aside for Regimental training to be taken by the RSM.
Day 3 a parade at the show grounds followed by skill at arms demonstration followed by a regimental march past.
Day 4 march to parliament house a parade taken by the PM John Howard.
Day 5 a march to War Memorial and parade on site.
Day 6 debrief, clean up and dispersal.

Show Grounds Parade and Skill at Arms Events

The skill at arms, based on a 1890s event program, consisted of; tent pegging with lance, effigy heads with sword, pistol over a jump and ring and peg events with lance, demonstration of mounted drill up to troop level. Plus a static display of horse drawn vehicles and equipment.

To end the day a mounted charge over trenches was enacted. Volunteers were selected to man the trenches. I don't think that they will consider volunteering ever again.

The evening consisted of dinner sponsored by Fairfax at Parliament House.

March and parade at parliament house

At the last minute we were advised that the Defence Minister, Bruce Scott indicated he would like to ride in the parade. A horse and uniform (with difficulty) was provided and the Defence Minister lead the regiment to Parliament House. Boots and saddles was called at 0830 and we departed the show-grounds at 0900 for a march via Northbourne avenue to Parliament House. The march was uneventful but awe inspiring, as it is not often that you would see nearly a kilometre of horseflesh trotting down Northbourne avenue.

All went well until Lake Burley Griffin bridge was reached as a number of horses took objection to the joining gaps in the road. The Federal police came to the rescue by obtaining a length of carpeting and covering the gaps.

The IBC formed up in front of Parliament House and were reviewed by the Prime Minister. All went well until the band struck up a march and the RSM's horse, who had dosed off during the wait, woke with a fright and decide to test the RSM riding skills.

March and parade at war memorial

Departed for War Memorial at 0900 with a march past down Anzac Avenue and a review at the War Memorial.

The camp proved a complete success and all who attend had some wonderful memories and experiences for future years. Canberra probably had not seen so many horses on its streets since federation.

One of the comments most voiced was that there was no memorial in Canberra for the Boer War even though it marked the birth of the Australian Army. Discussions took place with interested parties regarding the possibility of erecting a Boer War Memorial in Canberra but did not get past the good idea stage until 2003 when Colonel John Haynes approached myself and Ray Atkinson to take it on as a new project under the RAACA umbrella.

A committee was formed and planning began. After a slow start and a number of committee changes the group was reformed as the Boer War Memorial Committee and planning and fund raising began in earnest. Very little support came from government organisations in the early days as we were informed the public would not be interested as most of those involved had passed on many years ago.

How wrong they were; right from the start descendants of those who took part in the war responded from all over Australia. In the end we had some 8000 on our database. The response and support from the general public was overwhelming.

The final design ended up being a realistic representation of a section of mounted troopers making contact with the enemy while out on patrol (refer feature article p1)





Australian Government

Department of Veterans' Affairs

Factsheet CEP03 - Essential Medical Equipment Payment

Purpose

The EMEP provides financial assistance to members of the veteran and defence community to help meet the additional costs of running essential medical equipment, medically required heating or cooling, or both.

Who is eligible for EMEP?

To be eligible for the EMEP through DVA the person with medical needs, or their carer must:

- be covered by a Commonwealth Government concession card issued by DVA; or a DVA Gold or White Card;
- use certain essential medical equipment or have certain conditions that medically require the use of heating or cooling in their home or be the carer for such a person; and
- be responsible for contributing to payment for the energy account.

For the purposes of the EMEP, a carer is a person who provides care and attention on a regular and ongoing basis. The carer and user must live together in the same residence. A parent or other person responsible for a dependent child would be classified as a carer, including a foster carer of such a child. The carer of a non-dependent adult may also qualify for this payment.

What type of medical equipment will attract the EMEP?

The eligible items of essential medical equipment, when powered by electricity, natural gas, liquid petroleum gas, diesel, heating oil, petrol or kerosene, are:

- Home dialysis machine
- Home ventilator
- Home respirator
- Home parenteral or enteral feeding device
- Oxygen concentrator
- Heart pump
- Suction pump
- Infant apnoea monitor (when prescribed by a medical practitioner following apnoeic events)
- Nebuliser - when used daily
- Continuous Positive Airways Pressure (CPAP) Device
- Phototherapy equipment
- Airbed vibrator
- Electric wheelchair
- Insulin Pump

Medical conditions that attract a payment for heating and cooling (continued next page)

If you have one or more of the specified medical conditions outlined below, and as a result you medically require heating and/or cooling in the home to regulate body temperature, you may be eligible for the EMEP. Your doctor must confirm in writing that you or the person you provide care to has one of the medical conditions listed.

- Spinal cord injury at or above the T7 level
- Stroke
- Brain injury
- A neurodegenerative disorder
- The muscular dystrophies
- Full thickness burns covering more than 20 percent of the body surface area
- Rare disorders of sweating including congenital absence or mal-development of sweat glands
- Chronic erythrodermas.

How much is the EMEP?

During the 2014-2015 financial year, the EMEP was \$147. This payment is indexed annually on 1 July each year.

How can I claim the EMEP?

To apply for EMEP, please fill out the applicable form and return it to DVA:

- [D1342 Essential Medical Equipment Payment - User's Claim](#), if you are the user of essential medical equipment
- [D1340 Essential Medical Equipment \(EMEP\) Carer's Claim](#), if you are a carer of a person using essential medical equipment
- [D1341 Essential Medical Equipment Medical Confirmation](#), if your essential medical equipment was not provided by DVA

Where and how will payments be made?

Once your EMEP claim has been assessed you will receive an advice letter regarding the outcome and if successful, when you can expect payment. The EMEP will be paid into the account nominated on your EMEP application form. This payment only needs to be claimed once. Payments will be made each year thereafter on the anniversary of the claim.

What is considered a valid residence to claim the EMEP?

To receive the EMEP, you will need to reside in Australia on the date that you apply for the payment and on the anniversary of this date in subsequent years. The EMEP is not available if you are in residential care, hospital or other medical facility, residential rehabilitation centre, jail, or a detention centre.

Can I claim more than one EMEP per year?

Yes. Claims may be made for up to a maximum of two residences, for each piece of essential medical equipment for the person with the medical condition, in a single financial year, provided you continue to own or contribute towards the energy account in the second residence.

Can I claim EMEP if the equipment was not supplied by DVA?

Yes. If the equipment is on the list of essential medical equipment, you are able to claim the EMEP. You will need to get a Medical Practitioner to complete the [D1341 Essential Medical Equipment Medical Confirmation](#) form. The Medical Confirmation form, once completed, should be returned to DVA along with your claim form.

I am a carer for a person with medical needs who uses eligible equipment or medically required heating and/or cooling. Can I claim the EMEP?

Yes, you can make a claim for EMEP. You will need to complete the [D1340 Essential Medical Equipment \(EMEP\) Carer's Claim](#) form. The person with medical needs whom you are caring for will need to also sign the form.

I am not the energy account holder. Can I still claim the EMEP?

If you, or your partner, or the person with medical needs or their partner contribute to payment of the energy account you may still be eligible. The Department may require you to provide proof at a later date that you contribute to payment of the energy account.

More Information

DVA General Enquiries

Metro Phone: 133 254 *

Regional Phone: 1800 555 254 *

[Email](mailto:GeneralEnquiries@dva.gov.au): GeneralEnquiries@dva.gov.au

[DVA Website](http://www.dva.gov.au): www.dva.gov.au

[Factsheet Website](http://www.dva.gov.au/factsheets): www.dva.gov.au/factsheets

* Calls from mobile phones and pay phones may incur additional charges.

Related Factsheets

Hornsby RSL ANZAC Parade 2015

- [CEP01 Clean Energy Supplement](#)

Related Forms

- [D1340 Essential Medical Equipment \(EMEP\) Carer's Claim Form](#)
- [D1341 Essential Medical Equipment Medical Confirmation Form](#)
- [D1342 Essential Medical Equipment Payment - User's Claim Form](#)
- [D1343 Essential Medical Equipment Payment \(EMEP\) Information Brochure](#)

Disclaimer

The information contained in this Factsheet is general in nature and does not take into account individual circumstances. You should not make important decisions, such as those that affect your financial or lifestyle position on the basis of information contained in this Factsheet. Where you are required to lodge a written claim for a benefit, you must take full responsibility for your decisions prior to the written claim being determined. You should seek confirmation in writing of any oral advice you receive from DVA.

Last updated 6 December 2016

Steel Beasts!

Steel Beasts (SB) is the name for a family of tank simulators created by eSim Games for Microsoft Windows. Its subject is contemporary combined arms tactics (with emphasis on modern armoured fighting vehicles) at a company scale. As a consumer game, it is a genre mix of strategy game, action game, simulation game, and wargame of fairly complex gameplay.

Steel Beasts (More colloquially known as SB to its fans) is distinguished from other simulators by a faithful reproduction of tactical manoeuvres and Fire Control Systems as well as various other military facets than when compared to other simulators. The sound samples are mostly authentic having been recorded from some of the actual armoured fighting vehicles depicted in the simulation.

Steel Beasts models a number of modern armoured vehicles such as the Russian T-80, the German Marder, and a variety of armoured personnel carriers. Steel Beasts lets you assume the tank commander's or gunner's seat in the Abrams and Leopard 2, as well as move to an external camera view in each vehicle. The variety of units in the game (including infantry) allows for a wide range of different scenarios.

It also illustrates how difficult tank gunnery actually is. Like your real-life counterparts, you'll spend a lot of time on the gunnery range (almost a game in itself) honing your skills.

Steel Beasts isn't just a simulation. It's also a wargame, thanks to its detailed planning phase where you, as the mission commander, choose routes and waypoints for your units and issue contingency orders. Because it's impossible (and undesirable in a sim) to be in control of every tank at all times, the orders you give to your units at the beginning of the battle can have a huge effect on your chances of success. You can order a tank platoon to hold a certain position until it takes a certain number of losses and then to retreat to a holding position that you specify. The dynamics of battle in Steel Beasts are complex but easy to manage.



Because the game tries to simulate the gunnery functions in the Abrams and Leopard as closely as possible, Steel Beasts is not an easy sim to get into. The learning curve is quite steep, and it consists of far more than just jumping into a tank and cranking up that big gun.

Steel Beasts also excels as a multiplayer game - when you're facing a human opponent, the combination of advance planning, tactical coordination, and gunnery skill is put to the ultimate test. While the computer's artificial intelligence is very good, nothing quite compares to a head-to-head duel where both your forces and those of the enemy are controlled by live players. This sort of competitive play, translates well to Steel Beasts' world of ground-hugging metal monsters.

Customized versions of Steel Beasts have been adopted by the armies of Austria, Denmark, Sweden, Norway, Finland, Chile, Canada, Australia, Spain and USA for training purposes. The program is also available as a stand-alone personal PC edition for the trooper or anyone interested in armoured warfare.

Terrain Modelling and the Future (extract from SB Marketing)

Simulations are used for training; they are used in research and experimentation. And yet, the vast majority of experimentation and training is taking place in synthetic terrain that is usually based on elevation data with a mesh width of 30m (DTED2), if not worse. There are a number of reasons for that – availability and budget restraints are often named – but in addition, often the underlying simulation can't handle better quality.

Even though the terrain may appear quite realistic at first sight, anyone working in the business of delivering training to the warfighter must be aware that the human eye and brain are complicit in the business of making the human observer believe "being there", willing to suspend disbelief, willing to yield to the overwhelming firepower of visualization. The latter part is hardest to bypass – but as it is also a common issue for every single virtual simulation The DTED2 30m grid data were entirely useless without

Experimentation with LIDAR scan based terrain databases clearly show that simulated outcomes are often shockingly different when comparing them with conventional databases. Armoured vehicles and anti-tank missiles designed to maximize their stand-off advantage suddenly find themselves outnumbered and in duel situations of under 500m range in terrain where the old database predicted long lines of fire.

Even where the terrain is mostly flat, an elevated railway embankment may create considerable dead space in which a lot of bad surprises can be hidden. Even minor depressions create opportunities for ambushes. In fact, ambush becomes the default tactic for defenders in almost every scenario where 10m grid databases rarely offer suitable places to hide effectively:

Article reprinted from: From Wikipedia, the free encyclopedia and www.steelbeasts.com

The subscriptions for the new financial year starting the 1st July, 2017 are now due for the RAAC Association (NSW).

- Full Life Subscribers;
- Subscriptions Paid in Advance (3 Year Subscription);
- Members over the age of 75 years (at the start of July);
- Life Members and Widows.

Payment Methods:

- The usual rates apply: \$20 for one year or \$50 for three years. For any questions on membership please check the RAACA Website.

Paying on this reminder helps the volunteer Committee and avoids getting a written reminder.

Why Russia's New Tanks Are A Wake-Up Call For The US

By Christian Beekman on May 22, 2015

Russia's recently unveiled T-14 Armata main battle tank could mean big problems for the U.S. in future confrontations. Here's why.

During its annual May 9 Victory Day Parade commemorating the end of World War II, the Russian military brings out the most striking examples of their ground force vehicles. This year, they publicly unveiled what is possibly the most ambitious ground vehicle program since the end of the Cold War. The Armata Universal Combat Platform is Russia's attempt to make a interconnected family of tanks, infantry fighting vehicles, armoured personnel carriers, self-propelled guns, and other vehicles. The centrepiece is the T-14 Armata main battle tank, a radical design that highlights a troubling lack of fighting vehicle development in the West.

The T-14's biggest departure from traditional tank design isn't quite evident from photos. The turret is completely unmanned; instead, the three crew members operate the tank in a compartment at the front of the hull. This provides several advantages. There is more room in the turret for armament; currently, the T-14 is equipped with the latest upgrade of Russia's standard 125mm tank gun, the 2A82A; in addition to the wide variety of Russian armour-piercing and high-explosive shells available, the gun is also capable of firing anti-tank guided missiles. According to the technical periodical, Jane's Defence Weekly, additional armament could be provided in the form of a co-axial 30mm autocannon and PKT machine gun, giving the T-14 the ability to engage a wide variety of targets. The remote turret could also theoretically allow a single crew member to manoeuvre and fire the T-14's weapons, albeit much less effectively.



New Russian military vehicles, including the new Russian T-14 Armata tank, foreground, make their way to Red Square during a rehearsal for the Victory Day military parade, in Moscow, Russia, Monday, May 4, 2015.

AP Photo/Alexander Zemlianichenko

The turret is notably taller than previous Russian designs and contemporary Western tanks; a tall profile hinders the ability of the tank to go "hull down" behind cover, a quintessential tactic of armour warfare. But the larger turret could possibly accommodate a larger 152mm main gun, increasing the T-14's firepower even more. Another possible trade-off involves the crew compartment; while the front armour of most tanks is often the toughest, the T-14 crew will certainly be the first to know if any rounds do get through. Some designs, like the Israeli Merkava, have moved the engine to the front in order to provide more protection for the crew for exactly this reason.

The T-14 crew may not have to worry, however. In an unprecedented shift to prioritize protection over mobility, which shaped the design of many Soviet tanks, the T-14 will incorporate several active protection systems designed to kill incoming missiles before they even strike the tank. The tank also features explosive reactive armour as an inherent part of the design, providing an increased defence against projectiles. Completing the defence are slat armour panels at the rear, which provide some protection against shoulder-launched anti-tank weapons. The overall armour composition is new, but its makeup is unknown. It is likely similar to the "Chobham" and "Dorchester" composite armour developed by the British Ministry of Defence, putting it on par with tanks used by NATO nations.

The T-14 features a new target and sensor package, including an active electronically scanned array radar suite derived from a fighter jet, enabling the T-14 to track multiple targets simultaneously and provide automatic ballistic solutions to the gunner. The commander has day, night, and thermal optics in a remote systems that also features a machine gun similar to the American Common Remotely Operated Weapon Station.

The T-14's massive improvements may seem shocking, but the truth is the Russians have pioneered new tank designs for decades. Professor Richard Ogorkiewicz, a armour expert who has studied tanks since the early 1960s, explains in his book "Tanks: 100 Years Of Evolution" that the Russians always considered tanks an important part of ground warfare, whereas the West questioned the future of the tank several times during the Cold War. This was notably seen in the aftermath of the 1973 Yom Kippur War, where Israeli tanks counter-attacking against Egypt and Syria took heavy losses from AT-3 "Sagger" anti-tank guided missiles. Ogorkiewicz elaborates: On the Sinai front, the successful assault crossing of the Suez Canal by the Egyptian forces was followed immediately by counter-attacks by the Israeli 252nd Division, which ran into Egyptian infantry equipped with an exceptionally large number of Soviet-made Sagger anti-tank guided missiles and failed, losing 165 of its 268

tanks. This immediately led to worldwide rumours that tanks were no longer effective and it took some time for these to be disproved by the evidence provided by the rest of the Yom Kippur War, in which many more tanks were destroyed by the guns of the opposing tanks than by guided missiles.

Western tank development has ebbed and flowed, whereas Russian armoured vehicle research remained almost a constant. Several NATO allies have dominated their armoured forces in comparison with the Russian Federation, as Ogorkiewicz explains: ... the size of the Western European tank fleet was reduced to a fraction of what it had been. Thus, major Western European armies, such as those of Germany, France, Britain and Italy, were left with no more than about 200 tanks each... But elsewhere tanks have continued to be viewed as a major element of military strength. In particular, the army of the Russian Federation has maintained a fleet of 2,000 to 3,000 modern tanks backed by a reserve of several thousand older vehicles...

That trend seems to have continued. The current American main battle tank, the M1A2 Abrams, is an improved version of a design from 1979. The Abrams is good tank, and the performance of its predecessor, the M1A1, in the Persian Gulf War is often cited as proving its superiority over Russian tanks like the T-72. In the decisive engagement at the Battle of 73 Easting during the Gulf War, one particular troop of 12 M1s destroyed 28 tanks, 16 armoured personnel carriers, and 30 trucks in less than half an hour. But as Victor Suvorov, a member of Soviet military intelligence who defected to the West, explains, the Gulf War performance is misleading because the Soviets provided greatly simplified version of equipment for export to foreign nations, called "monkey models."

Suvorov writes: It is intended that the 'monkey-model' approach will be used not only for building tanks, but for all other sorts of equipment-rockets, guns, aircraft, radio sets, etc. In peacetime these variants are turned out in large quantities, but they are only issued to countries friendly to the Soviet Union. I have seen two variants of the BMP-1 infantry combat vehicle-one which is issued to the Soviet army and another which is intended for the Soviet Union's Arab friends.



The "Lion of Babylon" T-72s, used by the Iraqis during Desert Storm, did not necessarily represent the full capabilities of the Russian design, especially given the inferior training of Iraqi tank crews. There's also the fundamental fact that the T-72 was designed to be a cheap, mass-producible tank in order to ensure numerical superiority against NATO armour in Western Europe.

Therefore, the overmatch the Abrams enjoyed may fast be disappearing. Plans to upgrade the tank to "M1A3" status won't happen until at least 2020, and its modest changes of upgraded electronics and a lighter 120mm main gun won't put it on par with the T-14. Tanks from the South Korea and China have leap-frogged the Abrams in terms of fire-control capability.

The Army plans to keep the Abrams design until 2050, after the Ground Combat Vehicle program intended to replace many ground vehicles was cancelled, itself replacing another cancelled program called Future Combat Systems Manned Ground Vehicle.

Even then, upgrading the Abrams presents problems. The M1A3 upgrades assume the 120mm cannon and associated ammo will be sufficient to engage modern tanks like the T-14. 120mm guns are about the heaviest tank calibre able to accommodate a human loader. While the United States has experimented with a 140mm gun, it has never put an autoloading tank into full production. "Up gunning" the Abrams would require a redesign to fit an autoloading system. Then there's the armour. While it was very effective in 1991, the Abrams' composite armour has proved vulnerable to IEDs and tandem-shaped charge warheads. There's also two of the more glaring flaws of the Abrams. Its heavy at over 60 tons, making it difficult to airlift. And it has a gas turbine engine, that while powerful and relatively quiet compared to the diesel option, guzzles gas and limits the tank's range.

According to reports, the Russian military intends to purchase 2,300 T-14s over the next five years. With the struggling Russian economy, it's likely that Armata-based vehicles will be offered for export in order to offset the cost. Even if the Russia continues the "monkey model" policy for export gear, a downgrade T-14 could still stack up well against Western tanks, like the Abrams, Leopard 2, and Challenger 2. If the United States and its allies continue to assume their tanks are adequate for future confrontations, they may find out what the Iraqi experience was like at 73 Easting.

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www.teodor775.wix.com/3d-tank
E-mail: teodor775@mail.ru

This is shown on
Russian sites as the new
T14?



The Armata: the World's First Post-War, Third-Generation Tank

Tactical and Technical Specifications of the T-14 Tank

Main gun (2A82)	125 mm
Cannon ammunition stores	45 rounds
Automatic loader capacity	32 rounds
Combat firing rate	10-12 per min
Target detection range	>5,000 m
Target attack range	7,000-8,000 m
Engine	1200-2000 hp
Engine replacement	0.5 hour
Maximum weight	48 tons
Maximum speed	80-90 kph
Travel reserve	>500 km
Armor strength	>900 mm
Crew	3 personnel

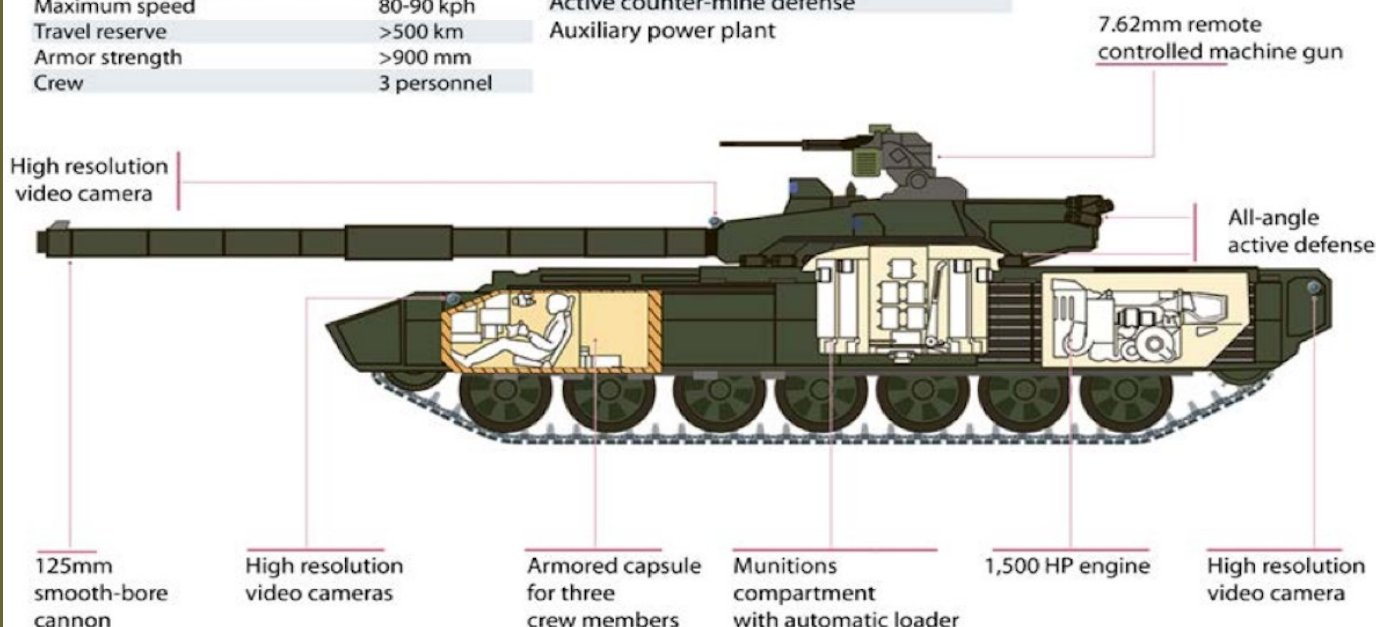
Firing in motion
 Commander's panoramic sight
 Circular view cameras
 Heat sensor
 Afganit active defense system
 Dynamic defense system
 Fire aiming and control system
 Combat C2 and navigation system
 Active counter-mine defense
 Auxiliary power plant

Engine

Four-cycle, X-shaped, 12-cylinder gas turbine super-charger with intermediate air cooling

Carburation System

Direct fuel injection



Vale Laurie Fisher

It is sad to note the passing of Laurie Fisher. Laurie served with the Regiment as a Centurion driver and gunner from 1956 to 1960.

Laurie did not have a funeral service, instead a private cremation was held. However, a memorial service was held on 11 May 2017 at the Salvation Army Chapel, Weroona Nursing Home, Bass Hill.

sincerely,

John Howells, Hon Secretary

Royal New South Wales Lancers Association

john.howells@lancers.org.au www.lancers.org.au

Lest we Forget We regret to advise the passing of the following members

Mr	LL	Lyall	Green OAM	12/16HRL
Mr	AC	Alf	Diggerson	UNK
TPR	E	Eric	Hansen	2/6 AR C Sqn
LTCOL	FW	Frederic	Deane	1 AR (N Sqn) 7/21 Aust Horse
Mrs	A		Hartridge	Widow (1AR (AIF))
LTCOL	J	John	Crossman	1 2 3 Cav 4/19 3/4 cav
Mrs	AL		Cabban	Widow of Laurie (3 Cav Regt)
Mr	RW	Ralph	Berman OAM	UNK