

EME



JOURNAL

The Magazine of the Electrical and Mechanical Engineering Branch

POST COMBAT MISSION AFGHANISTAN

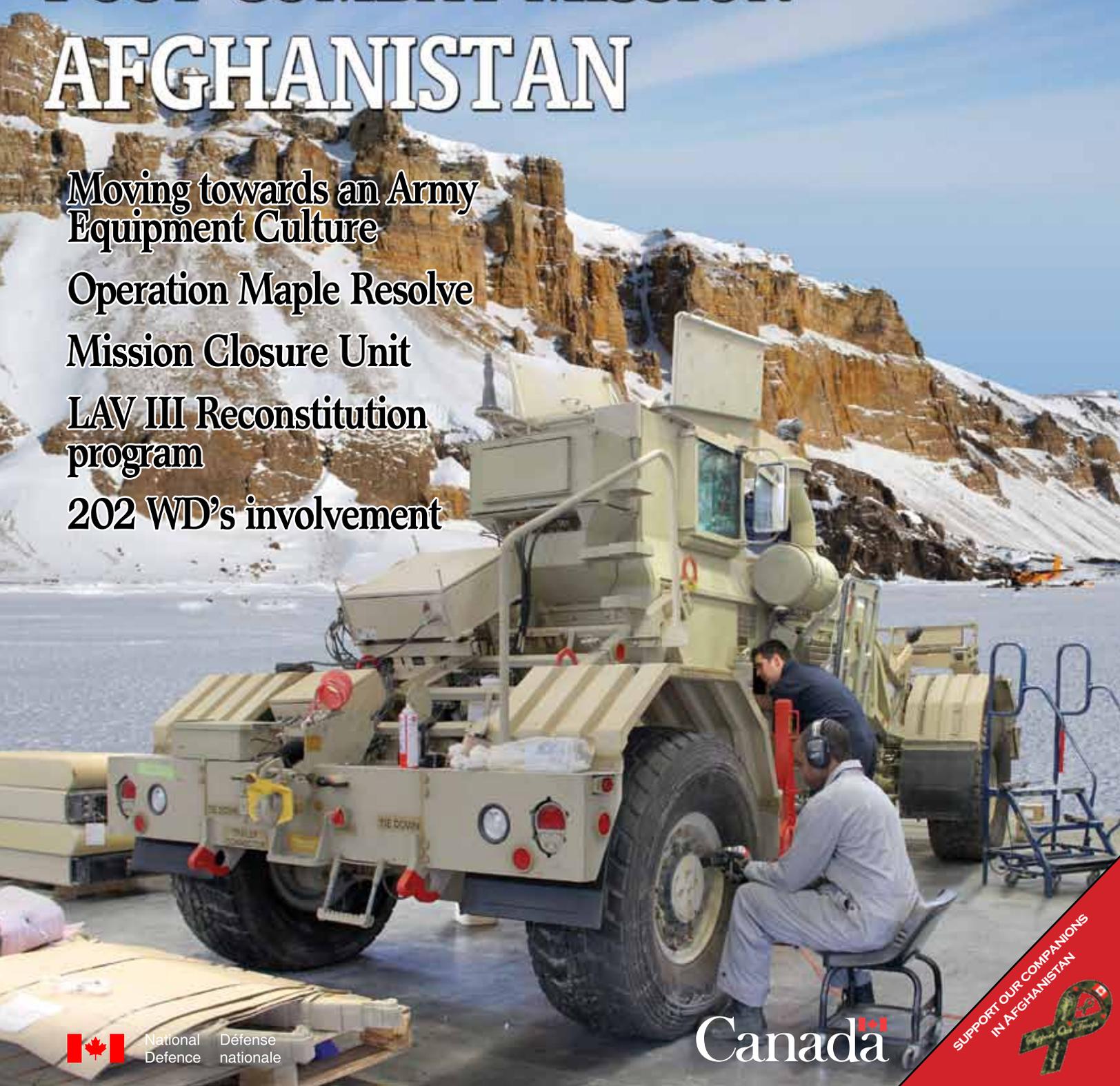
**Moving towards an Army
Equipment Culture**

Operation Maple Resolve

Mission Closure Unit

**LAV III Reconstitution
program**

202 WD's involvement



National
Défense

Défense
nationale

Canada

SUPPORT OUR COMPANIONS
IN AFGHANISTAN



The Last RCEME Apprentice Reunion

On the weekend of October 14th, 2011, approximately 150 Ex-Apprentices and members of their families from across Canada and the U.S.A., gathered to celebrate the last of nine reunions of the RCEME apprentices. The Apprentice program began in 1953 in Kingston, ON, and was disbanded in 1968, with the graduation of 30 Platoon, the final intake.



Half the attendance



*Apprentice Honour Roll being read by
RFB (Ret'd) & (Ter) Leung*



*Signature honoring the RCEME
Apprentice Army & Coast*



The other half



To those 1,010 boys who had the courage to leave their homes and become RCEME Apprentices.

To those 16-year-old Apprentice soldiers better known as the "the kids", "the snotty noses", or "the green monsters", who learned to wear the green flash with so much pride.

To all of those Apprentices who became Craftsmen, and spent their military careers closing with and fixing kit in Canada and abroad.

To all of those today who proudly wear their badge on their blazer, and never forget the time they were once Apprentices.

To those Apprentices who have made the ultimate sacrifice while wearing the Horse.

And finally, to all of you Apprentices, who tonight, a platoon at a time, proudly stand next to your comrades for this final roll call.

« Ladies and gentlemen, please join me in a toast to the RCEME Apprentices »

- Col N. Eldaoud



*Horse woman Joan Cochran-Lyle
presenting «My Silver Autos»*



The commemorative ceremony was highlighted by the presence of My Silver Auto, better known as "Fred", a beautiful white horse representing the horse on the badge of the RCEME/EME Soldiers of Canada. The flag covering Fred's back was originally presented to the Apprentices by the first commanding officer of the Apprentice Training Program, Major "Shorty" Lodge. Over the years this flag has been signed by all of the Apprentices who have attended the reunions.



McGinn (Ret'd) Lewis MacKenzie

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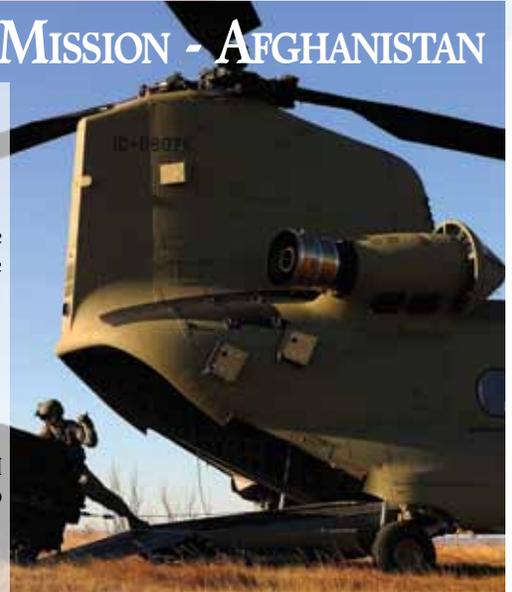
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Branch Advisor's message

Need For an Equipment Culture and Technological Advice

Col N. Eldaoud, EME Branch Advisor

Although the Canadian Army is still very involved in operations in Afghanistan, the end of our combat mission turns an important page in our history. So it was appropriate for the Army and the EME Branch to take a step back to learn from the experience and determine how to prepare for the next mission.

Combat operations in Afghanistan have clearly demonstrated that the Army is now supported, surrounded and faced with weapons systems whose technological level is increasing and becoming more complex. Thus, the technological advances of the LAV III which, at first glance may appear to be a considerable tactical advantage may as well prove to be a serious danger when the technology is poorly understood.

It is in light of this background that the Army must adapt to the new reality, EME must position itself to become the source of information and technical advice that will enable commanders at all levels to make the maximum technological advances. Thus, I am convinced of the need for the emergence of an equipment culture within the Army and, consequently, the introduction of new responsibilities, authorities and technological expertise and engineering in senior technicians and EME officers serving within the units and formations of the Army.

It is within this context that I have presented this view to Army Council on 22 February. Much of the text that I used that day can be found on page 6. You'll

notice that I used very concrete examples to illustrate the importance of changes that I think, have become essential for the Army and the EME Branch. I then argued

« It is in light of this background that the Army must adapt to the new reality, EME must position itself to become the source of information and technical advice that will enable commanders at all levels to make the maximum technological advances. »

the importance of an equipment culture for the Army and the need for EME to answer the call with a highly developed level of technological and scientific expertise at the tactical level.

This article speaks to the relationship that the Army should have with its equipment and the future mandate of EME. I invite you to read it and provide feedback.

I do not know if the changes, I believe necessary, in the Army's equipment culture will have been put in place by our next deployment. Indeed, a cultural change is a long-term business. Meanwhile, I know that the EME Branch will, as it's always done, continue to devote itself to support the Army and participate in its success.

In conclusion, I would like to invite you to read the other articles related to the theme in this edition. They describe very well challenges the Branch will face in this post-combat mission period. Being the reconstitution or operations in Canada's North, future challenges will be numerous and diversified. I know we will be able to face them.

Finally, please let me thank the EME Journal's production team, especially Annie A.-Bélanger and 2Lt Beauvais-Beaudry who worked hard in order to offer us a full-color journal. This change, coordinate by Annie A.-Bélanger will give us new possibilities and a journal that will be admired enviously. I am proud of it, congratulations.

Arte et Marte.

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The Journal of the EME Branch

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Branch Patron Saint Saint Jean de Bréboeuf
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Commandant Col N. Eldaoud, CD, MSC
Branch Advisor CWO JBA Bergeron, MMM, CD
Branch Chief Warrant Officer



Branch Chief Warrant Officer's message

EME Post Combat Mission in Afghanistan

CWO JBA Bergeron, EME Branch Chief Warrant Officer

So here we are. We all knew deep inside that Canada's combat mission in Afghanistan would one day come to an end. After years of combat and specific training in theatre, the Electrical and Mechanical Engineering (EME) Branch now needs to regroup, reposition and, above all, thoroughly evaluate its strategic position going forward.

Have no fear; our MPs and our government will be quick to find a new place where the Canadian Forces (CF) can put to good use all the knowledge they've gathered over the last 20 years.

In the meanwhile, we EME Techs have the job of returning all of the Army's weapons systems to operational status as quickly as possible to ensure success in the future. This is most certainly no easy task, and I am sure that a minority of our techs have felt a difference in tempo since the mission ended.

Certainly, we've heard our leaders state that CF members will carry on following a break in operations. I know for a

fact that EME techs do not have such a break for a multitude of reasons. When our troops go into battle, we have to make sure that they are capable of using their weapons systems and will emerge victorious. When the troops withdraw into a strategic position or take a break, we have to make sure they can be battle ready without delay and with as many weapons systems as possible.

That is the challenge we face as EME Techs, and that will never change. It will always be the duty

of EME Techs to ensure that our combatants have the best possible state-of-the-art equipment so they can survive on the battlefield.

That is the mandate we have chosen and are proud to uphold. Certainly refurbishing our equipment will be a colossal task and, to add to that, the DGLEPM troops will be busier than ever. Synchronizing the distribution of required spare parts and locating the troubleshooting equipment — most of which is scattered across Canada — has to be done as quickly as

« That is the challenge we face as EME Techs[,] It will always be the duty of EME Techs to ensure that our combatants have the best [...] equipment »

possible. And adding to the pressure is EME's backlog with regard to tech training. The School of Electrical and Mechanical Engineering is and will continue to be under great pressure, not only with respect to its DP1 courses, but also when it comes to updating lesson plans and integrating new technologies.

I should also mention all of the EME members who are working on the acquisition of a considerable amount of new technology while ensuring that the lessons learned over the last 10

«[...] wherever there's an EME Tech, there's pressure to deliver the merchandise.»

years at great cost are taken into consideration and will be applied to keep the Army aware of interesting developments around the world. As you've seen for yourself, wherever there's an EME Tech, there's pressure to deliver the merchandise. And, as usual, we will get through

this post-combat-mission break without even thinking about it, since we face a host of very different challenges regardless of where we work. Let's remember that, while

our government may have decided to give its troops a break, many of our techs are deployed to different operations across the world, and they are most definitely not on a break. I am sure of one thing though: we'll all work tirelessly to make sure the Army will be able to start where it left. And for EME Techs, my friends, that's our bread and butter. For us, fulfilling this mandate is a matter of pride.

Arte et Marte

Call for Articles 2nd Edition 2012

Theme for next edition : EME as leaders everywhere

We invite you to send your articles and photos relating to the above mentioned theme and categories (maximum of 500 words). Please send your photos in a distinct JPEG file format rather than directly in the "MS Word" document used for the text. The photos must be at least 300 dpi (dot per inch), and 5"x7" of size or more to qualify for the cover page. The author of the article and people portrayed in the photos must be identified at the end of the article as follows: Rank, initials, last name, trade and unit. **Deadline for submitting your article is July 13, 2013.** We reserve the right to select articles and to modify the texts according to the space available.

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Moving towards an Army Equipment Culture

Col N. Eldaoud, Branch Advisor

To begin, let me tell you a story. As CO of the NSE in Afghanistan in 2007, I was often traveling around to the Forward Operating Bases (FOBs) making sure the support operations went well. One day, I was in FOB Mas'um Ghar, and witnessed a platoon getting ready to conduct a short routine "Presence Patrol".

As I was watching those four LAVs being prepared, one of them was loaded with so much ammunition that there was no room left under the seats for the M-72s (it was before the Impact Seating Systems were introduced) and it caught my attention. These M-72s were left on the floor. At that moment, I knew something was not right as I could not stop myself wondering what would happen if an IED was to hit that LAV.

This event, along with several others I have been apprised of, taught me two major lessons. First, tactical land equipment operators do not have a proper appreciation of the limits and vulnerabilities of the technology surrounding them. They clearly understood and expertly exploited the tactical capability of their LAV, but didn't understand the limits of technological capabilities at their disposal. The second lesson I learned was about myself. There I was, a senior EME officer and witness to this situation, realizing that I was incapable of professionally advising the Company Commander on the potential risks associated with this practice. Never was I trained, mandated or given the technical documentation to professionally advise the operators on such a matter. Technology is inherently fragile and I felt that I should have been able to offer council and facts about the effects of IEDs on the LAV from a survivability point of view, or talk about the limits on mobility imposed by extra weight on the LAVs. Thus, I should have been able to provide a tactical leader with essential technical intelligence needed to make informed decisions about the equipment; but I just couldn't.

This example depicts a certain reality in our Army today: Systems and weapon systems of the Army are getting more and more technologically complex and advanced, and are part of who we are more than ever. They are one of our best assets, but left ill maintained and misunderstood, they can become our worst limitation.

It is in the context of supporting the Army's Readiness and to provide Commanders at all levels with the operational advantage to exploit the full spectrum of technological advancement of their equipment that I recommend that the Army supports two important initiatives: (1) to embrace a more aggressive equipment culture and (2) to introduce a new land equipment engineering capability in our tactical units.

1. An Equipment Culture

The Army Commander has clearly stated that readiness is about soldiers being supported by leadership, training and equipment (figure 1).

Therefore all of these four pillars (sub-cultures) need to be part of our Army's culture of readiness. Among those four, the equipment sub-culture is the least developed in the Army.

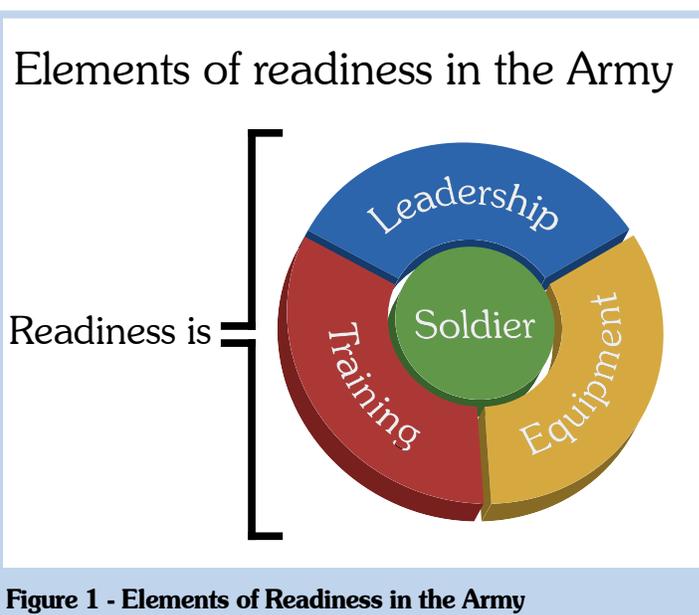


Figure 1 - Elements of Readiness in the Army

To alleviate that fact, some guiding principles should be adopted. The principles of a well balanced equipment culture are:

1. The soldier must be convinced that his equipment is essential to his ability to move, fight, survive and succeed in today's battle space.
2. The soldier must understand that the systems and weapon systems are sophisticated pieces of technology and inherently fragile.
3. The soldier must seek to use his equipment to its full extent, along with the basic commitment to be personally involved in the ongoing upkeep, checks and verifications.
4. The Chain of command needs to acknowledge that equipment is as important as the rest of the readiness pillars (people, leadership, and training) and that time and efforts must be invested equally toward them.
5. The chain of command should treat equipment malfunction and failures as unacceptable and unnatural phenomena.
6. Finally, Commanders must better understand the extent and limits of the technologies associated with their equipment.

Such an equipment-based culture in the Army will not only ensure better readiness and operational success, but will also significantly increase equipment availability.

2. EME as Land Equipment Engineers in Units

EME needs to actively participate in the equipment culture. As combat soldiers get closer to their equipment, EME will have to go back to one of its most important tenets: “repair as far forward as possible”; if combat soldiers are going to embrace a culture of equipment, EME must commit to be there with them.

The second commitment of EME will be to introduce a new tactical Land Equipment Engineering capability. This is not about more EME troops, but rather about more EME expertise and advice.

I see EME Officers and WO being able to bring all the up-to-date technological knowledge to the fight. This implies a change in the occupational structures. Craftsman to Sgt would remain focused on

maintenance, but WOs and Offrs would assume the roles of Artificers and Land Equipment Engineers in Army units and formations, looking at the equipment from a perspective of mobility, lethality and survivability.

To put this initiative in context, I see this as being two perspectives of the same mission (figure 2). This unprecedented union between the combat arms and their land equipment experts will not only contribute to the Canadian Army’s level of readiness, but will provide tactical Commanders the operational advantage to exploit the full spectrum of technological advancements by exploiting Land Equipment Engineering at the tactical level.

Embracing an equipment-based culture will be an Army and chain of command initiative. Introducing Land Equipment Engineering in unit will be our EME contribution.

As EME, we are now faced with an extraordinary challenge of transforming to become a technical Branch involved in operations like never before. I know that we will be up to the task as this Branch always has been in the last 70 years.

What this is/is not

In summary, this is not about more troops, it is about:

- A necessary evolution in the Army, based on our battle experience and on the reality of our higher reliance on our equipment and on the increasing complexity of our technology;
- providing an operational advantage to the Commander in order to properly exploit the technological advancement of its systems and weapons systems;
- saving soldiers lives and allowing them to get the maximum out of their equipments; and
- Changing the nature of our Maint O and ETQMS, arming them with the ability to advise the chain of command.

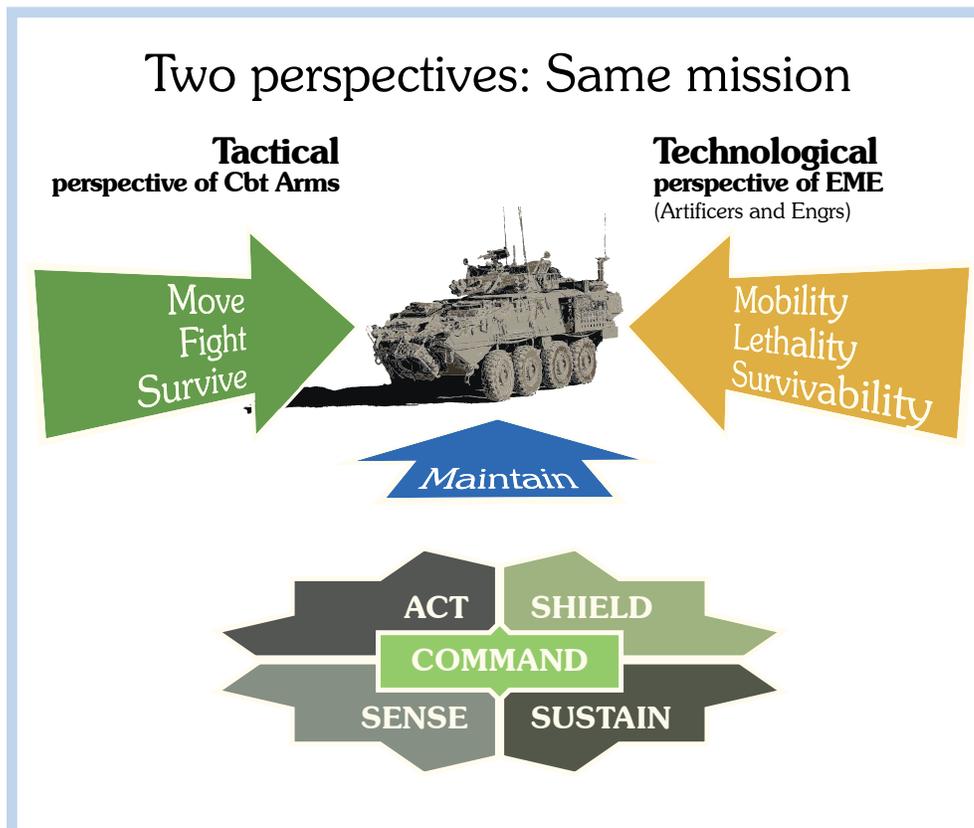


Figure 2 - Two perspectives - Same Mission
The Tactical versus the Technological Perspectives

The aim of this initiative is to give a unifying purpose to every player in equipment culture. The combat arms, supported technologically by EME technical advisors, will have a better understanding of the Sustain function; on the obverse, EME Engrs and Artificers will be involved in the Act, Sense and Shield functions through their comprehension and advice on survivability, mobility and lethality of the equipment.

Exercice Maple Resolve

By Captain M. Winsor

“Why are we doing it this way?” was sometimes asked in Wainwright on Exercise MAPLE RESOLVE. We have gotten comfortable with the business of Afghanistan and with good reason; however, we find ourselves in a position where Afghanistan is winding down and our skill-sets have become very specific.

Exercise MAPLE RESOLVE was the perfect opportunity to address this issue for 2 Service Battalion. Given that this was the first time since 2003 that the Battalion had deployed to Wainwright, we knew we had our work cut out for us.

As any Combat Service Support professional can attest, the challenges of moving your own unit are compounded by the fact that your priority is to move every other unit within the Brigade at the same time. Timelines were hectic, transportation requirements were incredibly complex and VOR rates a constant challenge. Nevertheless, it all came together and in no time we were in Wainwright.

While one phase of the Exercise was complete, there was no time for celebration. Camps needed to be established from scratch, final planning needed to be conducted with Canadian Manoeuvre Training Center (CMTC) and we had to support the main Brigade reception, staging, and onward movement (RSOM). As a Combat Service Support unit, we came together and our confidence increased with each passing day. By the end of Exercise MAPLE RESOLVE we were providing full tactical 2nd line Combat Service Support while simultaneously conducting Battalion level hide occupations, and planning to support the Brigade redeployment to Petawawa.



PHOTO: MCpl Gaudreault, Canadian Forces Combat Camera

Members of the 3rd Battalion, The Royal Canadian Regiment, load equipment aboard a Chinook CH-47D US Army helicopter during Exercise MAPLE RESOLVE 1101 in Wainwright, Alberta, on October 23, 2011.

Maintenance Company gained the well-deserved reputation of having the ability to recover any vehicle from any environment; tasks that were border line impossible were made to look like any normal job regardless of terrain or enemy activity. Transportation Company worked a relentless schedule of moving sea cans, troops and stores throughout the training area. Supply Company provided everything from foot powder to artillery ammunition. Demands for supplies were high, but Supply Company always seemed to be a step ahead of the requests. Administration Company kept focus internally, ensuring the other companies got the support they needed and running the Camp in Peregrine 4 Wainwright. Log Ops was a continual bee-hive of activity managing multiple radio nets, LCSS chat, e-mail, and telephone all at the same time.



1 & 2. Members of Admin Coy assembling a Mech Shelter. 3. Admin Coy Mat Tech making modifications. 4. Vehicle Tech working hard repairing an HLVV.

By the close of Exercise MAPLE RESOLVE, 2 Service Battalion had gained a tremendous sense of accomplishment and the confidence to do anything. At this point soldiers had stopped asking “Why” and moved on to “This is what we can do: provide Combat Service Support to 2 CMBG in every facet within the spectrum of war.”

Mission Closure Unit

Major G.B (Bruce) MacGregor, OC Maintenance Company, Mission Closure Unit

15 Nov 2011, Kandahar Airfield (KAF)

Today marked the formal closing of the vehicle production line of the Mission Closure Unit, the main effort for Maintenance Company since production ramped up in June 2011.

In reality however, the majority of the work was completed under the oppressive heat of the summer months, allowing the company to take it's collective foot off the gas from mid-October onwards to focus on drawdown and turn in of our equipment and tooling. Hard work at the front end paid off, and our troops were up to the

vigour and technical acumen by an exceptional group.

At our peak, Maintenance Company paraded 157 all ranks, was arguably the most unique Maintenance Coy that has existed, and was a truly national organisation in scope. Although

not have been feasible. Lastly, support from our civilian counterparts under the CANCAP program proved invaluable.

Our success, as with all successful maintenance organisations, resided in the ability of our troops and the leadership of our MCpls, who led from



Maintenance Coy - Mission Closure Unit, Mission Transition Task Force 1-11

task. In the end 880 vehicles received some form of attention, whether just a quick check to ensure that they were safe to be moved out of theatre by air, or a full up inspection and repair effort that served to return some systems to pristine condition, ready for the next fight. This also meant that Add on Armour and Survivability Enhancements were removed, packaged and returned to Canada for 241 vehicles.

For all vehicles we looked at more than just the chassis, with an equally important and equally time consuming full inspection of vehicle turrets, weapon systems, fire control systems and communication systems taking place. The overall workload also consisted of the inspection, repair and preservation of small arms, surveillance, target acquisition and night observation devices numbering in the thousands. It was a truly phenomenal workload, which was tackled with

force generated primarily from 1 Service Battalion (Edmonton), it comprised soldiers from 26 different CF units, from St John's to

« Our success, as with all successful maintenance organisations, resided with the ability of our troops and the leadership of our MCpls, who led from the front. »

Victoria and all points in between. Most unique however were the 42 combat arms soldiers (PPCLI, LdSH(RC) and Combat Engineers) who formed Add on Armour Removal Platoon and without whom task completion would

the front. Add to this an extremely competent and experienced cadre of SNCOs, an intelligent and motivated group of junior Officers and our success – their success - should come as no surprise. MWO Bantock (CSM and ETQMS) and I consider ourselves truly fortunate to have been a part of this Company and we are thankful to the families, friends and supporters of our troops who shouldered the domestic burden in our absence.

Ten years ago, 1 CMBG and 1 ASG maintainers were preparing 3 PPCLI equipment prior to their deployment into Kandahar in early 2002 (Op APOLLO). It is immensely gratifying to have been a part of this departure from Kandahar. With our work here complete, all ranks of Maintenance Company can be justifiably proud of their role in the closure of this chapter.

The LAV III Reconstitution Program

Capt G.A. Pudlowski, DAVPM 10-4-3, LRP Coordinator

I would hazard a guess that the average EME soldier's knowledge of what "Ottawa" does is somewhat murky. Ergo, here is a brief article about one of the programs that the DAVPM 10 EMT runs. And no, even though "Ottawa" generates incomprehensible abbreviations, that is not our primary focus.

The EMT (Equipment Management Team) within DAVPM 10 (Directorate of Armoured Vehicles Program Management) is composed of about a dozen EME soldiers, one New Zealand exchange officer, some civil servants and several contractors. Our mission is to provide support to the Wheeled Armoured Vehicle fleet, and in addition, we manage several distinct programs. One such program is the LAV III Reconstitution Program (LRP). With the end of the Kandahar mission the LAV III LORIT (LAV III Operational Requirement Integration Task) fleet was pulled from theatre and shipped (and trucked) to London, Ontario for a re-set. The re-set (very similar to the old IROAN – ask your ET what that means) is being conducted by the Original Equipment Manufacturer (OEM) General Dynamics Land Systems – Canada (GDLS-C). The contract calls for full inspections, repairs, completing outstanding modifications, and then sending the resulting vehicle back to the army.



Because the LORITs are relatively "new," having come out of a Repair & Retrofit Program (RRP) in Edmonton only 6-18 months before, the intent of the LRP is not to rebuild the vehicle again, but rather to do just enough to return the wagons to a serviceable and not a "show-room" state.

This task is challenging for GDLS-C whose traditional role is the assembly-line manufacture of new vehicles. Vehicle inspections are to a greater depth than a typical 1136. All the wheels are pulled, the turret and engine are both yanked, and once out, the engine undergoes a 500 hour

servicing as well as repairs and mods. Ditto for the turret. Chassis work is quite involved and cover all necessary repairs, including welding.

Depending on the paint condition, the vehicle will get an upper hull overspray, or just touch-ups, because the Army's requirement is a serviceable vehicle, not one that looks ready for a GOC inspection (ask your ET about that one too). A fully loaded LORIT in theatre is a heavy beast due to all of the additional armour it carries. In Canada, the amour package is not a requirement. But, it is still not a bad idea to train as you fight. So, to that end, the LORITs will be FFNW - Fitted for, Not With. Some LORIT survivability enhancements will be installed such as the Impact Seating Systems (ISS) and the Exposed Crew Protection Kits (ECPK) for both the rear air sentry and the turret. Oprahesque items such as the Interim Belly Armour (IBAK) or IEDPK (I don't have to spell that one out) will



remain in storage, ready to be installed if (and when) the vehicles deploy. The most visually distinctive feature of the LORITs – the side bins – will remain installed so that the drivers maintain an appreciation for the width of the vehicle. And so the crews have room to store their kit, as the ISS takes up room that was used to store rations, rucksacks, snivel kit, etc.

Some vehicles required engineering assessments on theatre expedient repairs. For example, one vehicle had a RPG strike that was repaired in theatre. Working together GDLS-C, the EMT concluded that the repair conducted in theatre



was good to go – a testament to the ability of EME technicians.

The program had a slow, some might say glacial, start due to delays in getting the vehicles to London. However, it achieved a significant milestone in late November 2011 with the sale (delivery) of the first re-set LORIT. DND will have 90 LORITs reset by GDLS-C at both their London and Edmonton plants. The re-set LORITs will help enable the army meet its commitment to prepare for the potential deployment of a Heavy Battle Group. Arte et Marte

PS – ask for a posting to Ottawa. Sure, you'll lose your PLD and LDA, and wear 3Bs, but seriously, it is a chance to make a positive impact on the Army's fleet and you'll never be able to complain about those #&& in Ottawa again!*



The first completed vehicle and the team that works in the London plant. On the far left is Louis Angelo, the GDLS-C London Workshop Production Supervisor. Next to him in uniform is WO Ernie Cardwell, the EMT's "boots on the ground" who ensures that the EMT's expectations are being met. On the far right is Brian Deary, the National Defence Quality Assurance Representative in London.

202 WD's involvement

2Lt F. Beauvais-Beaudry, Project Officer, 202 WD

By the time Op ATHENA officially ended on December 1st, 2011, the word 'reconstitution was echoing in every Army circle. For 202 Workshop Depot (202 WD), part of the Director General Land Equipment Program Management (DGLEPM), the operation marked a turning point in its activities since it assumed responsibility for returning thousands of pieces of equipment to operational service.

So an entire unit has committed itself to ensuring a successful transition, given the ramifications of this event, which involves over 800 vehicles deployed to Base Kandahar and more than 2,000 containers of materiel exposed to the harsh Afghan environment.

« ... this is the perfect time to do as our vision says: "Ready to act regardless of the weapon system." »



Technicians performing inspections on the AHSVS at 202 WD's building 3

The closure of the combat mission in Afghanistan also means that we have to reassess our clients' operational requirements. The new reality of contracting with industry has transformed the tasks of 202 WD's technicians. Now that many weapon systems (WS) contracts contain provisions on long-term manufacturer support, technicians have become a flexible force capable

of taking on extra duties and ensuring continued support for WS that are no longer supported by the industry.

In addition, 202 WD has gone from a workshop that focused on specific WS to a unit that uses a broader variety of management processes more reflective of today's market reality. "The

Leopard I and the M113 were 202 WD's bread and butter. Workloads are less predictable nowadays, so we need to be flexible. We can respond quicker than industry, which can take months to transform its work chain," explains Col Prévost, 202 WD's CO.

With all these WS back in the country, 202 WD has had to boost its production capacity by 45,000 hours so it can complete, by July 2012, the necessary inspections and repairs to reconstitute the resources needed for the next operation. So this is the perfect time to do as our vision says: "Ready to act regardless of the weapons system."

202 WD can point to 65 years of excellent work in support of the Army and remains positive regarding the future success of the Unit. It is ready to take on whatever challenges await and is ready to consolidate its strategic position with its clients.

This reconstitution project therefore represents an opportunity for the Unit to maintain its strategic position and promote its reliability and its responsiveness to the operational requirements of the Army.



The Husky, from the EROC fleet is one of the focus of our work regarding the reconstitution at 202 WD.

Operation Nanook 2011

By Capt Patrick J. Butler, DCO JTFSC

OP NANOOK 11 was one of three major recurring sovereignty Operations conducted annually by the CF in the North. Northern Operations are conducted as part of the Canada First Defence Strategy and Canada's Northern Strategy which strengthens security and demonstrates Canada's sovereignty in the North.

The operation was conducted in five phases from July 16 to September 12, 2011. OP NANOOK was a Whole-of-Government (WoG) joint Operation including all three elements of the Canadian Armed Forces, Canadian Coast Guard and several other government departments. This year's Operation also included elements from the U.S. Coast Guard and the Royal Danish Navy.



PHOTO : Sgt Norm McLean.

Members of the Canadian Rangers return from conducting a patrol in the Resolute Bay, Nunavut area during Operation NANOOK 11.

The operation was conducted in the Eastern portion of the Canadian North with the Land Capability Component (LCC) centered in Resolute Bay, Cornwallis Island, Nunavut Territory. The LCC comprised the Arctic Response Company- Group (ARCG), the 1st Canadian Ranger Patrol Group (1 CRPG), CF Land Advanced Warfare Center (CFLAWC) and the Immediate Response Unit (IRU). The ARCG which was based on 1 Royal New Brunswick Regiment (1 RNBR) was tasked with Arctic Familiarization Training and Land Specific Training including patrolling with attachments from 1 CRPG.

The support for the Operation was derived from a CANOSCOM formed unit, the Joint Task Force Support Component (JTFSC). It was responsible for EME and Logistical Support (including Transportation, Supply, Food Services and Movements). Signals and Construction Engineering for Camp Services were also



PHOTO : Sgt Norm McLean, Canadian Forces Combat Camera

Private Luke Johnston with 1st Battalion, The Royal New Brunswick Regiment, ensures that the Canadian Ranger beside him fully understands the weapon drills prior to having her fire the C9 weapon.

components of the JTFSC. The CO of the JTFSC, Maj Catherine Deri (Log O) structured her component on a Log Ops centre with a Log Support Group (LSG) to provide resupply to the Maritime component of OP NANOOK.

The EME personnel in the JTFSC were Capt P.J. Butler, DCO (CFJSG), Capt G.J. King, Ops O (DSSPM), Lt T.K. Kim, Duty O (DLEPS) and Cpl

C.D. Desmond Veh Tech (14 Wing). All were intrinsic to the success of the JTFSC, working long hours to ensure that all staff functions were effectively carried out and that equipment was maintained and available for operational tasks. The EME Officers were involved in all phases of the Operational Planning Process (OPP) from the planning and preparation phase to the redeployment phase. The exceptional skill



Capt Butler (JTFSC DCO) from CFJSG during the MAJAID Exercise preparation phase.



Capt King receiving his Engineer Grp coin from Col Dickson OS Eng Grp CANOSCOM, in attendance from left to right are: Maj Deri CO JTFSC, Col Dickson, Capt King and CWO Bransfield (OS Eng CANOSCOM).

Learning and Action

PHOTO : Capt Andrew Hennessy



A Boeing ScanEagle small unmanned aerial vehicle (SUAV) prepares for the first launch of a SUAV in Canada's High Arctic on Cornwallis Island during Operation NANOOK 11.

sets and experience that they brought with them made them an extremely effective in their respective leadership positions. They collectively demonstrated that EME officers are well trained and offer excellent choices for key command positions in a joint support organization.

Cpl Desmond was extremely busy providing technical support to an extremely diverse equipment suite which included hired MSE, MHE, ATVs, Gators and CFR equipment. He was also tasked as an instructor on the ATV/Gator driver training courses, as this platform was absolutely critical and without them, effective ground transport would have been impossible in the Area of Responsibility (AOR).

The LCC also deployed EME Reserve personnel, WO H.E. Gaudet, Veh Tech, CSS Pl Comd (1RNBR), MCpl G.H. Brown, Veh Tech and Cpl T.A. Wallace Wpns Tech (37 Svc Bn). Cpl J.C.W. Adams (Reg F), Veh Tech from 3 ASG also deployed as part of the LCC. Their collective role was to provide the ARC-G Coy with Integral Maintenance Support including



On the left is Cpl Desmond (Veh Tech 14 Wing) and CF Pers watch a local Inuit hunter (Debbie) preparing a Beluga whale for winter food storage.

ATVs, Weapons and Ancillary equipment. As the only deployed Wpns Tech, Cpl Wallace provided repairs to the JTFSC's Mobile Kitchen Trailers (MKT) propane stoves. During the LCC's deployment phase, EME pers was also employed in support of range practices and platoon sized mounted patrols.

the CF and other WoG departments.

Working long hours with the other staff and personnel of OP NANOOK with only limited resources and in marginal weather conditions, our EME Craftsmen expedited all tasks with professionalism and with the level of urgency dictated by this tragic event. Capt King's



Members of the Canadian Rangers start a hike to conduct an inspection of Lab 2 (North warning site), a facility located in Saglek, Labrador. The Rangers are sailing onboard Her Majesty's Canadian Ship Summerside presently participating in Operation NANOOK 11. Front to back: Sergeant George Sutton, Corporal (Cpl) Judy Morris, Cpl Rufus Payne, Master Corporal (MCpl) Winston Porter, MCpl Angus Kettle and Ranger Roger Etuangat.

OP NANOOK 11 was also to conduct a Major Air Disaster (MAJAID) aid exercise which would have seen the deployment of HSS and IRU components during Phase 4. Training became

a reality just prior to the commencement of the exercise, when chartered First Air flight 6560 crashed in the vicinity of the Resolute Bay Airport. CF personnel immediately responded to provide a variety of support to local authorities. During the period of involvement by the CF at the crash, EME personnel was involved in providing all aspects of support as requested from

dedication and expert leadership as the Ops O during the accident was recognized when he received an Engineering Coin from Col Dickson the OS Engineering Group at CANOSCOM. This was but one of the many accolades that brought credit to the EME Branch.

Without exception OP NANOOK 11 proved that EME personnel regardless of rank, trade, regular or reserve, is extremely well trained and fully capable of supporting the CF no matter what the circumstance.

Such display of professionalism is the reason why the EME Branch continues to reap high praise and accolades from all those it supports, whether it is the CF by itself or a WoG Operation, or our fellow Canadians as was proven during the MAJAID effort during OP NANOOK 11.

PHOTO : Corporal Rick Ayer, Formation Imaging Services, Halifax, Nova Scotia.

Interim Staging Terminal SLOC Detachment Kuwait

By MWO Norm Richard, SM, IST SLOC

EME pers was an important part of the Interim Staging Terminal (IST) Strategic Line of Communication (SLOC) Detachment Kuwait.

The SLOC Det Kuwait was involved in the most important mission for the redeployment of equipment from Afghanistan back to Canada. IST was deployed to Kuwait in Aug 11, and the main body arrived on the September 5th, 2011.

EME personnel came from all areas of Canada to support the mission, from Wainwright AB to Gagetown NB. The tasks were highly diversified, from maintenance, preservation, convoys and the loading of vehicles and equipment on the boat.

They continued to perform at a high standard, ensuring mission success as demonstrated by the outstanding end results. Their professionalism as EME Technicians was once again proven and reflected well on the Branch,

Arte & Marte.



Rear rank: Cplc Tremblay, Cpl Gore, MCpl Pyke, MCpl McKeough, MCpl Broadfoot, Cpl DeSchryver, Cpl Landry, Cplc Couture and Cpl Wiscombe
Front Rank: Cpl Maltais Sgt O'Reilly, Sgt Lord, MCpl Watson, MCpl Hummel and MWO Richard

Leopard 2A4M Course

MCpl A.P. Healey, Veh Tech, 3ASG Tech Svcs, Maint Coy/ Leopard Sect

On October 1st, 2011, twenty-four Military and Civilian students, from across Canada arrived in Germany for Leopard 2A4M training for the last course to be run in Germany.

The upcoming arrival of the new tanks to Canada sparked the need for qualified personnel who could perform the required maintenance on these vehicles as well as teach future courses at CFSEME in CFB Borden. This training was for Vehicle, Weapons and EO Technicians with previous qualifications and experience on the Leopard C2.

The first week was at the German Army Base in Bad Salzungen. All Technician trades were paired together for this week and started with basic characteristics and familiarization of the new Main Battle Tank (MBT). Once completed, we conducted basic driving and manoeuvring of the vehicle and received training on how to safely operate and traverse the turret. We then got to complete static and dynamic shooting with the Machine Gun in the vehicle on the live tank range. To finish off the week the German Armoured soldiers held a smoker for us and we went on an amazing castle tour. The week was over and we were packing up our kit and moving to the hotel in Erfurt where, every day,

we would be bussed to and from the Krauss-Maffei Wegmann (KMW) facility in Kölleda. Over the next five weeks we were given both theory and hands on technical training to be able to maintain the MBT.

Eight of the students were lucky enough to attend Vimy Ridge for the Remembrance Day ceremony.

At 2000 hours on the 12th of November we were spectators for the "Last Post Ceremony" at Menin Gate in Ieper, Belgium where they have been doing this ceremony every night since the First World War (with the exception of German rule '40 to '44). It was truly an unforgettable weekend for us. The last weekend in Germany we went for a trip to Hamburg where we had a city tour, a harbour boat tour and a pig roast at a brewery before visiting the German Tank Panzermuseum in Munster.

It was a course and experience I'm positive none of us will ever forget.



In no specific order : Serge Decuyper, MCpl Healey, Cpl Bastien, MCpl Boucher, MCpl Hasson, MCpl Underhill, MWO Beaudoin, MCpl MacKenzie, Dan Kilmer, Benoit Taboïka, Cpl Lewis, Cpl Staszewski, MCpl Salois, Sgt Guillemette, Sgt McGean, MCpl Hunt, MWO Desjardins, Gaston Boucher, MCpl Girardin, Cpl Gagné, MCpl Courchesne, MCpl Laliberté, MWO Thompson.

Setting up shop in Kabul

By Craig McKeown, NCSE Maint O

The National Command & Support Element (NCSE) Maintenance Platoon, comprised primarily with the Maint Pl technicians from 3 PPCLI deployed to Kabul, Afghanistan in July 2011 for Operation Attention Roto 0.

Shortly after arrival, the platoon was shipped east to a small camp called Blackhorse which would be home for the next eight months. Once in Blackhorse, the maintenance facilities were less than ideal. Arriving without toolboxes or spare parts, the platoon was greeted by a small empty workshop being occupied by two US Army mechanics working on Humvees. The first six weeks proved to be the most difficult; while living under a modular tent, borrowing wrenches and sockets from our US allies, the platoon became very creative with repairs on the growing RG-31 fleet. The maintenance building's bay doors were too small to fit an RG-31 indoors, so all the work was done in the small gravel parking lot outside in the heat. As shipments of tools, parts, and supplies arrived from down south in KAF, they were cleaned up, catalogued and organized into something that started resembling a maintenance workshop. Each passing week would bring in more shop supplies along with a few more RG-31s or AHSVSs from down south. With years of combat experience on each vehicle, they brought with them hours of maintenance required to get them serviceable for use by the Canadians occupying the training schools across the Kabul Base Cluster.

With production increasing and the requirement to track and monitor the growing work orders, a control office was designed and built, which was later outfitted with DWAN connections, CSN phones and of course painted with the EME colours and horse. The need for a working tool crib also became apparent. Designed and built within the workshop to meet our unique requirements, it soon filled with shelving, nuts and bolts and all the tooling that was shipped up from KAF.

Getting a new shop up and running posed its share of unique problems. One such example was the difficulty posed by the 220V European power supplied from the buildings, which slowed production as the power tools were incompatible. The EO techs worked hard to

change plugs, adjust motors, and designed power distribution solutions to get our newly shipped in drills, saws, grinders, welders and sewing machines up and running.

Being the only Canadian maintenance shop in Kabul, both first and second line work is completed by the NCSE Maintenance Platoon. To date, over seventy Repair Recovery Requests have been completed sending techs all over the AOR. Notably, three RG-31 transmissions



Cpl Boutin helping Cpl Davies with welding modifications to the shop.



Cpl Morrison and Cpl Thorburne using the AHSVS Wrecker to lift the front end to change hub seals.

have been changed out, using an aircraft pallet as hardstand and cardboard boxes for comfort against the gravel. Without a proper transmission jack on hand, a normal 4-ton hydraulic jack and a cleverly designed brace constructed out of a wooden box to help act as a transmission jack, the EME techs were able to get the job done, even in the austere environment provided by Camp Blackhorse.

As progress continued in the shop, so did the capabilities. The AHSVS Wrecker and a crew remained on-call with a short notice to move, ready to roll out with the QRF platoon if required. Keeping with the soldier-first mentality,



Maintenance Platoon on the range in the Pol-E-Charki training area.



continuation ranges took place, ensuring both personal weapons were functional and zeroed.

As the months went on and the mornings and evenings started getting colder, the need for an indoor working facility became more and more apparent. A double Mexx Sprung Shelter was brought in and put up in the parking lot just outside of the maintenance building, which had to be diplomatically approved by the camp's US land owners. It was soon thereafter wired for heat and light, and outfitted with shelving, spare parts, compressors, and floor boards adding to the assets available for the Roto 1 maintenance platoon to take over in March of 2012.

Although progress may have started slow, the facilities in Camp Blackhorse have grown from an empty building and bare parking lot to a fully functional maintenance workshop capable of both first and second line maintenance, all while keeping an average VOR rate below 10%. The entire NCSE Maintenance Platoon has undoubtedly learned an incredible amount since arriving in July and has successfully accomplished its main task of setting the stage for Roto 1.

Driver Training at CFSEME

By WO Wallie Lundell, CFSEME OIC Training Development

Technicians at Canadian Forces School of Electrical and Mechanical Engineering (CFSEME) have over the past year finally started to receive Driver Training at CFSEME. As part of the EME migration to the Army and a Combat Training Center (CTC) initiative, a National Contract was awarded to VALCOM in August 2010 to conduct Driver Training at various Army Bases across Canada.

CFSEME used to get its driver training at CFSAL, but this responsibility was transferred to the gaining units of the soldiers after their graduation. This placed a heavy burden on the gaining units as they also had to conduct the on the job training of the Apprentices that they received from CFSEME.

Since Driver Training started in October 2010, CFSEME has successfully trained over 400 technicians with the Land Force Command Driver Wheeled (LFC Drv Wh). The course is broken down into modules for ease of training and also provides some flexibility in the training. Mod 1 of the course commences with the Defence Driving Course (DDC) and the Safe Backing Course (SBC). Mod 2 is Common

training where the students learn about Convoys, Hides and Harbours, general tools and equipment. Mod 4 is where the students start their driving, using the Light Support Vehicle Wheeled (LSVW) as the primary vehicle for their training. The LSVW is utilized in the field as a Mobile Repair Team for all of the trades within the EME Branch. The students also receive the qualification for the Light Utility Vehicle Wheeled (LUVW) Militarized Commercial-off-the-Shelf (MiLCOTS), or Silverado as it is more commonly known. They are given rigorous training which includes day and night driving, blackout driving, cross country driving and driving both on highways and in cities. The students also receive training driving with a trailer, both forwards and more importantly backwards. The LFC Drv Wh course is a total of 13.5 days and nights.

There is the occasion where some of the students will receive Mod 3 of the LFC Drv Wh which is the LUVW, G-Wagon, an additional seven training days. The VALCOM instructors are also capable of qualifying some of the CFSEME Staff. To date this has been limited to the G-Wagon, but in the future we are looking at incorporating the Leopard Tank and Light Armoured Vehicle (LAV III) into some of the staff's spare time, which is very limited.

Every step of the way, the students are guided by a very experienced team of professional instructors. The instructors have varied backgrounds and most have retired from the Forces and are now mentoring the young



VALCOM Staff/Students MSVS/HLWV Course M001

Left to right: Mike Lorbeskie, Ken Wilson, Cpl M.A. Segato, Mike Doucette, Bill Roberts, Pte M. Doucette, Jen Steele, Jamie Billings

PHOTO: MCpl McCully

students. The students come from a variety of backgrounds, some with no previous driving experience prior to the LFC Drv Wh course. This places an extra strain on the instructors as they now have to utilize the many techniques that they have developed throughout the years in their approach to students.

The training has now expanded to include the Medium Support Vehicle System (MSVS) MiLCOTS and the Heavy Logistics Vehicle Wheeled (HLWV) for Vehicle Technicians, an additional 16 days of training. The HLWV Wrecker is the prime recovery vehicle used by the Veh Techs in the field and most Bases across Canada.

The MSVS is the newest vehicle in the DND fleet and our young technicians are some of the first to receive this training. Both of these vehicles employ Air Brakes to stop, so additional training is also required. The Vehicle Technician Development Period 1 (DP1) teaches the technicians how to fix the Air Brakes but they still need to understand the system from a driver's perspective which is a small portion of the Air Brake course.

CFSEME is always striving to improve the quality of technicians that are taught at the school and are constantly looking at new ways to improve our training delivery. Without the support of CFSTG MSE Safety and School Support this training could not have been accomplished, so a heart felt thanks goes out to them.

TLAV Severe Cold Weather Testing

By 2Lt Q. Du and 2Lt B. Nava, DASPM-2, DGGLEPM

The Track Light Armoured Vehicle (TLAV) Equipment Management Team (EMT) from the Directorate of Armament Sustainment Management Program (DASPM) in Ottawa conducted the TLAV Severe Cold Weather Testing at Canadian Forces Base (CFB) Goose Bay, Labrador from January 17th to February 3rd, 2012. The three variants put to the task were: the M113 A3, the Mobile Tactical Vehicle Recovery (MTVR), and the Mobile Tactical Vehicle Fitter (MTVF).

This TLAV testing in the North was initiated by and based on the Army Arctic Mobility Way Ahead document of November 2011, which outlines the importance of being capable to operate in severe cold weather conditions.

The aim of this engineering testing was to evaluate the TLAV Family of Vehicle (FOV) in severe cold weather and deep snow.

Hence, the TLAV EMT leaned forward in its never ending quest to support the Army and deployed engineers/technicians to 5 Wing Goose Bay for two weeks of dynamic engineering testing of the TLAV's mobility; note that the TLAV Turret and Remote Weapon Station were not the object of testing in Goose Bay.

The aim of this engineering testing was to evaluate the functionality, performance, and durability of the TLAV Family of Vehicle (FOV) in real environmental conditions of severe cold weather and deep snow. The Goose Bay effort was part of a comprehensive DASPM 2 testing program geared towards evaluating the TLAV FOV in a systematic way. In fact, prior to Goose Bay and as a risk mitigation measure, the TLAV EMT conducted static cold chamber testing at the National Research Center in Ottawa in late Fall 2011, wherein TLAV systems and components sustained temperatures as low as -45° C. This

static testing prepared the TLAV and its EMT well for the subsequent dynamic testing in the North. Many lessons learned from the static testing were immediately incorporated into the preparation of the equipment and vehicles for Ex ARCTIC RAM (1 Canadian Mechanized Brigade Group/ Yellowknife/February 2012) and for Goose Bay itself, as well as into the test plan put together for and implemented in this Labrador adventure. Also part of the TLAV preparations for Goose Bay was the instrumentation preparation which was done by the Quality Engineering and Test Establishment. This instrumentation was in the form of standalone data recorders of temperature and vibrations, which captured data throughout the two weeks of dynamic testing for subsequent analysis.

The testing results highlighted a number of minor technical difficulties; 157 Technical Incident Reports filed, nevertheless without a notable trend. Furthermore, this dynamic testing proved valuable in validating the TLAV's ability to sustain high tempo operations in severe cold weather and deep snow. In fact, the machines were driven in a large variety of road conditions for short and long durations of time. Testing was also conducted on ice, which yielded interesting mobility information. The MTVR and MTVF's capabilities were put to the test in these extreme conditions.

Overall, the TLAV performed very well in the



Cpl Duquette buried in snow

PHOTO: WO Denis Nadeau

North. The EMT's engineering and technical staff are already solving the minor technical difficulties raised during testing and are confident that the TLAV is fully operational for Arctic conditions in its current configuration. Moreover, the engineering/technical adjustments to be implemented in the short/mid-term will improve its capabilities.

The drivers and crew commanders taking part



TLAV undergoing winter testing

PHOTO: Mr Nivard Audet

in this test came from different units across the country. 2 Service Battalion and 2 Combat Engineer Regiment, from CFB Petawawa, generously supported DASPM 2 and the Goose Bay effort, as well as 1 Battalion Royal 22e Regiment and 2 Battalion Royal 22e Regiment, from CFB Valcartier. 3 Area Support Group's personnel contribution was also appreciated.

Last, 5 Wing's support to DASPM 2 was outstanding and Goose Bay proved to be an excellent location for testing.

PHOTO: Cpl Krista Blizzard



TLAV undergoing winter testing

Maintainers and the EME Spirit

By Lt Tony Nguyen and Lt Sébastien Oorlynck, 2 Svc Bn

During the month of October, over 90 members of 2 Service Battalion Maintenance Coy (2 Svc Bn Maint Coy) participated in Ex MAPLE RESOLVE (MR). This was a brigade level exercise that was conducted by Canadian Manoeuvre Training Centre (CMTC) at CFB Wainwright (Wx). It was one of the largest exercises ever conducted by CMTC.

Getting Out the Door

Emphasizing a change from an Afghanistan training model where personnel would arrive at a ready prepared camp. The Bn exercised its ability to set-up for a period of one month and 3000 km away. This necessitated detailed planning to move personnel, vehicles and equipment by road, rail and air.

First in, Maint Coy provided recovery and Mobile Repair Team (MRT) support for the railhead loading and unloading between Pembroke, Ontario and Wx. Also, the technical skills of our tradesmen were important in the Bn's camp activation as well as the activation for other Brigade Units. The Electronic Optronic technicians (EO Techs) ensured electricity was available throughout the camp while the Material Technicians (Mat Techs) were busy with equipment that had been damaged in transit. Maintainers made a positive first impression on Ex MR.

Exercising

Providing Combat Service Support (CSS) in a hostile environment was executed concurrently with camp routine and Bn exercises. There were two phases within the exercise, stands and



Bison MRT recovering in the soft terrain of Wx

force-on-force. Stands training included ranges, rappelling and convoy drills. During force-on-force, the combat scenario challenged support operations. Within both phases, Forward Repair Groups (FRG), Forward Support Groups (FSG) and Bn(-) exercised to demonstrate the readiness of Maintenance and other Bn assets.

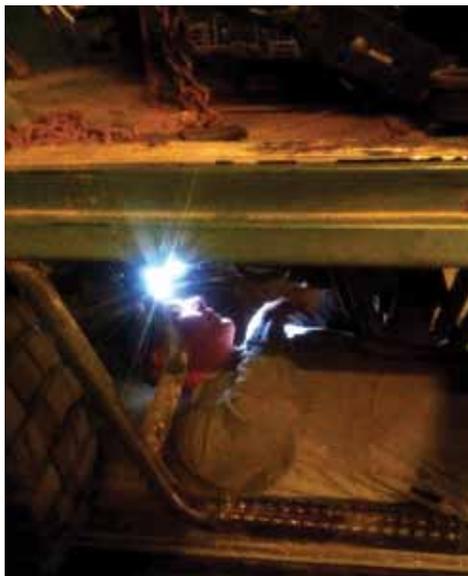


M777 sinking in the soft ground

Displaying EME Spirit

There was opportunity for everyone to get their hands dirty. One late night, Maj Heebner (OC Maint) and WO Scott (Con O) changed a Transfer Case on an LSVW. Not only did OC Maint have his hand in the Vehicle Tech world but he also took part in the Mat Tech's plasma cutting and welding challenge. Callsign '39' is forever emblazoned on a plate of steel.

Arte et Marte was loyally displayed throughout the exercise. On one particular morning, Maint Coy's flag had gone missing and a ransom note was left behind. The flag captor demanded two



Maj Heebner, OC Maint, gets his hands dirty



Maint Coy in their camp

Officers and a Senior NCO for the Bn's entertainment. Maint Coy covertly deflagged all remaining Coy flags; even Transport (Tn) Coy's, despite Tn's efforts to take theirs down every night. Coy flags were replaced with flags made of rags in EME colours, double-stitched and finished with grommets. Those rag flagged Coys ensured Maint Coy saw the return of its flag – so to have their own flags graciously returned. Maintainers do it their way; our

flag was returned without giving into demands.

Closing Time

By 24 1500 Oct 11, the enemy had been defeated. End Ex festivities began and memories were being shared over a can or two of beer.

MOBILE trial on Ex Maple Resolve

By Major Michel Hutchison, DLEPS 8/DGLEPM

The MOBILE solution permits Materiel Acquisition and Support (MA&S) activity in areas where connectivity to the Defence Wide Area Network (DWAN) is not available or is disrupted. The main device used is a laptop with the current version of SAP Mobile Defence & Security (MDS 1.6).

Integration into the central Defence Resource Management Information System (DRMIS) systems is assured via synchronization (note that DRMIS is still officially Materiel Acquisition and Support Management Information System [MASIS]). The mobile solution does not have all of the functionality of the DRMIS central solution but should provide the necessary processes to capture the key information in our business processes.

Conducting this trial during a major exercise was a unique opportunity to put the mobile solution through its paces. We had some constraints imposed on the trial; for instance the trial could not impact the progress of the exercise real-time. A full manual process was used for both maintenance and supply while the mobile solution was used as a recording tool and validating its information against the manual process.

Each unit from 2 CMBG operated with two supplied laptops, one for supply and one for maintenance. For first line maintenance, only one laptop was used in the control office. The maintenance laptop also had the entire deployed unit's SPSS since the current mobile solution has no means of connectivity between the maintenance and supply laptop.

When using a part from the unit's SPSS the Supply tech would then login to the Maintenance laptop and issue the part against the work order. A similar constraint exists between first and second line maintenance with no connectivity. Second line repair requests were sent over radio



MCpl Parsons and Cpl Roper working on their DRMIS mobile laptops

and second line also created an L1 notification to capture the work done at second line which again is a bit different than the current central solution due to the connectivity issue.

constraints applied to first line. At second line SPSS, we managed to enable more functionality for supply with receipts from CFSS as well as issues and transfers to first line. This was possible

« Conducting this trial during a major exercise was a unique opportunity to put the mobile solution through its paces. »

because these activities did not directly affect the issue of parts against a work order.

For second line maintenance, a single laptop was used in the control office. As was the case with first line, the second line laptop contained all the deployed second line SPSS. Radio was again used to receive second line repair requests since lack of connectivity imposes the same



Cpl Schermerhorn getting ready to login to the Sgt MacQueen's laptop and issue a part against the work order

Synchronization to the central DRMIS solution can be achieved by two means; connecting a DWAN cable directly to the laptop or the one we employed during phase III of the Ex which consists of using the USB drive synchronization process where we successfully simulated a DP process for this phase of synchronization. The trial was a success and now enables us to document the performance of the mobile solution against a set of established requirements. During the after action report meeting a common theme amongst the users was that they were able to see immediate benefits from the solution. We would like to thank again all of the members of the trial as they all contributed extensively to it by providing valuable feedback and suggestions for improvements to the solution.

North American Technology Demonstration

By Jonathan King, 2011 NATD Event Coordinator, DGLEPM EIT

The 2011 North American Technology Demonstration (NATD) event ran from 24-28 October 2011 in Ottawa, Canada. With more than 1,000 delegates from 34 countries in attendance and over 90 exhibitors, the 2011 NATD was NATO's largest international non-lethal capabilities trade show.



The 2011 NATD event was co-hosted by the Canadian Department of National Defence (DND) and the United States Department of Defense Non-Lethal Weapons Program. The NATO sponsored trade show and conference showcased the latest state-of-the-art cutting edge non-lethal technologies, which were presented with the potential to support NATO military



Active Denial System

personnel and their missions.

The 2011 NATD took place at the Ottawa Convention Centre; a newly constructed landmark in the Nation's Capital which opened in April 2011. The week-long event consisted of static displays, conferences, NATO and allied working group meetings and a VIP reception. A day of dynamic demonstrations was also presented at the Connaught Ranges Primary Training Center, located approximately 20 km outside of Ottawa. Selected exhibitors were given the opportunity to showcase their technologies on a live range and demonstrate how they can be applied in theatre.

With over 90 exhibitors, many of them from other countries, a vast range of Non-Lethal Capabilities (NLC) were presented at the 2011 NATD. From pepper-spray, stun-guns, smoke grenades and vehicle arresting devices, almost every type of NLC imaginable was presented. One technology in particular attracted significant attention, the Active Denial System (ADS). The ADS was developed by the US military

and operates by focusing beams of high-frequency millimetre-waves on a target person (or people). The induced effect is the sensation of intolerable heat on the adversary's skin.

Over 1,000 attendees from industry, government and military had the opportunity to handle many of the products and to participate in familiarization sessions. Amongst the attendees were leaders and staff from NATO, Partner for Peace as well as select allies of these organizations.

The 2011 NATD was a huge success as all attendance forecasts were surpassed, and all objectives were satisfied. This event succeeded in offering the operational and armaments communities an outstanding opportunity to see and touch the latest state-of-the-art and cutting-edge technologies in the field of NLC. Furthermore, the level of success can be attributed in no small part to the distinguished list of dedicated panellists and guest speakers, including Mr. Dan Ross, Assistant Deputy Minister (Materiel). The list also included Ambassador Gábor Iklódy, NATO Assistant Secretary General for Emerging Security Challenges, who



Laser Dazzler

spoke on the subject of Non-Lethal Weapons Requirements and future NATO roles relating to Non-Lethal Weapons. These delegates were among a dozen international VIPs and high-ranking military personnel who presented during the 2011

NATD conference program. The Minister of National Defence, Mr. Peter MacKay, attended the VIP reception which was held at the Château Laurier.

Canada chairs the NATO Defence Against Terrorism Programme of Work 11 (DAT POW 11) on Non-Lethal Capabilities. The DAT POW 11 mandate is to demonstrate ready-to-be-fielded, Non-Lethal Technologies to facilitate their rapid acquisition in support of NATO's mission in Afghanistan. Canadian Army Col Robert Elvish, DLEPS/DGLEPM, is the Chairman



Vehicle Arresting Device in action

of DAT 11. The 2011 NATD was the culminating event of the Canadian led DAT 11 program of work and marked the end of Canada's leadership role in this POW.

The Department of National Defence currently has a limited range of non-lethal capabilities that have been deployed into theatre. One system that has been used is a laser dazzler, which has proved successful. Col Elvish explains, "We went through a fairly significant exercise several years ago to procure a laser dazzler, or a blinding system, to warn and to deter vehicles approaching checkpoints and key positions. You can appreciate [the process; aiming] the laser dazzler into the windshield of a car effectively disrupts the driver and gives him the impression that it's time to stop". Despite their effectiveness, non-lethal systems have

several barriers preventing their adoption. Col Elvish said, "The real challenge for us, for people who are in the non-lethal capabilities business, is with regard to policy, doctrine and developing a legal framework to use these tools in the modern battlespace".

The use of non-lethal capabilities and their

potential benefits to the Canadian military continues to be investigated. Defence Research and Development Canada (DRDC) conducts Science and Technology in support of the operational requirements for non-lethal capabilities and as such, DRDC Valcartier established a booth at the NATD static display. Furthermore, the

Conducted Energy Weapons Strategic Initiative (CEWSI) a project funded by the Canadian Police research Centre (CPRC) and managed by DRDC under the Centre for Security Science held a two-day workshop as part of the NATO and Allied Working Groups.

CFB Gagetown EME Jiffy Jeep Team Participates in U.S. Jeep Festival

By Sergeant C.T. Wear, IC Jiffy Jeep CFB Gagetown

The EME Jiffy Jeep team from CFB Gagetown was requested by Butler County Tourism of Pennsylvania, U.S.A. to perform their spectacular military display of dismantling and reassembling of a 1968 military jeep in just less than 3 minutes.

The Jiffy Jeep dates back to 1993 when EME technicians from CFB Gagetown took it upon themselves to convert a Standard Military Pattern M38 Jeep into a display where the jeep's major components could be removed and attached in a matter of minutes. At first, the Jiffy Jeep attraction was mainly used at EME recruiting or army events but it quickly became very popular and even gained world wide recognition since the jeep appeared on YouTube.

The jeep display by the Canadians was the first event of a three day jeep festival that ran from the 12th to the 14th of August. The Jiffy Jeep performance kicked off the longest attempted jeep parade where a new Guinness World Record was set with over 1400 participants registered. The team performed with a contagious level of energy for the town mayor and VIP that had crowds of spectators on their feet, earning the team a key to the city.



Jeep being reassembled for VIPs as the first event to kick off the longest jeep parade that involved over 1400 participants that was recorded in the Guinness World Record

When not performing shows the Jiffy Jeep team embraced the history of the jeep by visiting its birthplace in Bantam, PA. Several monuments are



From Left to right: Cpl E.J. Roussel, Cpl F.R.J. Boudreau, Cpl R.C. Leblanc, Cpl M.B. Wright, Cfn M.J. Gouthro, Cpl M.L. Amero, Cpl J. David, MCpl G. Diotte, Sgt C.T. Wear

erected throughout the town commemorating the first jeep developed by the American Bantam Car Co. 71 years ago, in response to the U.S. Army's request for an all-purpose military vehicle. As stated by the Pennsylvania Historical and Museum Commission, "In September 1940 a team headed by Karl Probst delivered to the U.S. Army a prototype for the World War II jeep. This small, four-wheeled drive vehicle was produced by the American Bantam Car CO. Here, Bantam manufactured 2,675 jeeps. Although larger companies ultimately received the chief wartime orders, it was Bantam in cooperation with the Army that originally created the jeep."

This trip was different than other trips the Jeep Team performed at, as it's not only the home of the jeep but it houses hundreds of great jeep fanatics that were extremely inquisitive to how our jeep was made. The team was frequently interrogated to how things could possibly function and the team did not hesitate to give answers, putting jeep minds at rest as we know as the quote goes "Its a jeep thing... you wouldn't understand."

2nd Annual Ex Bushman

By Sgt Todd G Bursey, Tech Svcs Maint Coy, 3 ASG

EME Soldiers from Tech Svcs Br, 2RCR and 4AD Regt at CFB Gagetown, competed in the 2nd Annual Ex Bushman held by 2RCR on August 11, 2011 in Oromocto, NB.

Ex Bushman is an event similar to the 2CMBG Ironman and the Western Area Mountain man, which tests individual stamina, strength and endurance. The major difference in this competition is that you are competing with a fire team partner; basically you start and finish together. The event consists of the following: 15km ruck/run with 35lbs, followed by 5km ruck/run with 75lbs, 10km canoe paddle and 2km push to the finish with 35lbs. All of the EME soldiers who participated competed extremely well and finished with outstanding results most notably, MWO Donald Lanteigne/Capt Nicholas Tranquilla finishing 10th overall with a time of 4hrs 13mins. Sgt Todd Bursey/MCpl Terry Walsh being the second EME team to cross the finish line 18th overall, with a time of 4hrs 21mins and Cpl Derek MacDonald/Cpl Julie Pelchat winning in the mixed category with a time of 4hrs 40mins.

This display of self confidence and exceptional physical fitness is another excellent example of the outstanding achievements from our EME soldiers in LFAA. Hopefully next year's event will bring forward more soldiers from our Branch.

Arte et Marte



From Left to Right, Back Row: MCpl Walsh, Sgt Bursey, MWO Lanteigne, Capt Tranquilla, CWO Moreau, WO Baisley, Sgt Purcell, Cpl Eady, Sgt Rushton, MCpl Montreuil, Cpl Mclellan, Cpl Smith B, Cpl Smith W

From Left to Right, Front Row: Cpl Stebbing, Cpl Gunn, Cpl Henry, MCpl Gaudette, Cpl MacDonald, Cpl Pelchat, Sgt McDermott, Cpl Skinner

CFSEME hosts 48th annual EME golf tournament

By Capt B. Watson, CFSEME

The 48th Annual EME Golf Tournament was held at Circlad Pine Golf Club, Canadian Forces Base Borden. This two day event was held from the 4th to the 5th of August 2011.

The tournament consisted of a Meet and Greet (and Pig Roast) held at Circlad Pine Golf Course on August 3rd, 2011, a banquet, followed by a casino fun night, on the 4th of August 2011 and two fantastic days of golfing from the 4th to the 5th of August 2011. Approximately 143 golfers (EME personnel, retired EME members and corporate sponsors) were in attendance.



PHOTO : Cpl Pancham, Borden Base Maintenance

Low Gross	Jason Spencer Lyndsay Novakovich
Closest to the Pin	George Smith at Pin # 17 Michelle Wilson at Pin # 11
Longest Drive	Jason Blackwell at Pin # 5 Kim McAllister at Pin # 9
Golf balls awarded to the Most Honest players (In order to protect the innocent, we will not publicize the Most Honest Scores)	Col N. Eldaoud Becky Brinn
The Male and Female Seniors Trophies (over age 60)	Barry Code Susan Wheling
Winner of the Michelin Tires (Four tires for a maximum value of \$1,000)	Fred Martin

All players also received prizes for participating in the Tournament on the last day.

The Committee would also like to thank Mr. Gary Corriveau and all the staff of Circlad Pine Golf Course for their support of this event. As in previous years, this EME Golf Tournament was a huge success. Dates for next year's tournament are August 9 and 10, 2012.

When flags have pride of place...

By Capt Pier-Marc Desjardins-Boutin, CET Commander CFSEME

On 23 and 24 of last November, the Canadian Forces School of Electrical and Mechanical Engineering (CFSEME) at CFB Borden hosted the teaching staff of the Canadian Forces School of Communications and Electronics (CFSCE) for their traditional hockey competition.

PHOTO: Sdt Jason St-Jean



Photograph (left to right) : CFSCE coach MWO Fred Stanley, CFSCE team captain Sgt André Dénonnée, CFSEME team captain Cpl Douglas Ilnicki, CFSEME commandant LCol Paul Fuller, accompanied by the unit's Sergeant-major, CWO Richard Rodrigue.

This tradition was launched 18 years ago at the initiative of the two units' sergeants-major, with one dollar as the prize money. These days, the stake is unit pride, and the focus is now the professional development of the visitors. Of course, as any good Canadian would, the members taking part in the hockey competition feel it their duty to defend their team's colours.

Located at CFB Kingston, the CFSCE is very similar to the CFSEME. Both schools provide technical support to Canadian Forces operations, and both are constantly seeking to improve the education they provide so as to properly outfit the technicians of the army of tomorrow.

In addition, both schools act as "head office" for their respective trades, and it is therefore essential to develop the instructors' knowledge of teaching aid technologies to the full. This visit proved an ideal occasion to show our facilities and our classrooms and, above all, to share our teaching methods with each other. The CFSEME also seized the opportunity to show their visitors the school's museum, to the great pleasure of the CFSCE members. The organizer of the day's events, Sgt Martin Leboeuf summed up the high point of the visit:

"The software that lets the weapons technicians visualize interactions between small components (exploded view) was a pleasant surprise to the CFSCE instructors. I would think they saw a lot of potential there, as they also have to make their students understand how small parts interact."

So as to combine business with pleasure, two friendly hockey matches were staged. The prize: the losing team would have to fly the winner's flag for one day. In a tough contest, the CFSEME took the prize with an overall score of 6-2.

Next year, it will be the CFSEME's teaching staff's turn to visit Kingston and defend their title there.



PHOTO: Sgt Martin Leboeuf

Photo: MCpl Patrick Beauchamp giving CFSCE personnel an overview of the main artefacts in the School of Electrical and Mechanical Engineering's Heritage Hall.



Photo (left to right) : CFSCE Commandant LCol Walter Wood accompanied by the unit sergeant-major, CWO Yves Giard, who is ready to hoist the RCME flag.

Visit the EME Branch website



- EME events
- Online access to the EME Journal
- Discussion forums
- Photo gallery
- History and heritage
- And more!

www.EMEBranhGEM.ca

The Annual EME Trailer Raffle

By Capt Van Mourik and MWO McIsaac, 3 ASG

The time has come again for the annual Gagetown Maintenance Company (Maint Coy) Trailer Raffle in support of the Government of Canada Workplace Contribution Campaign (GCWCC). This event started in 1999 and was conceived by Materials Platoon (Mat Pl) in support of one of their members, Mr Tom Nickerson, a retired Metals Technician, who was employed as a civilian welder in Mat Pl.

The story behind the trailer is one that demonstrates the ability of military families to pull together to help each other. When Nick's wife was diagnosed with a fatal disease and required a lung transplant, the only place at the time that could perform the surgery was in Toronto.

The members of Mat Pl came to the quick decision to raise funds to help offset the costs incurred by Nick for travel and maintaining two separate residences. The members of Mat Pl decided to build a trailer and have a raffle to raise funds to help Nick and his family. This project would also provide Mat Pl with the perfect opportunity to give On the Job Training (OJT) to their Qualification Level Three (QL-3) personnel.

The raffle was a huge success and Mat Pl

donated approx \$2000 to the Nickerson family after all expenses were covered. The project also provided a major morale boost to Mat Pl through the sense of accomplishment for the QL-3 members who worked on the trailer.

Since 1999 when the first trailer was produced, the manufacturing of a trailer has been given as a project to the current OJT QL-3 personnel working in Mat Pl. The initial costs of the manufacturing of the trailer are covered by the Maint Coy canteen fund. The cost is approximately \$700 - \$900 for parts and materials, the funds are recaptured during the ticket sales and placed back into the canteen fund through the Non Public Funds office.

Unfortunately this story has a tragic ending as Mrs Nickerson passed away shortly after her surgery. On a positive note however, her



From left to right: Col Rutherford P, Pte Dowe T and Pte Pilon D.

memory lives on every year with the raffle that has raised approximately \$25 000 for the annual base GCWCC. The funds generated truly support a worthy cause and allow for some valuable technical training at the same time.

Our Contribution to the Crieé d'automne

By MCpl L.C.P. Phaneuf, Material Technician, 5 Svc Bn

The Valcartier Military Family Resource Centre (VMFRC) organized a fundraiser for the 6th Crieé d'automne. The event supports the VMFRC so that the centre can help soldiers and their families.

Just like two years ago, 5 Svc Bn Maintenance Coy was asked to build a trailer. The training platoon, which is the organization in charge of providing on-the-job training to EME technicians at the Valcartier Base, was asked to carry out the project – yet another daunting challenge this year.

As in the past, the trailer was auctioned off at a fundraising dinner on October 29, 2011, and the VMFRC received \$2,550.

The task involved not only building the trailer, but also creating a team to design it and



From left to right, the team that designed and built the trailer: MCpl Pascal Dallaire, Cfn Tim Dubois, Cpl Maxime Desjardins and MCpl Patrick Phaneuf.

carry the project out. The team was made up entirely of material technician trainees with very little experience in this field.

After a few brainstorming sessions, the team put their design and production knowledge to work. Though ideas came from all quarters, the main goal was to build a state-of-the-art trailer that also provided a valuable learning opportunity for our technicians. It is very simple to build a trailer – many people build them at home – but building a trailer that is unique, up to industry

standards and sharp-looking to boot is an uncommon challenge.

The trailer is made entirely of aluminum so that it is solid; it weighs less than 750 lb and has a load capacity of 1,250 lb. The biggest challenge was assembling the rear ramp. The ramp is hinged at two points and reaches the ground to facilitate access for motorcycles, ATVs, snowmobiles and even small cars; the load area is 5' x 10'. A storage box, equipped with a lock designed by the team, is mounted on the front so that the future owner can store chains, straps or tools. The aluminum was fully polished to make the trailer shine. Approximately 150 hours of work went into completing the trailer.

The bar was set high: the trailer that the Bn created the first time around was superb. This time, though, the 5 Svc Bn Maintenance Coy team really outdid itself.

Needless to say, the craftsmen behind this trailer are very proud, not only of their trailer, but also of the help they were able to give to the VMFRC. Kudos to the team: MCpl Patrick Phaneuf, MCpl Pascal Dallaire, Cpl Maxime Desjardins and Cfn Tim Dubois.

Tribute Bike

By MWO Lotocki, Pl Comd Veh Coy CFSEME

On the 6th of June 2011, MCpl (Ret'd) Peter Guy, his wife Annette and close friends, MBdr (Ret'd) Percy Zapata and wife Donna, arrived at Regimental Company CFSEME.

They had travelled from Brandon, Manitoba in order to participate in this year's Memorial Ride along the Highway of Heroes. The event ran from the 4th to the 11th of June, commencing in Belleville and finishing off in Oshawa, Ontario. To honour his fallen friends, comrades and all those who serve, Peter had a local artist in Brandon paint his motorcycle as a tribute.



A retired vehicle technician and consequently a life long member of the EME family, Peter contacted CFSEME to see if there would be interest in viewing his motorcycle before he headed back to Manitoba. The RSM gladly accepted the offer, and the viewing went exceptionally well. Peter has created a spectacular piece of art which truly pays tribute to all former and serving members. He also took this opportunity to take a picture of his tribute motorcycle in front of the RCME monument.

On behalf of all the members of CFSEME, I would like to thank Peter, his wife and friends for sharing his experience.



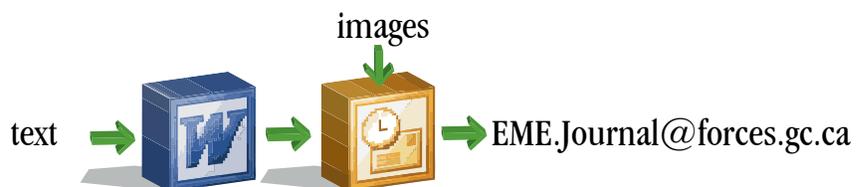
MCpl (Ret'd) Peter Guy and RSM CFSEME CWO J.A.R. Rodrigue

PHOTOS: MWO L.A. Lotocki

Writing an article?



- Aim around **500 words**, in **Word**.
- Write the **complete technical terms** before using an abbreviation
- Indicate the **author's name and his/her position**
ex: Sgt Goodwriter, Veh Tech, 202WD
- Add **pictures separately** in **Outlook**
- Give a brief **description** for each picture
- Include the **name of each individual** and credit the **photographer** when possible





Electronics and Optronics technician

EO Focus Group 2012

By Maj G. Olivier, EO OA

The EO Focus Group 2012 was held in Ottawa on the 25th and 26th of January in the Auditorium of the former NDMC. This provided an opportunity for the entire EO community to reconnect at Strategic Level. There was EO Tech representation from three LFAs, the RCAF, DAT IT EME, CTC, and CFSEME.

Many senior EO Techs from the Center, either working as LCMMs or with projects also participated. Furthermore, the audience was privileged to have as guest lecturers the Col Cmdt, Gen P. Holt, and the EME Br Advisor, Col



WO W. Flieler, RWS LCMM (TLAV), presenting on his state of affairs during the second day of the EO Focus Group 2012.

N. Eldaoud. CWO D. Dubuc, the EO Career Manager, presented as well on the occupation's manning and personnel challenges.

With this focus group, the EO OA / AOA's intent was to provide an opportunity for the occupation's senior leadership and technicians to focus and get updated info on the EO eqpt in service and its related concerns/issues, as well as on the project-related EO eqpt due to enter service in the mid-term.

The EO Focus Group 2012 proved to be a great learning opportunity, as there was presentations given on the second day by many EO LCMMs and other ILS / Systems Engineering EO advisors working with projects.

Of particular interest during the discussions was the positioning of the EO occupation in light of the new DP1 and DP2 trg that should come online in the next few years. Obsolescence management was also a key topic being addressed by many LCMMs.

Hence, the end state was achieved. A more informed EO community / occupation on its initiatives and current affairs, so to establish a focused and substantiated leadership and management of the EO trade applied throughout the CF, therefore establishing unity of effort.

Overall, the EO Focus Group 2012 was a great success to repeat hopefully every second year.



Materials technician

Modular tent and beyond

By MWO Robicheau and Lt Hassan Choudhary

In a not so distant past, Materials Technicians involvement with textile was to inspect tentage, shelters and make the repairs accordingly. These two tasks are very much still part of our line of work however; our technical abilities have brought us one step further.

In the month of September 2011, CFB/ASU Wainwright has seen a massive display of shelters like never seen before. 42 sea containers containing all the materials for the 1000 person Relocatable Temporary Camp (RTC) Kitchen were transported from 25 Canadian Forces Supply Depot (CFSD) in Laval to Wainwright.



1000 person kitchen

MWO John Robicheau, Materials Technician and Life Cycle Material Manager for all second line soft wall shelters & MECC shelters from DCSEM 2, joined his efforts to form a team from 1 ESU and CE personnel all across Canada. The team displayed tremendous effort to erect the complex (photo inset) for the first trial before putting it in service.

The 1000 person kitchen is one part of the RTC which is composed of a wide variety of engineering equipment that provides the CF with a modern, deployable, and re-locatable temporary standard of accommodations with inherent quality of life features and amenities. It provides a deployable capability to feed CF deployed troops on large scale deployments overseas. In collaboration with Combat Services Equipment Management 2 (DCSEM



Modular tent

2), the technical authority responsible for RTC Repair & Overhaul (R&O) under the watchful eye of the Life Cycle Material Manager (LCMM) MWO Robicheau, CANOSCOM trialed the 1000 person kitchen to ensure its operational capability and readiness.

Primarily, this set up of the 1000 person kitchen is a trial designed to allow the Original Equipment Manufacturer to complete the R&O process as

this is the first time the kitchen is being assembled with all of its components including appliances. This included completing the electrical systems and plumbing allowing all the medium ware to be properly located. Secondly, this trial is an excellent opportunity for CF trades people to familiarize themselves with RTC assets and gain valuable experience for future operations. For this trial, CF personnel arrived from all across Canada in order to help with the construction, repair, overhaul and teardown phases.

This project was led by Lt Hassan Choudhary of 1 Engineer Support Unit (1 ESU). Leading the overhaul phase was DCSEM 2 personnel who included Mr Serge Di Camillo and the (LCMM) for soft wall shelters and MECC shelters MWO John Robicheau. The kitchen trial was scheduled for completion in mid November, but with the weather being on their side and the outstanding effort displayed by the team, complete tear down and packing of the complex was done in record time and was ready to ship back to 25 CFSD by the 5th November.

MWO Robicheau who is also the LCMM the MECC shelters and shops such as the Battery shop played a leading role in this 2 month trial and overhaul. His efforts and those of Lt Choudhary and his team were rewarded by receiving CANOSCOM's Coin for outstanding effort and dedication to the trial.

This has clearly demonstrated that Materials Technicians possess the technical expertise and knowledge to take on such challenge.



Small Arms Modernization project

By Capt T. Ghadban, Syst Engr, DGLEPM

The in-service fleets of small arms were designed for and manufactured during the Second World War, the Korean conflict, or the Cold War, when the application of massed fire was more important than precision. The oldest small arms in the Canadian Forces (CF) have been in service for over 60 years, and suffer from fatigue, wear and tear, and lack of spare parts. Yet, today's military engagements require precise weapons to mitigate the risk of collateral damage.

This new security environment has caused an impressive surge of advancements in small arms technology and increasing focus of achieving the right mix of weapon, ammunition and optics.

Notwithstanding this major shift in the demands placed on our soldiers and the healthy supply of advanced weaponry, the CF's fleet of small arms has remained relatively unchanged. Numerous minor upgrades were carried out in the early stages of the Afghanistan deployment and a significant number of unforecasted operational requirement acquisitions were completed to improve small arms capability. Much of this work was conducted with only a preliminary understanding of the new operating environment and without a long term plan for sustainment. While the immediate operational requirements were met, the solutions were often less than ideal, and were not implemented on a fleet-wide basis. They also created new problems such as increased weight, and were not introduced with appropriate life cycle support.

The Small Arms Modernization (SAM) project is a Major Crown project valued at \$513M and is aimed at improving the small arms capability of the CF by upgrading, recapitalizing or replacing most small arms and their sights and accessories. Improvements to ergonomics, weight, balance, functionality, reliability, and firepower are

expected. The project has completed the Identification phase and is ready to proceed to the Option Analysis phase. The Options Analysis phase will determine the preferred

aiming device, sharpshooter weapon, gunshot locating sensor, tactical flashlight and reduced weight ammo. Like with any other project, the scope, requirements and/or timelines may be



Note: Actual makes and models may be different from the images shown above. SAM is still in the definition phase and most bidders have not been selected.

option for modernizing the small arms capability of the Land Force. This is done via user surveys, deficiency analysis, trials & evaluations and rigorous functional and performance testing. SAM is expected to upgrade the C6, C7, C8 and C9 and purchase new Pistols and Ranger Rifles for Phase 1. Other acquisitions within SAM that will be delivered by the end of Phase 2 include a replacement for the M203 Grenade Launcher (with ammo & FCS), close combat optics, laser

amended by the Army at anytime.

SAM is the first of three major projects aimed at improving small arms capabilities. The other two are Special Weapons and Ammunitions and Next Generation Small Arms. This ongoing effort is crucial to ensure that the CF has the best small arms technology for the soldiers of today and tomorrow.



1 Svc Bn Recovery Competition 2011

By Lt S.E. Wall, OIC Veh Pl, 1 Svc Bn

Vehicle Recovery is a fundamental task to Vehicle Technicians in the EME Branch. In order to place emphasis on the importance of recovery operations, and to encourage excellence in the field, 1 Service Battalion held a Recovery Competition on 8 September 2011. The competition challenged competitors with complex recovery tasks that were realistic and rarely seen in training or domestic duties.



As this type of event had not been held in the battalion's recent history, development of the scenarios was left completely to the imagination of the trialing crews. While developing and testing the selected scenarios the trialing crews had to perfect and test the vehicle casualty tasks so as to ensure fairness and consistency for each competing team.

The competition challenged competitors with complex recovery tasks that were realistic and rarely seen in training or domestic duties.

The trialing crews overcame many challenges in order to perfect three unique scenarios, each complete with actors. Indeed, the Recovery Competition would provide many challenges for staff and competitors to overcome.

Four teams participated in the competition: Recovery Section, A Vehicle Repair Section, QL 4 Training Cell and Maintenance Platoon each submitted a team to compete in the three scenarios. Each scenario began with the Crew Chief receiving a RRR, orders and a brief from the staff assigned to that scenario. Each recovery crew was then required to follow doctrinal MRT drills prior to departure, while en-route, at the casualty site, and on the return trip. The scenario provided significant

challenges to overcome. For example, in the battlefield damage casualty scenario, as teams began their hook-up they were engaged by an actor posing as a hostile sniper, and were then required to conduct drills to manage that threat. The pictures below are of a BLR MLVW which was used to simulate an IED casualty.

The competition wrapped up by 2000hrs on 8 September 2011 once all equipment and personnel were accounted for. By all accounts we had orchestrated a very successful Vehicle Recovery Competition.

All the competitors demonstrated superb skills in the conduct of the recovery operations, but in the end only one team could be crowned as victorious. Congratulations go to MCpl Lahey and Cpl Mitchell for demonstrating outstanding technical and tactical skills throughout the competition.

Given the accomplishments achieved as a result of the Recovery Competition we hope to build on its success for future years and eventually grow to encompass EME participants from across 1 Canadian Mechanized Brigade Group.



EME Trivia

By 2Lt F. Beauvais-Beaudry, 202 DA

1. In honour of a fallen comrade, driver of an armored recovery vehicle, two locations in Afghanistan were named after him. What were these locations and their respective names?
2. What surprising logistics solution to supply movement was implemented in 2008 and hosted at the Sperwan Ghar Mews facility?
3. What was the highest point at which the EME flag was hoisted at KAF?
4. Over the course of the Afghan Combat Mission, which fast foods made their way to KAF?
5. How many tours has WO Digger performed?
6. What item is displayed in this picture?



EME veterans

The 202 WD is proud to have welcomed Mr William Buchanan and Mr John Irvine, two former EME Techs, on the day of the Men's Christmas Dinner.

Mr. Buchanan joined the non-permanent active militia in July 1940 at age 25 and joined the Army that September. As our Regiment, RCEME, saw the light of day, Mr. Buchanan was one of the first to be a Craftsman in the RCEME Corps following service in the Ordnance Corps and served in the Advanced Workshop in England for most of WWII. He was sent to France as part of the D-Day operations where he serviced mainly trucks, cars and carriers, the type of work our vehicle techs would do today.

Mr Buchanan says that on/or around 15 May 1944 he was simply given a new badge and told to replace his old with that one; that he was part



From left to right: CWO Lévesque, 202 WD RSM, Mr William Buchanan, Mr John Irvine and Col Prévoist, 202 WD's CO.

of a new Corps... and to carry on. Mr Buchanan eventually returned home on September 10th, 1945, which to this day remains the happiest day of his life as his dearly beloved,

who would eventually become his wife, was waiting for him at Bonaventure Station. It is an honour for us to welcome Mr. Buchanan at our table as a veteran of our EME Branch, and maybe one of the few remaining initial beneficiaries of our workshop's first operational taskings.

As for Mr John Irvine, he has known the very beginnings of the 202 WD and worked there in 1947. He was a drafter and worked at building 10 where the electric section is currently located. After retiring from the Forces he took a contract as a civilian in the communications group based in Lahr, Germany, from 1988 to 1992.

Awards and Recognitions

In pictures



Col Cmdt receiving his CD3 with his son MCpl Robert Holt.



Col Eldaoud (new Branch Advisor) presenting a gift to Col Myers (outgoing Branch Advisor).



BGen Patch presenting the Branch pennant to Col Myers.

Celebrating EME Accomplishments

Major Wade Brinkman (EME) is currently serving as the Commanding Officer of the Area Support Unit in Chilliwack, BC. He is pictured here with the Inverse Synthetic Aperture Radar (ISAR), which was used to write a published technical research paper that eventually won 2011 Institute of Engineering and Technology Premium Award in Signal Processing.

Inverse Synthetic Aperture Radar (ISAR) is a unique imaging technique used as a tool to draw 2D radar images of targets based on their speed and direction around a fixed coordinate covered by a stationary antenna.



Major Brinkman posing with the 2011 IET Premium award

This system allows the antenna to perform non-cooperative target identification (NCTI) of aircrafts and ships based on distinct features of the target which return one or multiple signals generated by radar mats on ships, engine housings and intakes on aircrafts. The weakness of ISAR is that it requires a relatively large group of radar pulses which in turn involve a long time frame to make up for the time it takes for the signal to hit the furthest point on the target in comparison to the hit on the closest point; called the cross range extent. The series of pulses require that the target remains at a constant speed to accurately pinpoint it. However, with ships at sea or manoeuvring aircrafts this is rarely the case and the end result is a blur of the ISAR image occurring in the cross range, unrecognizable and useless for NCTI. There are algorithms capable of removing this error, however, they are extremely computationally intensive and possess little real time use.



In 2005, Capt Wade Brinkman completed a thesis at the Naval Postgraduate School (www.nps.org) to optimize the process of error removal by using new algorithms. In 2009, Maj Brinkman along with his thesis advisor, Dr. Thayananthan Thayaparan of DRDC – Ottawa, submitted the thesis as a 14 page technical paper to the Institute of Engineering and Technology (www.ietdl.org). This paper, entitled “Focusing Inverse Synthetic Aperture Radar Images with Higher-Order Motion Error Using the Adaptive Joint-Time Frequency Algorithm Optimised with the Genetic Algorithm and the Particle Swarm Optimisation Algorithm – Comparison and Results” was published in the IET Journal Signal Processing, August 2010. Through a process of selection for the best paper published in 2009-2010, the article was short-listed by editorial board members and selected by the editor-in-chief. Maj Brinkman and Dr. Thayaparan are the proud recipients of the 2011 IET Premium Award in Signal Processing

Medals and commendations

Joint Task Force Central / Land Force Central Area Commendation

Maj Guillaume Olivier

Major Olivier demonstrated exemplary planning and organizational skills when tasked with the complex roll out of the Defence Resource Management Information System in Petawawa. He developed a coherent plan and conducted extensive liaisons in Petawawa, Edmonton and Ottawa to ensure every detail was covered during the pre-roll out phase. His exceptional planning ability was the key enabler to a project of this size and complexity. Major Olivier’s highly successful roll out of the Resource Management Information System in Petawawa has brought great praise for both 2 Area Support Group and Land Force Central Area

Commander’s Commendation

Cpl M.R. Lewis

As a fire control systems technician at a forward operating base in Afghanistan from April to October 2009, Corporal Lewis’ dedicated research and innovative ideas led to improvements in the working environment of Canadian tank crews. He provided data that enabled the correction of faults in the Leopard tank’s cooling systems, allowing the crewmen to remain operationally focused during the blistering summer heat. The solutions he developed enhanced the crews’ effectiveness and will be incorporated in future versions by the manufacturer. Corporal Lewis’ actions are beyond those expected of his rank and demonstrate an outstanding commitment to his fellow soldiers.

Decoration conferred by the President of the United States of America



Legion of Merit – Degree of Officer
BGen (Retired) J.C.M. Giguere



Meritorious Service Medal
Maj J.C. Barbour



Order of Military Merit
62nd list

Appointed as Commanders
MGen I.C. Poulter, C.M.M., CD

Appointed as Members
CWO H.J. Bransfield, M.M.M., CD
WO J.E.F. Yargeau, M.M.M., CD



Meritorious Service Medal

MCpl J.T. Salois
LCol Poirier (5 Bn Svc)
Maj Cole (CFSEME)
Maj MacCharles (LFTDS)



EME Branch Advisor's Coin of Excellence

Coin #011 MWO Laramee

Presented 26 Aug 2011 by Col Eldaoud

In recognition of the excellent work and outstanding dedication demonstrated by MWO Michel Laramee in Op HARAS. His honourable contributions to the improvement of techniques and training process of EME QL4 technicians have produced results beyond all expectations. Thanks to his technical acumen, his strong leadership and extraordinary innovative vision, he has created a personalized training allowing the four EME trades to perform cutting-edge training; challenging, interesting and comprehensive. This outstanding achievement has allowed the EME training platoon of the Quebec region to become a reference on a national level in the field of technical training of QL4s. Master Warrant Officer Laramee reflects, in an exemplary manner, the basic features that make up the esprit de corps of the EME Branch.



Coin #012 Sgt Lammiman

Presented 28 Nov 11 by Col Eldaoud

Sgt Lammiman is recognized for his exemplary efforts in the planning and execution of the 41st Western EME Bonspiel. Sgt Lammiman designed the event to encourage a high level of Esprit de Corps amongst participants and his ingenuity was seen in the conduct of the meet and greet, registration, dining, and closing ceremonies. The efforts and dedication to the success of this event not only strengthened and raised the Esprit de Corps of the Western area but made a healthy profit for the Western Area EME Fund. Sgt Lammiman represents the best of senior NCOs within the EME Branch.



Coin #013 Sgt Toner

Presented 28 Nov 11 by Col Eldaoud

Sgt Toner is awarded the EME Coin of Excellence for his outstanding dedication in ensuring the high quality of students that pass through the LFWA OJT Center. He is an excellent leader, demonstrating to his staff and students the true meaning of "Arte et Marte". Sgt Toner on his own initiative has offered many original and creative solutions to overcome the resource problems facing the LFWA OJT centers such as rotating students to units outside of Edmonton to ensure that training standards and goals are being met. Sgt Toner continues to instill his experiences and the EME Esprit de Corps into his students and regularly challenges them to surpass his expectations. Sgt Toner is a true asset to his trade and the EME Branch, greatly influencing our success in the future.



Coin #014 Mr. Bates

Presented 10 Jan 11 by Col Eldaoud

In light of the remarkable contributions, efforts, and successes, the EME coin of excellence is presented to Mr. Darrel Bates. Mr. Bates is recognized for his outstanding dedication and mentorship of the Materials Technician (Mat Tech) junior tradesmen throughout FY 10/11. Mr. Bates' expert tutelage, leadership and changes to the Mat Tech training curriculum of the training at 2 Svc Bn OJT Mat Training Cell has been a decisive element in the flawless success of all students who attempted their sequential DP2 course.



Last Call

Kubanowski, Jozef W
(WO ret'd)
Blanchard, John
(CWO ret'd)
Williams, Cyril Andrew
(Captain ret'd)
Steffan, James Martin
Keays, George Willson
(Major ret'd)

june-07-11 Lelacheur, John
(Major ret'd)
june-28-11 Goheen, Peter Joseph
oct-04-11 Bowdridge, Eric Reginald
(Sgt ret'd)
oct-14-11 McKibbin, Kenneth Holdsworth
(Brig Gen ret'd)
nov-09-11 Burke, John

nov-16-11 Osborne, Ronald Albert
dec-11 Wade, Robert Cecil
(WO ret'd)
dec-19-11 Rostaing, Edouard André
Joseph (Col ret'd)
dec-19-11 Jacques, Daniel
dec-28-11 Hunter, Kenneth Ralph

jan-03-12
jan-05-12
jan-13-12
jan-14-12
jan-14-12

Thanks

CWO Richard Rodrigue, CFSEME RSM

Hello EME members,

This letter is just an opportunity for me to thank certain members of our wonderful EME Branch and to express my gratitude for their support to my son, Cpl Michael Rodrigue (armoured corps member), who deployed to Afghanistan with 12 RBC as a Leopard tank driver. The terrible incident occurred when his tank hit an IED during patrol. My wife France and I wish to thank the people listed below, whose cooperation, professionalism and devotion exceeded all our expectations.

Their exemplary sense of duty and positive attitude were essential in supporting our son and boosting his morale in a very challenging work environment. And the beauty of all this was that our son's trade never ever became an issue. And thanks to their quick intervention, they managed to gain our trust and, at the same time, mitigate our fear of never seeing our son again.

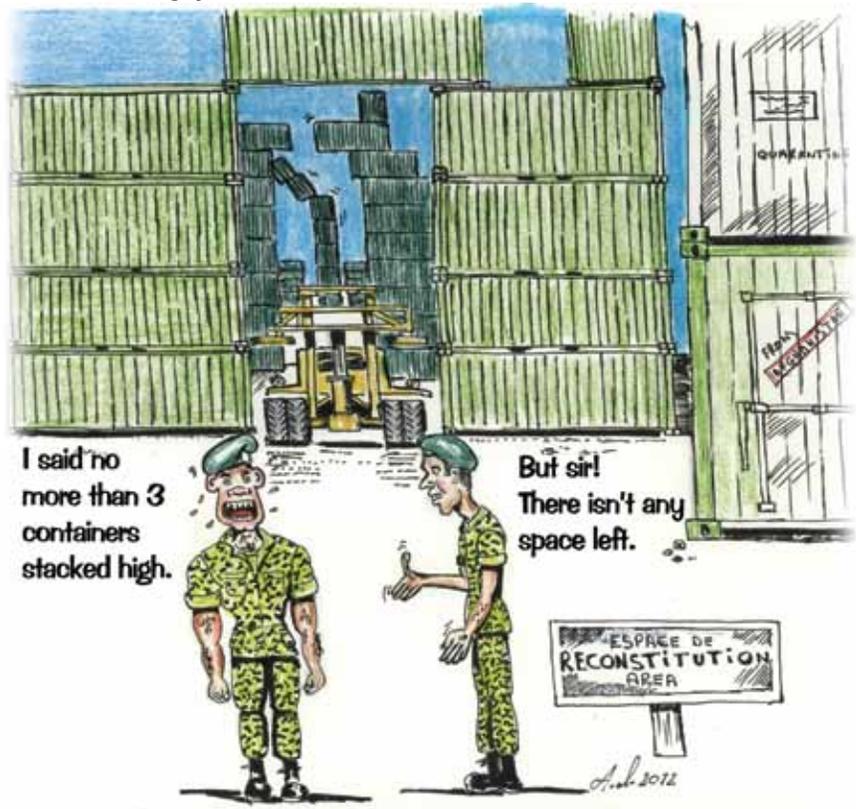
I know they would have done the same for anyone in dire need. But, as a father, I very much so appreciate the direct support you gave him and us when his health was in question. You should all know that in our eyes the ESPRIT de CORPS at the EME Branch is outstanding. From the time we started seeking information on this critical incident until our son's return to Canada, you have offered exemplary support to our son Michael, his brother Patrick (gunner) who was on the same ROTO and us, their parents. What you have done is commendable and deserves recognition. More specifically, we would like to thank the following people:

- CWO Gilles Godbout (RSM NSE)
- MWO Jaques Bolduc (CSM Maint Coy)
- Sgt Luc Sévigny (5 Svc Bn)
- Cpl Steve Brazeau (12 RBC)

There are no words to express our gratitude. Thank you from the bottom of our hearts for the support you have provided our family.

Murphy's Law

By Mr Alain Ilareguy



Here is some news about Michael since his return to Canada. Our son has made major progress and is back on his feet after a long period of recovery in a wheelchair. He is staying very positive and feels very grateful towards you all. He should be back at work soon.

ARTE ET MARTE

Thank you from the bottom of my heart.

Trivia Answers

1. The locations are named after Cpl Nathan Hornburg. The rest area at KAF is called Hornburg's Corner and the maintenance tank park in FOB MaSum Ghar is called Hornburg Tank Park.
2. Donkeys. The animals were used as an alternative to avoid destroying farm lands by passing vehicles.
3. The EME flag was hoisted on top of the KAF Comms tower on EME day 2008.
4. Tim Horton's, Subway, Burger King and Pizza Hut which also offered delivery.
5. 23 tours of peacekeeping with the last one ending in 2003 with his return to Canada.
6. A Bison sporting ceramic plating

