



The Magazine of the Joint Warfare Centre

16 June 2006 – Issue No: 5



## NEW CHIEF OF STAFF NEW JWC STRUCTURE



SAC-T Seminar '06  
Pages 6-9

Preparation of the Battle Field  
Pages 16-17

Photographic Flight  
Pages 20-21



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Cover  
Exercise Steadfast JAGUAR,  
15-28 June 2006,  
Cape Verde.



## **Editorial**

Once again, I have the great pleasure of presenting you with a new edition of "The Three Swords" magazine. This is the sixth edition of our quarterly magazine, which means that, it is now more than a year since our first magazine came out. We have started with an eight-page test magazine to check if there was any interest in having a magazine. The response we have received has been amazing! Especially in this edition the interest and eagerness to contribute materiel has exploded. As a result, "The Three Swords" has developed into this 40-page magazine. And, still we didn't have room for all of the articles and the pictures that we would have liked to use.

In the beginning, our main target group was the Joint Warfare Centre (JWC) family and we strived to have a balance between the military and the community content. However, in the last couple of issues, we have, to a larger degree, addressed a NATO audience. Mainly because we received a lot of interesting military contribution both from internal JWC sources and from external NATO sources. Therefore, it has become more and more difficult to find room for the JWC community materiel. Do we want to continue down this path? What is the purpose of our magazine? Who is the main audience for "The Three Swords"? What do you expect to find in our magazine? I hereby invite you to contribute us with your views and thoughts on continued development of "The Three Swords".

The circulation has increased from 500 the first time up to 1500 currently, but we still would like to reach more people. So, if you are one of those who would like to receive our magazine regularly, please forward an e-mail with name and mailing address. We also made "The Three Swords" available on the Internet. You can find current and previous issues on the JWC Internet page at [www.jwc.nato.int](http://www.jwc.nato.int) under "Media Center". Among the things you will find in this issue is a report from the very successful and interesting Allied Command Transformation (ACT) Seminar '06, which took place here in Stavanger 20-22 June 2006; articles on "Delivering Transformation" and "Effects Based Approach to Operations".

About JWC internal information articles, I would like to draw your attention to the articles on "The New JWC Structure" and "The JWC Building". We have a lot of new personnel arriving and I wish to take this opportunity to welcome you as members of the JWC family and as readers of our magazine. The magazine, together with our web page, is our channel for exchange of information, articles, reports, news and good stories.

Hopefully, we are able to give you and your family an insight to what is going on at JWC and what JWC is all about. Also, in the "Norway & the JWC" article, we have provided some information that we hope will be of use to you when settling in, both here at the JWC and in Stavanger, Norway. So, once again welcome to the new edition of "The Three Swords". Enjoy!!!



CDR (Sg) Helene W. Langeland, RNO Navy  
Chief Public Information Officer  
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## **The Three Swords**

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# FOREWORD

## Air Marshal Peter B. Walker CB CBE BA Royal Air Force Director, Joint Warfare Centre

SEPTEMBER of every NATO year is a period of change as we say goodbye to colleagues and companions with whom we have enjoyed the enriching experience of service in this multinational Alliance of ours. This year is no exception, and it is with particular regret that we say goodbye to one Chief of Staff and welcome to another. I do not believe in the cult of personalities because none of us are indispensable, and we are all part of the team that is the Joint Warfare Centre, but the singular performance of Brigadier General Steven Mueller cannot pass without comment.



Steve Mueller has achieved a great deal in his time at Stavanger, bringing focus and attention to detail to all aspects of our work; whether improving the facilities at Ulsness, providing Command Group oversight of the budget or assisting in the continuous development of this magazine, Steve strove for excellence in everything and he had no time for the average or mediocre. Setting the standard is very much what the JWC is all about and Steve instinctively understood that our reputation is our centre of gravity, and he worked tirelessly to drive forward initiatives that have sustained the credibility of the JWC in the last two years. Steve leaves us for an appointment in the Pentagon, and he and his charming wife Debbie will be sorely missed.

Elsewhere in this magazine the new Chief of Staff, Brigadier General Phil Ruhlman introduces himself and I am sure you join with me in wishing him and his wife Lina, a very warm welcome. Indeed for all of you who are new to this organisation, I am very pleased to have you boost our manning to nearly 85%, some 15% more than we wrestled with for most of last year, you too are most welcome and we trust you are settling in, and looking forward to the busy autumn programme we have for you.

Fresh people bring fresh eyes on old problems, and as we carry out our duties during the next few months, we older hands need to use our new comrades to question and evaluate what we are doing and how things can best be delivered.

In the past we have been forced to make compromises because of our manning shortfalls; there is a risk that these shortcuts and expediencies become part of the culture of our organisation, and this is unhealthy. It is right that we make sure that the best is not the enemy of the good, and we should not put 80% of our effort into gaining the last 20% of output; but best practise is still the target, and in order to retain our hard won reputation, we need to use those fresh eyes to critically review our processes as we work for continuous improvement. It follows that there are no stupid questions, and if our new staff are puzzled by our approach and have good ideas, then it is our task to harvest what they have to offer for our collective good. As we open our doors to the newcomers, we need to also open our minds.

I was very proud of the contribution you all made to the Allied Command Transformation Seminar held here in Stavanger in June. I do not underestimate the amount of work that went into supporting our Superior HQ, and I know the long hours spent by many of you ensuring Ulsness was ready, and that the Static Display posters were up to standard. I know that the members of the North Atlantic Council and the Military Committee were impressed by what they saw of the JWC, and I have received many expressions of appreciation for the enthusiasm and cheerful attitude of the JWC staff, WELL DONE.

Finally, as many of you are aware, I am very keen to sustain the links with our sister military community here in Stavanger, the Norwegian National Joint HQ. Earlier this year the senior staff of the 2 HQs met to discuss how these links could be fostered, and as part of a package of ideas we agreed to hold a combined Dinner night at the end of September. This opportunity for both our staffs to dine with each other and to enjoy a teambuilding occasion with the newcomers is scheduled for 29 September this year and I have secured the services of a small ensemble from the Central Band of the Royal Air Force at no cost to you. I encourage you to sign up for an enjoyable and convivial evening.



# Brigadier General Stephen Mueller

## U.S. Air Force

### Former Chief of Staff, Joint Warfare Centre

#### (28 August 2004-15 August 2006)

SITTING here putting pen to paper for my last Three Swords article I find myself gazing out the window at the beautiful Norwegian landscape and fondly reminiscing about the past two years. There is a lot to see looking out the windows of "E Block;" the beauty is everywhere, from spectacular fjords to crystal clear skies, it is truly breath taking. However, what garners my attention is not the scenery but the "transformation" I see everywhere I look.

When I gaze to the south I no longer see the car park, for in its place sits the New Rig, current home of the Joint Exercise & Joint Training Development Divisions. Just one year ago, neither the building nor the divisions which reside in it even existed. Looking to the east, Asgard Rig comes into view. It too has changed dramatically in the last year, both inside and out, with a new name and a new division residing in the once "Old Rig." Capability Development Division, as the "engine of our train," has transformed from a concept to action, leading our world class training. As I look to the north, I see and hear transformation literally being bulldozed before my very eyes as ground preparation for our new facility is under way... *out with the old, in with the new.*

Sitting here, I have to crane my neck to see the lower floors of E Block, the National Support Elements, Security, and the Community Support buildings. Like all of the enablers of our organisation, they are critical to our success, but, often operate in the background. The same is true for our Support and SMC4 divisions, and our key Host Nation support.

But, just because they are less visible does not mean that they are not similarly transforming.

Some people might say that what I am describing is simply evolution and not transformation. I couldn't disagree more as I firmly believe the difference is in the effort required to make change happen and the speed in which it occurs. Evolution is passive and happens naturally with little effort, whereas transformation requires enormous work to overcome the inertia against change. Evolutionary change is slow and almost imperceptible to the observer, whereas transformation happens quickly and is easily perceptible to anyone who takes notice.

NATO is taking notice of the changes led by JWC. You have to look no further than our very visible training delivery to see an exercise "delivered" more effectively and more efficiently than



just six months ago. If you peel back the cover you can also see an integrated concept development, an effective and viable experimentation program, and world-class Real Life Support accomplished by just a handful of experts. These exercises rest on the flexible backbone of a CIS structure that amazes even the most seasoned CIS veterans.

None of our mission areas are perfect, but they are all significantly better than just six months ago and will be significantly better six months from now. The reason they are better is not from evolving processes but rather from the energy of the JWC staff to transform NATO.

I want to thank the entire JWC staff for their energy, ability, and desire to make an impact. It is your hard work every day that makes a difference in our Alliance. When you look in the rear view mirror, you can see that you are truly transforming NATO and as such improving the capability of our Nations to meet the diverse security threats of the future. Thank you for your dedication, I am extremely proud to serve with you.

To the great Division Chiefs of the JWC, thank you for your patience and leadership as you continue to embrace change as a cultural way of doing business. Thank you for being my "board of directors" and for leading JWC in our business of transformation.

As I depart my post I am very optimistic about the future of the JWC. I believe the JWC is superbly led by your Director and I am sure my replacement will add tremendously to the command group leadership team. Brigadier General Phil Ruhlman, your new COS, brings with him a wealth of experience in staff and command positions and a career's worth of leadership. I am confident that you will all find him approachable and more than capable. I would like to wish Brigadier General Ruhlman, his wife Lena and his son Alex a warm welcome to the JWC.

I couldn't leave Norway without expressing my complete gratitude to the Host Nation. This assignment has been rewarding both professionally and personally because of the wonderful support and friendship Debbie and I have experienced from the day we landed at Sola Airport. We have made many friendships that we will cherish for eternity. We firmly believe the beauty of Norway is only surpassed by the friendliness of your citizens.

Thank you all for your support and all the best in your future endeavors.



# Brigadier General Philip M. Ruhlman

## U.S. Air Force

### Chief of Staff, Joint Warfare Centre

**B**RIGADIER General Philip M. Ruhlman is the Chief of Staff, Joint Warfare Centre, Supreme Allied Command Transformation, Stavanger, Norway.

Brigadier General Ruhlman graduated from the United States Air Force in 1980 and earned his pilot wings in 1981. His first assignment was as a jump-qualified Battalion Air Liaison Officer and Forward Air Controller flying the O-2A. He then transitioned to the F-16 and has since flown every version assigned to the United States Air Force. He flew 43 F-16 combat missions over Iraq and Kuwait during Operation DESERT STORM, and has served as a wing weapons officer, instructor pilot, and Chief of Standardization and Evaluation. His staff assignments include positions at joint element, major command, direct reporting unit, and headquarters air staff levels. He has commanded a fighter squadron, fighter operations group, and the largest operational F-16 fighter wing in the United States Air Force.

Brigadier General Ruhlman earned a Bachelor of Science Degree from the United States Air Force Academy, and a Masters of Aeronautical Science Degree from Embry-Riddle Aeronautical University. Brigadier General Ruhlman is a graduate of the Air Command and Staff College and the Armed Forces Staff Col-



lege. In addition, he is a National Defense Fellow and Air Force Fellow, National Defense University; and a Senior Executive Fellow, John F. Kennedy School of Government, Harvard University.

Brigadier General Ruhlman is a Command Pilot with over 3200 hours in the F-16 and O-2A, and 105 combat hours.

He currently lives in Norway with his wife Lina and their son, Alex.



The Joint Warfare Centre, as directed by Headquarters Supreme Allied Command Transformation, promotes and conducts NATO's joint and combined experimentation, doctrine, development, training and evaluation to maximize transformational synergy and to improve NATO's capabilities and interoperability. The Joint War-

fare Centre conducts training on, as well as develops, new concepts and doctrine for joint and combined staffs.

Through the subordinate Joint Analysis and Lessons Learned Centre, the Joint Warfare Centre performs joint analysis, collects lessons learned and feeds them back into the transformation network. Through its subordinate Joint Forces Training Centre, the Joint Warfare Centre assists Allied Command Transformation and Allied Command Operations in promoting doctrine by training of NATO Forces.

**V**I am excited to be on the Allied Command Transformation team as the new Chief of Staff of the Joint Warfare Centre here in Stavanger, Norway. Our mission as a world class training centre remains keenly focused on preparing NATO operational leaders and their staffs to conduct critical real-world operations as members of International Security Assistance Force (ISAF) as well as prepare them for the NATO Response Force (NRF). In my first few weeks here, I have witnessed an exceptionally outstanding Joint Warfare Centre team made up of 27 NATO and Partnership for Peace nations that efficiently and effectively drive transformation forward in NATO. The Joint Warfare Centre's use of transformational Concepts, Doctrine and Lessons Learned sets the pace for leading edge exercises and training. The Joint Force Training Centre in Poland, and the Joint Analysis and Lessons Learned Centre in Portugal also have key roles in supporting transformation for our combined NATO team.

The world is moving at a fast pace, and we aim to stay ahead of the changes by adapting and transforming our training mission to serve NATO's most needed requirements. The future is bright for the Joint Warfare Centre, and I look forward to serving here, working with you all, and contributing to our Allied Command Transformation mission forging transformation.

**"We are committed  
to deliver a more  
mobile, sustainable,  
interconnected,  
integrated, decision-  
making joint force  
for tomorrow."**

**General Lance L. Smith**

# DELIVERING TRANSFORMATION

By Inci Kucukaksoy  
JWC PIO



NATO's Allied Command Transformation (ACT) held its third annual seminar in Stavanger, Norway, on 20-22 June 2006. This year's seminar focused on "Delivering Transformation" and provided both a forum to discuss current and future transformation concepts as well as a walking tour of displays and technology demonstrations. NATO's Secretary General, Jaap de Hoop Scheffer, Ambassadors from the North Atlantic Council (the Permanent Representatives), NATO's top military commanders, and other senior NATO leadership attended the seminar hosted by U.S. Air Force General Lance L. Smith, Supreme Allied Commander Transformation (SAC-T). The seminar discussed the following topics:

- *Delivering Transformation*
- *The Coherent Application of Civilian and Military Power*
- *The NATO Response Force*
- *Coherent Applications in Training and Lessons Learned*
- *The Technological Challenge*
- *The Creation of Products*

The seminar speakers included Lieutenant General David Richards, Commander

ISAF IX; Mark Etherington, Head, Provincial Construction Team in Basra, Iraq, and Stephen McGibbon, Regional Technology Officer, Microsoft Europe, Middle East and Africa. In addition, there were addresses by Jaap de Hoop Scheffer; General Ray Henault, Chairman of the NATO Military Committee; Anne-Grete Strøm-Erichsen, Norwegian Minister of Defence and SAC-T. Also, a video tele-conference was conducted with General Gerhard W. Back, Commander JFC Brunssum, providing an update on Exercise Steadfast Jaguar prior to the Delegates' visit to Cape Verde.

Having more than 150 delegates from all NATO countries attending this year's SAC-T Seminar was an indication that each country recognized the importance of this event. The seminar provided a unique opportunity to evaluate NATO's current operational environment. It also

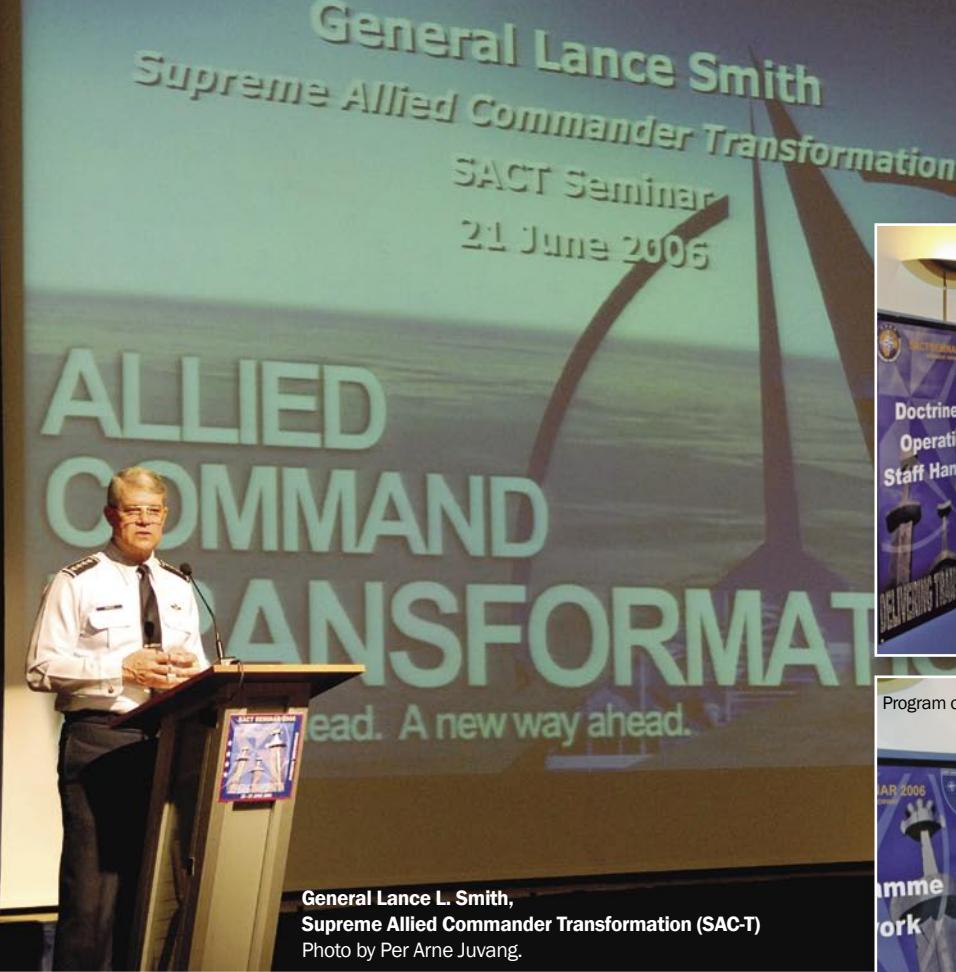
Left, top: Air Marshal Walker, Director JWC welcoming H.E. Jaap de Hoop Scheffer, NATO Secretary General, at Ulsnes training facility.

Below: General Smith hosted a press conference together with H.E. Jaap de Hoop Scheffer and H.E. Anne-Grete Strøm-Erichsen, Norwegian Minister of Defence on 21 June 2006.

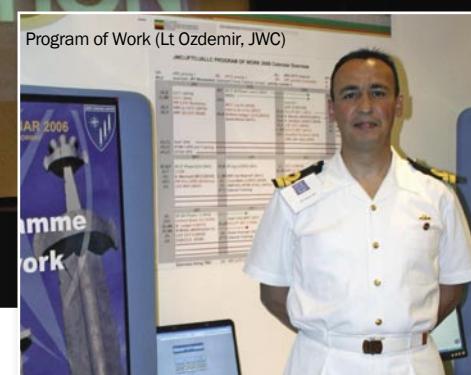
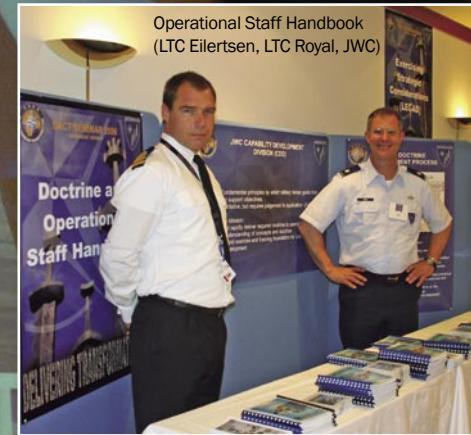
Photos by Per Arne Juvang.

# SAC-T SEMINAR





**General Lance L. Smith,  
Supreme Allied Commander Transformation (SAC-T)**  
Photo by Per Arne Juvang.



highlighted the collective approach to Defence Planning within NATO, as expressed in the words of Anne-Grete Strøm Erichsen, who said:

"We are not transforming and modernizing our armed forces in national isolation. We are searching for simultaneous and coordinated efforts in the same direction and for the same purposes."

ACT was established in 2003 and plays a big part in NATO's efforts to reorganize for emerging 21<sup>st</sup> Century threats. ACT's main goal is to improve NATO's military effectiveness and interoperability. General Smith, its Commander and the host of the seminar, leads the transformation of NATO military structures, forces, capabilities and doctrines to improve the military effectiveness of the Alliance. In his welcoming speech, General Smith said NATO had become a larger and more mature Alliance with a proud history, strong partnership relationships and a clear vision for what is needed in the future.

Clearly, success in changing the fundamental way that NATO approaches common threats now and in the future depends on a spirit of constructive dialogue and cooperation within NATO.

"I applaud the openness and hard work of the North Atlantic Council, Military Committee and their staffs since last year's Seminar in Norfolk. Together, we are committed to deliver a more mobile, sustainable, interconnected, integrated, decision-making joint force for tomorrow," General Smith said.

In 2004, NATO's Military Committee agreed on a comprehensive approach to improving NATO's ability to conduct military operations, which included reviewing intelligence, logistics and resource planning, force designation, force activation and deployment procedures. The NATO Response Force is at the centre of this process, providing the rationale, the requirement, and the catalyst for transforming the way NATO works. This is most true especially when one thinks about Alliance's engagement and commitment in operations that are in areas located at strategic distances from Europe. In words of Admiral Stanhope, Deputy SACT, these new capabilities are associated with "doctrine, organization, training, materiel, leadership development, personnel, facilities and interoperability".

The Comprehensive Political Guidance, signed on 16 December 2005, and Military Guidance for the Military Implementation of the Comprehensive Military Guidance (MC 550), signed on 2 June 2006, together show the distinct shift in NATO's concept of operations in order to respond to a broader spectrum of risks and threats. The Comprehensive Political Guidance provides a framework and political direction for NATO's continuing Transformation setting out the priorities for all Alliance capability issues, planning disciplines and intelligence for the next 10 to 15 years. These two documents are the essential products for NATO's transformation as well as key Alliance capabilities.

Another important aspect of the Defence Planning is the Defence Requirements Review (DRR), which consists of a number of studies created to support and integrate NATO's Defence Planning disciplines of Force, C3, Logistics, Resources and Armaments.

"The goal of the DRR is to identify the minimum military requirements which would enable the Alliance to successfully execute its full range of approved military missions," General Smith said.





From the "DISPLAY FAIR" at Hotel Atlantic, clockwise, International Security Assistance Force Training (LTC Hartov, JFC Brunssum; Col Rønning and Cdr Mikutis, JWC); Civil and Military Cooperation (Cdr Pierre, JWC); Land Command and Control Information Systems (Mr Postal and Mr. Veranda, ACT); Exercising Strategic Considerations (Col Berntsen and Cdr Lone Kjelgaard, JWC); Iraqi Key Leader Training (Maj Ellingsen and Cdr Vos, JWC). Photos by Inci Kucukaksoy.



The ultimate Defence Planning Goal is to ensure operational commanders have access to capabilities required to initiate, sustain and successfully conclude NATO operations. ACT stresses that Defence Planning in the Alliance will enable its member countries to enjoy the crucial political, military and resource advantages of collective defence and other common military efforts to enhance security and stability.

It is important to note that Defence Planning is taking place at NATO and in the Member Nations simultaneously; it is a collaborative and focused effort across NATO and nations. In summary, Defence Planning sets the base for evolutionary as well as revolutionary improvements in military capability in two ways. First, by building joint, combined capabilities through development/enhancement of interoperability. Second, by transforming equipment, facilities, doctrine, procedures, training, education and organization. "The missions that NATO forces are being called upon to perform will require a force that is more effective in a wider range of missions than what our plans of yesterday envisioned," General Smith

said. ACT's driving concepts to capability development, such as "Concept Development and Experimentation", "Integration and Interoperability", "Training and Education" are inextricably linked with the NATO Response Force. "These tools are all used to build a coherent NATO Response Force. They are force multipliers, they dramatically add combat effectiveness," he added. Genral Smith also added that the NATO Lessons Learned Process should deliver immediate feedback to the Joint Force Commander during current operations. "In the long term, the Lessons Learned process should deliver military transformation by feeding the analysis into our training and doctrine," General Smith said.

He suggested the process would be as real-time as can be possible. According to him, the NATO Response Force would constantly evolve and improve based on the guidance and Lessons Learned from ACT's subordinate commands.

"The data needs to be analyzed and the results must be integrated and the knowledge developed. This should be done collaboratively between the JALLC, the JWC, and the JFTC. Then, this knowledge must

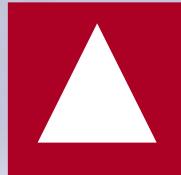
be implemented into our training and education programs, and then monitored. This is different than Lessons Learned in the past," he said. The General ended his speech with ACT's proposed themes for NATO's Riga Summit, which are:

- *Commitment to a NATO level concept supporting EBAO*
- *Support for Transformation by Heads of State*
- *New capability targets that expand the Prague Capability Commitment*

General Smith also expressed his appreciation for the superb support of Anne-Grete Strom-Erichsen, Norwegian Minister of Defence, in hosting SACT Seminar.

On the other hand, the JWC also won its own share of praise. Lieutenant General David Richards, Commander ISAF IX, publicly thanked Air Marshal Walker and his headquarters' staff for the training that the ARRC received prior to their deployment to Afghanistan to take over ISAF IX. He commended to SACT the need for the Joint Warfare Centre and said that both he and his team would have been far worse off arriving in theatre had they not received the Mission Rehearsal Training. ■■■

# SACT SEMIFAIR



# EYE ON JWC

## *WHEN THE TEAM IS BIGGER THAN THE SUM OF ITS PARTS...*

JWC's outputs are normally the result of strong team work. The planning, coordination and conduct of the activities in support of the 2006 SACT Seminar, held just recently in Stavanger, were in no way different. The following will describe how JWC's "SACT Seminar 06 team" worked together toward the achievement of a common goal. From the outset, it was clear that the JWC Spring 2006 Events Calendar would be challenging with major events such as ISAF IX and Exercise Steadfast Jackpot 06 planned respectively for March and April, with at the tail end the SACT Seminar scheduled to take place 20-22 June 2006. Increasing the complexities of the task was the fact that the major players that eventually would be committed toward planning the SACT Seminar were already and heavily involved in the conduct of ISAF IX and SFJT 06. The initial planning activities for the SACT Seminar would then have to be done from behind the trees.

The first big planning meeting with the representatives from ACT took place toward the end of April during a lull in SFJT 06. Gathered at the Atlantic Hotel, the JWC ACT Core Planning Team composed of representatives from the usual support branches (Real Life Support, CIS, Protocol, PIO, Budget and Finance, Transportation, Security) received their marching orders with regard to what would be expected of them. The mission assigned to them was rather straightforward albeit with a shade of grey: ACT would take the lead in planning the Seminar with JWC being in a supporting role. The initial program thus only called for a 90 minutes VTC and panel discussion to be held in Ulsnes, the JWC training centre some 15 kilometers away from the site. Obviously, some mission creep was to be expected but the JWC team was ready for it. Shortly after the meeting, SMC4 division started to plant the seeds for the acquisition of new VTC suite equipment. Discussions were initiated with a potential equipment provider, while ACT was asked to finance the eventual purchase. After some back and forth negotiations, JWC got the necessary funds for the acquisition while the selected company agreed to provide not just the equipment, but also promised to install, test and support the conduct of the actual VTC. What was left remaining then was to get the approval from the NATO technical board along with the drafting and signing of the equipment purchase contract. After a lot of work by and coordination between SMC4 and BudFin along with some gentle timely push by the JWC COS, the VTC suite was acquired, delivered, tested and used with great success during the Seminar. Concurrent to the work being done on the VTC, the JWC leadership decided that the ACT Seminar would be an ideal opportunity to showcase JWC capabilities. With that in mind, it was decided to demonstrate JWC professionalism with two demonstrations depicting the work intricacies of a JOC and a JEC. CDD and JED were thus respectively tasked with the organization of a 10-

minute demonstration each that would be successively run after the VTC in Ulsnes. In the same vein and with a view to stressing how ACT delivered transformation, SACT asked that various displays (not to be confused with the demonstrations) be put together for the participants. Those displays were to be conducted during lunch (also added to the original program) in Ulsnes.

In came LTC Bjorn Jenssen and his "cunning" plan. Bjorn readily applied himself to determine which displays would be organized along with finding who would organize them. That involved multiple liaison with folks from ACT and the JJJ (JWC, JFTC and JALLC), requesting their involvement while ensuring that there was no duplication of efforts. Several iterations of the plan had to be made detailing location of each display, equipment to be used, standardization of posters, tri-folders while making sure that all displays' representatives were kept abreast of what was expected of them. Credit is due here to the entire JWC Graphics Section who produced outstanding work under severe time constraints and to the JWC RLS team who facilitated the lunch in Ulsnes as well as organizing the movement of all display equipment from Ulsnes to the Atlantic Hotel and back. Also, thumbs up to all involved in setting-up and running the various displays.

Upon arrival of D-day, it was time to commit the reserve. After having established their main HQ, ACT realized that they would need reinforcement with regard to the coordination of Transportation, Security, Media and with the employment of Escort Officers. Moreover, they asked that JWC Protocol ran one of two Delegation Assistance Centres set-up as a Welcome/Help Desk for the event participants. The various JWC teams who were seamlessly embedded within the various ACT planning groups received high praise for their can-do attitude and devotion to the various tasks at hands.

Overall, the initial outlook on probability of success for the support of the event was rather grim. Compressed timings, unsettling mandate, several different stakeholders involved in the planning of the event were all worthy causes for concerns. However the uncanny capabilities for the JWC people to work as a team, the devotion demonstrated throughout by all involved along with the hands on involvement of JWC leaders were critical in establishing the winning conditions for a successful event.

The "SACT Seminar JWC team" was truly greater than the sum of its parts. ■■■

By Maj Sebastian Dufour, CA A  
Chief Real Life Support Branch,  
JWC Support Division





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After long and productive negotiations, the Kingdom of Norway and Headquarters, Supreme Allied Commander Transformation, represented by the Joint Warfare Centre have concluded a new **Memorandum of Agreement (MOA)** concerning the closure of Joint Headquarters North, the establishment of Joint Warfare Centre and the support of the NATO Joint Warfare Centre at Stavanger, Norway. An MOA can best be described as a treaty-like agreement between a NATO member state hosting an International Military Headquarters and the Alliance as such. The signing of the MOA between the Kingdom of Norway and Supreme Allied Commander Transformation on the 21<sup>st</sup> June 2006 marked an important milestone in the establishment of the Joint Warfare Centre. The Agreement was signed by Her Excellency, the Minister of Defence of the Kingdom of Norway Anne-Grete Strøm-Erichsen and Air Marshal Peter Walker, Director of the Joint Warfare Centre. The Agreement underlines Norway's firm commitment to NATO and its future transformation. The signing ceremony capped almost three years of negotiation, which intensified in the beginning of 2006, and led to the final signature in June.

The MOA serves a number of purposes; it formally closes the former Joint Headquarters North (a joint sub-regional command), it establishes the Joint Warfare Centre and it outlines the scope of Norwegian support to the Joint Warfare Centre. The Signatories to the MOA agree that based on the new command structure an increased reliance on Host Nation Support exists. This is reflected in the support offered by Norway to the Joint Warfare Centre. Where the MOA proper

outlines the overarching principles for support to Joint Warfare Centre, the details, implementation and procedures for delivery of host nation support will be regulated and detailed in a series of local agreements (LAs). The negotiation of the LAs is progressing satisfactorily and is expected to be completed shortly. The Joint Warfare Centre views these as instrumental to its operations in Norway and is confident that they will be concluded in a professional manner as soon as possible.

The LAs will describe the agreed level and standard of services to be provided. At the same time they will describe the recourses the Joint Warfare Centre may take if these standards are not met. Some things will change and some things will remain the same. Most personnel at the JWC will not notice a difference in their daily performance of duties.

At the request of the Financial Controller and due to the fact that the Joint Warfare Centre no longer is integrated with the co-located National Joint Headquarters, the previous cost-share arrangement (50/50) has ceased to exist. It has been replaced by a pay-per-use system. This is viewed to be much simpler and more appropriate. It is believed that this system will benefit both co-located headquarters. This also means that the National Joint Headquarters may purchase services from the Joint Warfare Centre and vice versa. Joint Warfare Centre will maintain an independent Engineering and Maintenance Branch to facilitate the needs of the HQ, whereas maintenance of all outdoors areas will be the responsibility of the Host Nation. The Host Nation will provide a transportation service. Joint Warfare Centre will make its

# THE NEW MEMORANDUM OF AGREEMENT

By Cdr Lone Kjelgaard, DA N  
Staff Officer, LEGAD, JWC

vehicles available to this transportation service. This was done to simplify the arrangements and provide the most flexible support. The level of support in the transportation area will remain the same as we know it today. There will be NATO oversight and management, but the daily delivery will be the responsibility of the Host Nation. To accommodate a lot of different needs, some which have been highlighted during the MOA negotiations, Norway will create a "Host Nation Support Services" office to assist both Joint Warfare Centre and Norwegian personnel posted abroad. This is to become a centre of knowledge and expertise. It is envisioned that this office will handle many of the matters currently undertaken by the Norwegian representatives in Community Support and Morale and Welfare functions. To avoid difficulties in command and control relations and any potential legal liabilities, e.g., for drivers, Norwegian personnel appointed to Joint Warfare Centre filling other than Peace-time Establishment Posts will be given status as Voluntary National Contributions. The MOA proper is expected to remain valid for the long term, whereas the LAs negotiated at the local level are envisioned to be reviewed and potentially renegotiated annually/biannually based on development and demand. The Joint Warfare Centre is very pleased with the results of the negotiations and is looking forward to working productively with both local and national representatives of the Norwegian Defence authorities.



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Above: The "Memorandum of Understanding" was formally signed between the Joint Warfare Centre and Kingdom of Norway on 21 June 2006.  
Photo by Per Arne Juvang.



# Effects Based Approach to Operations and its Implications for ACT



“ Staffs must be familiarized with the concept; and the operational complexity of current NATO missions makes it imperative to provide commanders and staffs with every helpful tool they can use. ACT can continue to positively affect the creation and implementation of a NATO EBAO, both through its participation in the working groups and in helping set the parallel and complementary course for institutional sustainment of the efforts underway to operationalize EBAO within NATO.

By Colonel Jody Prescott, US A,  
HQ SACT Deputy Legal Advisor (Forward)

## I. Introduction

The NATO political and military leadership has recognized that the development of a NATO Effects-Based Approach to Operations (EBAO) is necessary for successful operations in today's complex security environment.<sup>i</sup> Certain NATO members have been using some form of EBAO in their national planning systems for some time, as have some multinational headquarters within the NATO structure.<sup>ii</sup> A NATO Bi-Strategic Command Working Group is working on the issues involved in making a NATO EBAO operational across the Alliance, and a related working group is currently taking a “test-bedding” approach to EBAO, by applying it to at least one Defence Requirements Review 2007 planning situation. The latter group intends to compare capability requirements in current operational planning with those expected in an EBAO, and expects to identify further concept development requirements.<sup>iii</sup> ACT

has been very active in the area of EBAO as well. Allied Reach '06 not only featured presentations and discussions of EBAO; it also purposefully included representatives from international organizations (IOs), non-governmental organizations (NGOs), and the media to emphasize the holistic nature of this approach to operations. Importantly, Multinational Experiment (MNE) 4 tested not only the applicability of EBAO to a possible NATO Response Force (NRF) mission, but the software suite necessary to make such an approach practical. Finally, just this last June, the 2006 SACT Seminar at JWC featured EBAO as a focus area of discussion.

*What is EBAO, and what are the implications for ACT as the Bi-Strategic Command Working Group moves forward in its efforts, and when it begins training and educating NATO headquarters and personnel in EBAO for challenging assignments*



*like ISAF?* A current formulation describes it as “the coherent and comprehensive application of the various instruments of the Alliance combined with the practical cooperation along with involved non-NATO actors, to create effects necessary to achieve planned objectives and ultimately the NATO end state.”<sup>iv</sup> As previously noted, a holistic approach to operations is not new. What distinguishes EBAO from merely being a holistic approach is the way that information relevant to the planning, execution, and assessment of the operation is rigorously and systematically processed to provide political and military leaders with the most accurate, as near-to-real time picture of the operational environment as possible. This continuously updated picture is the predicate for operations in which the actions of military and non-military actors are not only synchronized, or at least deconflicted to the greatest extent possible, but their relationships and effects are as well.

Information management requires resources such as trained personnel, software applications, and hardware. It also requires effective organizational structures, and particularly today, global connectivity. Is it possible to better define the resource requirements of an EBAO? The answer depends in part at which level of military operations the approach is being used, and the particular model being used. For purposes of illustration, it is useful to look at a fairly well developed EBAO model at the operational level like the one used by U.S. Joint Forces Command (U.S. JFCOM) in joint exercises it conducts.

## II. The U.S. JFCOM EBAO Model

The U.S. JFCOM EBAO model sees friendly actors, adversaries, and the operational environment as a group of networked, interactive systems. It focuses on the effects the joint force commander seeks to achieve as a means of coordinating friendly efforts in the area of operations. Importantly, it incorporates an integrated assessment process to track whether the command's efforts towards accomplishing the “objectives” (goals) of the operation are succeeding.<sup>v</sup> U.S. JFCOM sees this model not as an alternative to current military planning, but instead as an enrichment of this process.<sup>vi</sup>

### a. Mission Analysis

Upon receipt of a campaign plan or operations order, a “System of Systems Analysis” (SoSA) team composed of subject matter experts begin researching the political, military, economic, social, infrastructure, and information (PMESII) systems of the area of operations. Each of these systems is broken down into subsystems. For example, the political system could be subdivided into local government, central government, public interest groups, and regional and international actors. The knowledge base generated by this research is used by the SoSA team to identify “key nodes” in each of the systems. “Key nodes” are

persons, places or things related to a strategic or operational effect the command seeks to create, or to identified centers of gravity, that have “linkages” between themselves and other nodes in the PMESII systems. “Linkages” are “behavioral, physical, or functional relationships” between nodes. “High pay-off nodes” are key nodes that appear in multiple PMESII systems.<sup>vii</sup>

This analysis, and the briefings and executive summaries prepared by the SoSA team, are fed into the “Joint Intelligence Preparation of the Battlespace” (JIPB). The battlespace is more than just a geographical area of operations, and the JIPB is defined as the “continuous process which enables commanders and their staffs to visualize the full spectrum of adversary capabilities and potential courses of action across all dimensions of the battlespace.”<sup>viii</sup> The JIPB process identifies strengths and vulnerabilities of the PMESII systems in the area of operations, and the key and high pay-off nodes can be influenced to achieve the desired effects.

As this intelligence process develops situational awareness, a joint planning group consisting of the J-code, special staffs, and external “stakeholders” (like civilian governmental agencies with interests in the area of operations) begin with the end state directed in the campaign plan or operations order and develop “objectives” for the operation. “Objectives” are clearly defined, decisive, and attainable goals towards which the operation is directed, and which simply state what is to be achieved where. Once the draft objectives are briefed to the commander and approved, planners then use the objectives for the further development of the EBAO process.<sup>ix</sup>

The objectives are then analyzed to derive the effects the commander will need to create in the battlespace to realize these goals. For example, if an objective is, “Nationals, facilities, and interests of NATO partners in Country A are protected,” a desired effect may be, “Country A ceases support of terrorist organizations.” The draft effects must also be briefed to the commander, and once approved, they form the foundation of the Course of Action (COA) development.<sup>x</sup>

Effects must be measurable, and this leads to the next step of the U.S. JFCOM process, the development of Measures of Effectiveness (MOEs). MOEs measure trends in the battlespace either towards or away from creating the desired effects. Continuing with the example above, an appropriate MOE could be a “Decrease in official statements by Country A in support of terrorist organizations.” Planners then develop “indicators” of the MOEs, that is, those things that are actually measured. For example, a valid indicator in this example could be, “Statements by Country A government officials in the media supporting terrorist organizations.” These indicators will then form the basis of the joint forces command’s intelligence collection efforts.<sup>xi</sup> Finally, the “criteria,” the specific metrics associated with the respective indicators are developed. Depending on the informa-

For example, if an objective is, “Nationals, facilities, and interests of NATO partners in Country A are protected,” a desired effect may be, “Country A ceases support of terrorist organizations.”

## EMBRACING EFFECTS BASED APPROACH TO OPERATIONS



Decisive Leadership of Margaret Thatcher, Prime Minister of the United Kingdom from 1979 to 1990 and General Tommy Franks (Ret.), Commander-in-Chief of the United States Central Command from July 2000 through July 2003, who led American and Coalition forces to victory in Afghanistan and Iraq.

Perhaps two of the most lucid expositions of EBAO in modern literature are found in Prime Minister Margaret Thatcher's description of her government's handling of the 1982 Falklands crisis and campaign\* in her autobiography "THE DOWNING STREET YEARS", and General Tommy Franks' recounting of the planning and execution process of the 2003 invasion of Iraq in "AMERICAN SOLDIER".

\*The Falklands War was fought in 1982 between Argentina and the United Kingdom over the Falkland Islands and South Georgia and the South Sandwich Islands.

tion available and the judgment of the planners, criteria could then be weighted. Continuing with the example above, and assuming that because of illiteracy and poverty in Country A most inhabitants get their news information from the radio, weighted criteria could look like this:

- 1A. 0 TO 5, 6 TO 15, OR MORE THAN 15 WRITTEN STATEMENTS PER MONTH
- 1B. 0 TO 5, 6 TO 15, OR MORE THAN 15 TV STATEMENTS PER MONTH
- 1C. 0 TO 2, 3 TO 7, OR MORE THAN 7 RADIO STATEMENTS PER MONTH

The U.S. JFCOM personnel who use this EBAO model in exercises acknowledge that it is very resource intensive.<sup>xii</sup>

### b. COA Development

As the planning process moves from mission analysis to COA development, the focus of EBAO now moves to matching friendly resources and actions against the key and high pay-off nodes and the linkages identified in the mission analysis. As tasks are sequenced in the various COAs to meet the commander's guidance and intent, planners also develop the Measures of Performance (MOPs) to determine whether the tasks that must be accomplished in each COA have in fact been completed successfully. For example, a task might be "Install additional power relay stations on the electrical grid."

Appropriate MOPs might be:

- 1A. ARE THE RELAY STATIONS INSTALLED?
- 1B. DO THE INSTALLED RELAY STATIONS WORK?

### c. COA Analysis, Comparison, and Selection

As the COAs are analyzed and compared, and then one is finally selected by the commander, the U.S. JFCOM model includes continuing analysis of unintended consequences and risk assessment.

Further additional stakeholder consultation may be necessary during these stages as well, and the SoSA team will continue to develop its knowledge base. Once the plans or orders are developed to effect the chosen COA, and are then executed, the assessment phase of EBAO begins.

### d. Assessment

To be effective, the assessment process must be adequately resourced, and the assessment plan must be comprehensive and fully integrated through the different levels of command. It must also be consistent with the MOEs and MOPs developed during the mission analysis and COA development phases, respectively. While effects in EBAO are planned from the top down, assessment actually occurs from the bottom up, beginning at the tactical level with the task assessment using the MOPs. The focus at this level is on the specific actions taken according to the plan or order, and the question is whether these tasks are being accomplished properly. This information is then fed up to the operational level, where effects assessment is conducted. The questions at this level are whether the proper tasks are being accomplished, and what the effects on the PMESII systems are. Finally, all this information is factored into the campaign assessment, which is tied to the objectives. The question at this level is whether the mission is being accomplished. Put another way, how far is the command from where it wanted to be in this stage of the operation?<sup>xiii</sup>

### e. Summary

The U.S. JFCOM EBAO model is comprehensive, and integrated into the planning, execution and assessment phases of operations. It is also fairly well developed, with a consistency and logic that runs through the process. It is, however, resource intensive, in terms of the personnel, their expertise, and the software and equipment that are required to support the model, and time.

## III. The Implications for ACT

### a. General Implications for NATO

Before EBAO can be implemented fully within NATO, the Alliance will need to make important political decisions as to which model or models it wants to use at the different operational lev-



els, and to what degree these models will be resourced. As suggested by the synopsis of the U.S. JFCOM model, this particular EBAO may neither be affordable nor practical below the operational level. Based in part on the experiences with the software suite used in MNE 4, current work in NATO has identified general software tool requirements. In short, current tools are at an early stage of development, and effective EBAO will require a new generation of network-centric software. In particular, tools to achieve situational understanding of non-military issues are needed. Of course, new software also requires new training.<sup>xiv</sup>

In addition to the resource issues dealing with software, a review of the U.S. JFCOM model suggests that were it to be used by NATO, staff planning processes and organizations would need to change significantly. CJ-3, CJ-5 and CJ-9 planners would need to work more holistically across the joint forces command organization, and would need to include special staffs and non-military stakeholders at the early stages of mission analysis. The impact upon the J-2 would likely be profound, in terms of its personnel, how it is structured, how it collects information from data sources outside the military structure, how it collects information and analysis from national sources, and how it distributes information and analysis throughout the command. The J-2's appetite for information would likely become both ravenous and omnivorous – managing this flow could prove very challenging. The efforts of the Bi-Strategic Command Working Group and the DRR working group will no doubt address many of these issues.

## b. Specific Implications for ACT

The example of the creation of criteria for the indicators of the MOEs in the U.S. JFCOM model suggest other changes that might need to be made in the transformational side of NATO depending upon the Alliance's decisions regarding EBAO. For example, the criteria are a basic building block of the U.S. JFCOM model - what doctrine do the planners use to create them? Where does the training of this doctrine occur? Is this training best suited for delivery in a traditional educational setting, or would it suffice to use advanced distributed learning methods? Should the training be a prerequisite to joining a planning staff? How would NATO resource the training of instructors and curriculum writers? The U.S. JFCOM model also suggests more narrow, but perhaps as challenging, resource requirements, as shown by an example from the commander's special staff – the legal advisors. On one hand, because of their legal training and function within the headquarters, they are likely to both take a holistic view toward problem solving and have a holistic appreciation for the organization. Further, an EBAO requires information flow and coordination between military and civilian actors with whom the military may not ordinarily work. This sort of engagement will likely implicate a spectrum of national and international laws that commanders and planners neither usually deal with nor worry about. On the downside, however, many legal advisors may have never worked in a large, operational organization, and even if they have, they may not have been fully integrated into high tempo operational planning. In

addition, depending upon the national system from which they come, they may never have received an education in operational staff work that a command and general staff college would provide. How can legal advisors and other special staff, as well as non-military stakeholders, be brought up to par quickly enough to make them valuable working group members?

## IV. Conclusion

Although the various working groups' efforts must of course be consistent with the Comprehensive Political Guidance and the Military Committee's developing work on a NATO EBAO, they should wait for final, definitive decisions on NATO EBAO before beginning to incorporate those aspects of the approach that have been validated in the field into NATO's daily work. Staffs must be familiarized with the concept, and the operational complexity of current NATO missions makes it imperative to provide commanders and staffs with every helpful tool they can use. ACT can continue to positively affect the creation and implementation of a NATO EBAO, both through its participation in the working groups and in helping set the parallel and complementary course for institutional sustainment of the efforts underway to operationalize EBAO within NATO. Once NATO has decided which model or models of EBAO it wants, doctrine can be written on its use. Doctrine and curricula will provide the platform for appropriate incorporation of EBAO into the exercises and experiments ACT conducts at HQ SACT, JFTC and JWC. JALLC can provide the rest of ACT the information and analysis needed to update doctrine, curricula, exercise and experiment scenarios, and perhaps even model standard operating procedures.

## ACKNOWLEDGEMENTS:

- i SG (2005) 0918-A51-REV 1, Comprehensive Political Guidance (01 February 2006).
- ii The UK Military Effects-Based Approach, Joint Doctrine Note/05 (September 2005)
- iii 07 Defence Requirements Review, Effects Based Approach to Operations (EBAO) Test-Bedding (briefing), Mr Dale F. Reading, NC3A.
- iv MC Position on an Effects Based Approach to Operations, MCM-0052-2006 (06 June 2006).
- v Effects Based Approach to Joint Operations, An Overview (briefing), Lieutenant Colonel Rhett C. Russell, Deployable Training Team, Joint Warfighting Centre (JWFC) (June 2006).
- vi Integration of an Effects-Based Approach to Joint Operations and the Operational Planning Process (briefing), US JFCOM JWFC (June 2006)
- vii System of Systems Analysis (SoSA) Overview (briefing), Mr. Dan Strasser, Standing Joint Force Headquarters, US JFCOM, (June 2006)
- viii JP 2-01.3, Joint Tactics, Techniques, and Procedures for Joint Intelligence Preparation of the Battlespace (24 May 2000)
- ix Objectives Development Process (briefing), US JFCOM, JWFC (June 2006)
- x Effects Development Process (briefing), US JFCOM, Standing Joint Force Headquarters (June 2006)
- xi Development of Measures of Effectiveness (MOE)/MOE Indicators (briefing), Mr Mark Seeley and Mr Dave Gray, Effects Assessment Planners, US JFCOM, Standing Joint Force Headquarters (June 2006)
- xii Development of MOE Indicator/Effects Assessment Criteria (briefing), Mr Mark Seeley and Mr Dave Gray, Effects Assessment Planners, US JFCOM, Standing Joint Force Headquarters (June 2006)
- xiii Assessment Overview (briefing), Lieutenant Colonel Rhett C. Russell, US JFCOM, Deployable Training Team, Joint Warfighting Center (JWFC) (June 2006)
- xiv Emerging Tools to Support Effects Based Approach to Operations (briefing), Mr Ufuk Dirim, NC3A (April 2006).

Photo Credits on Page 11: All pictures are taken by Andreas Steindl, JFC Brunssum, Public Information Office, during Exercise Steadfast Jaguar 06. The picture showing NATO Secretary General with Kofi Annan was first published in NATO's web site at [www.nato.int](http://www.nato.int) on 20 September 2005 with courtesy of UN. Page 13: Margaret Thatcher's picture is obtained from [www.margaretthatcher.org](http://www.margaretthatcher.org) and General Franks' picture from [www.dod.mil](http://www.dod.mil).

## Rehearsal Of Concept - A good way to prepare for mission?

# ROC(K)-DRILL

By Col Per Erik Rønning, NO A  
Chief, Capability Development Division, JWC



Photo by Alf Ove Hansen

**I**N order to achieve Strategic objectives within a Theatre of Operations or other Operational Area, campaigns and major operations must be planned, conducted, and sustained at the Operational level. These activities provide the necessary link between tactics and strategy by establishing the Operational objectives required to achieve the Strategic objectives; sequencing events to meet the Operational objectives, and, initiating actions and applying resources to bring about and sustain these events. In Joint Operations, understanding the capabilities of each component is crucial for success. The purpose of a **Joint Operation Plan** is to synchronise the employment of Land, Maritime, Air, Space and Special Operations Forces, as well as any other functional forces that may be involved. Liaison and coordination between the Joint Headquarters and Components is therefore essential in achieving unity of effort.

While Component Commands (CCs) have the means by which military action can be prosecuted and delivered at the tactical level, their capabilities are most effec-

tive when applied in concert. This is the principle of synergy, which may only be achieved through effective integration, co-ordination and synchronisation of forces. In this capacity, it is the role of the Joint Force Headquarters (JF HQ), which is the key to the Operation. Having made his Operation plan, the Joint Force Commander (JFC) will:

- **Apply** the military resources allocated to him to achieve the assigned mission within any constraints imposed,
- **Identify** and weigh the effect of each action, in terms of the impact it will have on achieving his objectives, the risks that it entails, and the resources required for its success and means of minimising the risk,
- **Exploit** the situation by adjusting and developing his plans in order to contend with changing circumstances and to take advantage of opportunities, and,
- **Re-visit** the operational estimate at regular intervals or whenever there is a change in the operational situation or when Operation Effectiveness Analysis dictates a change in emphasis is required.

In order to execute the above-mentioned

tasks, the JFC should conduct a **Rehearsal Of Concept** (also known as a "rock drill") prior to an Operation. The "rock drill" may be conducted on a map, terrain model or as a computer simulation; and may occur more than once, depending on the situation and time available for preparation. The main aims of the rock drill are to check that the Components' Operations Plan (OPLAN) is consistent with the Joint Operation Plan, to synchronise Joint Operations Area (JOA) forces, and to identify any Operational issues and concerns. This rehearsal allows for interaction between the respective staffs of the JFC and the various Components, across the full spectrum of the Concept of Operations (CONOPS), and also allows the CCs and selected JFC staff to brief their CONOPS and situational assessment. These efforts will collectively synchronise the JFC staff and the Components in the execution of key military tasks during a given time period and identify issues and concerns.

Article continues on Page 23



### When force is necessary...

Above, left: British Puma military transport helicopters bring KFOR soldiers and equipment into Kosovo, 13 June 1999  
(Belga photo, NATO)

Right: General Wesley Clark, who served as Commander in Chief for NATO operations in Kosovo in 1999.

Above, right: Exercise Steadfast Jaguar 06  
(Photo by Thomas Stendl, JFC Brunssum)



# The Preparation of the Battle Field

## *A new challenge, or old wine in new sacks?*

By Lt Col Gerard Wondergem, NL A  
Chief Standardisation Branch,  
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**Ypres, West Flanders July 1917** As June and July wore on, vast preparations were under way for General Haig's breakout of the Salient, around Ypres, West Flanders. Nearly half a million British and French soldiers were assembled. Hundreds of railroad trains arrived daily with stockpiles of munitions and supplies. To free soldiers for the fighting front, the British had imported tens of thousands of

oners. Prisoners taken could provide little in the way of strategic or even tactical information, but, Haigs' intelligence service under General Charteris wanted to know something more: what was their state of mind? German intelligence also paid interest in this, so trench raids became a nightly occurrence in the Salient, some involving hundreds of men and the casualties were enormous.

Aside from the planned use of tanks the Allies had increased their air superiority over the Germans by more than two to one with more than 500 aircraft in the Ypres sector alone (approx 15 kilometers of front line). And so from all perspectives it looked as if General Haig's great offensive was shaping up nicely; still there were undertones of trouble not the least of which was the weather.

General Charteris' meteorological section had done a thorough study of the rainfall in Flanders going back some eighty years. Based on this study and the previous years' records, Charteris predicted a relatively normal rainfall in July, August and September but October was always the雨iest month. As it turned out the August rainfall at Ypres was nearly double the historical average!

The preliminary bombardment started July 25 and lasted till the early morning of July 31. Four million artillery shells churned the landscape into a continuous expanse of shell holes which began to fill up with ground water. On July 31, under a great thundering barrage, hundreds of thousands of soldiers began to climb out of their trenches.

(Extracted from "Storm in Flanders" by Winston Groom, Grove Press, May 2003)

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Around November 7, the third battle of Ypres wound down. Hundreds of thousands of casualties were the result. The greatest advance in depth was seven kilometres. Key points in the preparation of the battlefield during the Great War were:

- the unlimited use of available and granted assets coming out of National resources
- priorities are set by the Commanders in theatre
- after sanctioning of the operation no further involvement of the National level.

### The present time:

Nowadays, we differentiate in a number of different levels that are of importance to answer the above mentioned question in relation to the preparation of the battle space. The highest level is the **Grand Strategic Level**; the coordinated use and implementation of economic, diplomatic, psychological, military and other means to defend the interests of a state, an Alliance or a Coalition.

The goal of a grand strategy is to provide aim and direction to the use of all these available means in order to achieve the defined End State. The grand strategy is the exclusive domain of the Government and in the end the grand strategy will determine the goals, the means used to achieve the goals, and, very importantly, the restrictions that are in place on the use of the means *without going in detail concerning* how these means must be applied. This is the National level.

The **Military Strategic Level** describes the coordinated, systematic development and use of military means of a state (or the states of an Alliance) in order to achieve the military part of the defined End State of the grand strategy.

This military mission and its objectives must be specific, realistic, achievable and limited in time. It is clear for example, that not all goals from the grand strategic level can be achieved by the use of purely military means.

At this level, we see the Chief of Defence Staff, SACEUR and SACT are all tasked to formulate the military mission and its objectives. We also see that some of the above mentioned authorities are responsible for the implementation of military means in an operation.

The **Operational Level** is the level at which the actual military campaigns and major operations are planned, conducted and sustained to achieve the military objectives within theatres or areas of operations. The operational level is vital in providing the link between strategic objectives and the tactical employment of forces. It is the responsibility of the Commander at the operational level to



**Top: Rememberance Day Poppies** are worn to show others that you are remembering those who died for their country. The reason poppies are used is because they are the flowers which grew on the battle fields after the Great War ended (bbc.co.uk)

**Below: Great War Cemetery in Flanders, Belgium.** (c) copyright 2003 Garry Benson.

Chinese coolies, as well as Zulus and other black laborers from its African colonies. They performed behind-the-lines unloading and carrying tasks, road maintenance and other non-combatant duties. Even during this so-called quiet interval, nothing was quiet in the Salient. Trench raids were stepped up owing to the perceived need for enemy pris-

plan and coordinate the campaign in order to achieve the given objectives. The campaign can encompass all levels of war. The operational level is clearly differentiable from the military strategic level. The operational commander really commands his formations and units to execute his campaign plan. In the execution of this plan, he achieves the effects to realise his objectives and, with that, he contributes to the realisation of the strategic goals or the defined End State. It is here that we shall consider the preparation of the battle space.

Establishing the different levels does not mean that as in the Great War of 1914–1918, commanders of a campaign have nearly unlimited access to assets or unlimited powers in the use of these assets. Much more than in the days of the Great War, Commanders must realise that all levels should interact and coordinate. Where General Haig had very few

objectives as quickly as possible because “the public environment” does not favour a campaign that winds down into one of attrition with accumulating losses.

Because of all these factors the planning and coordination of the preparation of the battle space is of the utmost importance and will not only take place at all levels in the staff of the Operational Level HQ, but also with the necessary involvement of all branches. Is this not what the “new” **Effects Based Approach to Operations (EBAO)** all about? If so, EBAO is not “new”, it merely formalises the ways by which we use the assets available in order to achieve the objectives that will bring the military mission to a successful end.

The use of EBAO inside the Alliance Operational HQs will help to establish the essential conditions and necessary arrangements to harmonise the military and non-

**(ROE).** In itself ROEs are just and must, of course, be obeyed.

On the other hand, they will also limit the possible options a Commander has. If these limitations will result in a less than “first choice” preparation of the battle space, the ultimate “military joint affects” campaign may last longer, may cost more in human suffering, may have more adverse economic effects etc.

That is, very strict and very clear ROEs can ultimately result in exactly the opposite effect to that intended by those who designed ROEs. want to achieve. Legal political advisors and those they represent are important but, it must be remembered that their *raison d'être*, like that of every other staff officer is to contribute to the desired outcome. Ultimately the Commander should focus on commanding his Force and not be bogged down in detailed staff work.

Grand Strategic Level	All means included to reach the defined End State	Focus on military part of the defined End State and define the Military Mission
Military Strategic Level	Contributes to the military asset in order to achieve the Defined Military Mission	Appoints Commander and tasks Commander on the mission and its objectives
Operational Level	Transfers authority; Sustains mission	Commander focuses on defined effects in order to achieve defined End State of Mission

limitations in the planning of the third battle at Ypres, General Clark, during the Kosovo campaign was spending nearly all his time at these restrictions.

Actions in the political arena must be supported by the planning and coordination of the military campaign. The intervention of the media (the so-called CNN effect) will have its impact at every level, since, with present day technology, the military campaign and its effects will be transmitted to sitting-rooms around the world and will form part of citizens’ daily lives. Too many negative messages will affect public support for the military campaign.

This of course becomes a political “risk”, with politicians, because of this degrading support, understandably wanting to alter the parameters of the military campaign, the use of assets or the way these assets can or are allowed to be used. A Commander at the operational level will have to achieve his ob-

military activities during the planning, the coordination and execution of the military operation.

The success of the preparation of the battle space will, at large, make a very significant contribution to determine the outcome of the military campaign. All means must be used: Intelligence, CIMIC, PsyOps as part of the Information Operation, logistics, exercise and training of the “fighting force”, the standardization and interoperability of the contributing Nations, CIS, and the necessary hardware to support all interacting parts of the military campaign.

The entire preparation of the battle space, in the end, must contribute to the wanted and planned “joint effects” in order to achieve the objectives of the military campaign. The planning and coordination of the preparation of the battle space should be “ruthless” and here we will see a first and also most important restriction i.e. the **Rules of Engagement**

Summarizing, it is obvious that modern military Commanders will never return to the state and the freedom they enjoyed during the campaigns of the Great War. Life is simply too complicated for that. The preparation of the battle field in the past would largely determine the outcome of the campaign as the preparation of the battle space will in present and future campaigns.

Although the use of an EBAO may appear to be fundamentally “new” philosophy, it is, in fact, just an all encompassing approach to use all available assets to achieve the desired End State.

It is certain that, because of the complexity of society, the preparation of the battle space will encompass more discipline and has become more sophisticated; still today and tomorrow the preparation of the battle space will set the conditions for the Commander to achieve the defined objectives in order to fulfill the mission.



# ANALYSIS IS NOT EVALUATION

By Jackie Offord, JALLC Senior Operational Research Analyst  
and Marvin Thorsen, JALLC Contractor for Operational Research

“

**The JALLC acts as the focal point in NATO for analysis of operations, exercises, training and experimentations and for the collection of lessons learned. ([www.jallc.nato.int](http://www.jallc.nato.int))**

THE Joint Analysis and Lessons Learned Centre (JALLC) is aptly titled. The key terms in the title are *analysis* and *lessons learned*. *Lessons Learned* (LL) are the desired end product. They are enduring improvements in our capability based on our past experience. LL are different from just fixing immediate problems, they are about making sure problems never happen again and that best practice is spread.

*Analysis* is used to thoroughly understand areas of activity identified to have potential for improvement. The results of *analysis* are used to recommend actions that will result in enduring improvements, thus leading to a *Lesson Learned*. The relationship between these terms, forms the basis not only for the JALLC's mission, but also sets the limits for the work of all LL Cells throughout NATO. In this article, we will focus on two points: what distinguishes *analysis* from *evaluation* (a process not part of the JALLC mission and best left to the evaluators, EXCON, trainers, etc.) and what analysis involves.

The distinction between analysis and evaluation is so important that it can be viewed as the foundation of NATO's LL approach. In fact, the differences are so great that they demand a philosophically different approach. To help clarify these differences, the definitions associated with both analysis and evaluation are included in Figure 1. Synonyms are also included since they can help give a word a deeper meaning and enhance the understanding of the word itself.

Notice that *analysis* involves taking something and looking at it in different ways to develop understanding of "essential features or meaning". This means not allowing preconceptions of expected results to taint the value of the examination. At no point in the definitions and synonyms does the concept of attaching a value or rating come into it. This is in stark contrast to the definition of evaluation, where the "act of asserting or fixing the value

or worth of" something is the basis of that activity.

To help clarify this distinction, think about the diving competition in the Olympics. A diver goes to the board, takes his/her stance and dives; a group of judges assign a value from 1-10 on the quality of the dive. This is a clear example of *evaluation*. The judges make an appraisal about the quality of the performance. Now, to contrast this with analysis, we would look at the same dive, but rather than judging the individual performance, we would start breaking out other factors to understand *why*

*or what contributed* to the fact that the dive was good/bad. For instance, we might collect data about the diving board and find that there is actually a problem with it maybe it has a crack or maybe it has lost some of its springiness. Or we might, upon delving into the diver's background, find that he/she has not trained for this particular type of dive.

*Evaluating* the dive to find out whether it was good/bad does not tell us how to repeat or avoid the same performance in the future tells us the quality of that particular dive. In contrast, *analysing* the dive would give us an understanding of issues that may need to be addressed to help improve the performance on future dives (e.g. more training, a new diving board that meets the standards, etc.) *Evaluation* tells individual divers how they did, compared to previously established standards. *Analysis* tells us the effects of all the factors involved, not just individual personal performance, that can affect the outcome.

For evaluation, the "data" tends to be very concrete, observable and measurable "things". For analysis, these concrete, observable and measurable "things" are the starting point. We must then delve deeper into other areas to determine the underlying reasons and causes that contributed to these results. Analysis involves not being satisfied with the "concrete, observable and



## ▼ Analysis versus Evaluation

Evaluation	Analysis
It is what you <i>know</i> . It is in your area of expertise.	You are often looking at things that are not your normal area of expertise.
What you look for is very concrete and observable.	The concrete, observable things are only the symptoms and your job is then to find out the reasons behind these.
It is human nature (and sometimes fun) to judge others.	We are not there to make judgements. We are here to find out the contributing factors.
Your evaluation is usually mission or scenario dependent. You need to be immersed in the operational issues, e.g. where the enemy is, what the specifics included in the plan are, etc. For example, the particular unit mistakenly thought the element they were up against was a battalion when it was actually just a company.	Often the actual mission or scenario events are relatively unimportant to our analysis. For example, we need to determine what contributed to the unit's faulty situational awareness. The fact that they thought it was a battalion rather than company is fairly irrelevant. Understanding the reason they acquired poor SA is the analytical challenge: incorrect information being posted on the COP? Important message traffic being diverted due to poor info management protocol? Etc.
Evaluators get to play in the weeds.	Analysts need to avoid the weeds at all costs.
The data is very concrete: Usually looking at\for 1st order, concrete effects. <ul style="list-style-type: none"> <li>• Procedures used</li> <li>• Performance against standards</li> <li>• Timeliness</li> <li>• Errors</li> <li>• Adherence to standards/procedures</li> <li>• Omission of steps/procedures</li> <li>• Incorrect protocols</li> <li>• Adherence to best practices</li> <li>• What worked great</li> <li>• Etc.</li> </ul>	The data is less concrete: Usually requires looking for 2nd, 3rd or even 4th order causes. <ul style="list-style-type: none"> <li>• Inconsistencies &amp; Confusion</li> <li>• Trends &amp; Patterns</li> <li>• Challenges</li> <li>• Proposed v real world</li> <li>• How things (technology, doctrine) can set people up to fail</li> <li>• Why did something work great?</li> <li>• Dynamic relationships and interactions (organisation, process, task, technology, time)</li> <li>• Etc.</li> </ul>

**Analyse (verb):** Examine methodically and in detail for the purposes of explanation and interpretation.

**Analysis (noun):** (1) A detailed examination of something in order to interpret or explain it. (2) The process of separating something into its constituent elements.

**Synonyms:** Breaking Down, Dissecting, Classification, Examining, Studying, Reasoning.

**Evaluate (verb):** To form an idea of the amount, number or value of; assess.

**Evaluation (noun):** Act of ascertaining or fixing the value or worth of.

**Synonyms:** Measure, Criticize, Estimate, Appraise.

**Figure I. From the Concise Oxford English Dictionary, 11th Edition**

measurable" but needing to look further for the larger issues and factors that contributed to these results.

Another important distinction between *evaluation* and *analysis* is what initiates each process. In NATO, *Evaluation* takes place at every exercise, and is regularly carried out in on-going operations. *Analysis* is conducted when a need for better understanding of an issue is recognised, in the hope that it will lead to an improvement in how we operate. To return to our diving competition, *evaluation* takes place at every competition—it wouldn't be much of a sport without a way to keep score. But *analysis* would be initiated when it became desirable to know more about why things happened the way they did; say, the average scores were noticeably different than a previous year's (faulty diving board, doping, inconsistent judging) or in anticipation of changes in the structure of the competition (a new diving board was acquired or the event will be held outdoors for the first time).

Finally, *evaluation* usually requires a certain degree of technical expertise in the area being evaluated. Otherwise, how could you judge what is good or bad? Evaluating a dive requires expertise in diving. In contrast, *analysis* of diving can be conducted

without the analyst being an expert diver, though an analyst may call upon experts to help them better understand the data they collect. This is not to say that analysts are not subject matter experts, it is just that their area of expertise is *analysis* rather than a particular functional area (e.g., diving, intelligence, NBC, etc.). This highlights the biggest challenge for analysts: maintaining an *analytic* focus and not slipping into *evaluation*. It is very tempting when analysing an area you are familiar with to begin critiquing the performances you witness during your data collection in other words, to do *evaluation*. This is further complicated since there are several forces that "push" one towards evaluation and away from analysis. The Table above highlights several of these and further contrasts analysis and evaluation.

So, when you are on your next deployment or exercise and you wonder why there are both evaluators and analysts running around, remember that the evaluators are key to helping you understand how well you are doing your actual work and the analysts are key to the successful identification of lessons that need to be passed along so that problems are not repeated and best practice is spread throughout the whole of NATO.

Story by David Keane, JWC Protocol Office  
Photos by David Keane and WO Jacek Sumislawski



**A**fter enquiring at National Joint HQ Air Operations about the possibility of hitching a ride with a Royal Norwegian Air Force helicopter in order to update the JWC's Aerial photography collection, we were more than a little surprised to get the call shortly afterwards on an overcast Stavanger afternoon that we should report to 330 Search & Rescue Squadron RNoAF Thursday 1st June, the following morning. The icing on the cake was that the weather forecast for the day promised glorious sunshine!

So, at the shortest of notice we were able to put together an intrepid team of JWC "volunteers" to undertake this task. On arrival at Sola Air Base, Flt Lt Jenny Holmes, WO Jacek Sumislawski, MSgt Mark Hardy and I received a crew and safety briefing from the helicopter commander and, after being informed that whilst this was a training mission they were still on duty and we should be prepared to be unceremoniously disembarked (hopefully after landing) upon receipt of a real emergency call, we were ready to go! We boarded the RNoAF Sea King Helicopter and

without even realising it, we were in the air and heading for our first target! On approach, we shuffled from our seats to the main cargo door. We then strapped in, sat on the floor and, poised with the array of camera equipment, were ready for "shooting". At this moment, the helicopter slowed to approx 40 knots and the door was opened to reveal the spectacular view of the home of the JWC and NJHQ, Jåttå. After circling once we proceeded towards Stavanger Centre following the RV-44 coastal road. We then flew around Stavanger Harbour and headed in the direction of Hundvåg skimming the small islands and bridges that link it to the Mainland. After circling Ulsnes, we flew in a North Easterly direction towards Hidle Island and the Flor & Fjære. We continued Westward towards Sola Beach, then on to overfly Soma Tekniske Verksted, concluding after an exhilarating 40 minute flight, back at our start point, Sola Air Base.

This was not only an excellent opportunity to take some quality photos of Jåttå and Ulsnes, but also provided us with a fantastic opportunity to witness the sheer beauty of the Stavanger area from the air on what was probably the nicest day on the year. Visibility was amazing and not only did we update the JWC's aerial photograph collection but we also take away wonderful memories. I am extremely grateful to the 330 Sqn Air Crew and NJHQ Air Ops for the fantastic cooperation and support in enabling this flight to take place.

Photos are available from PIO and Media Resources.





# The New JWC Structure

By Lt Col Todd Walton, US A  
Chief, Manpower & Personnel Branch  
Support Division

*What, Where, Why, How and When? Hopefully I can provide some more clarity and transparency to these basic questions in regards to the Peacetime Establishment (PE) structure that JWC has been working on and plans to put in for formal validation this Autumn. The first item to clarify is the term we are using for this new structure. We are using the term **Peacetime Establishment Internally Validated Structure** or PEIVS to separate what we are proposing to NATO versus our original PE (ESPE) and the Test PE we have been working under since Autumn of 2005. Internally is the key word here...*

### WHAT

JWC has been transforming its establishment to match current and future needs. The PEIVS is the culmination of several months of validation work within JWC to validate what was right with the Test PE structure and figure out good courses of action to adjust that structure to be more effective. Several studies, surveys and discussions were done culminating in an Operational Research project that highlighted strengths and weaknesses in the Test PE for the past few months, JWC has been looking intensely at validating that Test PE and adjusting the structure where needed to position the JWC to best accomplish our mission, but no external agency has. That formal process we want to start this fall. More on the timeline later.

### WHO

This new structure affects everyone in JWC, but that does not mean a great number of moves in relation to the Test PE we have been operating under since last Autumn. The vast majority of individuals will notice little or no

change in their job descriptions or duties from what they are doing now. Most of the moves of positions and people are within divisions, but there are a few moves across divisions. A total of six positions move from Joint Training Development Division (JTDD) to Capability Development Division (CDD) as the assessment function moves. Three positions move from Director of Staff (DOS) to Joint Exercise Division (JED) and vice versa.

The plan is also to increase the number of NATO civilians from the current 54 to 61 with these being offset by military posts that have not and are unlikely to be filled by nations. This whole process was based on zero growth, i.e., we have 280 posts on the ESPE and any changes or creations has been based on offsets within that 280. One exception is JWC is asking for and justifying the addition of a Deputy Director and the attendant Military Assistant.

### WHERE

This new PEIVS is just for JWC, not any tenant units or other headquarters in NATO.

### WHY

**Change...**for most people, change is an uncomfortable process. We naturally like to have things set in stone, parameters well established and have a feeling of security in knowing what the future holds. In order for a military force to be able to adjust and train for such a world, the organisations that supply, support, train and deploy these forces have to be flexible and change to meet what is required. Also inherent in this philosophy is with limited funds and manpower resources, organisations must constantly look at how they are structured to ensure that those personnel and resources are employed in the most efficient manner.

### HOW

The formal process to change our approved structure, the original ESPE, starts with the consolidation of all that work over the past several months validating our Test PE. A complete package of Statements of Function from all the divisions and Command Group, Job Descriptions on every post and justifications for all changes from the original ESPE is forwarded to ACT as the PE Authority (PEA). This includes classification proposals for all those positions being changed from military to civilian. ACT then approves and sends to the NATO Defence Manpower Committee (NDMC) who tasks the NATO Defence Manpower Audit Agency (ND-MAA) to survey, audit and validate the package. Once that is past, the package will then proceed to the Military Committee and finally to North Atlantic Council for approval. The approved package then, finally, goes back to ACT as the PEA to implement. As you can see, there are several political hurdles to leap before we have an official PE to work from.

### WHEN

The internally validated establishment is now ready for urgent formal validation by the PEA and by NATO committees as described above. This needs to be done as soon as possible to allow formal adoption of the optimal structure for its required output; it will also allow Nations to post suitably qualified staff members to the new proposed structure using revised Job Descriptions. It will capitalise on the work done by the JWC to date and may prevent the need for further work as part of the NATO PE Review. A delay in formal validation until the NATO-wide PE Review would leave JWC in a complex situation with an unendorsed establishment.



The proposed timeline we have put forward is as follows:



Ser	Date	Action
1	30 August 2006	JWC submits package of Organization Charts, Statements of Function, Change Proposals, Job Descriptions and Justifications to PEA for onward staffing to the NDMC
2	7 September 2006	ACT as PEA forwards package to NDMC
3	15 September 2006	NDMAA tasked to validate the new JWC structure
4	Mid September -Mid November 2006	NDMAA carry out 1-2 month audit process including a two-week onsite survey at JWC
5	Mid November 2006	NDMAA return package to PEA & JWC for final changes
6	Early December 2006	PEA resubmits to NDMAA final package, NDMAA submits to NDMC who circulate it for two weeks under silence procedures to nations
7	Mid December 2006	NDMC submits to MC for under silence procedures
8	Early January 2007	NDMC return agreed package to PEA for implementation



## ROCK DRILL

CONTINUED FROM PAGE 15

Rehearsals provide substance to the written OPLAN and provide the foundation upon which effective synchronisation of assigned joint forces can be based. War-gaming is a specific rehearsal method, which evaluates the potential of the OPLAN to accomplish the mission against all types of opposition while, at the same time, identifying and correcting deficiencies. The conduct of the war game is determined largely by the desired outcomes, selected method and the scope. Typically, war games will include the following activities:

**Setting Conditions:** A Flag Officer provides an introduction, possibly the Deputy Chief of Staff of Operations (DCOS OPS) or J3, to set the strategic and operational conditions affecting the OPLAN. This will include political considerations, threat conditions, environmental conditions, civil conditions, information and media conditions etc.

**Game Turn:** A series of 'game turns' considering the "action - reaction - counter-action" of opponents, starting with the opponent deemed to have the initiative.

The J-2 staffs brief the enemy situation and capabilities, the JFC briefs the objectives

and decisive points within the phase and the Component Commanders brief their actions supporting achievement of the joint objective/decisive point.

**Assessment:** An assessment of probable results and outcomes typically follows each game turn and is used to set conditions for the succeeding game turns.

**Recording Results:** Observations and conclusions drawn from the rehearsal should be recorded in line with the purpose. These may include:

- Deficiencies within the joint plan or Components plan to be corrected. Issuing a Fragmentary Order (FRAGO) may solve this
- Additional force/capability requirements
- Synchronisation requirements i.e. new Joint Coordination Order
- Significant risks and opportunities encountered against the OPLAN
- Decision points and supporting Commander Essential Information Requirements (CEIR)
- Branch plan requirements.

War-gaming readily identifies advantages and disadvantages as well as key actions that must be synchronised if the plan is to successfully achieve the essential tasks and

purpose of the mission. Broadly speaking, three options are available to war game an OPLAN:

1. Play out critical joint tasks by phase against their objectives,
2. Play out critical joint tasks at decisive points, and
3. Play out critical joint actions occurring in key geospatial segments of the battle space.

The war game helps to identify potential risks and opportunities as well as decision points that may require commander's action to counter or exploit such situations



**Editor's Note: Due to space constraints, Part II of the "JWC CAX Support Tools & Requirements" article will appear in December issue.**



# Construction due in March 2007!

(c) COMPUTER IMAGE PRODUCED BY TELJE TORP AASEN ARK. KTR.

Photos and interview by Inci Kucukaksoy  
JWC PIO

"The project is extensive with many challenges on different levels," says Norwegian Defence Estate Agency (NDEA) Project Manager Jørgen Skar. At a cost of EUR 54 million, the new building will be the biggest project in the JWC history. While challenging, the new building will give the JWC a rare opportunity to expand its mission and offerings.

Could you please explain the mission of NDEA? Also, could you explain the relationship between Norwegian Ministry of Defence and NDEA?

NDEA is an administrative agency subordinate to the Ministry of Defence. The Agency's primary tasks relate to the planning, construction, administration, leasing and disposal by sale of defence estates and properties.

The Norwegian Armed Forces represents the agency's largest and most important customer, but, the Agency is not part of the Armed Forces' military organisation. NDEA is also engaged in international operations. At the moment NDEA is coordinating building of new camps in Afghanistan.

Tell us about your job.

I work in the Construction Management unit, which plans and implements development projects. The Project Manager has the responsibility to plan, organize and carry out the project in such a way that the users are getting the best suited building to their agreed requirements within the resources agreed by the client. The Project Manager has the responsibility to see that the laws, regulations and contracts are followed. As the JWC is a large project, NDEA has put together a team to carry out the Project Management. At the moment it consists of two or three engineers. We are coordinating the effort of the Design

Team with architects, construction engineers, mechanical engineers, electrical engineers, fire engineer, acoustic engineers, landscaping architects and more specialists in different topics such as security and legal questions and different building contractors.

We also coordinate needs with JWC as the user as well as NDMA who will deliver the CIS solutions to the building, the community, the Stavanger municipality, the road authority, the National Security Agency and more.



## Is the construction design of the new building ready?

The plan form, outdoor situation and the facades are nearly finalised. The different technical solutions with air conditioning, sanitary systems, electrical systems are under design during the second half of 2006.

## Have you determined which companies will be involved in the construction?

The initial works with the demolition of existing buildings and new access road started in July 2006 with a local contractor, T. - Stangeland Maskin AS. The bids for excavation and blasting will be delivered in the first part of August, and according to the schedule, these works will start in September. The bidding process for the main structure, mainly concrete work, will begin in October 2006, with start of construction work during the Winter 2007. The technical systems and interior building work will follow.

## Can you describe the thought process that led to this construction plan?

NDEAs Project Manager has been involved in the project from an early stage of NATO's development of the Capability Package for the JWC and has received knowledge of the JWC organisation, their mission and Program of Work. This was in good use during the establishment of a room program which gives the basic

users requirements. The room program and different user meetings was the basis for the Design Teams' design, which was developed during Type B-Cost Estimate (the funding of what the Capability Package defined) and into the detailed design development. It has been a major consideration in the design of the JWC to develop a plan form that is very flexible. Rooms that can be easily re-planned as functions change are important to the future of the JWC. The design of the new building is such that there must also be easy access from E-Block to the new building. The main entrance to the permanent offices will be through the existing main entrance in E-Block on level 5. An interior walkway will also connect the two buildings on level 4. The building comprises five main floors including two floors that are primarily below ground level. Levels 1 – 3 are mainly in use during training exercises and are where the training exercises take place. Level 4 and 5 contain permanent offices.

Our goal is to deliver a functional building suited to the users requirements, which is in accordance with specifications in the authorised Type B-Cost Estimate.

## How does your design address the existing surroundings?

The general approach to the design of the building is to design a building that fitted in the landscape alongside the ex-

isting E-Block. The building will have the same height as the existing building. It is the intention that the building is located in the hill as opposed to on top of the hill. While the building reflects to some extent the form and materials of the existing E-Block, the design of the auditorium is seen as a counterpoint with a softer shape.

## When it is complete, will it suit the mission of this NATO organisation that embraces the future?

In the development of the project it has been a major consideration to create a flexible building which is capable of adopting to NATO's future needs, therefore we believe that it will be suited for NATO's missions.

## Can you describe your personal experiences in this process?

It is an interesting project. The project is extensive with many challenges on different levels. The user organisation is complex, with many different cultures, a lot of travelling and large turnover of personnel on all levels, this creates a challenging task.

It is with content we experience the co-operation with COS Special Advisor Dag Malde, who is the user coordinator of the project and, despite the complicated user environment, the work is going extremely well.



From left: Reidal Bringedal, Senior Advisor and Jørgen C. Skar, Project Manager, Norwegian Defence Estate Agency

# ACTION

## IN TRANSFORMATION

By Lt Hilmi Ozdemir, Turkish Navy  
Exercise Scheduler,  
DOS Office, JWC

### “Information Management”

The most challenging issue within today's business environment, for both public and private organisations, is to be able to manage information. It is a dilemma that Information Management is becoming harder when different tools and means to improve efficiency are released to the market almost everyday. Technological advances have enabled individuals to quickly access large amounts of raw data from a variety of media sources. The actual challenge is defining the Information Management requirement for every organisation, and the individuals within it, since each organisation has its own unique structure and characteristics. If we adhere to the key principle that “electronic data shall work for us not visa versa”, it should be possible to manage information.

The two most important factors for Information Management to be successful are a top down approach and strong leadership. With these in mind, the Joint Warfare Center (JWC) has developed an Information Management Framework, to include all stakeholders by providing common definitions, analysing bottlenecks, and considering which tools are the most appropriate for our expectations/requirements. These actions were developed using the Value and System Analysis Approach Model in order to clarify to which extent information is manageable from a JWC viewpoint. The aim is to improve Information Management in the JWC by formalizing information flows, responsibilities and procedures for handling data in order to provide the *“Right information, at the right time, to*

*the right individual (RI<sup>2</sup>T)*”.

Data is defined as raw facts, whereas information is defined as filtered data, which is used to produce output. For JWC, Information Management is an arrangement of people, data, processes, communication pipelines, and information technology that interact to support and improve day-to-day operations in the JWC. Information Management is a key element in supporting the problem solving and decision making management needs. In the JWC framework, the stakeholders have been grouped under five different categories, namely Users, Customers, System Owners, Supplier, and Developers.

**Users** are all members assigned to the JWC including NCSA Squadron and National Support Elements and **Customers** are all external organizations and host nations. The **System owner** is the JWC Information Management Team (consisting of COS, DOS, DIR MA, COS MA, and the Management Planning Officer) who hold the key positions responsible for information flow into and out of the JWC.

The Norwegian National Joint Headquarters (NJHQ) is considered a **supplier** due to their unique resource sharing with the JWC and **Developers** are the Information Knowledge Management Office, SMC4 Division, and local NCSA Squadron who are responsible for information technology.

Five different types of data sets are transferred between these stakeholders.

- **Mission - Formal - Action Data**
- **Mission - Formal - Info Data**
- **Mission - Informal Data**

- **Morale Welfare and Recreation Data**
- **Command and Control Data**

**Mission Formal Action Data** includes all data that is forwarded through the chain of command and needs reaction when it is received, for example any data related to JWC outputs. **Mission Formal Info Data** is also forwarded through the chain of command but no reaction is expected as, by definition, it is for information. Some of this data may be time sensitive such as real world update files. Trip reports, policies, and directives are good examples of time insensitive information within this category. **Mission Informal Data** includes all data mainly shared with external stakeholders. Some of this data may need to be elevated through the chain of command by the staff officers, while the other part remains at desk level. For instance, Core Planning Teams' staffing issues might require elevation while headquarters' routine coordination issues can remain at desk level.

**Morale Welfare and Recreation Data** consists of any data related to social life activities. Both time sensitive and time insensitive categories are relevant. For example the normal operating hours for the Central Cellar is considered as time insensitive, whereas an unexpected Central Cellar closure would be considered as time sensitive. **Command and Control Data** covers all data used while maintaining hierarchical relationship between both nation and NATO bodies. International evaluation reports fall into this category. An example of national command and control data is next of kin notification. It is possible for command

and control data to be both national and NATO, for example, leave approval.

In order to implement this information flow, it is critical to choose and use the right tools. A study listed the existing and required tools for JWC, based on their effectiveness and capacity, was carried out using a blend of four criteria; the availability of instant feedback, the capacity of the tool to transmit multiple cues, the use of natural language, and the personal focus of the tool. The tools were rated from lean to powerful and this scale was taken into consideration while defining and prioritizing the tools to provide the right data for stakeholders.

An Information Management Summary Diagram was then developed that put all the information management puzzle pieces together. This diagram shows which tool/interface should be used for which data and stakeholder type and which filtering mechanisms shall be in place. It was developed especially for ac-

tion officers in a visual format to make the whole information flow clearer, more understandable, and user friendly. The diagram also incorporates golden rules to be followed by every action officer. It is intended to be kept on each action officer's desk and used as a basic Information Management guide.

Today, Information Management related issues can be found in almost every evaluation report, review, and analysis post training and exercise events. It is obvious that there is a lot of space for improvement in the area of Information Management and the issues need to be attacked. Therefore, as a starting point and foundation, everything mentioned in this article have been included in a **JWC Information Management Policy Document**, which will be released soon.

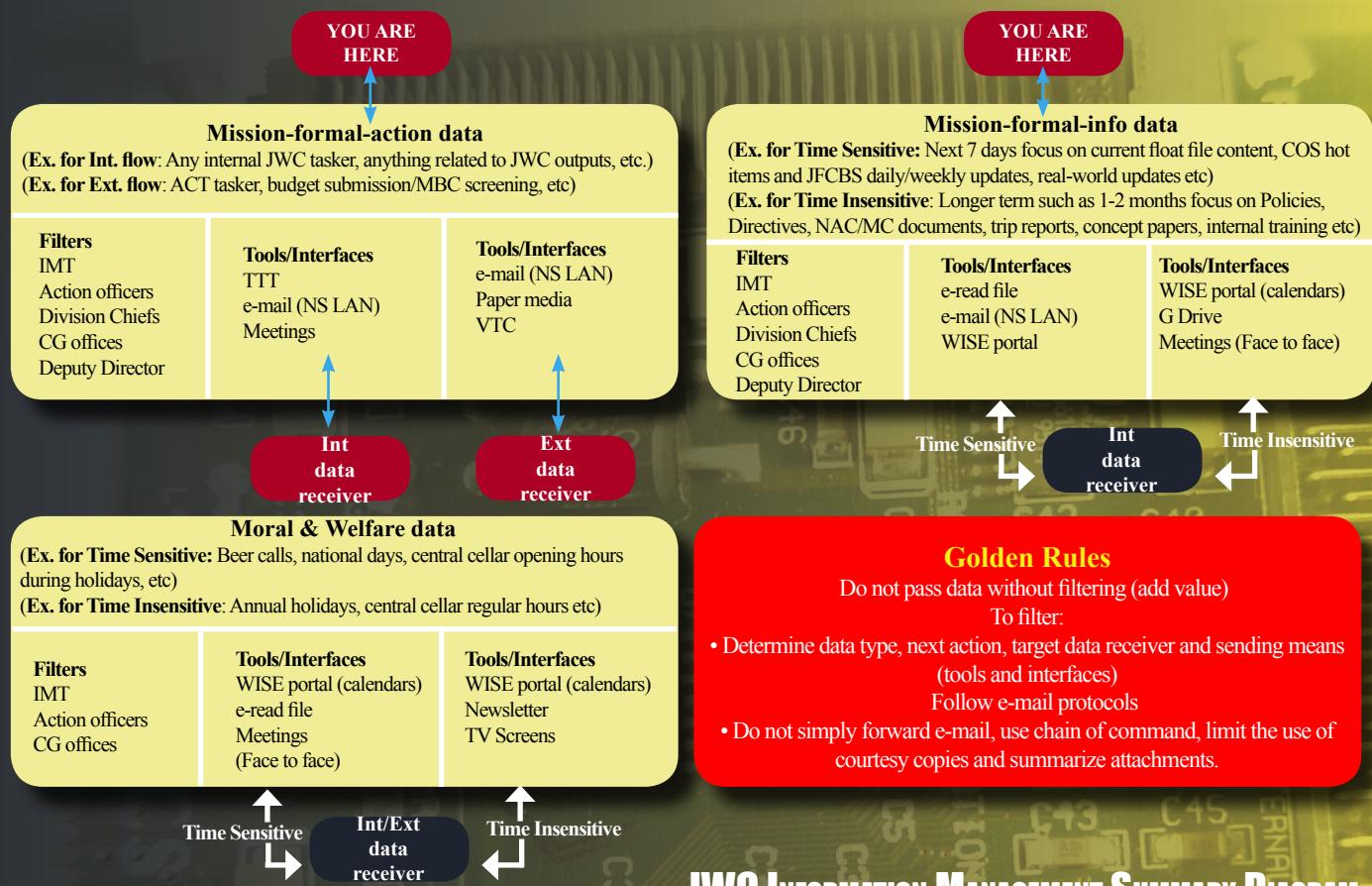
This initiative is an element of "**Action in Transformation**". Through this, JWC has again proven its ability to influence the "**Transformation in Action**" vision across the Alliance.

## Powerful

- Meetings (face to face)
- Telephone
- E-mail (NS LAN)
- Tasker Tracker Tool
- e-Read files
- Paper Media
- Outlook
- VTC
- E-mail (NU-LAN)
- TV screens
- Share Point Server
- WISE portal
- G Drive
- External Website
- Three Swords Magazine
- Newsletter
- NAFS (NU-LAN)
- PfP LAN
- Management Plan

## Total effectiveness

## Lean



JWC INFORMATION MANAGEMENT SUMMARY DIAGRAM

# Information Management with Partner Nations

By Lt Col Stig Rydell, Swedish Air Force  
Joint Exercise Division,  
Joint Training Development Division, JWC



ONE of the most critical facts for us is to exchange information with NATO. We, the Partners, have been at the JWC since early 2005, and have gradually become an integral part of its structure.

Today we are working within JTDD (Lt Col Rydell SW/F), JED (Maj Hirvonen FI/A) and in CDD (Cdr Vatsel SW/M). Our Swiss Partner, LtCol Barton, has recently been transferred to other duties in Switzerland. This autumn, an Austrian officer, Lt Col Pöcher will arrive and then four of the available six positions for Partner officers will be manned.

The tasks for Partner Staff Element,

PSE, are to contribute to work on all PpP interoperability issues and this covers also many areas within JWC "ordinary" tasks. We have all been met with a very positive approach from our NATO colleagues and are - mostly- an integrated part of JWC. But, we still have problems with access to the information needed for our proper work.

Let us start with the formal facts:

We have a security clearance, in accordance with current NATO-regulations, which allows us to access NATO/PpP information classified up to, and including, "SECRET". According to JWC Directive 05-03, "Joint Warfare Centre (JWC) Partner Staff Element (PSE)", we are authorised to work with NATO classified documents.

The documents need to contain RELEASABLE TO PSE, RELEASABLE TO PpP or RELEASABLE FOR INTERNET, in their classification.

Without this marking the highest accessible classification is NATO UNCLASSIFIED. We are not allowed to access NATO SECRET WAN, including WISE.

This creates some challenges for the information management in our cooperation. We do have the NULAN-system for UNCLASSIFIED information and this creates possibilities for the UNCLASSIFIED/RELEASABLE TO PSE-information. So, what is the solution ?

## Today

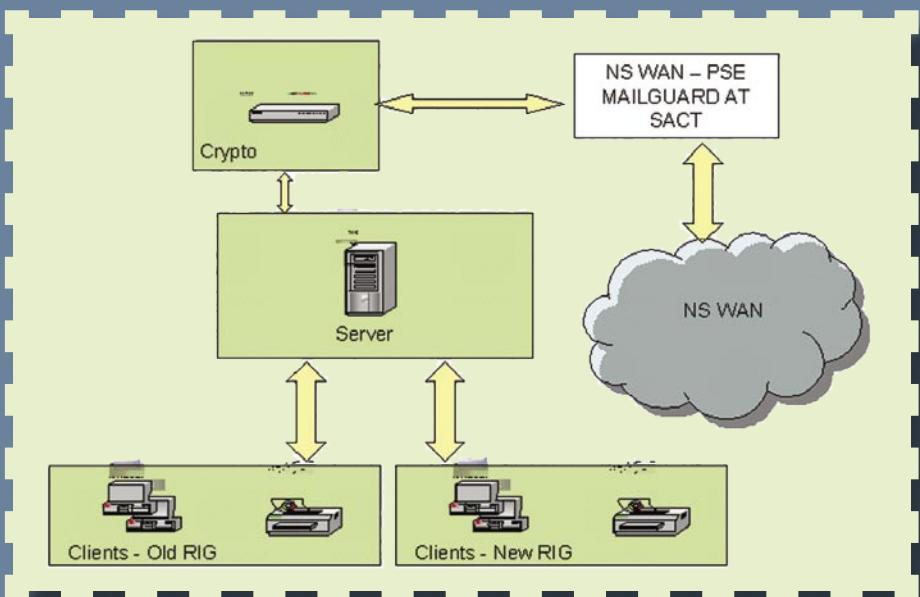
First of all it is necessary for our NATO colleagues to reflect if Partners need the information and also classify the information accordingly from the very beginning and - if possible - classify it with the caveats RELEASABLE TO PSE, RELEASABLE TO PpP or RELEASABLE FOR INTERNET. Division chiefs may authorise release of classified information up to NATO CONFIDENTIAL, on a need to know-basis and if the document is authored by JWC.

The next step will be to deliver the information, and this could be via paper or FILE TRANSFER for digital exchange of UNCLASSIFIED information to the NULAN-system. You just have to address your mail from your NATO SECRET WAN to the address "FILE TRANSFER" and ask them to deliver the information to specified Partners at NULAN.

## Tomorrow

There will be a PSE-LAN installed later this year, which will be specially configured for information exchange between NATO SECRET WAN and Partners. The exchanged information should in the initial phase be classified to NATO/PpP CONFIDENTAL, and later up to NATO/PpP SECRET. The picture on the left shows the principal layout for the PSE-LAN at JWC.

To sum this up, please proceed the positive approach with us and please also include Information Management in our cooperation!



# MAPPING MADA

By David Hill, Contractor  
Scenario Section, GEO  
Joint Exercise Division, JWC

**A**S part of the scenario section within JED, I am entrusted with the honourable task of playing Mother Nature and creating the topography on which the synthetic scenarios are played. In October 2005, it was decided to copy and move Madagascar to the west of Cape Verde to make the area suitable for this year's STEADFAST series of exercises. The requirement in general terms is to provide geospatial data to a similar standard as would be obtainable in real life. "Real life" is considerably easier as the NATO Geographic Policy is administered in SHAPE, which holds the data library in formats that meet the requirements of NATO Functional Area Systems (FAS) like JOIIS, ICC, MCCIS<sup>i</sup> etc. They are also able to acquire products from the member nation entrusted to produce and maintain each product. For products with more detail than 1:250 000, it's a little more complicated as these are left to each nation to decide what they produce. Thus, in less developed countries the quality of large-scale products can vary.

Geospatial<sup>ii</sup> products can be split into 2 types – raster and vector<sup>iii</sup>. Raster is an image made up of pixels with different values or colours (TIFF), and vector is lines and dots. Different users require their geospatial products in one or both of these types (vector is used by JTLS, ICC, ADAMS; both are used by JOIIS, iGeoSIT, TOPFAS).

The benefits of using Madagascar for the Mada project were enormous. It meant real data was available so everything was collected and then manually shifted to their new "location" in the world using Geographical Information System (GIS) software. This totalled over 400 items and was given to NC3A Geo to perform. It was identified that the real vector data was not of a high enough standard. So, as soon as the 1:250 000 raster data had been shifted, I began the laborious task of digitizing (drawing) all the roads and rivers in Mada. Although this would take about 160hrs to complete, it meant that the infrastructure of Mada would develop on a sound base from the beginning. The first example of this was adding 1500 bridges exactly where roads and rivers met. The roads, rivers and bridges formed the first three layers.

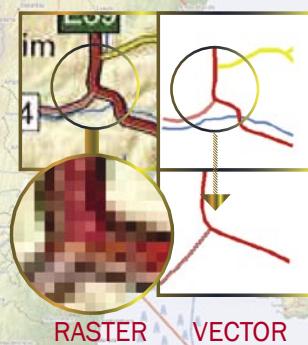
These 3 layers, along with elevation data, were needed by NC3A CAX team in January 2006 to enable them to start to build the scenario in JTLS. The next important date was the beginning of April when they would require the remainder of the infrastructure for the island. This is where reality is left behind and the country's infrastructure is built according to the scenario. Over 9000 individual points or features, including hospitals, schools, churches, pipelines, power stations, etc. were created by the Scenario Section and then, along with the roads, rivers and bridges, were populated with relevant information (attributes) using the GIS. The final layer to be added was the military facilities. These totalled 950 features and were created by the Scenario Section and the NC3A CAX team. Every feature in the vector data needed a unique identification number, a NATO description and three types of coordinates.

In addition to the obvious planning maps/raster data, imagery (Landsat, IKONOS & Quickbird), town plans and nautical charts were purchased from various sources and shifted by NC3A Geo. After that, new grids, legends, borders and scale bars etc. were added to all the products (less imagery) to make them look like standard maps. This phase would take a total of 4 months to complete and was delivered at the end of March 2006. From this massive dataset (totalling 10 DVDs), every military discipline and FAS that relies on geospatial data in some form was supplied as required.

As well as playing Mother Nature, there are also other tasks to perform. In addition to organising future synthetic scenario topology, there is plenty of work in support of real world activities. These range from ISAF related tasks to supporting those adventurous members of the JWC with maps and charts for exploring Norway.

**(i) Functional Area Systems:** JTLS – Joint Theatre Level System, ICC – Integrated Command and Control, MCCIS – Maritime Command and Control Information System, ADAMS – Ace Deployment and Movement System, JOIIS – Joint Operations Intelligence and Information System, iGeoSIT – Interim Geospatial Intelligence Tool, TOPFAS – Tool for Operational Planning, Force Activation and Simulation

**(ii) Geospatial.** The concept for collection, information extraction, storage, dissemination, and exploitation of geodetic, geomagnetic, imagery (both commercial and national source), gravimetric, aeronautical, topographic, hydrographic, littoral, cultural, and toponymic data accurately referenced to a precise location on the earth's surface. These data are used for military planning, training, and operations including navigation, mission planning, mission rehearsal, modelling, simulation and precise targeting. Geospatial information provides the basic framework for battle space visualization. It is information produced by multiple sources to common interoperable data standards. It may be presented in the form of printed maps, charts, and publications; in digital simulation and modelling databases; in photographic form; or in the form of digitized maps and charts or attributed centreline data. Geospatial services include tools that enable users to access and manipulate data, and also include instruction, training, laboratory support, and guidance for the use of geospatial data.



**(iii)** The difference between raster and vector data can be explained as follows:  
With raster, the image is broken up into a series of pixels. So for a digital map that is 150 pixels

wide and 150 pixels high, you have a total of 22,500 individual pixels. Each of those pixels can hold any of 16.7 million colours for JPEG. So even for a small file, there is a lot of data to be stored. Raster format is well suited to spatial analysis and is most common with scanned maps and imagery.

Then there are vectors. If you want to create a shape in vector format, you only have to create a few data points along a path. Then you can fill the path with any colour. So for simple shapes, vector files can be much smaller in size. And they can be viewed at any size you want without loss of quality. Each data point, whether it is part of a line or standing alone stores data or attributes about that point. These can be as detailed as you like so is ideal when creating Operational Theatre datasets.

When these are used in a GIS both types store details about their exact location in the world, therefore enabling interrogation and analysis, as well as map production.



# Counteracting Improvised Explosive Devices (C-IED)

By Maj Frank Tordeur, BE A,  
Capability Development Division, JWC

The global threat of terrorism and regional instability are profound security challenges of the 21<sup>st</sup> Century. As a result the Alliance requires the continual adaptation of its forces, concepts and capabilities to counter operations and actions related to this nature of conflict.

The proliferation of Improvised Explosive Devices (IED) as an asymmetrical tactic in current and future conflicts presents a significant threat to NATO forces. These treacherous and effective weapons are used by terrorists, insurgents, non-state actors and criminals to maim, kill and invoke fear. IEDs can range in size from milk cartons to jet airliners and anything in between. They can be fabricated using almost any type of material and initiator. IEDs can utilize commercial or military explosives, home-made explosives, or military ordnance and ordnance components. The low cost, low probability of detection, availability of materials and, effectiveness have made IEDs a weapon of choice for non-state actors around the globe choosing to conduct violent asymmetrical actions.

The IED threat is evolving quickly.

The potential for innovation and sophistication is still high and the Internet facilitates the extension of knowledge and available skills. At the tactical/operational level the threat of IEDs being employed by enemy parties may deny or limit NATO forces freedom of movement; this could potentially adversely affect a force commander's ability to achieve missions and objectives.

The efforts in defeating IEDs are too often concentrated on the device itself. However, the IED is only one form of attack that the enemy may use as part of a more complex attack. The IED is merely the end product of a complex set of enemy activities. An IED attack is the result of a planned operation with several key elements that work in a coordinated and synchronized manner to attain a desired result. The results can have operational and/or strategic impacts, not solely because of the military value of the target, but also because of their psychological impact on units, the local population, the world community, and political leaders.

The IED needs to be addressed not only as a device but also in the context of a system comprising social,

human, and technological aspects.

It is vital for commanders to have a holistic understanding of the requirements of an IED attack. Successful C-IED begins with a thorough analysis of the opponent and the common activities associated with an IED attack. These activities like leadership, planning, financing, IED designers, material procurement, bomb making, target selection, recruiting, and attack execution should be targeted by the operational level of command to identify vulnerabilities, which can be exploited to break the operational chain of events of the opponent.

Collective efforts like policy; resources; material; technology; tactics, techniques, procedures (TTPs); training; operations (including force protection, explosive detection, EOD/IEDD, Route Clearance, search, countermeasures, direct action, information, strategic communications, etc); intelligence (cohesive persistent surveillance, analysis, assessment, etc); and research are directed at disman-

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Above: Engineer soldiers searching for possible improvised explosive devices alongside a main road in East Baghdad, photo by Spc Teddy Wade, April 2006, U.S. Army official website.

tling the IED network and disrupting IED event chain, neutralizing the effects of the device, and developing C-IED capabilities within NATO and NATO Nations.

### **IED Defeat Strategy**

The IED Defeat Strategy is based on the following three key principles, each with its complementary functions and counter IED operations to be conducted: **Defeating the IED System, Defeating the IED Device, Training and Education.**

NATO must develop and implement each of the capabilities related to these pillars concurrently to keep pace with the threat. C-IED Operations consist of activities undertaken at the political, strategic, operational and tactical level, Information Operations, Psychological Operations, Electronic Warfare, Joint Intelligence, Surveillance and Reconnaissance (JISR), Forensic Exploitation, Stand-off Detection, Operations Security, EOD Operations and Force Protection measures, as well as protecting populations in accordance with the mission.

### **Defeating the IED System**

Defeating the IED System focuses on the adversaries/opponents and involves proactive activities undertaken at the political, strategic, operational and tactical level intended to disrupt the System.

The aim of defeating the System is to eliminate the ability and will to construct and employ IEDs.

Activities here include information operations campaigns, stopping individuals from joining the adversaries/opponents, interdicting the IED re-supply apparatus, apprehending actors, and encouraging external pressure to stop the use of IEDs.

### **Defeating the Device**

Defeating the IED System(s) consists mainly of Operational and Tactical actions, which are focused on the preventing the emplacement, detonation, and mitigation of effects within the operational areas.

### **Training and Education (T&E)**

T&E is the third pillar of the defeat strategy. Without a clear understanding of the "who, what, when, where and why" of the threat and means available to defeat it, the Alliance is unlikely to be able to adequately address the IED threat in the short or long term. As such there should be a holistic approach to the development of NATO C-IED doctrine, training, and STANAGS. Within this context, integration of the lessons learned process is essential. The C-IED T&E minimum standards shall ensure that designated NATO forces including those from Partner Nations, possess the basic abilities to successfully conduct C-IED operations. IED events are currently the "Number One Killer" of all forces in theatre, but, it has been demonstrated that, well-trained forces can counter/avoid 75% of IED incidents/events. Therefore, C-IED training needs to be integrated into the curriculum of the NATO Education and Training facilities, NATO training cycle, and pre-deployment certification training and force rotations. On the other hand, C-IED education should be designed to address a much larger audience and be more general in nature. The aim is to increase the overall knowledge of members of the Alliance, not to make them experts in any particular discipline.

### **NATO C-IED Capability Development**

ACT has established since mid-2005 a **C-IED Integrated Project Team (IPT)** in order to develop C-IED capabilities within NATO organisations, to establish a concerted plan of action to meet current and emerging IED threats and to work out in detail the actions required to meet the defeat strategy holistically.

These are some of the deliverables that have been produced or are in an advanced stage of development:

- The NATO C-IED Concept paper has reached the final draft stage
- The first draft of the Allied Doctrine for Joint C-IED Operations has been published and will be discussed

during an upcoming C-IED Doctrine Workshop in September

- ACT has issued a C-IED Joint Functional Area Training Guide (JFATG) that will provide the necessary direction and guidance for the pursuance and achievement of effective C-IED education and training, and its subsequent validation through objective and focused evaluation and assessment

- ACT and ACO have signed a Bi-Strategic Command C-IED Training for ISAF that outlines recommendations on preparatory training that should be provided by Nations to individuals and units scheduled for future deployment to Afghanistan

- A number of C-IED pre-deployment Training Packages have been produced. To note, the NATO School in Oberammergau, Germany will incorporate a number of C-IED modules in 33 of their courses and a first NATO-led centralised C-IED "Train the Trainer" (TTT) course is being conducted at the U.S. Joint Multinational Readiness Centre (JMRC) in Hohenfels, Germany.

### **JWC and C-IED Training**

As NATO's premier training centre for the operational level, the JWC is, amongst other missions, also responsible for organising and conducting the HQ ISAF Mission Rehearsal Training (MRT) and C-IED Awareness and Training will play a major part in all upcoming MRTs. For the HQ ISAF X MRT, which will take place at the JWC from 10-18 October 2006, ACT has developed a specific C-IED training package. JWC has incorporated these C-IED training modules in the Mission Specific Training (MST) and the Functional Area Training (FAT), while the single day of the Battle Staff Training (BST) will be completely organised around a C-IED scenario.

Finally, during the actual Mission Rehearsal Exercise (MRE) there will be numerous C-IED related events and injections. For the future, it is envisaged to introduce operational level C-IED training and education into the NRF training cycles.

## Capability Development

# NATO Coalition Warrior Interoperability Demonstration

By Bartek Jedra  
JWC CIS Analyst, CDD

**T**HE cornerstone of NATO's operational capability is the NATO Response Force (NRF) which is both an instrument for operations and a catalyst for transformation. By design, NRF will be agile, joint and expeditionary and must be supported by "network-enabled capabilities based on a robust and flexible Communication and Information Systems (CIS) foundation".

The Bi-SC vision is that NATO forces, including the NRF, achieve a state of Decision Superiority, which in turn is enabled by achieving Information Superiority through networked forces. This network-centric approach is the aim of the NATO Network Enabled Capability (NNEC), and can only be achieved with complete interoperability of and between NATO and National CIS systems. This is where NATO Coalition Warrior Interoperability Demonstration (CWID) enters the stage.

### What is CWID about?

CWID is an annual NATO Military Committee approved event, designed to bring about continuous improvement in interoperability for the Alliance. Allied Command Transformation (ACT) provides direction and management to the program, while NATO and Partner Nations sponsor interoperability trials and demonstrations comprising specific objectives defined by ACT and National Leads. The NATO CWID program focuses primarily on testing and validation of NATO and national C4I systems, with particular emphasis on those that will be deployed within a Combined Joint Task Force or NRF, thus improving the interoperability in NATO. In addition, NATO CWID provides a venue to conduct technical testing of fielded, developmental and experimental systems in the context of a coalition scenario. The event runs concurrent and shares elements of a common scenario with the Chairman of the U.S. Joint Chiefs of Staff CWID annual event. In 2005 and 2006 CWID was hosted by Norway in Camp Jørstadmoen at Lillehammer.

15 Nations and Agencies actively participated in the execution phase in Lillehammer and an additional five Part-

ner Nations attended as Observers. During the execution phase of CWID 2006, 18 NATO trials and 56 national systems were tested. Consolidated tests' results were published in the Final CWID Report.

### CWID 2006 Objectives

NATO CWID offers a controlled environment where NATO/NRF and national systems, emerging technical solutions and developments of fielded systems can be evaluated and assessed to identify deficiencies and find solutions to interoperability issues. NATO CWID provides the venue to prove, disprove and most importantly improve NATO, National and Coalition interoperability challenges.

Four major objectives were identified for CWID 2006:

- **Conduct** testing to validate the interoperability between C2I systems required for NRF rotations 9 & 10 in support of the certification process.
- **Provide** network tools to facilitate the management of information, enabling automatic discovery and integration technologies which promote loose coupling between C2/CIS systems and components.
- **Provide** C2 solutions that enhance the Commander's ability to plan communicate and affect coalition operations while remotely deployed. Inherent in this objective is the ability of the commander to maintain situational awareness and connectivity with subordinate activities while en route to the theater in crisis.
- **Record** observations and Lessons-Learned during the event.

### JWC participation in CWID 2006

HQ SACT, being responsible for the management part of CWID, requested for JWC C2/CIS expertise during the execution phase. CDD being in charge of doctrine, development as well as of the assessment part of the Bi-SC Lessons Learned Process delegated three representatives to be part of a CWID Management Team and formulate the core of an Assessment Working Group focusing on assigned tasks:

## Afghanistan expansion



# Authority Transfers from Coalition to ISAF in Southern Afghanistan

- Collect tests results of C2/CIS NRF Systems and perform operational and technical interoperability assessment on them
- Utilize Lessons Learned Process to improve interoperability in NATO
- Cooperate with NATO Interoperability Testing Infrastructure (NIETI) Core Team in developing a results collection and assessment method
- Transfer NRF C2/CIS systems interoperability tests results into Interoperability Test Requirements matrix and present to NATO HQ C3 Board
- Build up functional expertise to define C2/CIS requirements for future NRF C2/CIS training events and their validation
- Based on results collected and provided by JWC in cooperation with NIETI Core Team, NATO HQs and Allied Command Operations will receive a consolidated view of a current interoperability status between NRF 9 & 10 C2/CIS Systems based on which suitable actions will be planned on how to enhance them.

### **What can we get from CWID?**

Coalition Warrior Interoperability Demonstration is the only annual transformation event in the ACT calendar giving a real life opportunity to get familiarised with NATO/NRF/Partners C2/CIS Systems. CWID is a source of operational and technical C2/CIS knowledge, which supports the development of high quality of C2/CIS Lesson Learned analysis and assessments.

The CDD team, from Doctrine Branch and from Lessons Learned Branch, System Assessment Section, benefited most from improving their knowledge and skills in the area of C2/CIS and related systems. This is of utmost importance since it will be reintroduced not only into NATO Doctrine but also into JWC training events in terms of support to scenario scripting, MEL/MIL development, O/T training, and definition of Training Objectives as well as support to the improvement of Training Assessment.

Currently CWID is still expanding and despite the fact that a considerable number of interoperability issues are still to be solved, the program meets the expectations and will be continued in the future. The Final CWID 2006 Report highlights the fact that the future CWID will concentrate on integration of C4I systems between Air, Land and Sea components of the NATO Response Force.

CDD played an important role in the Management Team, led by ACT, improving assessment methods, developing tools, broadening the scope of assessment via insertion of operational aspects in order to include C2/CIS elements and expertise into future JWC training events. ■■■■■

NATO's International Security Assistance Force (ISAF) assumed command from Coalition forces in Southern Afghanistan on July 31, 2006. ISAF, which assists the Government of Afghanistan and the international community in maintaining security in its area of operations, has already been conducting operations in the 13 provinces of Northern and Western Afghanistan, where it also commands the military components of nine provincial reconstruction teams.

ISAF is currently made up of 37 nations from NATO and non-NATO states, showing the level of international support for the mission. The Southern Afghanistan area of operations includes six provinces – Day Kundi, Helmand, Kandahar, Nimroz, Uruzgan and Zabul. The Coalition retains responsibility for Afghanistan's eastern region, also known as Regional Command East, comprising the provinces of Paktika, Ghazni, Bamyan, Maydan Wardak, Logar, Khowst, Nangahar, Kabul, Parwan, Laghman, Kunar, Nuristan and Panjsher. Afghan and Coalition forces there conduct regular combat patrols to deny insurgents freedom of movement and sanctuary, to defeat the Taliban and related movements and to prevent the re-emergence of terrorism in Afghanistan. Additionally, the Coalition is continuing efforts to facilitate the development of Afghan National Security Forces, expand governance, and promote economic reconstruction in the eastern provinces to improve the lives of the Afghan people. The Coalition will also continue to aggressively prosecute its counter-terrorist mission, and play a leading role in the training and fielding of the Afghan National Army.

Since May, ISAF has been led by NATO's Allied Rapid Reaction Corps, commanded by British Army Lt Gen David Richards. "NATO is here for the long-term, for as long as the government and people of Afghanistan require our assistance," said Richards. "We are committed to Afghanistan and its future."

ISAF's expansion will bring more international military forces into Afghanistan, and will build on the efforts of the Coalition to provide security as well as reconstruction projects and humanitarian assistance in the South of the country.

"Today's transfer of authority demonstrates to the Afghan people that there is a strong commitment on the part of the international community to further extend security into the southern region's provinces," said Lt Gen Karl Eikenberry, Commander of Coalition forces. "This is a seamless transfer of responsibility and authority from the US-led Coalition to ISAF. Having NATO committed to Afghanistan's future is good for the Afghan people and the entire international community."

# Norway & the JWC

By Col Frode Berntsen, NO A  
Chief LEGAD, JWC

Photo authorized by NJHQ  
Security Officer Maj Brevik.

THE organisation we work for depends on the support we receive from Norway as our host nation. Norway provides many of the services required for the Headquarters to conduct its business. With the new Memorandum of Agreement signed during the ACT Seminar on 21 June this year, Norway demonstrates her full commitment to NATO and to the Joint Warfare Centre (JWC) in particular. Thus, Norway has fulfilled its pledge to provide significant support to NATO if JWC were located in Norway. What this Memorandum of Agreement contains, and what effects it will have, is described in separate article by Cdr Lone Kjelgaard.

Many colleagues at JWC have demonstrated a keen interest in the new Memorandum of Agreement. Almost every time it turns out that the inquirer really is interested in the possible extension of privileges; in particular that of tax free petrol. These issues are not covered by the Memorandum of Agreement at all, but by a Supplementary Agreement (to the Paris Protocol and the NATO Status of Forces Agreement).

This Agreement is being renegotiated, but requires longer staffing by the respective Ministries of Norway, and the outcome, including that of tax free petrol, is not given. We ask you to

be patient, and to know that the JWC team members are working hard to obtain the appropriate level of privileges.

When considering issues like the cost to Norway of supporting JWC and granting privileges to its staff, it is important to bear in mind that Norway also receives much back from the Nations and the Alliance. Despite the privileges, JWC brings a significant amount of activity to Norway, in particular to the Stavanger region. Most staff will purchase local goods and services, and even the sale of those goods where the VAT is refunded leaves the shops with a profit which again is taxed. Significant amounts are funnelled into the local economy through the lease of accommodations and purchase of educational services.

Through the planning and exercise activities at JWC, a significant amount of travel-related services, such as flights and hotels, are purchased every year. The visitors often enjoy downtown Stavanger, contributing both to the Royal purse (read Norwegian tax authorities)

and to local bars and restaurants.

As the recent ACT seminar shows, both the local area and Norway, on repeated occasions, have the opportunity to present itself to the NATO political and military leadership. This is clearly a benefit to Norway in itself.

Joint Warfare Centre is receiving many newcomers this time of year. Several will be at least slightly baffled when observing the somewhat ambivalent relation many Norwegians apparently have with alcohol. You will not have to travel much, before noting that almost every Norwegian passenger will buy their tax free quota.

What I ask you as newcomers, and remind those that have been here for a while, is that alcohol (and Tobacco) is serious business in Norway. It is very tempting to have sympathy with Norwegians who have to put up with high prices on these items.

The same applies to any other tax free item available through the BX, Central Cellar or through importation via the element or on your own ac-



count. However, abuse of privileges in particular when buying to non-entitled personnel (anyone who is not a foreign NATO employee, staff member or dependent of such) is prohibited. In addition to any national disciplinary measures, the entitled person will lose their privileges and if there were to be cases of such abuse, Norway may withdraw privileges altogether.

So, it is in your own interest to follow the rules. Instead of giving away a bottle of wine, invite them to your home and share the bottle with them.

In short, when you are in Norway, you and your family are, for everyday life issues, subject to Norwegian law. In the following I will highlight some topics you should keep in the back of your head:

Speeding and driving is expensive in Norway, the same applies to other traffic violations. Caught speeding beyond the highest fine levels indicated in the tables, entails suspended or unconditional prison term, possible loss of drivers license and fine. For on-the-spot conditional fines (accepted on the spot to avoid that the case be brought before

the courts), see the enclosed tables.

Parking tickets can be issued by both public servicemen and private companies; albeit the rules are different regarding who issues them, the price for not parking correctly is typically between NOK 500 and NOK 750.

The most important general rules for Norway are the speed limits if not indicated by sign, which is 50 km/h in build-up areas and 80 km/h outside of such areas. In addition, all traffic from the right (from any size road, but not from parking places, gas stations and such) has right of way unless there are signs which dictates that you have the right of way as shown in the below figure.



You will also quickly find out that most pedestrians will expect you to stop at crosswalks. For those not familiar with European signs, search via Google for "road signs Norway" and you should find informative resources.

It goes without saying that drinking and driving is a no-go. In Norway the

amount of alcohol in the blood may not exceed 0.02 % (or 0.2 ‰ which is the normal way of expressing the limit in Norway). Loss of driver's license, suspended or unconditional prison term with substantial fines, is the price to pay if caught.

Random breathalyser test on the road is legal in Norway, i.e. there is no need for the Police to have grounds of suspicion before they can ask you to submit to a breathalyser test. For sailing sail boats longer than 4,5 meters and driving any motorboat, the current alcohol limit is 0.08% (0.8‰). Random checks are legal at sea as well.

As a last note, and again reverting to the ever present topic of alcohol, despite the impression some may have after a Saturday night downtown Stavanger, it is not legal to drink alcohol in public places.

If you decide to bring a bottle of wine for your picnic that is also illegal according to the letter of the law, but normally a police patrol would turn the blind eye, but if she or he does not, follow the instructions they are entitled to give you.

## Facts and Figures:

### Speeding

#### Distances marked 60 km/h or less:

Speeding up to and including:	NOK
5 km/h	600
10 km/h	1600
15 km/h	2900
20 km/h	4200
25 km/h	6500

#### Distances marked 70 km/h or more:

Speeding up to and including:	NOK
5 km/h	600
10 km/h	1600
15 km/h	2600
20 km/h	3600
25 km/h	4900
30 km/h	6500
35 km/h	7800

### Selection of fines for other traffic offences:

Offence	NOK
Driving against red traffic light	5200
Driving against traffic signs such as "No way in", "Public transport only" and "One-way streets"	4200
Illegal overtaking	5200
Breach of give way rules and signs	5200
Driving without proper use of direction light and/or other lighting improperly used or not working properly (beam lights, dimmed lights, rear/fog lights)	2000
Use of illegal electronic equipment whilst driving, such as the use of cellular phones	1300

If several offences are committed at the same time under the Road Traffic Act, maximum fine is NOK 10000. The number of days spent in prison if the fines are not paid, range from three days of imprisonment for fines up to NOK 3000 and 15 days in prison for fines exceeding NOK 6000.

# JWC Allhands



## NATIONAL DAYS

Photos by Lt Col Dieter Stoll, Inci Kucukaksoy,  
MSG Juergen Eise



### MAY-AUGUST:

- 3 May, Poland
- 17 May, Norway
- 2 June, Italy
- 5 June, Denmark
- 6 June, Sweden
- 10 June, Portugal
- 25 June, Slovenia
- 1 July, Canada
- 4 July, the United States
- 14 July, France
- 21 July, Belgium
- 1 August, Switzerland

### Civilian Staff Association's Summer Lunch, 27 June 2006

Photo provided by Ercan OzKan, Multimedia



### Change of Command at 426<sup>th</sup> Air Base Squadron, Stavanger, Norway

On 28 July 2006, Lieutenant Colonel Thomas W. Tucker relinquished command to Lieutenant Colonel Michael J. Paoli. Lt Col Tucker has served as the 426<sup>th</sup> Air Base Squadron Commander since July 2004.

Lt Col Paoli is the former Public Affairs Officer at Kadena Air Force Base, Japan. The ceremony was presided over by Colonel Bruce W.

Lovely, Commander 428<sup>th</sup> Air Base Group.

Below: Colonel Lovely hands command flag to Lt Col Paoli.

Photo by Inci Kucukaksoy, JWC PIO.



# sailIng CLUB



**lt col gerd schreiber**



Photos and text by Lt Col Dieter Stoll, SMC4

**Sailing...**One of the best outdoor adventures whilst being at the JWC!

JSSC, the Joint Services Sailing Club, has successfully trained about 30 children and eight adults to be "released" on their own onto the wild Hafrsfjord waters. Andy, Gerd, Dieter and the team have done a great job, and went with their students through wind and rain to train them on the various JSSC sailing boats. The course consisted of classroom lessons on the five essentials, various knots and wind theoretics, as well as lots of safety drills and protective clothing lectures. Most of the time was spent on the water and on "online" teaching whilst being on the boats together with instructors. The result, loads of smiling faces, now racing and enjoying the Norwegian winds at the Hafrsfjord.

For further information, please visit our web page at <http://groups.yahoo.com/group/jwcsailingclub>

Photos by Inci Kucukaksoy, JWC PIO



**Visit to Sogndalstrand**

12 August 2006



## FORUM CAX '06

The first NATO Joint Computer Assisted Exercise Forum (CAX '06) will be held at NATO's Joint Warfare Centre in Stavanger, Norway, 26-29 September 2006.

CAX '06 will focus on technical issues and operating procedures relating to simulation-based exercise and training support, and participants will represent simulation centre staffs actually involved in managing CAX. The Forum's primary goal is to promote the exchange of information and "best practices" between the staffs of NATO and national simulation centres.

For further information please visit JWC Activities at [www.jwc.nato.int](http://www.jwc.nato.int).



### JWC SMC4 CAX SUPPORT BRANCH REPORTS TO BE "COMPLETE"

From one to eight: SMC4's CAX Support Branch, headed by Branch Chief Dr Cayirci, has now completed the recruitment process and all newcomers arrived. The team, and the "veteran" Lt Col Stoll, could now assemble for their first complete Branch picture during their CAX Training in Ulsnes on 27 July 2006.

**CAX Support Branch:**  
Msgt Sven Schikora, Harald Schimmel, Lt Col Dieter Stoll, Dr Erdal Cayirci, Ercan Atalay, Andrzej Wnuk, Ivan Vanello and Andrew Brown.

## At a glance...



Ercan Ozkan ran 60m and 200m at the Norwegian Indoor Championship 2006 in Oslo last April and received silver medals in both events for his age group. He also ran the 100m and 200m the first of July for the Norwegian outdoor championship in Oslo and received silver medals for those races as well. He is now preparing for the Balkan Countries Championship that will be held in Athens, Greece 24th and 25th of September 2006. (CSA Update)

**Excellence in Action:** We would like to publish short stories of our professional performers in future issues, where you can share with family, friends and community your thoughts, photos, hobbies, experiences and advice. The above picture is taken during the promotion ceremony of MSG Woodard, Chief NATO Registry/Senior Enlisted Advisor while his wife Pamela and SPC Hughes pinned his new rank insignias, July 17, 2006. Gorgeous Jasmin (6) and Xavier (4) were also present.

426<sup>th</sup> Air Base Squadron Services Community Centre offers a wide range of events, programs and entertainment for the entire NATO community. Family events are cornerstone of the program: Meeting Santa and Easter Bunny, the Halloween party, Camp Adventure program in Summer, or various outdoor activities and field trips are always crowd pleasers. Most recently, "Wonder Woman" visited Jåttå as part of the Services' Summer fun! Photo by Carole C.J. Simonsen.



Photos and Story by Msgt Robert Talenti, US F,  
Joint Exercise Division, JWC

# CHROME LEATHER & ROLLING THUNDER

**O**N 16-18 June 2006, local 'HOG Rogaland' Chapter hosted over 300 Harley Davidson motorcycles and 400 bikers from all over Europe. The event was held at the Hall Toll parking lot in the center of Stavanger's seafront area. It was the first time that this rally was held in the city center. Traditionally, motorcycle rallies are held at campsites or horse racing tracks. The rally was extremely well planned and offered lots to see and do. Vendors included tattoo artists, massage therapists, horse carriage rides, hand-made jewelry, and the sponsoring Harley Davidson shop - Harley Davidson Stavanger. (See the JWC/NATO special discount advertisement). Additionally, the event offered a fjord cruise, poker run, motorcycle ride out/guided tour, discounted food and drink prices, and lots of live music. Canadian 'biker blues' musician Pat Savage rocked the Hall Toll Bar on Friday night. He is tentatively booked to play our very own JWC Club on 28 October 2006.

At least two of our JWC bikers, MSgt Robert A. Talenti from JED with his '100th An-

niversary Edition "Road King Classic" and Christian Palieschi from NCSA with his modified double-headlamp "Dyna Wide Glide" supported the event. When asked what he thought of the rally, Mr. Palleschi said, "I had a great relaxing ride with 40 other bikers from across Europe," and "Everyone seemed to be having a really great time!" Several other JWC members stopped to look at the leather and chrome, listen to the rolling thunder, and to feel the festive vibe! There were many smiles on the participants and passers by alike. The event was truly a success for HOG Rogaland Chapter, JWC members and the local Stavanger area...

Photo top left: MSgt Robert Talenti and wife Helen Talenti; middle: Harley Davidson Shop, right: 300 Harley Davidson motorcycles at Hall Toll parking lot.

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**SAC-T SEMINAR, FAMILY PHOTO**  
**"FLOR OG FJÆRE", STAVANGER, 21 JUNE 2006**

