

EME



1-2011

JOURNAL

THE MAGAZINE OF THE ELECTRICAL AND MECHANICAL ENGINEERING BRANCH



EME AND TRAINING

Learning & Action

Tradition & History

Awards & Recognitions

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IN AFGHANISTAN



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For more information, contact : ANN-MARIE.STURGESS@forces.gc.ca

HISTORY QUIZ

By : Lt T. Kim , ADM(Mat) / DGLEPM / DLEPS 4-5-3

1

What was the first workshop that functioned for the first United Nations Emergency Force?

- a. 41 Canadian Infantry Workshop RCEME
- b. 56 Canadian Infantry Workshop RCEME
- c. 61 Canadian Infantry Workshop RCEME
- d. 82 Canadian Infantry Workshop RCEME

How many EME 50th Anniversary celebrations were there in Visoko?

3

- a. 1
- b. 2
- c. 3
- d. 4

2

In what year was the first EME Birthday celebrated in Haiti?

- a. 1989
- b. 1991
- c. 1993
- d. 1995

4

The EME Coin of Excellence recognises individuals who make outstanding contributions to the EME Branch. What number EME Coin of Excellence was awarded to the member who solved a technical problem using a Xbox controller?

Individuals can email their answers to [+EME-GEM_BRANCH@ADM\(Mat\) DLEPS@Ottawa-Hull](mailto:+EME-GEM_BRANCH@ADM(Mat) DLEPS@Ottawa-Hull). The first person to submit the correct answer will have their name and answers printed in the next edition of the EME Journal.

EME JOURNAL

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BRANCH ADVISOR'S MESSAGE

By: Col S.P. Myers, C.D., EME Branch Advisor

Folks - as most of you know, "Arte" Training has been one of my top three priorities since taking over as the Branch Advisor. Although my main effort was initially focused on our manning situation during the past two years, the successful recruiting and the repatriation of our (Personnel Awaiting Training) PATs to CFSEME has positioned us well. We are now at the point where we can start to place an even greater emphasis on the technical aspect of our training.

Arte training is vital to our ability to develop the soldier-technicians and Army leaders that are so essential on the modern battle-space. No matter the scenario, no matter the threat, the ability to close with and fix kit is critical to successful land operations. That is why it is so important that we maintain the momentum in modernizing and operationalizing our training.

The past few years have certainly been exciting and challenging for EME, as we closed with and fixed kit on operations. From the latest in cool maintenance toys (the AHSVS wrecker) to the realistic implementation of expedient battlefield recovery training, to fixing new and modern equipment on operations, EME has continued its track record of success on operations. The key to sustaining this success into the future lies in our training. The Vehicle Technician OJT Centers, the systems approach to training, the simulation work ongoing at our School, the incredible efforts in modernizing our courses at the highest levels, and learning to fix new kit on the fly when required to do so – these have all been accomplished, and more, because of the incredible work done at every level of our Branch. But we are not done yet, nor can we afford to pause. I fully intend that the Vehicle OJT Center concept be applied across

all of our trades. I am also placing increased emphasis on operationalizing our training. What do I mean by this? Well, we need to make sure that we apply our very scarce technical training time against those systems and equipments that are used on operations. To do this, without extending our training timelines, we need to take a real hard look at what we train on today, and if a piece of equipment is not tagged for potential use on operations, then we need to seriously consider removing it from training. Keeping our training relevant to operational requirements is the key to our continued success on future operations.

As most of you know, there is a lot of new and upgraded equipment coming into service over the next 5 years: from the Tactical Armoured Patrol Vehicle (TAPV), Close Combat Vehicle (CCV), upgraded LAV III and the Leopard II to new weapon systems, sense capabilities and the latest composite and armoured materials. Our equipment landscape will be dominated in the very near future with equipments sporting cutting edge technologies. Clearly there are challenges facing us as we evolve, and it will not be easy training on all the equipment the Army will soon have. Therefore, we need to continue to be innovative in our approach to training. This

is also in line with the CLS' philosophy of "Train to Excite" and that is why Arte training is not just the job of CFSEME but our entire Branch. We need to ensure continuity in the coaching, mentoring and supervision so important on the workshop floor; leveraging our recent operational experience to inject realism into our training; synchronizing training requirements with new equipment acquisitions at the senior levels; delivery of training at our School house. Successfully transforming our Arte training, keeping it interesting, challenging and relevant is a total Branch effort. It is the key to our future and we have to get it right: our soldiers deserve nothing less. That said, I have absolutely no doubt that once again, EME will rise to this training challenge with our well known "can do" attitude and we will continue to provide the best soldier-technicians-leaders to our commanders on operations.

As a final closing thought, this will be my last EME Journal Article as Branch Advisor as I will be handing over the responsibilities in June 2011. Therefore, I'd like to also take this opportunity to thank everyone for their support and advice these past three years. It certainly has been a very busy and challenging time for me. I have enjoyed meeting with many of you as I travel-

ERRATUM

Unfortunately a mistake was made in the November 2010 edition of the EME Journal. The author of the article called « Tribute to Cpl Hornburg », page 28, was Mr. L (Tex) Leugner, C.D., (WO Ret). Please note that the author of the text concerning the change of command of the CFSEME was MWO A. Lotocki, on page 6, and that he is a Senior Technical Instructor (STI).

led, and working on key Branch issues as we transitioned the Branch for success in the future. A personal and special thanks to CWO St-Jean and CWO Bergeron, two incredible EME RSMs, who kept my butt out of the fire; the Col Cndt, BGen (ret'd) Peter Holt, whose wisdom and advice were invaluable to me. And finally, to all of you – the Craftsmen, the soldier-technicians, the leaders of our regiment of many small units... everywhere, the members of our extended EME family – I say with all sincerity, it has been an absolute privilege and honor to have been your Branch Advisor for the last three years.

Thank you and Arte et Marte!



BRANCH CHIEF WARRANT OFFICER'S MESSAGE

By: CWO JBA Bergeron, C.D., M.M.M., Branch Chief Warrant Officer

Hello, everyone. I have been your Branch CWO for almost a year now. The first six months allowed me to complete my education in the Branch's

priorities and the methods that it uses to meet its objectives.

Although some might think that some of the priorities identified by our Branch Advisor have not yet been addressed, I assure you that we have made enormous progress in each of them. Whether in communications with our Regional Network's establishment, the successes achieved by our recruitment centres in enlisting EME technicians, the efforts made by all our occupation advisors and the Army training sections in LFDTs and CTC responsible for EME training, we have definitely advanced the markers in each of the priorities that have been identified.

Have we reached the point where we can let up the pressure? Definitely not. The accelerated pace of operations and delivery of new equipment in recent years has shown us that much remains to be done concerning the training of our technicians. The rapid modernization of equipment has only increasing the gap between the training provided and the training required. Of course, the ultimate goal remains the same: to train our technicians on the right technology at the right time. On the other hand, much of the work done by CF-SEME in recent years has been aimed at enhancing our ability to train our DP1 technicians in each of the trades. The School has thus been able to meet two of our Branch Advisor's priorities: increasing the number of EME technicians and enhancing their ARTE training. Don't get me wrong: the quality of the training of our DP1 technicians is up to the demands of the new technolo-

gies on the market. Not a week goes by without a working group going over the teaching points to see what should be added to or removed from the program in order to keep our training system on the cutting edge.

We must now concentrate our efforts on finding the way to face the training needs required to face the demands of the new equipment that is knocking at our doors. The new generations of combat and reconnaissance vehicles that are coming and the replacement of the B-type vehicle fleets pose a major challenge to our training system. Beyond the basic training of our technicians, we must understand the complexity of the challenges to come. Several question marks have yet to be explored, and our senior technicians will have to direct their expertise toward them in order for the necessary training to be developed.

Rest assured that the EME Branch leadership has their ears to the grindstone and that every effort is being made to keep us on top of the new technologies knocking at our door. ARTE training remains one of the Branch's priorities, and we are rapidly approaching the objective linked to it.

OPERATION HARAS: RESTRUCTURING OF THE EME ON JOB TRAINING CENTRE

By : Sgt Steve Bouchard, Vehicle Technician Training Platoon, Maintenance Company 5 Canadian Service Battalion

The Maintenance Company of 5 Canadian Service Battalion must augment the current capacity of its On Job Training (OJT) Centre. The Centre, which presently offers training only for vehicle technicians, will be reconfigured. It will train and coordinate training for the four trades of the Electrical and Mechanical Engineering (EME) Branch – vehicle technician, materials technician, electronic-optronics technician and weapons technician – and will do so by dedicating to the task all of the resources required to obtain national objectives in technician training by December 2011.



Craftsman Philippe Morin tests and adjusts a C3 telescope with advice from Mr. Jean-Pierre Lemire.

Out of this mission was born Op HARAS. “Haras” is a French word meaning “stud farm”. The horse holds an important place in the tradition and lore of the EME Branch, and a stud farm is an establishment where selected horses are kept for the reproduction and improvement of the breed.

The restructuring of the Centre and its resources will take place according to a carefully thought out concept. A series of gradual changes will be implemented in the course of the year ahead, in order to define the needs and reorient the structure of the organization until the final results is achieved. A complete review of the needs of the four trades has been ordered, and will be followed by a coordination of plans for the company as a whole. The current infrastructure, the availability of training personnel, the risk that training could negatively affect productivity, the availability of funds, and the required struc-

acquisition of new equipment to allow the troops to carry out their work in the field require that the Branch conduct a bottom-to-top review of the validity of its technician training concept. In order to provide absolute support to the Army, a technician must be fully confident and have top-notch training behind him. In an environment where spare parts are increasingly rare, it is even more critical to review the level of training of our technicians to ensure that they do not simply fall into the mindset of “parts replacers”. The ability to judiciously diagnose needs is critical in that it minimizes down time as well as replacement costs. For technicians, the priority must remain on developing skills and competencies, rather than compromising these aspects by subjecting them to the demands of productivity too quickly. Keeping the priority on

tural aspects of the organization are all subjects now being studied with a view to determining and planning the most efficient approach to meet the technical standards.

The replacement and upgrading of vehicle fleets, the replacement of obsolete equipment or simply the

training will assure the future productivity of the EME workshops. Training focused on the individual and his or her capacity to learn will be the primary effort. Beginning immediately, a systemic approach rather than a group-based approach will be applied in order to develop our technician-soldiers and make them knowledgeable, experienced and hardened craftsmen.

This complete restructuring will involve a reallocation of existing resources. To date, each of the four EME trades has trained its craftsmen independently, without necessarily looking to share or synchronize educational resources. They will now need to consider possibilities for the exchange of teaching materials such as the hydraulic training equipment to meet the needs of vehicle and weapons technicians, electronic white boards that can be shared among



Craftsman Vincent Bard explains the sequence of steps to follow for inspection of a 25mm automatic gun to his instructor, Mcpl Dany Faucher.

the different trades, and multimedia classrooms.

Each trade has its strengths in how it applies and manages the training of its technicians. Is the monitoring of students' progress effective and could it be more so? Synchronizing the movement of craftsmen through training in LFQA units, central monitoring of the quality of instruction received rather than a quadruple chain of certification, a clear separation between productivity and training to ensure that trainees have the time to fully develop their abilities, centralized and standardized personnel administration, and finally a future cohesion of technicians under one hat are all factors that require a review of the procedures in place.

The future looks promising, the intentions are legitimate and, knowing how the EME Branch operates, success is assured. With this approach, the craftsmen of LFQA EME Branch will soon take on a whole new look, and the workshops will reap the benefits.

EME GUILD

The EME Branch identified the need to preserve and protect our proud heritage. From this, the EME Guild Charitable Trust was created and will be funded through donations from former members and current supporters of the Branch.

- Remembrance Program
- Memorabilia
- History
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For more information, please contact :
ANN-MARIE.STURGESS@forces.gc.ca



RESERVE EME TECHNICIANS TRAIN IN REG FORCE UNITS

By : Capt. Ward Krecsy, OIC, Area Reserve Combat Service Support Coordination Cell (ARCCC)

The opportunity to describe our success in training EME Reserve technicians couldn't be missed since training is the theme of this EME Journal. Over the past three years, the Area Reserve CSS Coordination Cells (ARCCC) in each LFA, have been working hard both within their areas and collectively, to enhance the number and quality of EME Reserve technicians in the Army. Each ARCCC is responsible for managing the trades training for all EME Reserve technicians and officers throughout their career and are essentially, the de facto career managers.

We have had good success increasing the number of Reservists attending courses at CFSEME by roughly ten per cent in each of the previous three

trade. Reg Force units have also been instrumental in this success.

Along with the quality of training our Reg Force units provide, having QL4



Cpl Wesolowski is inspecting a .50 Cal QCB Heavy Machine Gun, during his Weapons Technician skill maintenance training at CFB Esquimalt, TEME. Cpl Wesolowski is a member of 39 Svc Bn, 11 Svc Coy. (Photo credit : MCpl Hicks.)

years. The number of Reservists that have gone through their QL4 training has only moderately increased but the biggest success has been with the quality and consistency of training due to a very good training arrangement we have with our Regular Force units within LFWA. As well, over the past two years, funding has been provided by the Army G4 for Skills Maintenance Training to allow Reservists to work a few days each year immersed in their

and Skills Maintenance training run in Reg Force units allows Reg and Res members to work side by side more often, enhancing mutual respect and dispelling common misconceptions each component has toward each other. In LFWA we have made steady progress with this as has been indicated by the enthusiasm our Reg F units have shown to assist in the trades training for our Res F trades people.

Our main QL4 training units are ASU Wainwright, 1 Svc Bn and ASU Shilo. They have maintained extremely high standards while providing a military training environment that draws out the best in our Reservists. The dedication and planning ability of the QL4 training staffs in these units has been nothing short of superb. Taking into account that these units have only sixty five training days to have the students complete all "Essential" POs to be QL4 qualified, is quite remarkable. The quality of QL4 training is proven by the successful pass rate our students demonstrate on their QL5 courses.

Skills Maintenance training is equally embraced by ASU Wainwright, ASU Chilliwack, TEME Esquimalt, WEME 17 Wg, Thunder Bay, ASU Shilo and other units to a lesser degree. This training is a win-win arrangement for both the Reservist and the training unit. Depending on the number of Class A Reservists who are able to make themselves available, our funding will often allow them to undergo this training for thirty days or more at a time. This adds a trades person to the shop floor for the training unit and immerses the Reservists in a military trade environment long enough to adequately refresh their trade skills.

There is a long way to go in developing this training in LFWA but looking back at the way things used to be, we are quite pleased with how far we have come.

ARTE ET MARTE

EXPEDIENT FIELDING REQUIRES EXPEDIENT TRAINING – THE LEOPARD 2 EXPERIENCE

By: Capt Philippe Guidoin, Tank Replacement Project ILSM2

In September 2006, following Op MEDUSA, the decision was taken to deploy Leopard 1 C2 main battle tanks (MBT) to Afghanistan. Soon after their arrival, it was realized that a more robust capability was needed to satisfy the operational requirements.

This situation led to the lease of 20 Leopard 2 A6M MBTs from Germany and their subsequent fielding to Joint Task Force Afghanistan (JTF-A) within 6 months. This short timeframe created some challenges in that there was no time to develop an institutional Canadian Forces (CF) EME maintenance course.

With the restraint of time available to establish a course in house, two options were explored; either ask a NATO allied army or ask the original equipment manufacturer (OEM) to provide Canada with this essential training. For the technicians, it was quickly realized that the foreign military technical schools were either at their maximum capacity (Germany and Netherlands were the two armies that were investigated) or we could not have the required throughput of technicians to fulfill our needs. The choice was then made to contract the technical training for the deployed Leopard 2 fleet with Krauss-Maffei Wegmann (KMW), who quickly set-up a conversion course for our technicians, already qualified on the Leopard 1 C2. Since June 2007, eight courses have been successfully delivered in Germany.

The experience showed the advantages and disadvantages of the OEM training. The positive sides of this option were:

- a. Our soldiers were trained by technicians either building the Leopard 2 or offering 3rd and 4th levels of support, leading to a very effective transfer of knowledge. On some occasions, the instructors had the opportunity to be deployed as field support representatives (FSR) in Afghanistan and developed a strong understanding of our needs and any training shortfalls leading to course improvement.

Of course, there is another side to the medal:

- a. These courses are very expensive when delivered on the contractor premises (approximately 1.1 Million Euros per course).
- b. The success you have using the newly bought equipment like the Leopard 2 leads to other countries buying the same vehicle and then competing for training vacancies. For example, KMW started to train the Canadians and developed their

product. They are now training the Swiss, Singapore, Greek, Brazilian and Chilean Armies, on a regular basis thus reducing the availability of their instructors.

- c. Special care must be taken when dealing with the provision of the vehicles or equipment used for training. When commercial-off-the-shelf (COTS) vehicles can be provided for training by the OEM, standard military pattern (SMP) vehicles are usually provided by the Army, which creates additional

- b. The OEM had the flexibility to quickly include new equipment in the training like the inclusion of the new Leopard 2 A4M CAN, a unique model within the Leopard 2 family designed especially for the CF, less than a month after the first tank was commissioned.
- c. Using the OEM finally alleviated the workload on CFSEME, which can be a determinant factor for success when many new fleets of vehicles (RG-31, AHSVS, MSVS, Leopard 2, etc) quickly enter service.



EME Technicians from JTF-Afg TF 3-10 working on a Leopard 2A6 in Kollëda, Germany, Summer 2010.

Leopard 2 MBTs.

The Leopard 2 technical training offered by the OEM was a great opportunity for EME soldiers to acquire first hand knowledge on maintenance from instructors who are building the tanks. While this option is too expensive and administratively difficult for steady-state training it provides the opportunity to be very flexible and prevent any domino effect on CFSEME by diverting resources from other courses. This option should be considered for any aggressive procurement process in support

administrative work and reduces vehicle availability. Therefore, not only did we require the OEM to provide some equipment, we also had to acquire, through a govern-

ment to government agreement with the German Army, resources such as Leopard 2 Armoured Recovery Vehicles (ARV), special tools and test equipment (STTE) and

of CF operations.

TRAINING IMPACTS OF THE M777

Par: Capt E. Kortelainen, PMO, LWTH Fielding and Training

The M777 howitzer was introduced into the Canadian Forces in late 2005 specifically for Operation ARCHER. The original buy of 12 guns was an Unforecasted Operational Requirement (UOR) that also included limited integrated logistics support as well as contractor delivered technical training for the Weapons (Wpns) and Electro-Optical (EO) Technicians, which was delivered just-in-time for deploying units.



Training on a M777 howitzer in Petawawa.

In 2007, the Project Management Office (PMO) Lightweight Towed Howitzer (LWTH) was stood-up and tasked to incorporate a 155mm artillery capability in the Army and improve upon the

UOR support concept. The introduction of the M777C1 imposed unique challenges on the Army and the aim of this article is to describe the development of the technical training component of

the M777C1 ILS concept.

Technical training development for the M777C1 was mostly centered on the Wpns and EO Technicians. The Vehicle

Technician will be introduced to the Gun Tractor, which will be based upon the family of the Medium Support Vehicle System Standard Military Pattern (MSVS SMP) vehicle, as part of that project's mandate. The full impact on the Materials Technician is still not defined because of the complexities associated with the M777C1 cast titanium and aluminum structures. The interim direction is 'do not train' but a review is still ongoing and final implementation will be addressed at a later date.

Training Development

During the UOR phase Canada was challenged to keep up with the high operational tempo and growing demands for M777 technical training as more howitzers were delivered to the US and Canadian forces concurrently. This situation necessitated that contractor delivered training for the Gun Management System (GMS) and howitzer would occur at the contractor facilities in the United Kingdom and United States respectively. Although this solution met the need for immediate operational deployments, it was not Canadian specific and not cost effective. A series of working groups in 2008/09 were tasked to analyze the training requirements from an Army and EME Branch perspective. The final Training Needs Analysis (TNA) concluded that EO training was best delivered in Core training and the Weapons training would remain as an Occupational Specialty Qualification (OSQ) for the short term (with a view to transitioning to Core in the long term). The Centre of Excellence (COE) for both EO and Wpns Technician training continues to be CF-

SEME Borden.

Significant changes between the UOR GMS and the Generation II GMS including a new 20 Amp Battery Power Management (BPM) unit, Detachment Commanders Display Terminal (DCDT) and Gun Laying Unit (GLU); and the integration of the Enhanced Position Location Reporting System (EPLRS) onto the gun that enable voice and data communications within the gun battery.

Initial investigation revealed the training delta between the UOR guns and the M777 C1 were marginal for the howitzer system and there was no requirement to provide additional training to previously qualified Weapons Technicians. For the EO Technician, the training delta between Generation I and Generation II GMS is greater and requires an additional conversion training package to address the differences. This additional training will likely be done in unit lines as a 3-4 day conversion course.

As a result of studies carried out in 2010 by Director Army Training, Master Lesson Plans will be finalized and Wpns Technician Pilot training will be conducted in fall 2011. The EO Technician Initial Cadre Training (ICT) will be conducted during summer 2011 and the intent is to fully introduce the new material into the EO Technician core training in 2012. There will be a transition period between the status-quo (technicians trained by the manufacturer) and the steady state (institutionalized training provided by CFSEME) to ensure that qualified technicians are in position to support M777 C1 fielding in fall 2011.

Training Aids and Infrastructure

During the spring and summer of 2011, CFSEME will receive numerous training aids to facilitate the conduct of training. To support Wpns Technician training; one complete M777C1 (including GMS), Computer Based Training (CBT) software, special tools, bench training aids, and an Interactive Electronic Technical Manual (IETM) will be provided to the School. The major components of the EO Technician training include the provision of two fully functional GMS mounted on training boards, special tools and test equipment, and publications. Training aids for the Optical Fire Control (OFC) will consist of: Quadrants Fire Control M17A1 and M18A1; Mount, Telescope and Quadrant M171A1 and M172A1; Telescope Panoramic M137A2; Telescope Elbow M138A1; and Alignment Device M154. The facility requirements to adequately house the M777C1 and provide the requisite training space are presently being studied. This infrastructure design process will continue at least until Full Operational Capability (FOC) is reached in 2013.

A lot of "leg-work" is done in a fast-paced operational tempo and procurement cycle to ensure the operability and maintainability of the M777 C1 howitzer. Proper, thorough, purposeful, and safe training are the fundamentals to providing the engineering and maintenance support to permit the users to receive improved capabilities and accomplish their mission.

"Arte et Marte"



"General Walter Natynczyk, Chief of Defence Staff, laughing with the students and PATs of CFSEME's Regimental Company on 14 September 2010"

OP ARTE: FROM SIMULATION TO HANDS-ON TRAINING AT CFSEME

Par : Capt Dan Cake, Training Development Officer at CFSEME

Advanced learning technology will allow CFSEME to bring training back to the Middle Ages. Sounds like an oxymoron, no? Well let us consider how folks were 'trained' back in the Middle Ages. The butcher, the baker, the candlestick maker; all three employed an apprenticeship model. Young apprentices would learn from a master tradesman for many years. Practice was real, feedback was immediate and the apprentice enjoyed a 1:1 instructor to student ratio. What does this have to do with the CF's training model of today?



Today's model is heavily influenced by our public education system. The public model is rooted in developments stemming from the Industrial Revolution and the 19th century. In short, labour requirements for the new factories necessitated a mass increase in the populations' literacy and numeracy skills. An educational assembly line focussing on the basics of reading, writing and arithmetic had to be put in place.

This was the model that was perfected throughout the Twentieth Century and that we are all products of. This model became an integral part of our society. We came to value our schools so deeply, that it became almost taboo to question their efficacy. Comments like: "it worked for me, why can't it work for the new students," have often been heard.

But, how well has it really worked? Has it fostered the critical thinking skills required of the modern work force? Advancements in psychology have called into question many of the assumptions prevalent in the construct of our education system. While the delivery of mass information to large numbers of students via the teacher-led lecture approach has proven to be an effective means to improve an individual's memorization skills, it has done little to ensure the fostering of tangible work skills.

Tangible work skills are of the essence nowadays in the EME Branch. The variability and sophistication of technology present in the Army's equipment of today has necessitated an increase in the skill sets of EME technicians. Rather

than rote learning specific procedures for the maintenance of specific kit, our technicians now require a deeper understanding of the underlying principles governing their operation. Technicians need to be able to apply this general understanding and critical thinking strategies in order to solve specific maintenance problems.

These critical thinking skills are not easily facilitated via a lecture format and a 1:30 instructor to student ratio. Yet the requirements that necessitated this Industrial approach are still a factor. CFSEME needs to take in ever greater numbers of unskilled individuals and send them out the door ready for work. This must be accomplished without a significant increase in staffing levels. What we need is the medieval apprenticeship model; what we have is the nineteenth century assembly line.

Fortunately, developments in learning technology are allowing us to factor in what we have learned from psychology and are permitting a more natural apprentice-like approach. Through the infusion of simulation technology and through the feedback mechanisms of computer-based Learning Management Systems, we are now able to offer our students ample amounts of virtual (if not real) practice and instantaneous feedback. Embedded software allows students to re-play their entire practice session outlining in very specific terms what they did right and what they did wrong – without the requirement for instructor talk.

In spite of this obvious advantage, it is well recognized that there will never

be a replacement for real hands-on and the mentorship of a real instructor. What virtual practice supports, however, is a situation whereby students can arrive on the workshop floor better prepared for real practice. They can be mentally warmed up. Feedback from the Armoured School's employment of gaming software on their DP3 Troop WO's course substantiates this claim. Pass rates have improved dramatically and students claim that when they finally get into their tanks, in the field environment, they already know what to do. Even with the addition of real environmental factors, stress and fatigue, the procedural knowledge is already well ingrained.

This is what CFSEME is after: more opportunity for practice, more quality feedback and a maximization of the potential of real practice time. It took many years and some failed starts to arrive at this conclusion. As leaders in the adoption of new technology in the CF, EME personnel have traditionally been open-minded to its incorporation. Unfortunately what was often missed, in previous attempts to modernize, was the need to identify priority targets and an under-appreciation for the magnitude of the effort involved. From those projects, however, many valuable lessons have been learned.

Under the leadership of the previous Cmdt CFSEME, LCol Nishika Jardine, and continuing under the guidance of the current Cmdt, LCol Paul Fuller, the CFSEME centred project "Op Arte" has been initiated. In July 2010, the Op Arte Project Manager was established. Since then, Mr Paul Hallett (REME Maj re-

tired), has conducted a detailed analysis of the requirement and has begun to put together an implementation plan that will take us out 4-5 years.

Over that course of time, the continued support of the Army Learning Support Centre (ALSC) and outside agencies will be vital to Op Arte's success. The establishment of the ALSC Courseware

development detachment at CFSEME in July 2010 has provided much needed horsepower in support of Op Arte. The procurement of products from e-learning companies, such as NGrain, has also allowed CFSEME to expedite the process of modernization.

In summary, CFSEME is now actively modernizing its training through adopt-

ing the medieval apprenticeship model facilitated by modern learning technology. The success of Op Arte is vital to the continued success of CFSEME and to the EME Branch's continued ability to sustain the Army's equipment.

SAVING A PART OF OUR HISTORY!

By : L (Tex) Leugner, C.D., Warrant Officer (Retd)



During the D-Day landings in 1944, many tanks, trucks, landing craft and other equipment were swamped and sunk before reaching the beach. In 1970, local fishermen snagged their nets on a Canadian 1st Hussars Sherman tank that had sunk off the Normandy coast during the invasion near the town of Courseulles-sur-Mer. A team of me-

chanics, lead by MWO Bob Sutherland, serving with NATO in West Germany, recovered and repaired the tank, after which it was named "Bold" and given to the town. The tank now contains the crests of the Canadian Units that participated in the Normandy invasion, including a replica of the original crest of the Royal Canadian Electrical Mechani-

cal Engineers mounted on the right side of the hull.

In appreciation of Canada's efforts, the town of Courseulles-sur-Mer has installed a bronze plaque on the tank dedicating it "to the memory of all Canadian units that participated in the D-Day landings."

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The Journal of the EME Branch

Branch Formation:	May 15, 1944
Branch Motto:	Arte et Marte
Branch Patron Saint:	Saint Jean de Brébeuf
Branch Colonel	
Commandant:	BGen (retired) P.J. Holt, O.M.M., C.D.
Branch Advisor:	Col S.P. Myers, C.D.
Branch Chief Warrant Officer:	CWO JBA Bergeron, M.M.M., C.D.

LOOKING FORWARD

Par: MCpl Steve McIntyre, Vehicle Technician Instructor Vehicle Company (CFSEME)

Anyone who has passed through the hallways of CFSEME Vehicle Company in the last two years would have noticed an increased student population in the building. Most recently, in the last six months, there have been more students in training here at CFSEME than there has been in the past ten years.



Prior to this year, there was a fear that with a decrease in EME enrolment, low course numbers and a high retirement rate, there would be an impact on the health of our trade for the future. In an effort to keep the Vehicle Technician trade strong, we asked for more students. Our demands did not fall on deaf ears as this past summer, the number of students swelled to over 300. During the summer of 2010, CFSEME ran eight DP1 (QL3) courses, two DP2 (QL5) courses, a Leopard course, and a Heavy course. Currently, the forecast for the summer of 2011 and 2012 to meet the Army's demands will promise even more students; thus our enrolment rate will be even higher.

In order to accommodate the amount of students in the school, CFSEME has had to make some alterations. Some of the changes have included increased class sizes, the reallocation of classrooms (every room in the school is now being utilized) and the delivery of instruction. With all of these changes, the instructional and support staff members have had the daunting task of remaining flexible and resourceful while still maintaining the level of consistency that is synonymous with the Canadian Forces. It was only with the support of the Combat Training Center as well as the EME Branch Staff, that CFSEME could meet the requirements to facilitate the increased student throughput.

CFSEME also had to change the class sizes. Prior to this influx of people, the class sizes were 12 students, now, the average class size is 24. You would think that these numbers would overwhelm the instructional staff here at CFSEME

Vehicle Company, but this has not been the case. Armed with the knowledge that this is a step in the right direction for the future of our trade, the instructors have banded together to ensure that the students get the support and instruction needed to succeed at the units. CFSEME also tried to improve the service for the students which has been a large undertaking. Managing the lives of over 300 students has proven, at times, to be a logistical nightmare. In efforts to subdue chaos, we recently created a section called the Course Supervising Officer (CSO) Section. CSO Section is dedicated to taking care of the students' needs whether they are administrative or course related issues.

New course curriculum and course doctrines have also been implemented. Since its adoption by CTC Galetown and the Army, the new doctrine has forced us to change our way of conducting business. We no longer get to decide course sizes and duration. As dictated per the requirements of the doctrine, we now need to meet the new quota demands. Although DP1 courses have been cut down to 125 days of instruction, it does not mean the courses are any easier. In fact the college level instruction, the heavy electronics-based material and the pace of delivery has proven to be more challenging than the courses of the past. Regarding the DP2 course, they have also been cut down to just 55 days. In order to cope with the decrease in days of instruction, we now rely on the more experienced students to demonstrate skills to the younger students and the results have been good.

One thing that remains consistent here at CFSEME is the need for manpower. CFSEME Vehicle Company now employs over 80 personnel, including military and civilian instructors. Many of the civilian instructors have prior military experience and have proven to be a real asset to the school. Some of them have been employed here for many years. With constant postings of members in and out of the school and various taskings for the military staff, they are the anchors that make sure the changes put in place are relevant in the following years.

Upon reviewing the facts of these recent changes, it can be said that the "Army Tempo," as every one knows, is moving at an incredible pace. Considering the amount of EME soldiers coming to CFSEME Vehicle Company for training, it is imperative that we ensure our tradesmen are properly trained and educated now more than ever because of the advancements in technology. Although CFSEME's new senior NCOs and instructional staff have taken new directions to meet the problems head on, the reality is that the burden of ensuring that the EME soldier is well educated, professional, and ready to take their place as the next generation of techs, falls upon us all.

REGIMENTAL COMPANY TODAY

By: Lieutenant W.K.R. Lee, Administration Officer, Regimental Company

As the starting point and training facility for all EME Officers and NCMs, Regimental Company provides the best possible common non-technical training along with realistic field oriented training for students. For those who have not been back to Regimental Company for a while, following is a brief description of the company.

PERSONNEL AWAITING TRAINING PLATOON

The transformation from Post Recruit Education Training Centre to Personnel Awaiting Training (PAT) Platoon of future EME technicians and officers is the biggest change to Regimental Company that most returning personnel would notice. With over 320 EME PATs at this time, it seems like we are managing a PAT Battalion. PATs do a number of activities throughout their stay at CFSEME, including but not limited to:

- Prerequisite training for trade specific Development Period (DP) 1 training (POET, BQM(L) BOT);
- Employment While Awaiting Training (EWAT), which is not trade related;
- On the Job Employment (OJE), which is trade related;
- Skills maintenance, including soldier skills and ranges; and
- Professional development, such as trips to trade and military related locations.

PAT PI staff manage the day to day activities of these soldiers. This involves conducting interviews, managing appointments, preparing students for courses, conducting and supervising training and activities, and solving complex administrative issues.

As the only Regular Force Army unit in Borden, as part of the Combat Training Centre, CFSEME is tasked with a variety of activities in support of visits and exercises. PAT PI absorbs many of these tasks, allowing staff and courses to carry on with training.

TRAINING FOR NCMs

The Common EME Training Platoon (CET PI) is now, in conjunction with In-

termediate Training Platoon (ITP), providing courses for all NCMs, less DP4. DP1 and DP2 concentrate on field skills, convoy ops, navigation and MRT drills. DP3 teaches the first level of supervision of a workshop, namely the future EME sergeant. The new challenge of CET is the development of all the new pilot courses for DP 1, DP2 and DP3 and the addition of DRMIS training. DRMIS will increase the training time for all CET pilot courses in the future resulting in course schedules that may overlap and leave little room for course delays or student retests, particularly for the DP1 and DP2 courses (17 courses annually). However, the quality of the students that are sent to DP1 training has significantly increased since they are receiving solid prerequisite training from PAT PI.

EME OFFICER TRAINING

Similar to NCM training, EME Officer training is also undergoing significant changes at the DP 1 level. A Qualification Standard Writing Board (QSWB) was held in December 2009, followed by a Training Plan Writing Board (TPWB) in February 2010, and the changes that resulted from both of those are causing a shift in the approach and delivery of EME Officer training. A training development team has been formed to implement the required changes to the former Phase III and Phase IV courses. Although not the most significant, the most noticeable change is certainly the decrease in duration of the combined course. Whereas the old Phase III and Phase IV courses were a combined 120 days, the new DP 1.1 and DP 1.2, as they are now called, are a combined 85 days.

The shortened course length has two main effects: all training can occur in the summer and is thus more accessible to the Reserve Force; and all stu-

dents may be able to undergo OJE, a previously rare occurrence. The removal of AJOSQ training (ATEC and AORG, currently online courses), and other embedded courses such as the Civilian Management course, General Safety Officer course and WHMIS training contributed greatly to the decrease in training days for the combined DP 1 EME Officer course.

There are some very exciting additions and changes to the course which will increase the quality of training at the DP1 EME Officer level. Major changes include the approach to instruction and assessments, which will now be focused on analysis, provision of advice, group discussions and deliverables in the form of presentations, briefing notes and memorandums, as would be seen in a maintenance organization. More emphasis will be placed on understanding and influencing production, in both a first and second line organization. Students will also receive more training on the leadership and management of a maintenance organization on deployed operations, which will see the evolution of the legendary Exercise DIRTY HANDS. Field training will focus not only on a first line Maintenance Platoon, but also on a Vehicle or Artisan Platoon in a Maintenance Company, and a platoon sized Forward Support Group as part of a Battle Group or National Support Element. Their scenarios will include work orders, parts requests soldiers' personnel issues, and similar real life scenarios, including full-spectrum operations in the contemporary operating environment.

STANDARDS

Regimental Company Standards ensures that the training conducted follows the Training Plan (TP). They are responsible for standards in briefings,

end course reviews (ECRs), and the preparing, administering, and marking of all Skill Knowledge Exams (SKEs). They are currently in the process of updating course material and conducting pilot courses. Additionally the Senior Technical Instructor is also tasked with conducting NCM DP4 training once per year using a variety of guest lecturers.

ORDERLY ROOM

Although the Orderly Room remains where we all fondly remember it when clearing in (or out) from courses, the implementation of PAT PI created a big impact to the staff within the orderly

room. With all the incoming students (Phase III, Phase IV, EAOC and DP1 - 4) on top of the PATs, the three clerks within the Orderly Room are administering over 400 files at a time.

HQ

The increases of throughput on all CET courses and the extra workload generated by PAT PI have combined to make Regimental Company a busy and vibrant place to work. There is a constant need for CFTPO taskings to fill gaps in manpower and to increase staff numbers during the busy period of Phase III and Phase IV officer training.

Anyone who loves a challenge, enjoys busy days influencing the future soldiers and officers of the Branch and wants to live in a nice area of Ontario, speak to your career manager.

202 WORKSHOP DEPOT – AN EME UNIT... FOR THE LAST 65 YEARS!!!

By : Sophie J. Tremblay, Communications Officer (i), 202 WD

Is there an EME member who does not know of 202 Workshop Depot? Who does not know that we are the only 3rd and 4th line unit within the CF doing 3rd and 4th level maintenance for Land Force equipment? Did you know that we are celebrating our 65th anniversary this year?

It was in 1942 that the first maintenance workshop, consisting of technicians from the Royal Corps of Military Stores «Ordnance Mechanical Engineers (OME)», saw the light of day within the 25th Central Ordnance Depot (25 COD). «The Workshop of the Royal Canadian Electrical and Mechanical Engineering - RCEME» became, on October 1st, 1946, the 202 Workshop and then was renamed 202 Workshop Depot in 1966.

Since our beginnings, we have repaired and manufactured equipment of various types, from tanks to turntables, from Sherman tanks, through the Cen-

turions, and finally the Leopard series, as well as the M113 vehicles. We have also worked on communications systems such as the RT-524, ANGRC-106, ANGRC-5121, fire control systems, the radar MVI. We have excelled in repairing equipment from pieces of mobile artillery M109 through to the AHSVS and the M777 of today.

202 WD is currently the repair center for more than 2,000 items, components and equipment. We are recognized as a centre of excellence for life extension

projects, repair and refurbishment of equipment.

Our technical excellence and our teamwork, will allow us to be: «ready to act, regardless of the weapons system» for many more years past our 65th anniversary and will position us well to face the changing face of Land Force Equipment.

Long live 202 Workshop Depot! Primus inter pares!



Paul Grenier, 202 DA

OP NANOOK 2010 – TRAINING IN RESOLUTE BAY

By: Lt. Edward Speicher, SO EME

Operation Nanook is Canada's annual joint exercise in the High Arctic. This year's Whole-of-Government operation included all three elements of the Canadian Forces, the Canadian Coast Guard, and several other government departments. The exercise which encompassed elements of foreign services for the first time in 2010 included the US Navy, USCG and Royal Danish Navy and focused on joint operations and interoperability.



Personnel instructing on survival techniques as taught to them by the Rangers.

port Element (JTFSE) who provided everything from food and fresh water to camp transportation, maintenance of equipment and even communications back home. Though the JTFSE was composed of personnel from many different trades, the OC, Maj Cairnes, an EME Officer, ensured that the EME spirit of efficiency, flexibility and optimism reigned supreme.

closest store is 1500 km away and the runway is shrouded in impenetrable fog.

The area in and around Resolute was chosen for the exercise due in part to its climate and remote location. The challenges faced by operations in this part of Canada are extreme, as illustrated. NASA uses neighbouring Devon Island to simulate the vast frozen landscape of the surface of the moon. The experience gained in operating in this type of environment is essential to planning successful operations in the future. In one particular instance, frigid temperatures and powerful winds gusting up to 85 km/h taught the JTFSE that tents with rounded corners were far superior to those with flat faces.

The operation ran from 3 August through to 26 August 2010 and was meant to demonstrate Canada's Arctic disaster relief capabilities and to promote Canadian sovereignty in the Eastern and High Arctic.

Providing support to a large group of soldiers, sailors and airmen can prove challenging in any theatre. Providing that same support in one of the harshest climates in the world, in a place where the infrastructure is either non-existent or too fragile to risk crippling, and with the added burden of several hundred soldiers purchasing supplies is even more so. Problems such as broken heaters and generators, supply shortages and even inclement weather, which might otherwise be dismissed as minor issues, can become show-stopping affairs. Unforeseen operational requirements involve more than a trip to Canadian Tire when the

Cpl Tremblay, the only Vehicle Technician employed in the JTFSE, showed his EME colours by asking if there was anything he could fix as soon as his boots hit the ground. The sole source for the repair of tent heaters, he quickly became a favourite around the camp; the camp cooks, who produced wonders from the back of a kitchen trailer, were a close second. As most of the facilities used for maintenance were on loan from the Polar Continental Shelf Program, no EME flags flew in the arctic but this would ultimately prove to be a positive thing as it meant no EME flags were lost in the high winds.



EME WEBSITE:

Want to know more about the EME Branch?
Visit our website :
www.emegembranch.net



NEW START FOR EME ADVANCED OFFICER COURSE

Par : Maj (Jens) Kull, DSSPM 4, DSSPM, DGLEPM

After a one year hiatus, and some significant adjustments to course material, CFSEME conducted the EME Advanced Officer Course (EAOC) Serial 018 from 24 Jan to 18 Feb 2011.

Twenty-three young and clever EME Officers from as far West as Vancouver, BC to Gagetown NB on the East coast, took part in this senior EME Officer training. Every one of them showed up ready for the challenges of becoming better equipment managers at the strategic and operational levels. To achieve the

ada (GDLS-C) and ARMATEC in London, Ontario. This visit provided students with a first hand appreciation of cutting edge technology for soldier and equipment survivability. In addition, students gained a better understanding of the DND-Contractor relationship and an insight into the future of integrated service support concept.

During this session it was also decided to reinstate the tradition of a course gift. After much consideration, the course participants decided to promote

education and invest in the future of the younger generation by funding an additional bursary of \$540 under the umbrella of the 2011 EME Fund Bursary program.

On behalf of the course participants and DS, we would like to thank all the Guest Lecturers and those who supported EAOC 018. As well as convey our best regards and successes to the future recipient of the bursary in his or her endeavours. Arte et Marte!



The EME Branch, represented by Col Myers and CWO Bergeron, the Branch advisor and Branch CWO, receiving a check for the EME Branch Fund.

transformation from equipment maintainer to equipment manager the students focused on Command, Resource Management and Project Management activities within the LEMS, as well as the core business of DGLEPM sub-organizations.

The course comprised of lectures, discussions, and exercises by the Directing Staff (DS) and an array of guest speakers as subject matter experts. One of the highlights consisted of industry tours of General Dynamics Land Systems Can-



CONA 018 - PARTICIPANTS

Maj	Kull, Jens	Maj	Proulx, Frederick	Capt	Kaufman, Roman
Maj	Tessier, Claude	Capt	Kiltz, Karl	Capt	Michaud, Dave
Capt	Akbari, Yusef	Capt	Morin, Jean-Francois	Capt	Balkaran, Randy
Capt	Pelle, Enrico	Capt	Caines, Timothy	Capt	Poirier, Karen
Capt	Ramessar, Melissa	Capt	Fleury, Guillaume	Capt	Sandhu, Partap
Capt	Fontaine, Daniel	Capt	Smith, Colin	Capt	De Ladurantaye, Carl
Capt	Fraser, John	Capt	Tyerman, Whitney	Capt	Greer, Robert
Capt	Yuen, Shing-Fai	Capt	Hill, John		

CONA 018 - INSTRUCTORS (Left to right)

Maj	Tousignant, Steves	Maj	Atkinson, Dwayne
Lcol	Gosselin, Daniel	Maj	VanVolkenburg, Clayton
2Lt	Peet, Dustin (Course AO)		

FIELD TIME FOR OFFICER CANDIDATES AT CFSEME

By: 2Lt Southcott, Ph III EME student, Regt Coy, CFSEME

In July 2010, the students of EME Officer Phase 3 (serial 0026) at the Canadian Forces School of Electrical and Mechanical Engineering (CFSEME) embarked on the daunting month-long field portion of the course. Prior to Phase 3, most candidates had spent, at most, 5 continuous days in the field. With only a day or two between exercises reserved for reconstitution, the month of July was, for some, something of a dread. The course was to deploy from 05 to 09 July on Exercise (Ex) DEMO DIGGER, from 12 to 15 July on Ex TRIAL RUN, and from 17 to 29 July on Ex DIRTY HANDS.

Beginning the morning of 05 July, the course bussed to nearby CFB Meaford for a day-long introduction to operating crew-served weapons. Stopping first at the SAT range, students re-familiarized themselves with C6 handling drills. From there, they proceeded to the machine gun range, where they spent the remainder of the morning firing belts of 7.62 mm at tank hulls, oil drums, and Figure 11 targets. Regrouping at the adjacent ordnance range, many now with sore shoulders, candidates spent the afternoon firing the 84 mm Carl Gustav. Each was allotted two concrete training rounds and 1 HEAT round; dramatic explosions ensued.



Officer Candidates in an All-Round Defence position during a Road Move.

Photo taken by: 2Lt R.H. Haddad

From CFB Meaford, the course deployed to Forward Operating Base (FOB) A in the CFB Borden training area in order to commence Ex DEMO DIGGER. Following a fairly shaky first convoy, students established a platoon Command Post (CP) complete with working communications (comms) and semi-established defensive positions. Over the next four days, in sections, candidates rotated through four teaching stands: siting a maintenance platoon, responding to a Mobile Repair Team (MRT) call, leading a vehicle convoy, and providing FOB security. Each stand presented distinct challenges: visualizing the trench layout of a platoon site with a sizeable flank, travelling tactically to the location of the source of a Repair/Recovery Request (RRR), coordinating the movement of a packet (6 to 10 vehicles, grouped within a convoy) with intermittent comms, and responding to creative Opposing Force (OPFOR) scenarios. Departing FOB A the evening of 09 July, in a third of the time it took to arrive, the students spent the weekend preparing for the next exercise.

Over the next four days, on Ex TRIAL RUN, students had opportunities to practice much of what they'd learned on the previous exercise in preparation for formal evaluations. Most of what they'd done the following week – platoon sitings, MRT calls and vehicle convoys – remained the same; now, however, platoons would move in formations to and from the sites and occupy them, the student Maintenance Officer (Maint O) preparing and implementing a defensive plan. Again, students faced various OPFOR scenarios (some memorable) while en route to and in position – one in particular comes to mind in which 2Lt Lutes was appointed Administration Company Commander following the eradication of the Company CP by a vehicle-borne IED (Improvised Explosive Device) let in by unnamed out-route sentries.

On 17 July, laminated "aide-memoires" and clipboards in hand, students left, refreshed and energetic from a 24-hour leave of absence, on Ex DIRTY HANDS. Evaluations lasted from 4 to 18 hours,

the latter being for the Maint O. Following a brief change-over between Maint Os, platoons would begin preparing for the next move. When not being evaluated, candidates passed the time digging trenches and rigging camouflage netting to vehicles – two activities they would become intimately familiar with in the time to come. The two-week ordeal came to a close with a hasty move under a hail of enemy artillery, followed by the occupation of a new site just down the road. The unsuspecting "enemy," upon the students' arrival to the improvised site, was met with overwhelming machine gun fire and the squeal of tires as the course moved back to the base.

Field-time miseries were soon forgotten as students feasted on take-away burgers and bedded down on cots for eight-hours of forced rest. However, select students were invariably heard christening the ground in their sleep for nights to follow.

CHANGING DOCTRINE FOR NEW MISSIONS

By: MCpl Pilon, Maintenance Company 5 Canadian Service Battalion

The dynamic environment of the Afghanistan theatre of operations creates extremely complex conditions for vehicle recovery. Army purchases of new equipment add another dimension. How does one go about training a maintenance company to meet the new challenges and missions it will be faced with?

This is what WO Drouin's mentoring team was asked to do with personnel from a variety of units at Valcartier Garrison for the force build up of the National Support Element (NSE) Maintenance Company assigned to Joint Task Force Afghanistan (JTF-Afg) 3-10 on Operation ATHENA.

The task began with the formation of a six-person mentoring team. These members of the EME Branch, drawn from various units of the garrison, had all been all part of either the NSE or the Battle Group (BG) of JTF-Afg 1 09 on Op ATHENA. At the team's first meeting, an action plan was drawn up. The plan covered training on mission-specific equipment and lessons learned during JTF-Afg 1 09. Our team's mandate was divided into three phases. The first phase was the development of training plans, and consisted of several stages: the preparation of classroom lessons and towing scenarios, as well as the acquisition of mission specific equipment such as a Leopard 2A4, a towing vehicle and a Heavy Mobile Repair Team (HMRT) vehicle of the Armoured Heavy Support Vehicle System (AHSVS) class, and vehicles of the Enhanced Road Opening Capability (EROC) suite. There was another challenge to be met: we wanted to use equipment that was representative of that encountered in theatre. With the assistance of Defence Research and Development Canada (DRDC), we were able to recuperate vehicle carcasses that were still in excellent condition to serve as training aids, as well as all of the material required for classroom instruction.

Because some members of JTF-Afg 3 10 did not have operational experience on the new vehicles, phase two consisted of realistic and progressive training on these new vehicles for all trades within the EME Branch. In this phase, the participants received training on the mech-

anical and auxiliary systems of the main vehicles found in the theatre of operations, including the Leopard 2A4, EROC suite and the AHSVS. They then spent four days receiving in depth training on the maintenance vehicles, familiarizing themselves with the winches of the Mobile Tactical Vehicle Repair (MTVR) and the Bison Mobile Recovery Vehicle (MRV), the crane of the HMRT vehicle and the AHSVS wrecker, as well as the 10-tonne HMRT and towing vehicle. It was essential for us to familiarize the less experienced vehicle technicians as well as the auxiliary trades with the operation of this equipment. In theatre, auxiliary trades are regularly called on to carry out vehicle technician tasks. This was greatly appreciated and will certainly have positive impacts during their deployment and future operations. These familiarization days ended with PowerPoint lessons concerning life on the forward operating bases (FOBs), the rapid reaction force (RRF), newly modified procedures for the Repair & Recovery Request (RRR), and towing scenarios actually carried out by Branch technicians during JTF-Afg 1 09.

The final phase was reserved exclusively for vehicle technicians deploying with the NSE and BG of JTF Afg 3 10. This phase was based on the experience acquired by the six members of the mentoring team, mainly in relation to complex towing requests encountered during JTF Afg 1 09 that no member of the team had ever dealt with in training. The DRDC equipment was used to make these towing scenarios as realistic as possible. This phase was very demanding for the trainees but equally so for the mentors. Ten to eleven-hour work days in overwhelming heat added to the realism of the scen-



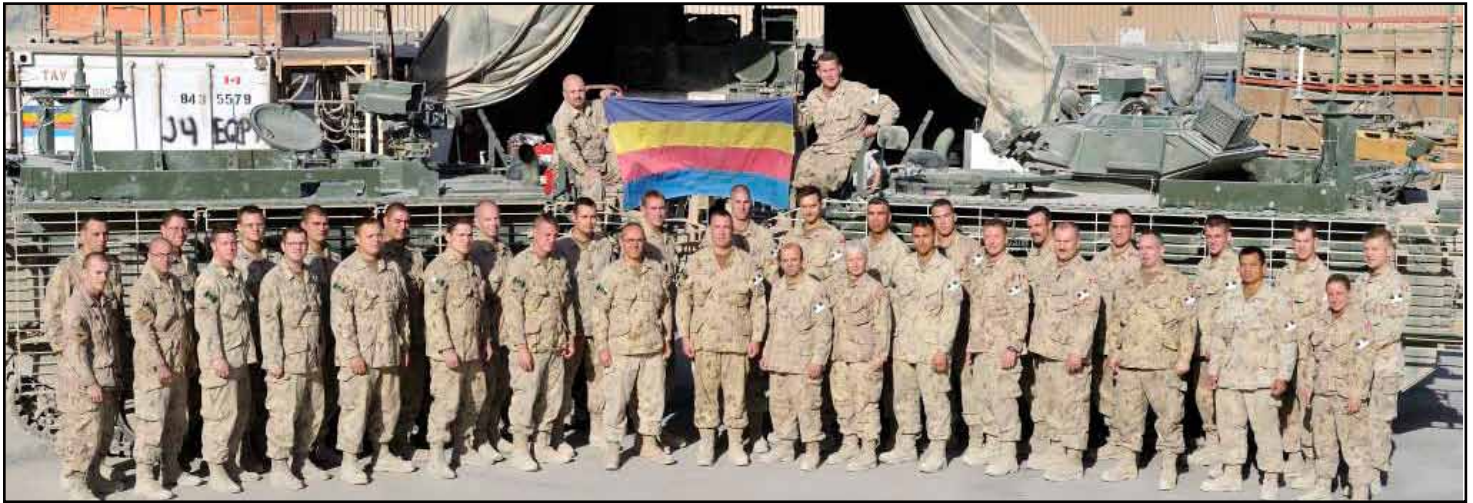
arios. Thanks to the experience and the variety of positions held by the mentors in theatre, they were able to reproduce six scenarios that they had personally experienced, of varying degrees of difficulty and all characterized by the same high level of realism. The trainees' presence of mind and their sense of urgency were put to the test in completing the scenarios in a minimum of time. The trainees had the opportunity to develop techniques and to learn about the capacities of the new vehicles that we are now using in theatre. This training allowed the participants to benefit from the experience that their instructors had gained directly on the ground in the theatre of operations.

The mentoring team was made up of WO Drouin, MCpl Fleury, MCpl Pilon, MCpl Geoffrion, MCpl Bérubé, MCpl Richard and Cpl Brisson-Bélanger. They prepared, trained and offered guidance to EME Branch members on the NSE and BG on how to perform numerous repair and recovery tasks and requests that they will encounter during their deployment for JTF Afg 3 10. The lessons learned will enable them to respond to the requirements of Exercise MAPLE GUARDIAN in Wainwright and above all to be better prepared for their mission in Afghanistan. For their sustained efforts, WO Drouin was awarded the EME Branch Advisor Coin of Excellence and his team received the CO's Coin for JTF Afg 3-10.

THE TRACKED LIGHT ARMoured VEHICLES - (TLAV) TECHNICAL ASSISTANCE VISIT - (TAV)

By: Cpl (Fitz) Fitzgerald, PJ Mat Tech

Canada's largest and longest multi-element, multi-trade, TAV to date was assembled 10 May 2010. None of us were fully aware of what we were getting ourselves into. After we arrived, our first task was to set up a fully operational shop from nothing, which, in itself, was quite a task. Even before the shop was set up, the tools were unpacked or we knew what we were even doing, the production line had started. (The team at Kandahar airfield)



Progress was slow, the work was hard, and the days were long and hot. Even though the majority of us had never felt heat like that let alone worked hard in it, we put all that aside because we had a duty and a job to do. We were there to help save lives. Every vehicle we completed was another vehicle for the troops.

The weeks flew by for everyone and with only a few weeks till "Home Leave Travel Assistance (HLTA)" everyone gave their best effort to complete as many vehicles as possible which, in that heat, was quite an achievement. We celebrated Canada Day at the New Canada House with beers (only two) and cheers. Members from the TLAV TAV competed in a boat race and received honourable mention for the design of their boat, which of course looked like a TLAV. We laughed as the likes of Scott Harris, a Canadian comedian, made us feel as if we were home. The songs and sounds of the 2008 Canadian Idol winner Theo Tams must have upset the Taliban because they shot another

rocket in our direction right in the middle of his performance.

With August being a shortened work month (HLTA), we had only 2 weeks to reach the goal set out to us by Command and we wanted to reach that goal. That goal is what drove us, or maybe it was the fact we would get to go home soon, either way we put our heads down and got the job done. The couple of weeks of work were productive, some of our best to date, completing 49 of the 86 vehicles at that point, but the past 3 months of long hard days wear even the strongest thin and it was time for a well deserved break. With our goal reached we embarked on adventures back home or abroad knowing that the soldiers fighting the fight were safer every time they mounted up, strapped in, and went to do what had to be done.

The good times of seeing family and friends or travelling to foreign lands now in the past and summer at its end, we all strapped on our boots and put the uniform back on. We were back to

our home away from home which at that time was much cooler throughout the day than before, most noticeably in the mornings, Brrrr. Jet lag, early mornings and stories to tell, the TLAV TAV was right back at it working hard. Getting back into the swing of things didn't take long. With things moving at full swing again and the addition of a few more mods to the TLAV, the largest of which being the Rubber Track, and the ever approaching deadline to finish what we were there to do. The pressure was felt among all as the deadline of 15 Nov 2010 was looming. We were on track to finish but it was tight. When we completed all the survivability upgrades to these vehicles, we rested easily knowing our important mission in the big picture was complete and the soldiers using these vehicles were much safer than before.

Arte et Marte



ELECTRONIC-OPTRONIC TECHNICIANS

ADVENTURES WITH «PSS»

By : Cpl NA Barbary, EO Tech, 1 RCR

There are several moments that linger in my memory when I hear the words persistent surveillance system (PSS). All of them amounting to what would become my tour in Afghanistan as an EO tech in the EME Branch tasked with getting and keeping the PSS's operational in wartime.

The first was getting a phone call about a week before my scheduled deployment telling me "You've been pulled off your chalk and loaded on an important course for a new piece of kit that we're using in theatre, and it starts in a couple weeks". I thought to myself "Great, I get to learn about a new piece of equipment that we're going to work on. I was one of a small handful of people in theatre with the course; I'll be the go to guy for battle group maintenance". The words that actually came out of my mouth however were a long list of expletive verbs and nouns that are far from appropriate and won't be stated in this tale.

The course was 5 very long weeks but finally I was on my way to Afghanistan. Then came the fateful moment when I asked when I was going out to work on the Guns... A long pause as my ET and Maint O both looked at each other grinning and then back to me as I was informed that things had changed and that I should have "controlled expectations" as they liked to call it about what I was going to be doing for the rest of my tour.

When I arrived in Afghanistan, there was only one system running and the rest were grounded for parts, many of which were unavailable. Since arriving here I've managed to repair two of the systems completely and a 3rd system, although not deployed, is only waiting for the main camera and the fourth has miraculously remained serviceable.

I've seen all kinds of problems. There were damaged cables on the towers, one crashing down and destroying everything on it and one getting wedged up creating a rather difficult



Cpl NA Barbary, EO Tech, working with the PSS in Kandahar, Afghanistan

scenario with a 200lb sight head hanging in the sky. I've also had to deal with defective cameras and controllers right from the manufacturer and network nightmares. I've also seen what happens when a helicopter flies too close to the balloon tether. One of my most memorable experiences was when I discovered that XBOX 360 controllers work as reliable, tough replacements for the PSA joysticks that while armored to the nines have a tendency to fail and get broken all by themselves. I was able to work with the Directorate Combat Support Equipment Management (DCSEM) in Ottawa to catalogue almost all the components used in the tower and the balloon, and managed to create maintenance guides for equipment that would normally have gone back to the manufacturer for repairs

such as Sight head thermal and day cams and laser range finders.

As I near the end of my tour I can honestly say that I have thoroughly enjoyed my time here and I'm proud of the part I played with this system's growing presence in operations with the Canadian forces. I wouldn't trade my experiences for anything.



MATERIALS TECHNICIANS

25TH ANNIVERSARY CELEBRATIONS

Par : MWO Barry Smith, Mat PI Comd, CFSEME

With the weather cooperating, except for the occasional reminder from Mother Nature that it is unsafe to weld in the rain, we were all in fine spirits to get this celebration under way. None could be happier than the participants to the Sea Container inspector course, which had just spent the entire week in class and were, that morning, writing their final exam.

With about a hundred determined Mat Techs, retired Mat Techs and spouses, we embarked on a celebration that few had even come close to, and definitely not surpassed in the past 25 years since the inception of the trade. We were blessed by the presence of the following still very much engaged personnel: Mers Fedorowich (CWO Ret'd), Paddy Garland (MWO Ret'd), Gary Couzins (CWO Ret'd), Patrick Clark (MWO Ret'd), Nells Heldman (WO Ret'd), and many other retirees that made the special trip. In many ways, these Mat Techs developed the trade and contributed immense mentoring to the Mat Tech leadership that spearheads trade initiatives in present day.

The opening address included a dedication to a now revered 25th anniversary Mat Tech banner made by MCpl Louis Lantin; the dedication of an oak framed collage of EME hat badges that were donated by Maj Gord Goddard (Ret'd EME officer and ex Mat Tech) and the investiture by MWO Barry Smith, Mat PI Comd, of the # 441 Mat Tech coin encased in a frame that was made by Mr Fred Martin (Sgt ret'd). All of these items were inducted into Mat heritage and rest at the Pearson building at CFSEME.

The Branch Chief, CWO Alain Bergeron took some crafties under his wing and



showed them how 18 holes is done. The OA, Maj Justine Mumford and the AOA, CWO Marc Trepanier did the same with the graduating DP1 course. It was also reported that MWO Choquette (Chuck to his friends) had hit a golf ball so hard that he peeled the shell open like an onion, but unfortunately it was not enough to garner him longest drive. With the golf over and the meal about to be served, there was a surprise visit from the EME Branch Advisor Col Shawn Myers, just in time to cut the cake. He also set in motion a barrage of speeches noting the accolades of several Mat Tech members that recently were awarded prestigious awards as well as numerous examples of Mat Tech ingenuity in support of deployed Ops, the army and the CF. He took the time to recognize MCpl Tom Hoggarth, for being awarded the MSM for his technical expertise in Afghanistan, Sgt Bill Kochie for being awarded a CDS commendation for his efforts in reacting to a propane blast in Toronto, and to present the EME Coin of Excellence to MCpl Jason Papineau for his innovative design for a Leopard tank roller adaptor

used exclusively in Afghanistan.

Serge St-Antoine (WO Ret'd) donated his time to cook the Pigs, Sgt Paul Rhodes and the ever quiet MCpl Patrick Norman served to all the finest food that Base Borden could offer. MCpl Darrell Joudrey had the PA system and kit shop set up to sell Mat Tech 25th anniversary items and coins, and there is still stock left for anyone who is interested.

At the end of the day the celebration had done better than expected; the Br Adv closed out the ceremony with some parting words and especially thanked the retirees and guests for their attendance. In addition, a total of \$123.00 were also raised in support of the "Soldier on Fund" during this putting competition. This silver anniversary was one never to be forgotten, and when you see the Mat Tech 25th logo (designed by Fred Martin (Sgt Ret'd) on bumper stickers you will remember that the year 2010 was our year to reflect on 25 years in the EME Branch.



MATERIALS TECHNICIANS

25TH ANNIVERSARY FOR THE DEPLOYED MATERIALS TECHNICIAN

By : WO Steven Slominski on Behalf of the NSE and Sgt Denise Smith on Behalf of the T-LAV TAV

Being far away from the Materials Technician celebration in Borden marking the 25th Anniversary, our deployed Techs in Afghanistan were taking part in the events in mind and spirit. Both the Task Force in form of the NSE, Maint Coy and the T-LAV TAV consisting in total of 17 Technicians took the time to mark the occasion with a photo op and some cake during the same weekend that the celebration in Borden took place.

Our Materials Section consists of nine technicians which were all drawn from CFB Petawawa. With the exception of MCpl O'Hara who's home Unit is 1 RCR and Cpl Linehan who is from the RCD, the remainder were generated from 2 Svc Bn. We have grown to be an effective team and together with all the rest of the EME occupations the NSE, Maint Coy have accomplished a great deal to affect the Task Force's mission.

We have come a long way in our short history as a trade. The Mat Techs that have formed the TF 1-10, NSE, Roto 9 tour, have once again done everyone proud and followed in the footsteps of the tours that preceded it. It has been a unique opportunity to showcase the extraordinary talents the Materials Technician can perform in a deployed environment during this Anniversary year.

Receiving accolades not only from the Canadian Command structure for outstanding performance and ingenuity, our TF Allies quickly saw the benefit of our versatility. They rewarded the Section with letters of appreciation and with a Commander's Coin from the US Navy, NMCB 18 (Naval Mobile Construction Battalion) better known as



From left to right: WO Gibbenhuck A/ET Maint Coy, M. Neil Thiem (CANCAP), LCol Marcella CO, NSE, Cpl Grandy, Cpl Schwemler, Cpl Clouthier, Cpl Vaillancourt, Mcpl O'Hara, WO Slominski, Sgt Smith, Cpl Blount, Cpl Theriault, Cpl Berube, Cpl Fitzgerald, Cpl Le Royer, Maj Cole OC Maint Coy, CWO Patterson RSM, NSE. Not Present: Mcpl Leblanc, Cpl Brauer, Cpl Doucet

the "Sea Bees". Never turning anyone away and making the impossible possible, our reputation is growing in admiration. We are proud of our accomplishments, our satisfaction in helping others, and contributing to the mission at hand in such a unique fashion which is (in my humble opinion) the motivation needed to continue fostering this outstanding occupation.

By : Sgt Denise Smith on Behalf of the T-LAV TAV

The eight Mat techs deployed on the T-LAV Survivability Enhancement TAV are all volunteers from seven different bases. The diversity of experience from each person has been essential and invaluable in overcoming many obstacles. The TAV, just over six months long, has certainly challenged our skills and patience but we always prevailed and our

dedication never waived. The support we've received from our counterparts on Roto 9 has certainly been crucial to the completion of many of our modifications on the T-LAV, solidifying what we already know, that Mat techs are one big family.

We're all disheartened that we weren't physically able to partake in the Anniversary events in Borden, but our Esprit de Corps is maintained to a high level as we celebrated in our own way.

ARTE ET MARTE

By : WO Steven Slominski on Behalf of the NSE



VEHICLE TECHNICIANS

National
Maintenance
Contract
(NMC)

By : MWO JLF

Rouleau, DLEPS 4-6-2

The NMC was initiated to reduce the maintenance gap between the vehicle workload and available productive hours, in order to maintain the operational effectiveness of Army units (mainly Gagetown, Valcartier, Petawawa, Shilo, and Edmonton).

A long process was started by the drafting of a Statement of Requirement which ended up with three Canadian companies bidding on this tender. A two (2) year +1 (if required) contract was awarded to Calian in May 2010.

On 09 August 2010, the NMC started turning wrenches on the B fleet vehicles. Many adjustments had to be made along the way as different Provinces have different rules WRT class 3 / DZ drivers licence and the going live of the Defence Resource Management Information System (DRMIS) introduced new twists on the agreed reporting procedures, however, the amendments were made and it was full steam ahead.

In the beginning of December 2010, DLEPS 4-6 went out to all the maintenance organisations that house the NMC to conduct a Quality Assurance visit. The outcome was very positive and it was confirmed that we are getting excellent services from Calian. These visits were very encouraging as the plan is to expand the NMC to Wainwright in April 2011.

This EME Branch initiative in having civilian employees fill in for the numerous vehicle tech shortages pan Canada has certainly made a difference to dampen the productivity gap until the trade becomes healthy again.

Logistic Vehicle
Modernization

By: WO L Caouette DLEPS, 4-6-4

In addition to the recovery solution article submitted by EC Brandon-Williams which appeared in the last issue of the EME Journal, I would like to take this opportunity to write a little on the Logistic Vehicle Modernization (LVM) project of which will also touch the way EME will conduct itself in the future.

The lessons learned during our missions in Afghanistan demonstrated some of our weaknesses to the CF. One of these weaknesses was our older "B" fleet vehicles' which lacked the mobility and protection capabilities which hindered the delivery of our essential services on the fighting front. The LVM project was launched to deal with these issues.

DLEPS 4-6 along with DLR are presently formulating the requirements of the next generation of MRTs and wreckers (under the Enhanced Recovery Capability), which will hopefully see the light by 2015. The MRT fleet, in the LVM project, must fulfill the task of following convoys while getting to forward repair locations, regardless of the terrain or threat and achieve this while providing enhanced mobility and protection capabilities for its crew.

With the aide and excellent feedback received from our EME comrades; the EME Branch, DLEPS 4-6 and DLR can once again achieve to meet today's operational requirements and help renew pride within the troops by modernizing their MRT and wrecker assets.

EME Publications

By: MWO Leigh Vey, 37 Svc Bn

As known, our Land Equipment Management System (LEMS), Preventive Maintenance (PM) pubs have, until recently, been circa of the 1970s, 1980s and 1990s. One could argue that some reasons for this could have been due to the dissemination of the DLERM cell which managed these pubs, or the Operational tempo in Afghanistan which fast tracked the procurement of equipment at a pace unprecedented in the CF, and now DRMIS... However, it is known that the lack of manpower required to frequently update our technical pubs have left them in a poor state.

There is good news. In the latter part of 2008, the EME Branch, spearheaded by DLEPS 4 started a publication revitalization initiative to address this shortcoming and it was then decided that a dedicated Pub Revitalization Coordinator (or team) was to be re-initiated.

I was asked to take on this task in the early stages and have been engaged in the review, research and development process ever since. It has been a daunting task, filled with surprises to say the least and I refer to the whole initiative as "peeling an onion" simply because our pubs are so interconnected that the deeper you dig, the deeper you have to dig to see what information is still viable.

To date, countless pubs have been reviewed and have been earmarked as obsolete to be rescinded, streamlined, updated or combined with other equipment of the same category to form a single publication. As of now, the Preventive Maintenance procedures for all Tactical Support Vehicle (B Fleet), Combat Vehicles (A Fleet, including Leopard), and Mobile Support Equipment (Commercial Fleet including Engineer-

ring Equipment) have been updated and have been assigned new publication CFTO numbers. The Miscellaneous Equipment, Engine Driven publications are being worked on at the moment and will also be grouped accordingly. Basically, the aim is to have all vehicles and equipment supported by LEMS found in four volumes. The LEMS Inspection policy pub has also been updated and still remains as the over arching document for the LEMS PM.

The biggest and most significant change to the publications themselves, other than current content, is their layout. These new pubs have equipment specific annexes which can be extracted or inserted as fleets are removed from or enter service. This format is much improved and is intended to keep the publications relevant.

The publication revitalization initiative has had very good results to date. Most significantly it has uncovered some of the antiquated and outdated ways we have been doing EME Inspections for years. LEMS has now come in line with the Canadian Commercial Vehicle Inspection Standards which has changed our PM inspection frequency as a direct result of this project. From feedback I have received, that item alone has been well worth the work.



WEAPONS TECHNICIANS

THE HAIR TRIGGER

By : Maj. Robert Haddow , DSSPM 4-5 Team Leader - Small Arms, Soldier Weapon Systems

Welcome to the third edition of the Hair Trigger, the news column aimed at Weapons Technicians and those with an interest in the Trade.

Headlines for this edition are:

- New Occupational Adviser (OA).
- Review of Wpn Tech training both regular and reserve force at DP1 and DP2.
- CASW contract announced.
- OA and AOA visit to western area OJT centre.

New Occupational Adviser

Major Rob Haddow, currently the Team Leader for Small Arms in DSSPM has replaced Major Bryan Davidson as your Occupational Adviser. Major Davidson initiated a number of excellent ideas for the Trade, such as the Weapons Technician Vision, written with the help of many of you, and this good work will be continued. Best wishes to Major Davidson for his command tour as OC Maintenance Company at 2 Service Battalion.

Review of Weapons Technician Training

A full review of Weapons Technician training is underway. The review covers all of your training courses at DP1 and DP2 levels for both Regular and Reserve Force personnel. Review teams are made up of unit technicians from MCpl to CWO so if you have comments on the training you have received, track down your unit/bde representative and pass those on. If you can't find a local rep, email your comments to myself or the AOA. Our contact details are on our Intranet web page at: http://admmat.mil.ca/dglepm/dleps/emebranch/en/tools_ressources_occupation_advisor_wpns_tech_e.asp

Company Area Support Weapon (CASW) Contract Award

The contract for delivery of 304 grenade machine guns and their fire control system was awarded to Rheinmetall Canada Inc in Oct 2010. The system will be known as the C16 Automatic Grenade Launcher System and consists of a modern high-velocity 40 mm weapon system with an advanced Fire Control



C16 Automatic Grenade Launcher 40 mm weapon with an advanced Fire Control System

System (FCS). The FCS, which has direct and indirect firing capability, is also equipped with full GPS and a laser range finder. The C16 system also includes a ground mount group (cradle and tripod), a thermal weapon sight, and multi-purpose and airburst ammunition. The contract also includes the provision of ancillary equipment, logistics containers, tactical containers, project management, system engineering, spare parts, interim support, and training. DSSPM 4 Soldier Weapon Systems will manage the C16 after it comes into service later this year, with first deliveries slated for the Infantry School, the Canadian Forces School of Electrical and Mechanical Engineering and then distribution to units.

Visit to Western Area OJT Centre

The OA and AOA visited the OJT centre at 1 Svc Bn in the second week of January to see first hand the excellent work being done to fully qualify technicians so that they are ready to deploy to support a wide range of weapons systems, without immediate supervision, by the end of their time at the centre. In the future we will see greater use of OJT to ensure our technicians have the right skills and experience to be fully effective at their first unit.



RMC PROGRAM DELIVERS AMMUNITION EXPERTISE

By: Capt Alex Braden, MEng, QATA, Lightweight Towed Howitzer (LWTH) Project



In August 2010, the first class of students graduated from the Royal Military College's (RMC) pilot program in Advanced Ammunition Engineering. This masters-level degree was established through the efforts of the Directorate of Ammunition and Explosives Management and Engineering (DAEME) in conjunction with RMC's Department of Chemistry and Chemical Engineering. The MEng program in Advanced Ammunition Engineering at RMC provides the CF with an in-house capability to produce sufficient ammunition engineers to meet the needs of the many equipment projects across ADM (Mat).

Under the supervision of Dr. William Andrews, the course-based Master's program educates students in eight subjects: internal ballistics; external ballistics; the chemistry of energetic materials; explosives and explosions; ground-launched munitions; air- and sea-launched munitions; weapons design; and ammunition management. Visits to industry and defence establishments round-out the program, and include sites such as General Dynamics Ordnance Tactical Systems Canada, GD Land Systems, DRDC Valcartier, the Canadian Explosive Research Laboratory, and various US DoD establishments.

From an EME point of view, the more interesting parts of the program were the courses in explosives and explosions, ground-launched munitions, and weapons design. The first provided knowledge of the physics behind blast events, while the second developed a greater

understanding of the terminal effects of land weapons against a variety of hard and soft targets. Together, the courses illustrated the importance of the survivability of army vehicles and the protection of personnel. The course in weapons design made students aware of the complexity of modern weapons systems, including fire control systems. Collectively, these three courses fostered a greater appreciation for the work done by all four EME trades to keep the army's equipment ready to survive and win the fight.

The year-long program concluded with students submitting and defending a project report dealing with an ammunition-related issue. The topics covered in the first year of the program included demilitarizing rocket propellant, the effects of tungsten penetrators on ceramic armour, studying shelf-life predictions for propellants, and designing a reduced lethality artillery round. Upon completion of the Master's program, graduates are employed within DAEME, or are posted to a Project Management Office (PMO) within ADM(Mat), where they serve as a Qualified Ammunition Technical Authority (QATA).

The Masters degree in advanced ammunition engineering is an interesting way to obtain a unique specialty within the EME branch. Graduates help to ensure that ammunition procured by the CF is able to perform reliably and safely, and they can also go on to serve in various positions throughout the CF that are ammunition and weapons related.

THE EME PERSPECTIVE

By: Sgt Baker, IC Wpns, 1 RCHA

What better way to get back to basics and motivate personnel than by holding a challenge in typical Artillery fashion, thus the dawn of the First Medieval Weaponry Contest.

The contest was simple, each battery had to build a maximum of 3 trebuchets, 1 per troop, each capable of launching a projectile, the size of a tennis ball as far and accurately as possible. There were a few other technical limitations that I do not want to mention as it may cause a dispute over some of the trebuchets exceeding the design limitations.

Initial interest was confined to a few volunteers who diligently researched and silently constructed their trebuchet in secret. After the first display of launching tennis balls it seemed the interest exploded. Everyone had an idea of how to improve the designs in order to wipe the floor with their opposition and so embellishments on their progress became greatly exaggerated trying to psych out the competition.

EME will never be out done when it comes to ingenuity, motivation, and technical skill. Research and the imaginative ideas of the light maintenance troop (LMT) spawned the ultimate trebuchet design and what emerged was the Floating Arm Trebuchet.

Judgement Day, the 14th of September 2010; which trebuchet was the best would become clear and the victor would lay claim to the coveted title of champion of the first Medieval Weaponry Contest.

Although all the batteries had excellent designs and construction, it was LMT (aka "The EME's") that reigned supreme, unveiling the engineering marvel that astounded all. They all laughed as we motioned for them to move out of the way. They all laughed as we corrected for wind and distance. But the looks on their faces as they watched in complete and utter amazement as a tennis ball flew 60 meters on our first attempt, was priceless. To the sceptics that shouted "it was a fluke", we launched our second ball 70 meters "just to rub it in".

The second portion of the contest was accuracy. The range was set at 25 meters (the longest throw from the trebuchet with the shortest distance). Little did they know that LMT had already accounted for such events and developed a firing table and knew exactly how far their ball would travel with different weights and drops from different

heights.

Again EME reigned supreme, as we raced to the 25 meter line, dropped 20lb of counterweight, adjusted for range and hit the target on the first attempt securing our place as champions of the First Medieval Weaponry Contest.

Yes, a great day was had by all, and when the next challenge comes, we know that all bets are off and LMT will have to defend its title. But until then, LMT will proudly hold and display the trophy in their Troop Lines.....



Photorama



Photo : Roger Saillant, 202 WD

July 2010: BGen Patch, DGLEPM and Mr. Grant Corey, Senior Director of North American programs of General Dynamics of Land Systems (GDLS) had the honour to turn-over the last LAV-LORIT to be deployed in Afghanistan to BGen Tremblay, representing the army. The LAV-LORIT (LAV 3- Operational Requirement Integration Task improvement program was implemented in 2008 to provide the best possible protection for soldiers deployed in Afghanistan. The modifications included belly armour kit for the protection of crew and passengers, impact siting system and many other.

9TH ANNUAL WO J.R. MUISE MEMORIAL HOCKEY TOURNAMENT

By: Capt Bob Greer, 2IC Veh Coy, CFSEME

Another successful Electrical and Mechanical Engineering (EME) Hockey tournament has come and gone. The 9th Annual WO J.R. Muise Memorial Hockey Tournament, hosted by the Canadian Forces School of Electrical and Mechanical Engineering (CFSEME), took place at CFB Borden from 06-10 December 2010.

This year's tournament was a great success, with teams from across the EME Branch from CFB Gagetown to ASU London. Additionally, it was a great pleasure to host two British teams: the Royal Electrical and Mechanical Engineering (REME) Stallions from the United Kingdom and the British Army Training Unit Suffield (BATUS) Wolves stationed at CFB Suffield. With a total of 14 teams, the week was filled with 33 action packed games, excellent competition, fair play and most importantly it provided an opportunity for friends and family of the EME Branch to come together and build upon our camaraderie.

In order to accommodate the diverse calibre of hockey, the tournament was structured into three divisions: Arte; Marte; and Sadie. All three divisions were well balanced, creating a competitive atmosphere for all involved. The Andy Anderson Arena was filled with excitement throughout, especially during the first few days as a snow storm blanketed the region closing the base to essential services only. As everyone knows, no matter the weather, hockey will always be a priority. The week-long tournament concluded with well-matched teams in each division finals.

The battle for the Sadie Division Trophy was between Area Support Unit (ASU) London and CFB Kingston. With determination, grit, and a lot of help from players from other teams, CFB Kingston came out as the Sadie Division Champions. The Marte Division finals saw Maintenance and Logistics Support (MLS) Borden, square off against the REME Stallions. At the end of a very close game, it was MLS Borden who earned the title of Marte Division



Officially kick off the tournament with the ceremonial puck drop as part of the opening ceremonies.

Photo: Cpl Edhouse

Champions. The finals for the Arte Division saw CFB Petawawa play against CFB Gagetown; up until the second period the game was fairly close, and then CFB Petawawa came out strong and took a commanding lead, never looking back. In the end, it was CFB Petawawa with the win and title of Arte Division Champions.

Well done to both the planning committee and participants!

Photorama



EME IS EVERYWHERE!

Winter 2011 : The EME flag is not only the first to go up, but is now a «guidance beacon»! This flag flew over the control tower at «La Grande» airport to guide 5 Svc Bn OC Maint, Maj D. Matsalla, in his private plane when he visited the Joint Support Element during exercise «Guerrier Nordique» in Northern Québec!

Call for Articles Edition 2-2011

Theme for the next issue : Changing Equipment Landscape

We invite you to send your articles and photos relating to the above mentioned theme and categories (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 definition of every acronyms and abbreviations must be included in your 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 11th, 2011.** We reserve the right to select articles and to modify the texts according to the space available.

Internal E-mail: +EME.Journal@202DA@Montreal

External E-mail: EME.Journal@forces.gc.ca



LAST CALL

FROM APRIL 2010 TO APRIL 2011



Aucoin, E J "Bob"
Barrett, George J
Bingham, Harry C
Boughton, John C
Campbell, Donald Norval, CD (CWO Ret.)
Chandler, Robert "Bob"
Dubuc, Daniel
Fendick, Reginald "Rex"
Fraser, Ian "Sonny"
Garnett, J J "Joe"
Goatcher, James Albert, (CWO Ret.)
Gordon, Alexander "Al"
Greene, Mike
Grutchfield, Al
Hughes, George A
Hynes, J. "Bernie", (CWO Ret.)
Joyner, E M "Tex"
Kearns, Paul
King, Ronald L

November 8, 2010
February 9, 2011
January 24, 2011
April 3, 2011
February 5, 2011
January 10, 2011
June 21, 2010
September 22, 2010
February 16, 2011
June 29, 2010
July 28, 2010
January 19, 2011
October 27, 2010
October 22, 2010
June 27, 2010
October 22, 2010
November 5, 2010
January 16, 2011
July 29, 2010

Kingsmill, HAG "Tony"
Kirby, Carl Bennett
Lalonde, Richard "Dick"
Laramie, Donald
LeBlanc, JAD "Mike"
LeClair, J B "Joe"
Marchand, Edmond "Jerry" Joseph
McVey, G Stewart
Munroe, Harold W
Pickett, John
Prince, Thomas WA
Ramey, Owen M B
Russell, Donald E
Snooks, Lou
Stoneman, Todd A
St. Onge, George A
Weber, E D "Don"
Westergard, Olga "Squirrel"
Williams, E A "Ernie"

May 19, 2010
April 6, 2010
December 8, 2010
November 21, 2010
January 22, 2011
October 13, 2010
March 8, 2011
February 20, 2011
August 17, 2010
January 9, 2011
June 27, 2010
September 22, 2010
February 28, 2011
October 17, 2010
August 25, 2010
August 6, 2010
July 5, 2010
November 24, 2010
September 22, 2010

If you know of anyone who has been missed from this list or if you would like to send a message or condolences to the families please contact the regimental Padre, Rev. Don Chisholm at revdonch@cogeco.ca or the Col Cmdt



FINAL RCME APPRENTICE «GREEN FLASH» REUNION AND COMMEMORATIVE CEREMONY

The RCME Apprentice Training Program was a training plan that ran from 1953 to 1968 at the RCME School in Kingston Ontario. Some 1010 young men joined and about 690 graduated.

Where: Kingston and Ottawa, Ontario

When: 14, 15 and 16 October 2011

Who: Ex-apprentices from this program, as well as widows, children and grandchildren of these Veterans.



For further information, please contact:

Dan Lyle at danflyle@sympatico.ca or 613 828 8879 in the East
L. (Tex) Leugner at texleug@shaw.ca or 403 932 7618 in the West

Website : <http://www.emegembranch.net>

Photorama



The 2010 Jiffy Jeep Team toured Germany in October 2010. The Jiffy Jeep (now known as the EME Jeep), is a SMP 1973 M38 Jeep modified to showcase the skill and ingenuity of EME Soldier Technicians across the Country, and now Worldwide!

GRUMBLINGS FROM THE VAULT

By : Cpl OB McElroy, Veh Tech, WLEO TEME, 14 Wing Greenwood

Being members of the EME Branch, we are often the first to see new kit. We need to be able to maintain it before it can be rolled into battle. We tend to be very informed on how it can be employed, and often times are the solution to problems that had not been anticipated. More often than not, we do this, consider it part of the job, and move forward with little recognition. Fortunately for MCpl Frederic Gagnon, this is not one of those times.

Having been deployed with Task Force FAUCON, Canadian Helicopter Forces (Afghanistan) ROTO 1, it was his responsibility to equip and maintain the M134-D Gatling gun, as well as the M240-H machine gun, which were fitted to our CH-146 Griffon and CH-47 Chinook helicopters. As these were new pieces of kit in new applications, there was a significant amount to learn, and very quickly. To prepare himself for these tasks, MCpl Gagnon was sent to Dillon Aero for a maintenance course and spent a significant amount of his own time researching problems and solutions that other users of this weapon system had uncovered.

Not only was MCpl Gagnon working on new kit, in a new application, in a poor environment but he was also the I/C of a two man EME det.

Upon his arrival in KAF, MCpl Gagnon discovered that not only was he without tools and a shop but parts were not available either. In response to this, he had to quickly develop an affinity for diplomacy and scrounging. Fostering relationships with the British, US Army, and the USMC was paramount, as they had parts and knowledge. Taking advantage of these relationships

and knowing that the GAU-21 (.50 Cal air model) would be coming online soon he spent many hours with the USMC HC-53 squadron techs, taking in their lessons learned and further developing his knowledge of our new systems.

As aerial gunnery of this type was a new role for Canadian Tactical Aviation and Land Weapons Technicians, MCpl Gagnon saw fit to document his successes, failures and some lessons learned. Hoping to alleviate some issues for future techs in his position, he decided to publish these writings in an email format. As such, his "Grumbings from the Vault" ended up with a much wider distribution list than he intended, with his notes making it to all the Helicopter Squadrons within 1 Wing. Undoubtedly this helped techs who would be working on these weapons in the future. Lessons learned are key to us moving forward as a mainte-



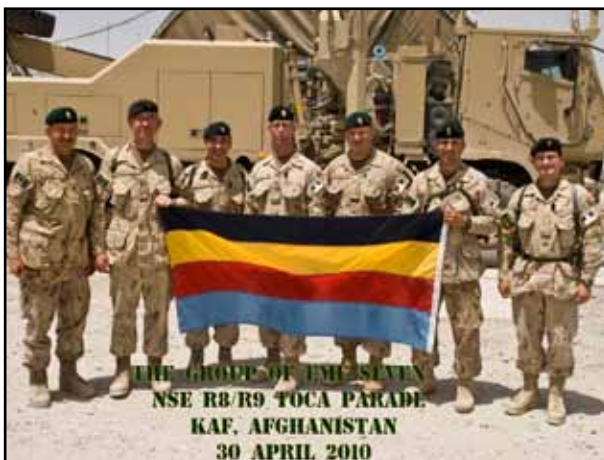
MCpl Gagnon receiving is prize from LCol Létourneau in the presence of CWO Viel

nance organization and MCpl Gagnon took the responsibility to record not only his successes, but his failures as well.

As such, Congratulations MCpl Gagnon on a job exceptionally well done.

ARTE ET MARTE

Photorama



«Group of EME Seven» in TFA

During the Transition of Authority for the National Support Element from ROTO 8 to ROTO 9 in Joint Task Force Afghanistan (JTF-Afg), there were 7 EME Majors on the ground at the same time. The numbers demonstrate the impact that the EME Branch has on the overall operations within JTF-Afg. From left to right, Maj Paul Soulliere (ROTO 8 OC CMC), Maj Gord Edwards (DCO ROTO 8), Maj Alain Brule (OMLT), Maj Dave Beyea (OC Maint ROTO 8), Maj Rob Iley (OC CMC ROTO 9), Maj Mike Cole (OC Maint ROTO 9), and Maj Kevin Fitzpatrick (Tech LO)



THE EME COIN OF EXCELLENCE



COIN # 004

CWO JACQUES THIBAUT



CWO Thibault was an indispensable pillar for the efficiency of all EME Members for the LFQA during his stay at 5 Svc Bn Maint coy. As the ETSM for LFQA, he has been the senior technician, omnipresent in all the aspects of the EME Branch, and always there for every technician in the sector. He took on extremely vast responsibilities and became known not only as the godfather of all LFQA EME technicians, but also as the technical authority concerning the maintenance of the supported equipment. With his proactive approach and his remarkable energy, he not only overcame these challenges, but he extended his influence to improve the efficiency of the operations of the supported units. He touched the heart of all the members of the EME branch of LFQA, constantly listening to our soldiers and our supported units. The EME branch recognizes his crucial contribution to troop morale as well as the effectiveness of the EME branch in operation and in garrison.

COIN # 009

MWO TIM RELIHAN



For unmatched leadership and dedication to the welfare and morale of all EME troops through his graphic design art.

COIN # 005

MCPL JASON PAPINEAU



MCpl Papineau is a highly dedicated soldier-technician who has demonstrated excellence in ARTE. His innovative spirit prompted him to create a solution allowing mine rollers to be utilized with the new Leopard A6 MBT fleet deployed in TFA. Without MCpl Papineau's unique invention, the tanks would be in danger of direct damage from mines and IEDs. His adaptive solution has enabled operations and undoubtedly saved lives of deployed CF soldiers.

COIN # 007

MCPL ROBERT CARR



MCpl Carr was instrumental in the successful mentorship of KANDAK 5 Maintenance Company. His exceptional leadership, patient instruction and resourceful training initiatives were the key to success. The brilliant effort that Master Corporal Carr provided throughout ROTO 9 has had a direct and positive impact on the ability of KANDAK 5 Maintenance Company to perform their mandate.

COIN # 006

WO ERIC DROUIN



For his dynamic leadership and his exceptional planning during his contribution to the creation and planning of EX CHIRON APPRENTI and for the technical training of Maintenance Coy, NSE, TF-Afgh 3-10.

COIN # 008

CPL NATHAN BARBARY



Cpl Barbary is awarded the EME coin of excellence for his determination and ingenuity displayed while returning a mission essential piece of equipment back to service in Afghanistan, 2010. The expedient field repair of the Persistent Surveillance Suite accomplished using an X-Box game controller and downloaded drivers adapted to control the systems surveillance camera returned a critical video feed to the TFK Tactical Operations Center.

COIN # 001 – NOT AWARDED

COIN # 002 – NOT AWARDED

COIN # 003 – WO JEFF MORRIS

AWARDS & RECOGNITION

CDS COMMENDATION

MAJOR BERUBE

For his professionalism as the Operations Officer of the National Support Element in Afghanistan, Feb-Sep 08

SGT FACEY

For his leadership and dedication as the Comd of a Combat Service Support detachment in Afghanistan, Mar-May 08

ORDER OF MILITARY MERIT 2010

CWO J.B.A BERGERON

CWO J.P. SAVOIE

CAPT J.D. HILL

SGT R.W. COUGHLIN

CWO J.E.G. GODBOUT

EME Branch recipients of the Order of Military Merit. The award was established to provide a worthy means of recognizing conspicuous merit and exceptional service by members of the CF, both Regular and Reserve.

MERITOUS SERVICE MEDAL

CWO PATRICK J EARLES

For his leadership and dedication as the RSM of the National Support Element in Afghanistan, Jan-Aug 06.

MCPL W.T. HOGGARTH

For innovation and outstanding work ethic while deployed to a forward operating base in Afghanistan, Joint task force Afghanistan, Sept 08 to Apr 09

CEFCOM COMMENDATION

MCPL FREDERIC GAGNON

As the sole weapons technician with Canadian Helicopter Forces (Afghanistan) from April to November 2009, MCpl Gagnon maximized the use of a limited number of weapons to ensure Canada's helicopter fleet remained operational. His initiative, perseverance, ingenuity and dedication enabled Canada's helicopter fleet to provide consistently outstanding support to troops on the ground.

CANOSCOM COMMENDATION

LCOL REGUSH, LCOL BEAULIEU

For their efforts in planning Reconstitution activities in preparation for redeployment from Afghanistan.

MAJOR P.S.C. HEEBNER

For his performance in the planning of the Camp Mirage was nothing short of exceptional.

From first indications of the imminent closure of Camp Mirage, Major Heebner led and coordinated CANOSCOM's cross-functional planning

efforts. Consequently, the success of Op ADJACENT was directly related to thorough planning, leadership, and teamwork, all of which were showcased by Major Heebner in large measure. To that end, he chaired numerous Operational Planning Groups resulting in synchronize efforts by a variety of specialists through a very detailed planning process. Indeed, Major Heebner's achievement was well-above the norm in circumstances that were both ambiguous and time-sensitive. Undeterred, Major Heebner worked tirelessly up and down the chain of command to coordinate all elements of the closure plan which were reflected in superb CANOSCOM operational products. Accordingly, CANOSCOM executed what proved to be a highly successful operation of strategic importance, thereby promoting the Command's operational credibility.

Although Op ADJACENT was clearly a team effort, Major Heebner is recognized for his laudable efforts at the forefront of an immense undertaking of strategic importance.

PRESIDENT'S TROPHY OF THE ARMY LEAGUE OF CANADA (ONTARIO)

MWO CHANTAL GALATI

This Two time winner of the EME Branch advisor cadet national award continues to add to her laurels. MWO Galati finished as runner-up for the General Walsh Memorial Sword award, the highest honour an army cadet can achieve nationally. As the top army cadet in Ontario, MWO Galati is being awarded the President's trophy by the Army league of Canada (Ontario).

