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# TRANSFORMATION THROUGH TRAINING



BYDGOSZCZ - POLAND

## JFTC AS POTENTIAL GATEWAY FOR CFI IMPLEMENTATION



## JJJ - PRESENTING A UNIFIED FRONT

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# „Transformation Through Training“

The aim of this magazine is to provide a forum for exchange of information and expertise among training and educational institutions across NATO in the area of training, military professional education, and related technological support. In the context of The NATO “Smart Defense” approach, there is growing importance for cooperation with partner states and international organizations, such as the United Nations, the European Union, the Organization for Security and Cooperation in Europe and others. With the above in mind, the JFTC invites authors from countries and institutions beyond the NATO environment, to publish in the Transformation Through Training magazine. The magazine will focus on the best practices in the areas of command and staff training, professional military education, simulations and simulation technologies, distributed training, military training development, and other related areas. The JFTC also welcomes recommendations for the application of the most recent experience and lessons learned from ongoing operations, training events and recent innovations in the field of simulations and information technologies. The magazine will also briefly cover the life of the international community at the JFTC with the aim of promoting the centre within NATO and among the partner nations. The magazine will be published twice a year, during the spring and fall, by the NATO Joint Force Training Centre in Bydgoszcz.

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# STEADFAST JAZZ '13



## When JFTC Comes Back to NRF After a Long Operational Involvement

■ **LTC Philippe Teppaz-Misson,**  
JFTC Training Division Staff Officer

*Editor's note: The article was submitted before the execution of Steadfast Jazz 2013.*

Year 2013 is a transition year for the Joint Force Training Centre (JFTC). For several years, according to the decision of General Mattis, who was the Supreme Allied Commander Transformation in 2008, the NATO Centre in Bydgoszcz focused on ongoing operations training, i.e. ISAF mission training. As the JFTC is responsible for tactical training, the centre organized exercises for Regional Commands (North and South), and for Operational Mentoring and Liaison Teams (OMLT), then replaced by Police, Military, Operational Coordination Centre Advisory Teams (PAT/MAT/OCCAT), at Kandak and above Kandak level, when Joint Warfare Centre (JWC) dealt with International Security Assistance Force Headquarters (ISAF HQ) and ISAF Joint Command (IJC). But as the ISAF mission will leave the floor to the post 2014 NATO training and assistance mission, and due to a very high level of ambition of NATO concerning trainings, the Joint Force Training Centre will return to training the NATO Response Force (NRF) and preparation of the certification of head-

quarters from the NATO Command Structure (NCS) and NATO Force Structure (NFS).

We can now talk about a comeback because before General Mattis' decision, it was the task of JFTC to deal with NRF training, which was a very challenging goal for the centre. The ISAF training events have a lot of discrepancies with traditional NATO exercises. The planning cycle is different and shortened, the duty of the centre is not the same during the event, and the settings used for the scenario are duplicated from theatre when they have to be created in a standard NATO exercise. All this makes a big difference that the JFTC has to take into account and to regain experience in order to be fully ready to conduct NRF training.

To meet this challenge, the JFTC is adapting itself by changing its internal structure. Training Division division was organized to perform only three different types of training events as mentioned previously (RC North, RC South, OMLT). Therefore, each of the three branches had one and only assignment, being able to give a hand to the others for every training event.

But facing the diversity of all the different exercises the JFTC has now to conduct, support or host, for instance Bold Dragon, Puma, Steadfast Jazz or Loyal Bonus, the TD has to come to a more cross-functional organization. So, in regard to the predictable changes in Afghanistan and to support this structure change process, a decision was made at the JFTC in 2012 to start to learn from the ongoing NRF exercises to become up to speed when the task will be given formally. The first team was appointed to attend the planning cycle and execution phase of the exercise Noble Ledger 12, taking place at the military training area of St. Mawgan, UK. This training of Allied Rapid Reaction Corps (ARRC) was as LCC for NRF 2013. But this was only the first step. The main event that will be the warming up for the JFTC is a very complex and big exercise Steadfast Jazz 13 (SFJZ 13).

As agreed between the commanders of JFTC and JWC, the TD participants of SFJZ 13 are mentored by JWC members during every phase of the exercise, includ-

ing the planning. This concerns mainly observer trainers during execution phases, but also scenario developers and planning officers during all the preparation meetings.

Exercise Steadfast Jazz 2013 (SFJZ13) will be held in Latvia, Lithuania and Poland for its visible part in November. Other participants will contribute to this exercise from Germany, Italy, Belgium and Norway. Steadfast Jazz 2013 is a partial Live Exercise in the Baltic region combined with a Computer Assisted Exercise (LIVEX/CAX). The LIVEX will take place in Poland and in the Baltic Sea. There will be a land maneuver as well as air and maritime assets demonstrating NATO power. SFJZ 13 is a multi-tier deployable forces exercise, involving HQs from the strategic level down to the brigade level, for a NATO collective defense operation. SFJZ 13 is the exercise which will create a venue to train, integrate, evaluate and support the certification of the NATO Response Force (NRF) 2014 Headquarters, that is to say the Command and Control delegated by NATO member states and by Allied Command Operation (ACO) to conduct the NRF standby during year 2014.

The NATO Response Force is a high readiness, technologically advanced multinational NATO capability. The NRF is manned by units committed by member states maintaining a high readiness level in their home states for a set period of time to be capable to deploy to operational regions within an established period of time if a decision to invoke the force was made. The NRF is capable of deploying to the operational theatre within five days from the approval of such decision. The NRF is activated at the decision of the North Atlantic Council (NAC).

The stand-by phase for this rotation will start on 1 January 2014 and will last for one calendar year. It concerns different headquarters from the NCS and the NFS. The command of the NRF is given to Commander Allied Joint Force Command Brunssum (COM JFCBS), General Hans-Lothar Domröse. That is to say that JFCBS will provide the nucleus of the Joint Task Force HQ of this NRF 2014. Different Components are designated as follows: the Rapid Reaction Corps France (RRC FRA) in Lille will be the Land Component Command, the Allied Air Command Ramstein will provide Air Component Command with a Joint Force Air Component HQ, the Italian Maritime Forces (ITMARFOR) will be appointed as Maritime Component Command, and the Italian Joint Special Operation Headquarters (ITJSO

HQ) will be assigned as Special Operations Component Command. A Joint Logistic Support Group (JLSG) will be formed by the JFCBS and NATO Rapid Deployment Corps (NRDC) Italy, and Chemical Biological Radiological Nuclear (CBRN) Task Force is provided by France with its 2<sup>nd</sup> Dragoon Regiment. In addition to that, the Supreme Headquarters Allied Power Europe (SHAPE) will participate with its new Comprehensive Crisis and Operation Management Centre (CCOMC) as the strategic level of command. As a portion of military units and command and control elements assigned to the NATO Response Force will be fielded to the training areas in Latvia, Lithuania and Poland for the Steadfast Jazz 2013 period, Host Nations will also have the main role in this exercise.

An exclusive feature of the exercise is that it will be conducted jointly with the Host Nation Support (HNS) in the Baltic States exercise called Baltic Host 2013, whose purpose is to train the capacity of the Baltic States to render HNS to the NATO allies. Integration of Baltic Host 2013 into this larger NATO exercise will elevate the training event to a higher level because the exercise will not only ensure regional level interoperability but also interoperability with the allied forces. The event will significantly improve the readiness of the Baltic States to render the HNS.

Exercise Steadfast Jazz 2013 will exploit NATO Article 5 (collective defense) operation scenario. This is the first time since the end of cold war that such a collective defense scenario will be used in an exercise. The SFJZ 13 will contribute to NATO's visible assurance initiative to demonstrate NATO's cohesion and commitment. It will be supported by strategic communication. In particular, some Partnership for Peace (PfP) nations, such as Russia, are invited to visit the event, as well as International Organizations (IOs) and Non-governmental Organizations (NGOs). The scenario, based on the newly designed Skolkan settings which previously was used only once but in a non-article 5 operation, features a fictitious former communist and a non-democratic state of Bothnia, which is very aggressive towards Estonia and NATO generally speaking, mainly for historical and economical reasons. The NRF will be sent to the Baltic region in order to prevent, or to foil, an attack against one of the NATO members.

The exercise is now ongoing, even though the main part will be held in November

this year. Most of the planning conferences have been conducted, led by the Officer Primary Responsibility (OPR) from Brunssum and the last one will be the Final Coordination Conference (FCC) in September in Riga. Very important events to set the scene before the beginning of the exercise have been already achieved. First part was the Academic phase and the Key Leader training which are crucial to make sure that all the staff of each headquarters are working in the same way, speak the same language to achieve the same goals. All the procedures and main principles were addressed to ensure everybody is heading in the same direction. The second part was the Crisis Response Planning (CRP) phase. This phase is designed to train and exercise the new Comprehensive Operation Planning Directive (COPD), using the Tool for Operation Planning Functional Area Services (TOPFAS). But this is also the phase in which all the operational documentation is produced to run the exercise in its last part. The plan is written, tasks are given to each headquarters, and so "the war" can start!

During those phases, the JFTC sends personnel from both TD and Training Support Division (TSD) to observe how the planning cycle occurs, and how JWC observer trainers are interacting with the training audience. They could observe how to lead the training audience in the right direction, not giving them the solution but guiding them by asking accurate questions. It is not enough to be a subject matter expert to be a good observer trainer. You also have to improve your pedagogical and human skills. Cooperation was very fruitful, as the JFTC members are very eager to learn, and JWC trainers are very committed to support our effort to gain experience.

And now that all the planning is almost done, as the last planning conference will be the FCC in September, the big part is about to be played. First, the Battle Staff Training (BST) will be a kind of rehearsal for the last execution phase - phase III, which is a visible part of this one and a half-year marathon. These two main events will be new opportunities for the JFTC members, in particular for newcomers, to get ready for the next mission of the Bydgoszcz centre: preparation of the Allied Land Command certification exercise in 2014. And the first step of this preparation will take place already two weeks after SFJZ 13 in Bydgoszcz, nicknamed the Loyal Bonus. A new challenge for the JFTC! ■



# Overcoming Challenges through CWIX 2013

■ **Mr. Fulvio Postogna,**  
JFTC Training Support Division Engineer  
**LTC Peter Lueck,**  
JFTC Training Support Division Staff Officer

The 2013 CWIX was hosted at the JFTC in June. During this three-week exercise the JFTC played host to over 800 participants and 18 Nations. Moving beyond the sheer number of people involved is the often difficult task of building a complete network to facilitate interoperability testing. In this regard, the JFTC led by the CWIX CIS Working Group in coordination with the NCI Agency – Squadron of Bydgoszcz highlight that good cooperative teamwork can achieve amazing results.

The 2013 Coalition Warrior Interoperability eXploration, eXperimentation, eXamination, eXercise (CWIX) held at the Joint Force Training Centre (JFTC) from 3 – 20 June 2013 illustrated the importance of interoperability testing within the North Atlantic Treaty Organization (NATO). The continued success of the CWIX is based on the need for NATO and Partners to establish and test interoperability on key Communication and Information Systems (CIS) prior to use in an operational setting. The key role of the CWIX as a venue for interoperability testing and validation is magni-

fied by the desire of the political leadership as expressed in the Connected Forces Initiative (CFI). Based on CFI principles, within NATO the nations need to maintain the interoperability gains from combat operations and continue to improve interoperability capabilities for future operations. The JFTC was a key component in the CWIX 2013 in not just providing the primary facility, for the over 800 participants, but also as active participants in the technical testing and set-up of the event. The success of the CWIX demonstrates the critical link between the JFTC and Headquarters Allied Command Transformation (ACT).

## CWIX Overview

The connection and cooperation between the JFTC and ACT is crucial as the close coordination leads to a robust exercise program for the annual CWIX. In 2013, the CWIX had 18 nations and 11 NATO organizations that conducted testing on 149 different CIS platforms. The underlying network infrastructure for CWIX was developed and managed by the JFTC to ensure a robust network environment for testing the variety of systems. This year testing was also conducted by 20 distributed testing sites, which enabled additional testing



and expansion of testing opportunities. In addition to the network, the JFTC was also an active participant by participating in the Mobile Computing Focus Area and with testing the NATO Live, Virtual, Constructive (NLVC) suite of applications. Given the different areas, this article will now focus on the JFTC effort to overcome some of the technical difficulties within the exercise.

During the planning phase for CWIX 2013 a few major technical challenges were presented to the JFTC and to the local NATO Communications Information Agency (NCI Agency) – Squadron of Bydgoszcz. The first challenge presented by the nations was the desire to connect two separate portions or enclaves of the Combined Federated Battle Laboratories Network (CFBLNet) together to enhance the number of capabilities present. To better understand what the CFBLNet is presented here is the definition from the Defense Information Systems Agency (DISA) website, CFBLNet is “network equipment and services (that) are located within the confines of the various national and international battle laboratories and experimentation sites of the participants, which provide the applications, analytic tools, and communications necessary to conduct initiatives.” The less technical interpretation is that the CFBLNet is multiple enclaves that facilitate different types of testing and experimentation around the world with member organizations and nations. For the CWIX testing an enclave on the CFBLNet is established annually to create a secure and reliable testing environment.

## First Technological Challenge – Federating Two Networks

The CWIX enclave is built every year to facilitate CWIX testing and is directly managed by the CWIX CIS Working Group lead. This year for the first time two CFBLNet enclaves were connected to support testing during CWIX. These two networks consisted of the Coalition Test and Evaluation Environment (CTE2) enclave and the CWIX enclave. The CTE2 enclave is a dedicated environment that simulates the Afghanistan Mission Network (AMN) configuration and is used to perform pre-deployment testing of the Command and Control (C2) systems before deployment into the ISAF Theater. The CTE2 enclave is managed by the Coalition Interoperability Assurance and Validation (CIAV) community. Many Nations participate with C2 systems in both communities (CWIX and CIAV) and therefore it seemed natural to bridge the two networks, instead of alternatively moving and re-configuring capabilities from one enclave to the other. This basic concept appeared to be good for testing during the CWIX and would facilitate additional C2 systems available for potential interoperability testing, if a good solution to connecting the enclaves could be found.

To connect the CWIX and CIAV enclaves, multiple options were discussed on the best solution for joining the two networks. The final decision was to maintain the identity of the CWIX sites and the CTE2

sites by completing a routing bridge between them. This technical solution detailed the need to maintain the separate enclaves and create a means for the systems to communicate. Even if the technical challenges to bridge the two different enclaves were quickly defined the major issue faced by the CWIX community was the sharing agreements and the accreditation, or certification of the security rules, process to have the two enclaves connected. This led to the classic intelligence sharing dilemma of “need to share” compared to “am I allowed to share” or “do I wish to share” principle. This led to a very technical solution that took a long time to coordinate, which allowed the bridge to only “share” the information on an “as needed” principle. After the agreement that the enclaves could be bridged then the technical challenge of connecting them was developed.

On the technical side the integration of the two enclaves required changes to the overall CIS architecture. Given that the CTE2 enclave is a permanent network the decision made by the CIS Working Group Lead was to use the existing CTE2 enclave structure and routing configurations as the baseline. This was a fundamental change for the CWIX and required additional work to ensure that this connection of the two enclaves was invisible to the exercise participants. Many of the core enclave configurations typically used in CWIX would not apply for this year and lead to major changes to the temporary CWIX network. Through these changes the CWIX CIS Working Group was able to suc-



successfully integrate the two separate enclaves and facilitated over 4,000 test interactions.

Overall, among the CWIX CIS community it was quickly realized that the most challenging problems were not the “how to” that could be solved consulting documentation, personal experience or via the Internet-wide forums, but rather the “am I allowed to?” issues. This gave a good flavor of the challenges the federation of heterogeneous networks will pose in the future and a real sense of the issues the AMN community has already faced when standing up the CIS infrastructure that supported ISAF till now. This led to the second technological challenge during CWIX in developing

a cloud infrastructure to support testing.

## Second Technological Challenge – Building a Cloud Infrastructure

This year the JFTC and the NCI Agency – Squadron of Bydgoszcz developed a VMWare based, cloud infrastructure. The purpose for this solution is the ability to reduce the number of servers that need to be present at the JFTC to support interoperability testing. During every CWIX, nations and NATO agencies bring a multitude of servers at a great cost for transportation and space usage at the JFTC. The ability to reduce the number of servers

will increase space for more capabilities testing and reduce the power and air-conditioning requirements on the JFTC facility.

Another benefit gained is the insight into building a cloud infrastructure that supports a wider concept of distributed training in a connected forces environment. As cloud infrastructure and capabilities continue to expand in both government and commercial use it is a technology that can be leveraged by the JFTC. The ability to host and run complex C2 systems from a distance could provide reduced energy requirements and infrastructure to forward deployed commanders. As a NATO Training Centre it is important for the JFTC in coordination with





NCI Agency – Squadron of Bydgoszcz to realize this technology and its capabilities in future training events. Recently five servers at the JFTC were upgraded to be used as host machines which enable a cloud infrastructure. More specifically, during CWIX 2013 NCI Agency configured a private cloud based on VMware Cloud Director that ran the bulk of the Interoperability Experimentation Testing and Validation (IETV) platform with more than 60 servers and the ACT Service Oriented Architecture (SOA) machines with four servers. The ability to reduce the total number of servers at the JFTC from 64 to five was an extraordinary effort that still provided a

stable testing platform. An added benefit is the ability to quickly reconfigure the system and on-the-fly re-engineering allowed for a successful hosting of the IETV platform and the SOA servers. In the future the JFTC and NCI Agency – Squadron of Bydgoszcz are determined to expand the cloud infrastructure to further reduce the total number of servers hosted at the JFTC.

In addition to CWIX the cloud platform supports a wider concept of distributed training in NATO. For the future it could be possible not only to distribute the training audiences or the exercise control, but federate and use distributed computing facilities from either nation-

al or NATO training centres to provide resources when needed. The datacenters present at the individual locations could become a resource to be utilized to complement each other as needed. The data-center will be decoupled from the applications Functional Area services (FAS) they run. The benefit to this approach is that the FAS will be executed wherever computing power is available and is accessible in a training cloud via a federated high bandwidth network. The ability to link and manage this environment will be very beneficial to the JFTC and NCI Agency – Squadron of Bydgoszcz in the future as training requirements develop.



## Conclusion

The continued success of the CWIX is based on the strong relationship between the JFTC, ACT, and the NCI Agency. Within this relationship the JFTC continues to maintain technological competence by federating and joining two separate networks this year and the development of the cloud infrastructure. As the JFTC has been designated as the future main execution site for the CWIX for the upcoming years it is critical that it continues to grow and expand its technological participation within the exercise. The two major technological challenges proved to be a success and positions the JFTC to provide a baseline technical capability for future training. ■

# ISAF Regional Command (North) Training Bydgoszcz

**1-18 July 2013**



■ **LTC Alain Julia,**  
JFTC Training Division Staff Officer

July 2013 saw the arrival of some 350 soldiers and civilians (approximately 130 Training Audience and more than 200 external Exercise Control staff) from around 20 NATO, and Partnership for Peace Nations, at the Joint Force Training Centre (JFTC), Bydgoszcz, Poland. The arrival marked the last stage in the preparation of Headquarters, Regional Command North (RC N), ahead of taking over the responsibility in Afghanistan.

During this key element of the force preparation, the JFTC were able to teach, mentor and develop the HQ in order to aid RC(N) staff fulfil their mission effectively.

The future Chief of Staff, Brigadier General Markus Laubenthal, German Army, gave clear guidance as to the purpose of this training; to conduct Mission Specific Training (MST) in order to understand the current operational focus, but also to learn how to build

effective teams, capable of supporting the Commander in the decision making process. Importantly, this phase enabled members of RC N HQ to meet their future in theatre partners, and rehearse processes and procedures common to the mission whilst deployed.

The RC N training is compiled to meet the needs of the Commander and his HQ staff. Three elements made up the package: Mission Specific Training (MST), Battle Staff Training (BST) and the Mission Rehearsal Exercise (MRE). In layman's terms, the program consisted of: academic lectures, staff exercises based on practical working situations, and a computer assisted Mission Rehearsal Exercise to introduce complexity and friction. Throughout, the participants were supported by Subject Matter Experts, CIS technicians, Real Life Support and also representatives of the Afghan National Security Forces, all contributing experience, knowledge and assistance to the Training Audience.

## **A Realistic and Relevant Scenario**

For each RC N training event, the JFTC staff conduct a detailed in-theatre reconnaissance to inform their planning and preparation cycle. 2013 provided new chal-



allenges within the context of huge operational changes in the RC N. The JFTC prepared, in cooperation with the Bundeswehr Joint Forces Operations Command (BwJFOCOM), a scenario that would develop the training audience whilst ensuring challenge and operational friction within the HQ. It should be noted that whilst the exercise seeks to apply a certain degree of pressure, the Command and HQ are not assessed per se. On the contrary, the scenario focused on ensuring the RC N HQ understood the mission, current and future ISAF operations, and built the required level of confidence to master SOPs and develop Situational Awareness. Importantly, a quality product is built on: the theatre reconnaissance conducted by the exercise Core Planning Team (CPT) and the ISAF Data Capture, which is done by the IT specialists from the JFTC Training Support Division. The theatre visit also provided the staff with a detailed picture of the Commanders' current issues, concerns and priorities.

RC N 13 02 training focused on a particularly busy and demanding period for the HQ, as a data capture. The period 28 Mar – 05 Apr 2013 was chosen as the foundation to the scenario, using a selection of operations as the building blocks for the wider scenario. Additionally, in-theatre concerns and constraints were developed and used as topics within round table discussions and the academic part of the training. The visit further developed key relationships with representatives from the NGOs and IOs and enabled recommendations and institutional



experience to be implemented within the wider notion of Comprehensive Approach.

A continued drive for scenario realism and relevance relies on Subject Matter Experts (SMEs). SMEs were made available by the nations participating in the training or, in some cases, sent by their respective NATO commands. Additionally, SMEs representing IOs and NGOs, termed “White Cell” travel from Afghanistan to add genuine flavor to the vignettes, panel discussions and role-play elements of the exercise. The SMEs attended an early Scripting Conference to assist in the development and crafting of exercise ‘injects’ and storylines.

Additionally, as RC N continues to move through transition towards a com-

plete hand-over, the scenarios needed to focus not on operations in the round but, ‘Support to Operations’. This vital notion of ‘supporting’ required participation from the Afghan National Security Forces (ANSF) members. Representation consisted of soldiers and policemen serving in the units or commands located in the RC N Area of Operations (AOO). This proved highly successful on the exercise, and ensured that the complexities of working with Operational Co-ordination Centers (OCC), District and Provincial authorities and to the ANSF Chain of Command (CoC), was realized.

### Exercise Parameters – Lines of Operation

The reconnaissance visit noted the Commanders priorities as Election preparation and Redeployment. These two priorities provided a baseline for all subsequent planning. All topics and situations exercised during the BST/ MRE phases of the training aimed at what could be shortened to “Support to the ANSF”. Civilian casualties, Non-Kinetic Operations, CIED, Security and Governance, Personnel Recovery, Special operation forces, ISAF Strategy, RC N Operations and Military Coordination, were all still injected, but three Lines of Operation (LOO) linked the Commanders priorities to workable scenarios. These LOO’s were namely: Security (a VVIP Visit), Governance & Development (Elections Meeting) and Redeployment and Force Posture (ANSF



Operation). All these themes were, to a certain extent, linked to ISAF ‘stepping back’ and ANSF ‘taking the lead’. Terms such as ‘In-Extremis’ support used to express the ‘one foot on the ground’ concept of ISAF redeployment, yet, with a retained ability to react in an expeditionary fashion.

A solid grasp and appreciation of Support to Operations and not ISAF operations needed to be emphasized to the TA. As a result of a more passive, and less kinetic stance, the TA noticed an increased emphasis on the involvement of NGOs and IOs, and the role of the ‘White Cell’. Without the active contribution of the practitioners equipped with the first line experience from the work with local population and local authorities in Afghanistan, the TA would have received a less than complete picture

of the current and future ISAF picture. In sum, 15 days of intensive preparation, four days of BST, four days of MRE, 27 VTCs, 16 lectures, 11 Round table Discussions, Media Training and other training activities helped to create a training venue ideally suited to the needs of the training audience. (Check these figures – from previous exercise).

## Mission Oriented Training

The RC N TE 13-02 was considered as one of the most successful RC level events to have been conducted at the JFTC. One of the key elements of this success was the Key Leader (KL) visit which took place in Jun 13. The overall aim of the KLT was to make them familiar with the ISAF mission, future tasks and responsibilities of the

RC N and expectations of the ISAF/ IJC HQs. The KLT provided the background to the Command Team and enabled the new HQ structure to be viewed in person and described in-theatre. Additionally, visit presentations covered: Campaign Design, Strategic Risks Assessment, Governance and Development, ISAF Mission Overview, ANSF Situational Awareness, Election support and Redeployment. Equipped with this level of knowledge, HQ Key leaders arrived at the RC N 13 02 training armed with higher levels of confidence, were comfortable within the new HQ layout and made better use of the presence of the ANSF members and SMEs.

## Mission Rehearsal Exercise

On completion of academics, walk-through/talk-through vignettes and a comprehensive review of SOPs and in-theatre practices, the TA moved into the practical scenario based training. This phase of training allowed the HQ to be constructed in cells and for LOCON / EXCON / SIDECON elements to inject serials and information to test the Planning and Decision Making Cycle. Unsurprisingly, this phase of the training created Traditionally, the training created a perfect opportunity for different commanders and officers responsible for training to visit the JFTC and to get a closer look at the training process. This gave visitors the opportunity to visualise the overall progress trainees had made, from: the “crawl” phase at the starting point, to the ability to “run” in the Mission Rehearsal Exercise. The following visitors were shown around the training event: In considering the Commanders priorities, the MRE made use of an imbedded Media Cell to test and train the HQ staff in all aspects of media messaging. This additional media dynamic raised current in-theatre issues that have reached the German press: alcohol consumption in theatre, CIVCAS, support to the ANSF, CIMIC projects all playing their part.

Constantly searching for improvement and adaptation, the JFTC has demonstrated its capacity to organize this exercise which was far less kinetic, and far more about comprehensive approach. This was a world class training tailored for the mission which gave the next HQ RC N all capabilities to help its commander in his decision making process. ■





# New Beginning for the JFTC

## The Supreme Allied Commander Transformation about the Centre's Future Tasks

■ **Radosława Kubiczek,**  
JFTC Public Affairs Specialist

Use of experience, skills and expertise gained after Afghanistan in training for NATO Command Structure and NATO Response Forces – this is the future of the Joint Force Training Centre (JFTC) after 2014. On 17 April 2013 General Jean-Paul Paloméros, the Supreme Allied Commander Transformation (SACT), visited the Bydgoszcz NATO training centre for the first time after he had assumed the position. He assessed the JFTC's work and marked directions for its future tasks and development.

"I am very pleased to be here in Bydgoszcz today to visit one of Allied Command Transformation's most important commands, which provides a very valuable contribution to NATO transformation and especially prepares our forces for

Afghanistan" – said General Paloméros and expressed his full support to the centre and its mission. "The JFTC Commander, Major General Macko, and the whole staff are doing a wonderful job. They are really committed to their mission that focuses on training people, helping them, supporting them before their future missions. Training at the highest possible level we are preparing for success of tomorrow" – he underlined during a meeting with local journalists.

These were not just simple courtesy words as before the meeting with the media General Paloméros had had a possibility to observe both the centre's staff and training participants working hand in hand in the culminating phase of a Mission Rehearsal Exercise summarizing the first 2013 train-

ing for above battalion level ISAF advisory teams. Discussions with members of future advisory teams and with the Exercise Control staff, including representatives of the Afghan National Security Forces (ANSF), provided the SACT with a complete picture of how the JFTC training events work in practice and what value they have for trainees. The SACT learned more also about the centre's links and cooperation with Centres of Excellence (CoEs). He recognized the proper use of the CoEs knowledge and expertise during the exercises conducted in Bydgoszcz.

The current main effort of the JFTC's work is coming to an end as NATO plans to withdraw its forces from Afghanistan in 2014. Thus, one of the most important topics raised during the SACT's visit was the



future of the JFTC. “For this centre it is not the end but rather the beginning” – General Paloméros said and added: “The JFTC plan for 2013 fully incorporates and demonstrates the complexity and the importance of training for the future of the Alliance. This plan is perfectly in line with my priorities as it focuses on conducting pre-deployment training for current operations, while at the same time also training the NATO Command and Forces structures. (...) We have to build upon the skills and experience we have today after Afghanistan, Libya, even Balkans, to reinforce NATO and Partner Forces interoperability.”

Together with the JFTC Commander





the SACT discussed plans of future training for NATO Component Commands. The JFTC has already established good connections with the newly launched NATO Land Command Headquarters in Izmir. To achieve a complete jointness of NATO forces the JFTC needs to link its training efforts also with the NATO Air Command and Maritime Command Headquarters.

The SACT put emphasis on the Bydgoszcz NATO training centre's engagement in the Connected Forces Initiative (CFI). "In addressing the present and preparing the future all your work runs throughout the entire portfolio of the Connected Forces Initiative; Education-Training-Exercises-

Technology with the ultimate goal of enhancing the Alliance's readiness and interoperability. You are truly at the forefront and your dedication is crucial to maintaining the credibility of the Alliance." Pointing out the JFTC's involvement in the Crystal Eagle 2013, which was this year's biggest training of the Multinational Corps Northeast, the SACT added: "CFI is exactly what you do here. You invented the CFI before it was named."

However, the support for Afghan security will not be drawn back together with NATO forces' withdrawal from the country. General Palomeros emphasized that the reassessment and refinement process of the Alliance's strategy for Afghanistan was taking place and marked that 'JFTC would continue to be on the rise to provide training support and coordination once the operational construct is determined'. He also added: "There is little doubt that the implementation of the plan for post 2014 training in Afghanistan will be very demanding. But together we will meet the challenge".

For the last three years the JFTC has been a home for the Coalition Warrior Interoperability Exercise. Not only did the centre host the event, but it also took an active part in the project by contributing to the scenario development and the experiment execution. "All these training activities are extremely important and powerful tools for transformation" – said General Palomeros. He also highlighted the critical importance of simulation, which is also

an integral part of training provided by the JFTC. "Simulation presents new and extensive opportunities and perspectives for training and we must continue to push forward these innovative practices with an emphasis on being constantly alert to adapting training to the real needs of our nations' forces."

During the all hands meeting with the JFTC staff, the SACT encouraged the centre members to continue their efforts in support of NATO mission and said: "You are not alone; you can rely on your mother ship, ACT". He also stressed that the time was not the easiest for NATO, but the whole Alliance was aware that training remained essential to keep its military effectiveness. To illustrate the importance of training, the SACT concluded his speech with a Chinese saying: "Tell me and I will forget, show me and I may remember, involve me and I will understand."

Before the end of his visit General Palomeros expressed his deep appreciation for enormous support the JFTC received from Poland as well as from the community of Bydgoszcz. "I would like to thank the Polish authorities for their strong commitment to the JFTC and ACT. Poland has been instrumental in helping JFTC to become established and to play a full role in NATO's physical footprint across the Alliance. (...) I am also very pleased to see how our people here are supported and welcome. This is a very friendly community and the JFTC members feel here, in Bydgoszcz, at home" – said General Palomeros. ■





# JJJ – Presenting a Unified Front



■ **MAJ Andrew Gabrielski,**  
JFTC Info Ops Subject Matter Expert

Several months ago, the Joint Force Training Centre (JFTC) hosted the “JJJ Meeting.” As the name implies, the participants of the meetings were the “Three Js”, the Joint Analysis and Lessons Learned Centre (JALLC), Joint Warfare Centre (JWC), and the JFTC. More specifically, the Commanders of the three Centres came together to discuss a number of topics including, defining and providing more fidelity in the roles and responsibilities of each Centre, utilizing the Centres and their personnel in a way that maximizes capability and capacity, especially in the current resource constrained environment, and how when the Centres come together, they are stron-

ger if they present a unified message and a common front, something that not only applies to the JJJs but also to us, at the JFTC.

The last concept, being stronger as a team than acting individually, is broadly defined as unity of effort. There are many definitions of unity of effort, both in the military and non-military parlance. A military definition of unity of effort is “The state of harmonizing efforts among multiple organizations working towards a similar objective (Lawrence, Scott. *Joint C2 Through Unity of Command*. Joint Forces Quarterly Autumn/Winter 1994-95, p. 107). This idea was brought up during the opening remarks of the meeting and from that moment for-

ward, the discussions were oriented towards cooperation, collaboration, and coordination in order to achieve unity of effort.

As mentioned earlier, one of the many topics discussed during the JJJ Meeting was further defining and refining each Centre’s roles and responsibilities in relation to the others. Generally speaking, the JWC focuses on operational level training, the JFTC on tactical level training, and the JALLC focuses on the lessons learned process and analyzes how experimentation can be utilized during the exercise development and execution. Even though each Centre seems to have a niche, or a very specific role, in relation to the other there are certain areas



where there is slight overlap on the type of work being done, even if it is at different levels (operational versus tactical).

This overlap, or duplication of effort, must be minimized in order to achieve unity of effort across the Three Js. It may seem easy to do this locally at each Centre, but taken in the larger scope and context across each of the Three Js, it is a bigger, much more difficult task. This is why the JJJ Meetings are important and it is also why one of the outcomes of the most recent JJJ Meeting was to carry on the collaborative nature of the meeting in a monthly VTC. This way, each Commander can coordinate with the others on topics including points of action, milestones, and ways ahead on activities in each Centre as well as personnel allocation in order to minimize duplication of effort and capitalize on the strength of each location, leading towards unity of effort.

These points and ideas that were being discussed at a very high level during the JJJ

Meeting are not only applicable to the JWC, JFTC, and JALLC as individual Centres, but also to us as individuals that make up the JFTC as a whole. If we look back to the definition of unity of effort we can break it down to the individual level and say that unity of effort is harmonizing efforts among multiple individuals working towards a similar objective, in this case, the success of the JFTC. The JFTC has undergone multiple, some may say, continuous transformation in its history. During this time, members of the JFTC have continuously synchronized and harmonized their efforts in order to project and propel the JFTC forward towards a common objective – the Centre's success.

The JFTC's continued success is dependent on carrying the messages, themes, and hard work that has already been done to date through the summer transition successfully, another parallel message that was discussed by the Commanders of each Centre, but one that

applies to us as individuals as well to the JFTC. Managing the summer personnel transition is essential so that once the newcomers have arrived and are settled into their new roles and responsibilities the JFTC can execute as if no change of personnel has even happened. This is the continual challenge in every organization, to maintain a corporate knowledge base and continue to progress and grow while simultaneously undergoing constant change. Dedicated personnel who strive to achieve unity of effort drive the organization forward successfully, and the JFTC has them.

The JJJ Meeting was a valuable venue for the Commanders to come together, discuss important issues, reach a common understanding, and plan for the future. Many of the discussions are not only applicable to the JJJs as a whole but also to individuals here at the JFTC. At all levels, it is important and essential to achieve unity of effort in order to achieve the common objective. ■

# CAX Forum

■ **LTC Wolfhard Schmidt,**  
Head of the JFTC Wargaming Branch



The 8<sup>th</sup> NATO Computer Assisted Exercise (NATO CAX) Forum 2013 took place in Rome (Italy) from 29 September to 3 October 2013. It was organized by the NATO Modelling & Simulation Centre of Excellence (NATO M&S COE). The CAX Forum is the main CAX related event, held annually, and was attended by approximately 250 participants from more than 50 NATO, PfP, ICI, Mediterranean Dialogue and Contact nations and organizations.

The focus of the 8th forum was on technical items and operational procedures related to simulation based exercises and training support, in order to promote the exchange of information and best practices among the staffs of NATO and national simulation and training centres. Special focus was dedicated to Connected Forces Initiative (CFI) and to NATO used models such as JTLS, JCATS and VBS 2. The forum provides the JFTC a perfect

platform to inform nations and originations on the purpose and the possibilities of the centre and its function within the NATO training and exercise arena. Additionally, the JFTC's future role concerning NATO Response Force (NRF) training and the CFI implementation was addressed by the Centre's Commander, Major General Pavel Macko, in his speech as a key note speaker on the topic "JFTC AS POTENTIAL GATEWAY FOR CFI IMPLEMENTATION" ■



# JFTC as Potential Gateway for CFI Implementation

■ Major General Pavel Macko,  
JFTC Commander

The Joint Force Training Centre in Bydgoszcz (JFTC), Poland, is the NATO's prime joint tactical level training institution which will play important role in implementing the newest Allied Initiative – the Connected Forces Initiative. Here, I will focus on broader implications of the recent NATO initiatives and available IT and CAX technology for NATO collective training and a potential role for the JFTC within it.

## Decade of Transformation

JFTC will soon celebrate 10th anniversary of its activation. It has been a decade of significant growth of our capabilities, capacities and training output for the Alliance from scratch. Center's life experience matches with a very challenging decade for the Alliance as a whole. NATO has experienced its highest ever engagement out of area during the same time. Our operational engagements in Balkans and particularly in Afghanistan have brought us much closer and we have reached unprecedented level of cooperation and integration on all levels, from strategic level down to the smallest tactical unit. It has been truly transformational decade for the NATO and our national forces. We can see the Alliance more experienced, interoperable and more partnership oriented than ever. On the other hand we have suffered significant budget cuts, deepening disproportions of defense expenses

both across the Alliance and inside particular countries. We have not progressed much with some of the key capability shortcomings. While the requirements for maintaining of Allied capabilities for full spectrum response remain untouched, the nature and complexity of security threats is dynamically changing. The threats are less visible and more networked, which calls for full set of new capabilities for the Alliance and possibly its more networked reaction together with partners.

These were widely addressed in our new Strategic Concept and commitments from Lisbon and Chicago Summits. Smart Defense Initiative and its complementary Connected Forces Initiative represent main areas of effort and at the same time ways how to maintain our still relevant present capabilities and acquire the new ones; how to acquire robust, trained and mission ready NATO Forces 2020. While Smart Defense is about acquiring and maintaining the needed capabilities, the CFI focuses on making them more interoperable<sup>1</sup>.

As we wind down our major operational commitments in ISAF and prepare for a different form of our engagement in Afghanistan, we have to preserve significant momentum in terms of cooperation and interoperability we gained. In the absence of major operational commitment, an intensified education, training and exercising is the only practical way for NATO to acquire and further bolster the new capabilities for being

more flexible, deployable and adapted to defend its own territory from any threat as well as to cope with the emerging security threats which are more functional in nature than geographical or purely military ones. At the same time we have to regain our full ability to conduct high intensity joint combat operations, the ability which suffered some attrition in recent years due to prolonged focus on large scale stability operations. This is the reason why the Connected Forces Initiative is so important not only politically and strategically, but also in practical terms.

## Interoperability-Objective of CFI

If we look closely at the three main areas of effort within the Connected Forces Initiative, they all have interoperability as a central objective and focus. In the post-ISAF era we will have to preserve the gains and further expand this interoperability. We cannot expect significant growth of training and overall defense budgets in a foreseeable future. Many of our nations have no ambition and even no capabilities to act unilaterally in larger scale any more. Thus acting as a part of a broader coalition is not an option but a default setup for the future use of our armed forces. Our ability to quickly assemble or regroup and act effectively together in combined formations - in other words **interoperability** is an absolute paramount.

Given the spectrum of capability

requirements, complexity of potential threats and required high readiness of NATO Forces 2020, we cannot afford growing this interoperability as we did until now. The old paradigm of achieving the interoperability of only selected personnel, formations and headquarters as something additional to already fully developed and capable set of national forces and headquarters has to be changed. In principle, we have two main options how to approach CFI implementation. Many suggest that we can use limited effort approach and focus on NATO Command Structure and NATO Force Structure headquarters only and intensify their training in order to facilitate the growing role of Graduated Readiness Forces headquarters for meeting stated NATO's level of ambition, and all the rest leave to national institutions hoping to find each other at some common "meeting point". The other option is to try to coordinate and synergize NATO-led headquarters training and national forces training. If we really want to achieve our goals for NATO Forces 2020 within known conditions and constraints, we should accept the approach that NATO Forces 2020 have to **be born interoperable** instead of made interoperable afterwards. If we accept this approach as the starting condition, then it would become a true **game changer** and have profound implications on the way we implement the CFI. It would guarantee that this initiative will not turn into one time campaign, but it will become for us a way of life.

As already highlighted, the CFI is all about interoperability. The core of the effort and ultimate objective is to achieve **operational interoperability** and higher level of readiness of the NATO Command Structure and NATO Force Structure headquarters on one side and NATO forces on the other side through intensified training and exercises. Ability to participate in combined operations should be an organic part of national training of the forces. Combined joint integrated multilevel exercises including LIVEX part bringing together the headquarters and forces should represent regular culminating event for achieving ultimate operational interoperability, which will make sure that our "Chiefs and Indians" are well trained and coming from the same "tribe".

Enhanced education and training should facilitate achieving of "**mental and doctrinal interoperability**" as a key prerequisite for reaching the operational interoper-

ability. Our senior leaders, officers and all personnel should be trained as NATO personnel ready to "plug in" to coalition effort throughout the whole career development. This will require much closer harmonization and standardization of our educational and training systems and programs. National institutions should educate and train all personnel from the beginning of their professional growth to be able to integrate and act as a part of the Allied effort and at the same time preserve all aspects of national interests as well as citizenship and patriotism building.

Better use of technology should aim at achieving **technical interoperability and interconnectivity** as a key enabler and force multiplier. If NATO Forces 2020 should be born interoperable, their equipment has to fit together and be more interchangeable and cross-supportable, their C2 (C4I2S) systems have to talk to each other and their headquarters should be interconnected. While for the operational deployment a sustainable concept of the Future Mission Network build on experiences from the Afghan Mission Network is a way to achieve fast connectivity of our forces and headquarters, a similar approach should be adopted for the training support. Our national training support tools, systems and training centers as well as the NATO ones should be further harmonized and more permanently connected together in order to facilitate closer affiliations between headquarters and forces, which will allow more combined and joint integrated training. We should move from isolated stove-piped systems and applications towards more flexible modular systems and solutions. This is happening already now and the NATO CAX Forum, ITEC and other similar events play important role in this effort. Our key training facilities should be permanently connected into a NATO Training Network or Federation where it is reasonable and efficient. In addition, mobile tools for projections of our training capabilities and support to remote locations wherever needed should be acquired and fielded as well.

## CFI Implementation: Possible JFTC Gateway Role

Although discussion and coordination of planning for CFI implementation is right now led by ACT and its institutions,

the implementation itself must be collective effort of all of us - NATO institutions and headquarters as well as all members of NATO and their headquarters and institutions. It will be our major challenge and at the same time the biggest opportunity which offers enough roles to play and room for much closer collaboration for all of us without attempting to dominate it. Our achievements should not be measured by how much we have worked or statistically done, but by how much of real interoperability we have actually delivered. I believe we don't need a major change of common funding principles, nor should we try to decrease the roles and responsibilities of nations and their institutions and substitute them with the NATO ones. We don't need to build many new capacities and possibly duplicate our effort. Instead, we should spend few possible "CFI" additions on both sides, NATO and nations, to improve and enhance those institutions and capabilities where we are already the best and acquire only those new capabilities which fill identified gaps or new requirements and better harmonize and connect them together.

An approach to CFI implementation as I have just described was the starting point for the JFTC in our considerations of our potential future role in CFI. I am convinced that as the NATO's only joint tactical level training center with key focus on the levels between NATO Command Structure Headquarters and national forces, the JFTC can naturally play the **gateway role for achieving the operational interoperability and provide an access point to NATO support** to nations and their armed forces. We don't see this role as a central dominant body which directs this effort, but rather as facilitator of the discussion and institution fostering collaboration among NATO and national institutions and providing access to those NATO tools and systems which some nations do not possess and acquisition of them would not be reasonable. As the training centre, we focus on those areas where we can deliver tangible practical results. Our primary effort will be dedicated to supporting operational interoperability by providing robust training support and contributing to experimentation and development of training and exercise support tools and systems.

JFTC has been very active in introducing, promoting and implementing intercon-



nected distributed training support by the combined training teams in close cooperation with our US partners even before the CFI was introduced. Recently, combined effort of JWC, JFTC, US JCW, and US MCTP Ft. Leavenworth allowed us to run the combined distributed ISAF pre-deployment exercises with a training audience of 5 to 7 thousand staff members, featuring four levels of command and spanning various locations over two continents. We gained the experience and expertise which will allow us to organize multilevel distributed exercises for the future. In such exercises JFTC will host joint tactical level headquarters and link them to joint operational level (supported by JWC) and also allow to plug-in for national forces, which could train either from their national training centers or field locations. This construct of exercise would be a culminating point for operational interoperability and would assume that we link together NATO-led and national exercises, synchronize and harmonize them for gaining maximum synergy. It will require long term cooperation and combined effort of NATO and national trainers as well as robust interconnectivity and technical support (AIS and CAX) of training. The unique expertise of Centers of Excellence could be integrated and "operationalized" to such exercise through JFTC and JWC entry point or event through the national facilities.

We already started to implement this kind of support beyond the ISAF mission. Exercises like PUMA 12 of Polish SOF Command in its role of NATO Multinational SOCC or training support to MNC NE series of Crystal Eagle exercises this year are good examples of this approach. In the near future we will support LC HQ Izmir on its road to FOC and some of GRF Corps HQ's and

possibly brigades will be integrated into it.

### Need for NATO CAX Platform

Integrated multilevel exercises require not only physical connectivity and interoperability of C2 and various functional systems, but also interoperability of various CAX systems and exercise control supporting tools. This is another area where we will play a very active role. As a most urgent current task in front of JWC and JFTC is to overcome somewhat uncertain future of our current key CAX systems, JTLS and JCATS, and make sure that we can fully use them for the NATO training needs before we collectively deliver a new set of NATO CAX systems. In addition, collectively NATO and nations need to define the requirements for new CAX systems, which must be modular and flexible, allowing building a realistic synthetic environment and combining it in a transparent manner with feeds from live systems which supports integration of various levels of command and training in a fashion where headquarters and forces "train as they fight". This includes the ability to stimulate the NATO FAS that will present commanders and their staffs with a realistic and believable training environment.

JFTC has been nominated the role of NATO Live Virtual Constructive Simulations Hub. We have already conducted series of experiments and already used various tools we have at our disposal in support of real training events. However, this is just a beginning and more will have to be done to fully exploit currently available systems. In order to deliver on the promised JFTC gateway role, we already started development and implementation of the practical tools allowing dis-

tributed training and projection of our capabilities to a remote training audience. JFTC already has at its disposal mobile capability we call "CFBLNet on Wheels" and "CAX on Wheels" and we have tested and used it in support of the previously mentioned exercises. These tools and their broader use can further mature with cooperation and assistance of all other NATO and national partners.

Last, but not least I would like to mention CWIX (Coalition Warrior Interoperability Exploration Experimentation Exercise). JFTC as the Host of this large interoperability testing of C4I2S, used this opportunity and tried to operationalize it with operational scenarios setup as well as with our own experimentation in order to improve exercise support tools. I would like to highlight the inclusion of Modeling and Simulation into upcoming CWIX 2014 offers a unique opportunity to expand testing and bringing more operational relevance to this exercise. I would like to encourage all partners to use this opportunity and participate in this event either in Bydgoszcz or from their home locations.

The JFTC and its personnel are really looking forward to the follow on discussions, cooperation network building, and contribution to sound results for the Alliance and its nations in implementation of the Connected Forces Initiative. ■

<sup>1</sup> M. Mizera, P. Macko, Policy Papers, NATO Forces 2020: Role of Connected Forces Initiative, Center for European and North Atlantic Affairs, Bratislava, 15.06.2013, <http://cenaa.org/wp-content/uploads/2013/06/PP-6-2013-NATO-Forces-2020-Role-of-connected-forces-initiative.pdf>

# Jackals and Drones

## The Metamorphosis of 21<sup>st</sup> Century Terrorism

**The Front-line Consensus on the Threat of Terrorists using Drones**

■ **Christopher Charles McKeating,**  
Military Advisor – Future Forces Exhibition  
& Conference 2014

This paper is a continuation of *Jackals and Drones: The Metamorphosis of 21<sup>st</sup> Century Terrorism - Al-Qaeda's Chrysalis & the Metamorphosis of Terrorism Research* which was published in the Spring Edition of the JFTC magazine.

**Part I – ‘The Context’** was based on a compilation of notes from two years of tutorials and research on terrorism and was collated as context for an on-going piece of fieldwork into quantifying the nature of the threat posed by terrorists engaging in drone warfare. Whilst it argues that no empirical evidence exists to categorically confirm a drone threat, it does confirm that the development of drones by terrorists such as Hezbollah is beyond its infancy and that both Al-Qaeda and the IRA are in a state of technological mutation; that their progres-

sion - from asymmetrical field commands and IEDs to cyber warfare and sophisticated operations centres - is transforming at speed with 21st century technologies.

Based on this observation, the work argues that not only will Al-Qaeda and the IRA emerge from this chrysalis and actively deploy drones designed-to-mission over the next five years, but that the United Kingdom is vulnerable to being the first target of such an attack. In summary, although it can be seen that there have indeed been significant inroads to understanding the phenomenon of

terrorism, the greatest weakness between terrorism studies and policies based on research is a lack of pragmatism and a failure to recognize aims of terrorists as comprehensible and realistic as opposed to idealistic and inhuman.

The paper hence highlights an urgent need for policy-makers to be aware of not just the strengths and weaknesses of the research upon which knowledge of terrorism is based, but the politicization of the term ‘terrorism’ and the flaws in the arguments and counter arguments for ‘new terrorism’.

It is also argued that if terrorism research is to accumulate empirical evidence on whether terrorists are likely or not to employ technology on a military scale, scholars need to move beyond the research paradigms and incentives of the last ten years, beyond the confines of office centred studies and beyond the inability to come up with a working, useful definition of the phenomenon for policy based research.

**Part II – The Research** is based on an analysis of data aggregated from 23 interviews and 100 questionnaires sent to 156 experts on warfare and terrorism across NATO (i.e. Electronics, Avionics and Explosives Experts, Senior Officers, CIA Operatives, Special Forces, ex-Paramilitary Combatants, PMC Contractors, Combat Pilots, and Professional Mercenaries). The research confirms not only that drones *will* be a feature of modern terrorism but, with an overwhelming number of respondents who identified specific drones as superior weapons to car-bombs and suicide bombers for specific targets - and London as one of the targets most susceptible to drone attacks - consensus that the implications are acute; indeed significant enough to warrant calls for further anti-terrorism legislation and new counter-terrorism measures, particularly in the field of counter-drone technology. The research gives context to the answers by providing references throughout the questions to the motivational influences behind terrorists and, by focusing on their origins, structure and strategies, an insight as to how targets are selected and weapons chosen. To compound the research (and as the past is fundamental to understanding any present or future application of contemporary weaponry), some of the questions were framed within historical arguments to: (1) illustrate the modernity of terrorism and (2) show its nature to develop pragmatically and technologically when given the opportunity. It was concluded, as a consequence of the proliferation in dual-purpose components and an increase in the number of failed nation-states, that the opportune time for terrorists to develop militarily has already dawned; that terrorists are

more realistic than idealistic when it comes to technology and not just in a chrysalis of technological metamorphosis but mutating steadily towards drone warfare and at an alarming pace.

## Theory

The background to this research stems from an event that took place on Tuesday, 7th November, 2004 when, at approximately 10:30 am local time, IAF combat pilots failed to intercept a terrorist drone that had penetrated Israeli airspace. The Iranian designed drone had been built, armed and launched by Hezbollah. It was the first verified flight of a drone by a terrorist designated organization. Ten years later and with the author unable to interview terrorists on claims to have since cultivated drone-technology<sup>1</sup>, a model of research had to be developed. By piloting of various questionnaires aimed at ascertaining how terrorists could apply drones, the theory upon which this paper is based came into being:

*Due to the increasing para-militarization of some terrorist organisations, military oriented discourse between irregular combatants of non-state forces has become close enough to the discourse of regular combatants of nation-state forces that, for certain aspects of terrorism studies, elements of the state can effectively be interviewed in lieu of terrorists.*

By theorizing how non-state combatants and state combatants think alike in combat and hybrid warfare and, by focusing on what they have in common with regard to innovation, acquiring targets, applying their equipment and adapting their defensive and offensive capabilities to their mission, it became possible to hypothesize with first hand expertise on the consensus as to the threat of terrorists investing in drones.

The paper is hence an insight to not just NATO's stance on the question as to whether or not terrorists will use drones, but an insight as to the terrorists' stance. In summary, the project is both a consequence of Hezbollah's technological breakthrough that Tuesday night in May a decade ago (just

23 months after the USA first used an MQ-1 Predator drone armed with two AGM-114 Hellfire missiles in combat) and from having demonstrated both public interest in the subject and the existence of concern and discourse within NATO as to the implications of terrorists employing drone technology.

## Note

(A). Due to the constraints of publication, this draft has been edited

(B). There was no agreement on the model of drone most likely to support terrorism. In fact, there was much disagreement. However, as this anomaly had been noticed at the piloting stage of the research, questions were included to find consensus on the types of drones that correlated with the modus operandi of two well-known groups (the IRA and Al-Qaeda) and, by default, consensus on the subsequent risk to hypothesized targets. Due to the above and further discrepancies in responses over the effectiveness of various weapons (namely hand grenades), the issue of London, a late interview with two ex-UNGCI personnel who worked with weapons inspectors in late 1990s Iraq and, to obviate any of the disorientation on terrorism and weapons of mass destruction that appeared post 9/11, a few questions were appended to the research on:

- (1). The prototype 'terrorist-drone' that was designed to assess innovation (this project will be presented at: FSEC 2014 in Prague).
- (2). The 'drone-friendly' properties of C4H8Cl2S which were explored to assess the viability of chemical attacks. This was as a direct result of interviewing the ex-UNGCI officers and the alleged use of the organophosphorus chemical Sarin by rebel forces in Syria.
- (3). The threat to London and its heritage to assess why the respondents thought the city to be so susceptible to drone attacks.

## Introduction

*“If a terrorist group gets drone technology, it will use it against us in every way it can.”*

**Former United States Director of  
National Intelligence,  
Admiral Dennis Blair<sup>2</sup>**

Despite increasing use of drone technologies by state-forces (both on and off the battlefield) and statements such as Admiral Blair’s, the question as to whether or not drones will soon be used by non-state forces, has, until recently, actually attracted little public debate. With the militarization of terrorist organizations across the world intensifying, however (e.g. with the paramilitaries of Syria, their use of heavy weapons and their recruitment of veteran combatants from Iraq), it is a topic that is increasingly being discussed at the operational level within military circles throughout the Alliance. In order to test this observation and the belief that further research into whether or not terrorists will use drones was needed, an assessment of consensus on the subject across fields such as electronics, avionics and explosives was deemed essential; as too, was the ability to publicly demonstrate military discourse on the subject. However, with no precedent of a drone threat or strike by terrorists, and little published material (other than a handful of newspaper articles) to suggest a threat, it was necessary to first elicit open debate on the topic. This was achieved by the publication of a 9000 word essay on the topic of drones in NATO’s JFTC - *Journal for Transformation Through Training*<sup>3</sup> - upon which the media, military and press quickly picked up on and reported. Despite a sensationalist review of the essay by several tabloids, *The Times*<sup>4</sup> article added to others’ calls for a re-assessment of the situation and a review of the arguments as to why terrorists have not as yet employed drones, whether they are likely to employ drones and if the adage that suicide bombers and car-bombs are cheaper and more effective than drones is of any real value.

**It needs to be made clear at this point, that whilst this research is based on samples collated from experienced sources and authentic literature on the subject, many of those sampled were predominantly either front-line combatants and serving officers or officials with either personal or direct interests in counter-terrorism. Furthermore, it needs to be pointed out that the definition of ‘terrorist’ was outside the scope of this essay and has intentionally not been covered in this work. For the purposes of this essay and sake of argument, any references to the above are to those proscribed as ‘Terrorist Organizations’ under Schedule 2 of the Terrorism Act, 2000, by the government of the United Kingdom of Great Britain.**

The first section of the paper looks at the participants sampled, how they were grouped and several issues that arose during the piloting phase of the questionnaire. This is prefixed by a brief introduction to the moral issues surrounding drones and the implications of their use to combat terrorism. For an assessment on the consensus of the types of drones most likely to be of appeal to terrorists and the targets most likely to be attacked, this is followed by an analysis of the five parts that made up the questionnaire: (1) terrorist innovation, (2) target selection, (3) drone design, (4) counter-drone capability and (5) understanding terrorism and the implications of drone attacks. Each of these parts is supported by references in the questions to the historical traits of terrorism and the argument that terrorism is mutating militarily as a consequence of the increasing number of failed states, failing states and the increasing para-militarization of terrorism. The three final sections were appended as practical, hypothetical and primary arguments to compliment the findings of the research: these are the design of a prototype drone, a proposed explanation for the ‘London Phenomenon’ and an evaluation of mustard gas as a chemical weapon that the consensus showed to be a ‘good match’ for

weaponizing drones.

The paper concludes that the consensus across NATO is that drones will be a feature of modern terrorism and that the implications will have far reaching consequences. It was equally concluded that as a consequence of the proliferation in drone components and an increase in the number of failed nation-states, that the development of the technology by terrorists is advanced and advancing; terrorists are not just in a chrysalis of technological metamorphosis but mutating steadily towards drones as a means to wage what U.S. Army Lt. Col. Shannon Beebe called a “*vortex of violence*”<sup>6</sup>; 5th Generation Warfare and Net-centric Terrorism. Although the only empirical evidence that categorically confirms a drone threat is based on Israel’s assessment of Hezbollah’s capability (and to a degree the IDA report of 2005 which stated both Al-Qaeda and FARC to have experimented with unmanned weaponry), consensus confirmed that the development of drones by terrorists across the world was nevertheless inevitable, beyond its infancy and that terrorism was indeed in a state of evolution; that its progression - from asymmetrical field commands and IEDs to cyber warfare and sophisticated operations centres - has been transforming at speed with 21st century technologies.

Based on these observations, it is further argued that not only will terrorism emerge from this chrysalis and actively deploy drones designed-to-mission over the next five years but, given the discourse, that the United Kingdom is likely to be the first target of such an attack (particularly from within its borders). Prime targets are believed to be stadiums and calendared celebrations such as the *Grand National* or *New Year’s Eve*. National icons came second as ‘targets of propaganda’. The consensus on the prime threat to the United States was from drones outside continental America with attacks on its embassies, warships, key personnel, bases and citizenry. This was followed closely on the home-front, with cities such as

Dallas, Houston, Phoenix, Minneapolis, Los Angeles, Seattle, Chicago, Boston, New York and Washington, overwhelmingly believed to be defenceless against attacks by drones launched from inside Mexican and Canadian controlled territories.

Unfortunately, by overestimating the capabilities of terrorists to deploy WMD over the last decade, their capabilities to deploy drones in this decade have been underestimated. Not only are the voices of those on the frontline countering terrorism believed

to have been stonewalled, but the ability of drones to democratize the ability to wage terrorism by organizations and individuals misunderstood. In short, although there have been significant inroads to understanding the technological evolution of terrorism, a lack of pragmatism (primarily a reluctance to recognize the aims of terrorists as comprehensible and realistic) has led to what is little other than a policy failure in this area. To illustrate the point, a young British Captain serving in the Helmand replied (most poignantly) to the

question as to why drones might be a more attractive alternative to suicide bombers by answering simply that, “*they obviously obviate the need to sacrifice a person’s life.*” The results of this research add to the argument that the goals of terrorists are measurable, achievable, human and well defined and that drones will become as ubiquitous a terrorist weapon as the AK47 and the IED (in the public’s eyes) over the next five to ten years.

## Section I

*“As often in the past, future conflicts will appear as hybrids comprising diverse, dynamic, and simultaneous combinations of organizations, technologies, and techniques that defy categorization.”<sup>6</sup>*

Capstone Concept for Joint Operations Version 3, January 15, 2009

### (1) The Moral Implications

Ironically, whilst to say that a drone strike against a terrorist target by a nation-state is a polarizing topic, indeed an understatement (especially in the States), the research shows that the reverse is not; U.S. drones were overwhelmingly, for example, seen as ‘weapons of terror’ and to have set a precedent for future acts of terrorism (see questions 01 – 08 below). This has also been reflected in a number of well publicized statements over the last year: in January 2013, for example, the British UN Special Rapporteur on Counter-Terrorism said:

*“its growing use (drone strikes by nation-states) includes raising the spectre that non-state organizations - organizations labelled as terrorist groups - could use the technology in retaliation” and that, “the plain fact is that this technology is here to stay, and its use is a reality with which the world must contend.”<sup>7</sup>*

And just a year earlier, the head of the CIA’s counter-terrorism centre (2004 - 2006) stated:

*“the Pakistan drone programme is far too indiscriminate in hitting targets and could lead to such political instability that it creates terrorist safe havens.”*

*“We have been seduced by them (drones) and the unintended consequences of our actions are going to outweigh the intended consequences.”<sup>8</sup>*

### Questions 01 – 08:

**01. The United States has set a precedent. Within 5 years, Chinese drones could be killing Uyghur Separatists in Kazakhstan, Turkish drones could be killing PKK Insurgents across Northern Iraq and Israeli drones could be targeting and assassinating key assets across the Middle East. How fair is this statement?**

Very Fair	Fair	Unfair	Completely Unfair
30%	43%	17%	10%



**02. Are drones effective for killing terrorists?**

Yes	No
87%	13%

**03. Are drones effective in combating terrorism?**

Yes	No
22%	78%

**04. Are drones being used as a weapon of terror?**

Yes	No
67%	33%

**05. Has the United States resorted to confronting terrorism with terrorism?**

Yes	No
64%	36%

**06. In the 1940s, 2,340 German UAVs (V1s) rained down upon London killing 5,475 and injuring over 16,000. In the 1980s, unmanned aircraft crossed the Atlantic. Model aircraft today can fly in excess of 400 kph. Why have terrorists not employed drones to date?**

Answers predominantly centred on the fact that there had been: (1) no precedent of a drone attack (2) the development of drone technology has been too fast and (3) there is no failed state or terrorist base close enough to western targets from which to develop and launch long range drones with large payloads.

**07. Given the proliferation in drone components and the militarization of some terrorist groups, how long will it be before a nation state is attacked by a non-state drone (excluding Hezbollah's)?**

1 – 2 Years	2 – 3 Years	3 - 4 Years	5+ Years
	27%	24%	34%

15% voided this question

**08. Drones will target US cities from Canadian and Mexican territories over the next 10 years. Highlight how realistic this is in your opinion.**

Very Realistic	Realistic	Unrealistic	Completely Unrealistic
10%	53%	23%	14%

**(2) Participants Sampled for the Research Proper**

Table 1 shows of the 156 participants across the sectors sampled (Government, Intelligence, Military, Civilian and Police), that 17 held the rank of Colonel and above, that 46 were explosive experts (10 Civilians), 27 electronics / avionics experts (7 Civilians) and 25 pilots and logisticians (5 Civilians). The rest were made up of 13 Special Forces, including 3 ex-Legionnaires, all with Combat / Field experience, 6 Police, 5 Paramilitaries, 5 Government Officials, 7 Intelligence Officers, and 5 PMC contractors.

**Table 1**

Gov.	Intel.	Military Pre-Screening	Voided	Military Post-Screening	Civilian	Police
5	7	17 Col. +	14	3 Col. +		6
		36 Explosive Experts	16	20 Explosive Experts (11 from Georgia & Ex-Yugoslavia bar Slovenia)	10 Explosive Experts (5 from Georgia & Ex-Yugoslavia bar Slovenia)	
		20 Electronic / Avionic Experts	13	7 Electronic / Avionic Experts	7 Electronic / Avionic Experts	
		20 Pilots & Logisticians	13	7 Pilots & Logisticians (inc. 2 Non-NATO Algerian Combat Pilots)	5 Pilots & Logisticians	
		13 Special Forces	0	13 Special Forces		
		5 Para Militaries	0	5 Para Militaries		
		5 PMCs	0	5 PMCs		
5	7	116	56	60	22	6

**Note:** 56 from the sector ‘Military’ were voided on request or for not meeting the minimum criteria. As with the interviews, none of the data collated from these respondents was included in the results.

Table 2 shows the minimum criteria set for participation in the research across those sectors sampled:

**Table 2**

Sectors	Government	Intelligence	Military	Civilian	Police
<b>Sample</b>	5%	7%	60%	22%	6%
<b>Criteria 1</b>	<b>Aged between 30 – 60 with min of 4+ years’ experience in one or more of the following:</b>				
All Sectors	Military, Intelligence, Diplomacy Air Defence, ATC, Explosives, Electronics, Pilot, Engineering, Shipping, Railways, Logistics, Counter Terrorism				
<b>Criteria 2</b>	<b>Service with / in at least one category:</b>				
Intelligence	SIS, MOSSAD, GCHQ, CIA, MSS, ABIN, GRU, DGSE, GIP				
Military *	Combat or Frontline Experience, PMC, SF, Para-Military, Foreign Legion, N. Ireland Security				
<b>Criteria 3</b>	<b>Minimum ranks or equivalents to have been held:</b>				
Military**	Sergeant, PO, Cpt				
Civilian	WS-14 to WS-19 (US White Collar Grades) or GS/GM-13-14 (US Blue Collar Grades)				
Police	Sgt, Inspector				
<b>Criteria 4</b>	<b>NGO, Soldiering, Diplomatic Service or direct role with / in one or more of the following:</b>				
Government	Mali, Afghanistan, Philippines, Yemen, Algeria, Iraq, Congo, Yugoslavia, N. Ireland, Syria, Georgia, Israel, Sudan, Libya, Saudi Arabia, Somalia, Columbia, NATO				
Intelligence					
Military**					
<b>Criteria 5</b>	<b>Work countering the objectives of at least one of the following:</b>				
Government	Al-Qaeda, PIRA, UDA Shabaab, Ansar, ETA, Islamiyah, FARC, UVF, INLA, Al-Asqua, Shaheed, Shrinkyo, Hamas, LTTE, Shining Path				
Police					
Intelligence					

\* Except NATO & Civilian Pilots

\*\* Except those from Ex-Yugoslavia, bar Slovenia

As it was already agreed that any record of the qualitative, semi-structured interviewing that was to take place would remain confidential (the 23 interviews were arranged and scheduled to give the author context only) for security reasons, the questionnaire thus needed to be structured to add more quality to the quantitative data. The hope was that this would give the research a richer and more meaningful result. Hence, open ended questions were included to capture some qualitative information upon which an analysis of the aggregate data could then be conducted. In short, on top of the 'agree' / 'disagree' type of format, this enabled the author to capture key lines of thought, key vocabulary and stances that were found to be of importance.

**Note: The data aggregated from the confidential interviews was, however, later deemed to be too important to exclude a priori and the interviewees were hence contacted for a compromise. Despite the fact that it would undermine the research academically, it was agreed that there would be no breach of confidentiality were the data to be used as argument in the narrative of the essay – without reference. As this piece of research was written essentially as a call for further research, the benefits were believed to outweigh the academic risks.**

## Section II

*“The categories of warfare are blurring and no longer fit into neat, tidy boxes. One can expect to see more tools and tactics of destruction – from the sophisticated to the simple – being employed simultaneously in hybrid and more complex forms of warfare.”<sup>9</sup>*

**Robert M. Gates, United States Secretary of Defence, 2006 - 2011**

### (1) Terrorism & Innovation

Throughout the history of modern terrorism, from the IRA's radical advances in mortar technology during the 1990s to the use of mobile phones as remote detonators in the Iraq war, the adoption of military technology by civilian combatants has been rapid; it was Lashkar-e-Taiba that showed the world how technology and ten men could bring a city of 20 million to a standstill through its execution of one of the most technologically advanced terrorist attacks in history. What hit Mumbai was not just ten gunmen intent on slaughter, but ten armed microprocessors supported by an operations centre over 500 miles from the killing fields. Through coordinating the attacks in real-time, using BlackBerrys, satellite phones, GSM handsets, search engines and social networking sites, the terrorists were able to sustain a kill ratio of 18:1.

Although technology and terrorism have always marched in pace with modernity, what is different today is how technology has opened up the battlefield; for the state, the soldier on the ground has become strategic and may now directly influence tactical, operational and strategic levels of command to the degree that they affect political change on a national scale; for the terrorists, it has enabled their corporals to affect political change on a global scale and not only exploit the gaping power vacuums left in the wake of failed revolutions, but build their chrysalides across the decaying nation-states of the world.

Furthermore, due to the pace of technology it is simply impossible to define what proto-types of drones actually exist today and what types of drones are likely to be developed, what types of targets are vulnerable to these and to which state actors and non-state actors these capabilities would prove attractive. Hence, it is only by first brainstorming how military technology that has crossed over to the civilian world (e.g. GPS) could be reapplied by terrorists that thought can then be given as to whether or not legislation or further counter-terrorism measures need to be emplaced. Without it, the word 'drone' is as meaningless as the word 'terrorist' and discussion on their validity little other than an insight to the issues that Kafka's allegories brought to light way back in 1917. With a new, technically savvy, younger generation of post-Arab spring men and women replenishing the ranks of terrorist organisations and radicalised groups across Europe, America and abroad, brainstorming how far drones are a part of their plans is essential.

No.	Statement / Question	Yes	No
09	Terrorist ranks are being replenished with younger, technically literate men and women post Arab-Spring. Highlight if this will lead to an increased application of commercially available technologies for terrorist purposes.	93%	7%

No.	Question	Completely Agree	Agree	Disagree	Completely Disagree
10	Highlight how far you would agree that a serious threat exists from terrorist organizations planning to take advantage of drone technology.	33%	55%	12%	0%

Consensus on the threat was shown to be high, but it is not new. As far back as 2004 a U.S. House of Representatives subcommittee heard testimony<sup>10</sup> regarding the threat from Dennis Gormley of the Monterey Institute that a drone “could be fired from beyond visual range at a target while the terrorists make their escape before impact” and that there “would be little danger of detection in transportation, launch or escape.” Further questions were hence asked to ascertain more on the seriousness of the threat by focusing on weaponization:

No.	Statement	Very Easy	Easy	Difficult	Very Difficult
11	Highlight how easy it would be to weaponize a civilian drone with the Czech designed explosive, semtex.	13%	68%	19%	

No.	Statement	Very Easy	Easy	Difficult	Very Difficult
12	Highlight how easy it would be to weaponize a civilian drone with an IED.	12%	72%	10%	6%

Having established that existing US drones are considered to be a state weapon of terror and that the seriousness of the threat of terrorists acquiring and arming drones is high, it was necessary to consider practical aspects of actually building the machines. With the miniaturization of auto-pilot systems and gyros post-2005 and the increasing range of commercially available drone kits, batteries and parts to build fast flying, short range drones with payloads of up to 30 kilos, the respondents were asked to view the US military’s latest acquisition (the ‘Switchblade’) and consider:

Questions 13 & 15	Compiled Answers	Could it be replicated?	
		Yes	No
How could Terrorists utilize such a weapon?	Most respondents predicted that manufactured drones will be used as insurgency weapons as opposed to weapons for assassinations or attacks on civilian targets. ‘Terrorist Drones’ would be ‘assembled’ on a case by case basis. With the increasing para-militarization of groups like Hezbollah and Al-Nusra however, some will ‘slip through the net’.	78%	22%
What types of Terrorists would they appeal to?	Drone capabilities were considered so diverse that the technology was deemed to be of incalculable value to most, if not all, terrorist organizations.		
How widely available and affordable is the technology?	The proliferation of drone technology was seen as a serious concern in that it enables terrorists to ‘assemble’ drones as opposed to ‘manufacture’ them. Over 74% of the respondents said the technology was widely available and affordable		

Peter Bergen the director of the national security studies program at the New America Foundation, said, “*The explosion in drone technology promises to change the way nations conduct war and threatens to begin a new arms race as governments scramble to counterbalance their adversaries.*”<sup>11</sup> In short, the dissemination of military technology and dual purpose components has already filtered down.

Having established that the consensus on terrorists considering drone technology is high and that drones would not be difficult to weaponize, it was important to pinpoint why they have not as yet been used beyond the experimental stage and if suicide bombers and car-bombs will remain the weapon of choice. This sampling showed the argument that drones are unlikely to replace suicide bombers and car bombs, the hallmarks of the modern terrorist, to be less than black and white. The reason for this is that, in certain scenarios, a well-directed explosive of several kilos flying at 200 kph would have far more of a devastating effect (or desired effect) than a 500kg car bomb on the ground. The fear is that drones could open up areas that were hitherto off limits with existing weapons. Furthermore, whilst a suicide bomber may well, for example, have as equally a devastating effect on a stadium crowd as a small suicide drone, the drone could fly in fast from hundreds of kilometres away, with dozens of ‘*contubernales*’, take in targets of opportunity on route and, in real time, home in on secondary targets i.e. search and rescue teams and congested emergency exits. In short, their means to terrorize and the means to which they can be applied are infinite. It is merely a question today of fuel and payload calculations:  $\text{Max Payload} = \text{MTOW} - (\text{OEW} + \text{Fuel Capacity})$ .

## (2) Target Selection

The motives behind Al-Qaeda’s initial attacks were clear; “*to radicalize and mobilize the Islamic world*” (Jason Burke, 2005) and promote the ideology that united and motivated Jihadist groups. As Al-Qaeda has matured, its ranks have continued this theme and the group today is reflective of an international, academically qualified and younger generation. Furthermore, a decade of repressive legislation and war has fragmented and decentralized the hierarchy to the degree that their affiliates have become increasingly autonomous and their motivations for alliance more varied (Gartenstein-Ross and Dabruzz, 2008). In this aspect of Al-Qaeda that is important with regard to the question of drone use; unlike other terrorist groups where innovation is often stifled, Al-Qaeda has become creative and technologically oriented.

Moreover, whilst Al-Qaeda’s original leadership inspired a generation of mass attacks at the ‘far enemy’ by career terrorists, the new leadership might not; the motivational influences on the group’s followers have simply changed beyond recognition over the years and this could have serious implications on future attacks. For example, what radicalized Bin Laden’s and Al Zawahiri’s generation is very different from what radicalises today’s, post-Arab Spring youth and pre-dates the many thousands of jihadists who have fought over the last decade as a direct result of the wars in Iraq and Afghanistan. In short, today’s Salafists are not motivated by fighting the Soviets, for example, or dependent on the networks that Bin Laden’s generation relied upon and that the West was familiar with countering. What they have is something else and it is not ‘new’. In fact, it is as old as the hills. What today’s Salafists have in common is a shared perception of hatred and an ideology that transcends ‘disbelief’, a shared expectation of being exploited and a shared anthology. Their motivational influences stem from the battlefields of Bosnia, Chechnya, Afghanistan, Iraq, Syria, an increasingly globalised world and a comprehensive, innate understanding of their enemy. Their network is no longer familial and localised, but Oedipal and Balkanized. What has been the key to their resurgence and entrenchment from North Africa and the Middle East to Paris and London can hence be found in the history, continuity and modernity of terrorism.

In effect, the leadership of Al-Qaeda today could be said to have democratized - with legions of autonomous, multi-layered networks of cells, affiliations and alliances having institutionalised an ideology that has captured the zeitgeist of 21<sup>st</sup> century Islam. It could also be said to have set in interminable motion of the inspiration for not just this generation’s radicalisation, but the next’s; millions of potential recruits and sympathisers from which to pool indirectly or militarize under a physical structure that is decentralized and supported financially, technologically, logistically and ideologically, not by a franchised, parental, organization - but a community. This progression has proved appropriate to the goals of the organization in that it has enabled Al-Qaeda not only to survive the onslaught of the world’s superpowers, but maintain its position at the forefront of the Salafist movement.

Like all terrorists, Al-Qaeda’s ideology is nevertheless reflected in both the targets it selects and the tactics and weapons it uses to attack them; massive casualties or horror killings in an international, publicised context. And, by reversing the equation, research can still determine their weapons of choice and learn how to counter them. In the Al-Khobar compound attack of 2003, Saudi Arabia, it was car-bombs and the use of blast-walls. It was also this case where the counter-measures failed to hold the terrorists and, after separating the hostages into Muslims and non-Muslims, they proceeded to slit the throats of the

latter (Abdul Hameed Bakier, 2006); over a thousand Western families left the country in the following three months. Long term reconnaissance, high quality explosives and a coordinated, highly daring attack (that included suicide bombers to breach the car-bomb proof walls and head-sets for communications) set the standard for what was to become the new hallmark for the terrorism that is reminiscent of Al-Qaeda. Not only did the attack terrorise, but demonstrated to the world that they had the technology and capability to strike at both the ‘near’ and ‘far’ enemy at will, with collusion and with drama.

The impact of Al-Qaeda’s ideology on their tactics between 9/11 and the ‘Arab Spring Uprisings’ of 2011 is also significant as, over the decade, the tactics they have employed to achieve their long term objectives has had sufficient enough support to sustain a continued campaign of violence. The situation now, however, has gone full circle and returned to that of Al-Qaeda’s beginnings in the 1990s in that they have had to go back to having to persuade Jihadist fighters to take a global perspective - to strike once again at the West directly. And, given the recent paramilitarization of terrorism across North Africa, Yemen and Syria, it is this - what unfolds from this chrysalis - that will determine what Al-Qaeda’s tactics is going to be for the future. To gauge Al-Qaeda’s motivation behind targeting in this context, the following questions were posed:

**16. It is being argued that Al-Qaeda’s drones will target 7 areas of a state. Highlight 3 areas you see as the most unprotected and likely to be attacked. 65 % of respondents highlighted the same 3 areas:**

Critical Infrastructure	Bridges, dams, fuel dumps, electricity pylons etc.
Arteries of transportation	Railways, airports, motorways etc.
National Monuments and Centres of Culture	Iconic buildings, artworks museums, palaces etc.
Military Soft Targets	Academies, Training Centres, Conferences, Police Stations
Civilian Soft Targets	Schools, Hospitals, Stadiums, Celebrations
Military & Government Personages	On the battlefield, abroad and on the home-front
Targets of Economic Importance	Banks, Stock Exchanges
Cyber Space	Jamming, Copying, Re-routing

**17. Highlight in another colour one of the three areas you chose, as being the most vulnerable to drone attack. Of the 65 respondents, 56 highlighted:**

Civilian Soft Targets	Schools, Hospitals, Stadiums, Celebrations
-----------------------	--

**18. Highlight in another colour one of the targets in the category that you chose, as being the most vulnerable to a drone attack. Of the 56 respondents, 54 highlighted:**

Civilian Soft Targets	Schools, Hospitals, Stadiums, Celebrations
-----------------------	--

**19. In which circumstances would drones be a better choice of weapon compared to a suicide bomber or a car-bomb?**

76% said the variables were so large that it was impossible to answer. 24% voided the question.

**20. Would 3 swarms of 5 FPV drones<sup>12</sup> (15 drones carrying 1kg of explosive each), cause more terror and casualties at a football match than 2 suicide bombers carrying 10 kilos each or one 500 kg car-bomb parked beneath a stadium?**

63% agreed they would.

### (3) Drone Design

The drones are likely to fall, initially, into five categories: off-the-shelf, long-range (1000 km) hunter-killer drones (HKDs) with heavy payloads of up to 50 kg; short-range (100 km) suicide drones (SSDs) able to carry incendiary, fragmentary and fuel-air explosive devices of up to 1 kg; purpose built surveillance drones (PSDs) with a flight-time of days and capable of

relaying real-time intelligence; autonomous, surface-borne sea mines and the most feared, *The Jackals* (one-offs, tailored to target). Tactics will follow the lessons learned from having been on the receiving end of several thousand drone strikes over the last decade, including the deadly double-tap.

To ascertain the above and determine how far it is believed that terrorists are engaging in the development of drones, questions were asked regarding the sale of drone components and the feasibility of designs for less than \$10,000:

No.	Statement / Question	Yes	No
21	Would you agree that the sale of drone components should be licensed?	92%	8%

**Questions 22 – 27:**

Drone Type	Drone Specification	Feasible	Key Words
Long Range Drone	Altitude 5,000 metres Range 500 + km Explosive Payload 30 kg	54%	Cities / London
Suicide Drone	Short-range (100 km) suicide drone able to carry incendiary, fragmentary and fuel-air explosive devices of up to 5 kg	67%	Battlefield / Political Assassinations
Short Range High Altitude Surveillance Drone	Purpose built surveillance drones with a flight-time of 2 days and capable of relaying real-time intelligence Unlimited 3D GPS waypoints with built-in camera First Person Visual Control and fully-scriptable missions	58%	Battlefield / Coordinated Attacks on Civilian Targets
The Jackal	One-offs, tailored to target GPS that can track up to 16 satellites simultaneously 1080p video camera + 4kg explosive payload	64%	Surveillance / Coordinated Attacks on Civilian Targets
Off Shore Sea Drone	Operating range of 100 km, a maximum speed of 40 kph and a patrol duration of 6 hours. High explosive payload capability (50 kg) Based on converted Kawasaki Jet Ski	72%	Warships / Harbours / Tankers
The Bug	The 'Bug' is a little different than a highly maneuverable remote controlled flying quad-copter egg in which any standard hand grenade (Incendiary / Fragmentary etc.) can be inserted. Can be flown automatically or by camera (or a combination of both) Range is only 2 km but it can hover for 3 hours before needing its battery replaced	76%	Battlefield / Crowd Attacks

Respondents were also asked to highlight how useful surveillance drones would be to the execution of a terrorist attack:

No.	Statement	Extremely	Very	Not Very	Barely
28	Highlight how useful surveillance drones would be in planning / coordinating terrorist attacks.	64%	25%	7%	4%

**(4) Counter Drone Capability**

The task of defending a relatively large area (such as a large industrial city) from an air attack is based on a layered air defense system that includes fighter aviation and anti-aircraft missiles. The most valuable targets are protected with another line of air defense: short-range anti-aircraft missiles or guns such as were seen at the Olympics in London, 2012. Defending a large industrial city from UAVs, however, would be extremely complicated, from both a technical and an economic point of view. The reason for this is that the systems were designed to protect key installations – not the entire populace. The prob-

lem of a drone attack would be aggravated by the fact that whilst air defence capabilities would be effective against some types of drones, they were equally designed to counter missiles and manned aircraft and would be ineffective in tracking, identifying, acquiring and countering many types of existing drones. For example, if a terrorist attack from the air occurred at a range of several kilometres from the target (inside the zone of layered air defence), and the flight time of the UAV lasted no more than 15 to 30 minutes, existing air defense systems would be relatively ineffective, especially if the attack was an autonomous swarm of lightweight, fast flying, highly manoeuvrable craft. On top of this, the scattering effects of radar signals from background objects that have much larger cross sections compared with that of small drones would make it an almost impossible task.

No.	Question	Extremely Effective	Effective	Ineffective	Extremely Ineffective
29	Highlight how effective current air defense capabilities would be against one heavy drone?	44%	36%	15%	5%
30	Highlight how effective current air defense capabilities would be against 1 light drone?		18%	56%	26%
31	Highlight how effective current air defense capabilities would be against swarms of light drones?		1%	64%	35%

Questions 32 – 34 were asked to illustrate the implications of terrorists using drones. Not only are current defences believed to be weak, but policy and counter-drone measures. Over half of the respondents believed that drones would change the face of terrorism.

**32. Civilian aircraft on approach could be brought down by swarms of miniature drones in their flight-path? Highlight how realistic this is in your opinion.**

Very Realistic	Realistic	Unrealistic	Completely Unrealistic
9%	64%	20%	7%

No.	Statement / Question	Yes
33	Highlight if you would agree with the following statement: “As terrorism research has been inherently weak in this area, policy based upon it has been intrinsically flawed”.	63%

No.	Statement / Question	Yes	No
34	Drones will change terrorism beyond recognition in that the ability to terrorize will be amplified and unlike anything that we have ever seen before. Highlight if you agree or not.	55%	45%

## (5) Understanding Terrorism and the Implications of Drone Attacks

Even before the attacks of 2001, Crenshaw (2000) saw the dangers in isolating terrorism from its context, side-lining the previous thirty years of research on what terrorism constituted and relying on the assumption that the world was witnessing the advent of a ‘new terrorism’. In her ‘Agenda for the 21<sup>st</sup> Century’, she drew attention to the problems of not only defining terrorism and distinguishing it from other forms of violence but researching it in an events driven world. The question was not so much the analytical usefulness of such a pejorative and subjective term, but the increasingly diverse and fluctuating nature of its usage. In summary, her argument was for more studies based on pragmatic, developmental models of primary research that analysed individuals and groups within their political and social environments as opposed to the application of personality theories and studies of the psychology of terrorism that “bound rationality”.

If the object of terrorism research is indeed to accumulate enough knowledge to trace the causes of the emergence of terrorism and, on the basis of this, predict patterns in which it is likely to re-emerge and the weapons it is likely to use, the field has failed to take our understanding of the phenomenon beyond the exploratory stage of research (Silke, 2001). Silke’s

arguments rested on finding that little headway had been made since a review on terrorism research by Schmid and Jongman as far back as 1988. Through an examination of the literature published in the two leading journals of the time (*Terrorism and Political Violence* and *Studies in Conflict & Terrorism* from 1995 to 2000), he came to the conclusion that terrorism studies existed on little other than, “a diet of fast food research: quick, cheap, ready to hand and nutritionally dubious.”

A decade on again and with further increased political interests, whilst the literature on terrorism has increased dramatically, the research that it is based on has not. Researching terrorism is still compounded by a lack of primary material together with a mountain of secondary and re-worked resources that are of limited value – especially given the changing nature of terrorism, technology and state agendas.

That the research methods employed often reflect the different camps within the field of terrorism studies is thus no mystery. What has emerged, particularly over the last decade, is little other than different perspectives of the same material. Be they descriptive, quantitative or experimental, their value is hence limited in that the range of methodologies, especially those employed in gathering data beyond open sourced materials, has been weak.

In the wake of the Boston Bombings, the author of *Leaderless Jihad: Terror Networks in the Twenty-First Century*, M. Sageman M.D., Ph.D. said:

*“..the gap between academe and the intelligence world prevents any meaningful exchange of ideas. As it stands now, we are condemned to rehash the same old tiresome and irrelevant arguments that prevent us from asking key questions about the turn to political violence.”*

**April 30<sup>th</sup> 2013**

The fact is, since 9/11, terrorism research has taken on a new relevance. It is no longer just a field of research but a war-fighting asset; an abstract, inflective, prosody of communication in which the research has ceased to belong solely to the world of academia. With ‘new terrorism’ came ‘new research’. Sadly, however, the tension between academia and the state (the office bound lecturer and the counter-terrorist operative) has brought the research to stagnation. To attain a field with the analytical skills capable of responding to 21<sup>st</sup> century asymmetrical warfare, the values and limitations of such research from a tactical, operational, and strategic perspective need to be understood and re-addressed – especially with regard to the future implications of the augmentation or suppression of drone-technology. Indeed, if we are to counter terrorism more effectively, academia and the state would be well advised to return to the *affaires de coeur* that they had long enjoyed prior to 9/11.

In the context of privacy issues<sup>13</sup> John Villasenor (Professor of Engineering at UCLA and a Brookings Institution Senior Fellow) puts this question of ‘augmentation or suppression’ into perspective:

*“The Internet has proven useful and valuable in ways that were difficult to imagine over a decade and a half ago, and it has created privacy challenges that were equally difficult to imagine. Legislative initiatives in the mid-1990s to heavily regulate the Internet in the name of privacy would likely have impeded its growth while also failing to address the more complex privacy issues that arose years later. Thus, while it is important to proactively consider how to protect against the privacy abuses UAS could make possible, in doing so it is important to recognize the near impossibility of predicting all of the ways that a rapidly developing technology can be used – for good or for ill – in future years.”*

In short, whilst terrorism has changed, it has not changed beyond recognition and a look into its history is of fundamental importance to understanding: (1) the threat posed by terrorist-drones and (2) the consequences of legislating against them. Indeed, as what is often portrayed to be a ‘new’ threat is simply little other than a contemporary learning curve in an historic line of development, with established precedents and a clear lineage, deeply reflective of modern society and with unmistakable connections to the past and a history that is of fundamental importance to countering it, the divorce between academia and the state may prove to have been a costly error with regard to drones.

In researching terrorism therefore, with its myriad of lineages and histories, it is only under the light of sustained research and scholarship and a commitment to understanding what is woven into the very tapestry of the subject that we can begin to understand the threads of it and where its fabric has either faded or been patched. Contemporary understandings of the past are otherwise little different than subjective interpretations and their value as to the knowledge that can be accumulated from such research with terrorism is reduced even further, especially given the limited primary resources available. The following literary arguments on terrorism research illustrate some of the key strengths and weaknesses of its ability to anatomize this tapestry.

## The Tapestry of Terrorism

Although the characteristics of terrorism are static, how they are perceived and applied is dynamic and the definition of its nature is therefore fluid and dependent on contemporary events. An example of this phenomenon is the heavy politicization of the term that took place after the attacks of 11 September 2001 and the subsequent misconception that ‘terrorism’ had actually undergone a series of fundamental changes, namely that it had manifested its ‘true self’ and declared ‘war’ on the United States. As the cause for the war intensified, so did the concept of terrorism across the political spectrum. In fact, over the last decade, there has been such a shift in the definition of terrorism academically, that there are now over a hundred schools of thought on what it actually means. Some say that it has de-centralized and de-politicized, others that it has moved on from preaching violence (as a means to a political end) to the phenomenon of using violence as a tactical end in itself. Several concur that it has moved from the shadows to open-combat on the field and to have rooted its agendas in theology, as opposed to any known ideology. One concurrent theme, however, is that the drama of traditional terrorism has become but a dated irrelevance and superseded by a modern, 9/11 type of warfare.

However, without the commonality of the Cold War, the subsequent attempts to politicise it have resulted in little other than bringing to light the gulfs of entrenched differences between the state and academia and hitherto solid allies. Further failures have been initiated by the writing off of the fundamental differences that terrorism has with legitimate uprisings (including, ironically, those between 1775 and 1783) and attempting to re-classify it through the dismissing of guerrilla groups such as FARC. This renaissance period for the terrorists, therefore, was the result not just of the world’s tolerance of it, but its politicization of it. In fact, the demonization and classification of non-state combatants has since undermined not just the West’s future positions in any mediatory roles or future peacekeeping capacity, but their hitherto, unquestioned, sense of righteousness. There are three lessons to learn from this and each is crucial to the issue of drones: the terrorists’, the victims’ and the general public’s. The first is a lesson in legitimacy, the second, a lesson in innocence and the third, a lesson in culpability and the antithetical nature of terrorism that has, unequivocally, led to this state of affairs. The reason for this is that what we are talking about here are the implications of confronting terrorism with terrorism – and the challenges faced by liberal democracies with regards to drone strikes.

## Section III

### (1) Proto-type

In order to assess the value of building hypothetical terrorist weapons, the example of an anti-helicopter minefield in the sky was asked first:

*“Swarms of bomblets hovering in the clouds will be the minefields of the future”.*

#### 35. Highlight if the technology and desire for this will exist in 5 years?

Yes	No
67%	33%

Other questions posed the use of hand grenades (due to their proliferation) as the means to arming small, lightweight drones of up to 15kg that could home in on targets at 100 kph, in swarms, from distances of up to 10 km using FPV technology and GPS.



**36. What would be the effect of 3 Fragmentary Hand Grenades exploding within 10 metres of an Apache helicopter flying at 140 knots?**

Light to Medium Damage (Key Words)

**37. Highlight what would be the effect of 3 phosphorous or 3 fragmentary grenades detonating at speed against the side of a moving, overcrowded passenger train.**

<b>Phosphorous</b>	Many Casualties	18%	Isolated Damage & Few Casualties	82%
<b>Fragmentary</b>	Many Casualties	76%	Isolated Damage & Few Casualties	24%

**38. If drones like ‘The Bug’ were able to drop hand grenades, what would a swarm (50) of them be able to achieve in an attack on a Railway Station with:**

Type of Grenade	Application of Technology
Fragmentary Grenades	Massive Casualties (Key Words)
Incendiary Grenades	Massive Fires (Key Words)

**39. What would the casualties be from a swarm attack (50) on a stadium such as Wembley at full capacity? 1500 – 5000 (aggregated).**

As a result of the answers, it became evident that the theory upon which the research was based was sound and that the building of prototype terrorist weapons, an area of terrorism studies hitherto unexplored, had value; a proto-type was hence designed and, in order to promote research on countering such a threat, it is to be displayed at the next NATO arms fair in Prague. The drone was designed as a crude, \$1500 UAV with swarm capabilities for the battlefield, assassination and a terrorist attack on crowded areas such as those above.

**(2) London**

**40. Why is London a better target for terrorist drones than any other city including Washington or New York?**

Because it is London (84% - Key Argument)

**41. What is the likelihood of tracking and shooting down a fast moving drone the size of a football flying through the populated streets of West London?**

None. (83%)

**42. It was quoted in *The Times* last week that “For \$10,000, a drone with a payload of 50kg could be placed outside Paris, ‘wake up’ in six months, take off for London in the middle of the night and destroy Big Ben – live on the internet with a running commentary.”<sup>14</sup> How realistic is this?**

Very Realistic	Realistic	Unrealistic	Completely Unrealistic
	52%	20%	16%

12% voided this question

**43. What would be the political effect of a \$10,000 drone hitting the Houses of Parliament? Message to the world as opposed to the US (Key Words)**

To the terrorists, another attack on the United States would be exactly that – an attack on the United States. With London, however, it would be an attack on the world. London represents the world. Although an attack on an icon such as Big Ben would hence be an attractive target, note that an attack on a football stadium was deemed more likely; as 9/11 awakened sentiments of Pearl Harbour, an aerial assault on London would be likened to the Blitz of 1940 and galvanize public support for pre-emptive strikes, disproportional retaliation and an escalation in the War against Terror.

**44. Highlight if London is likely to be attacked by drones over the next 5 years?**

Yes	No
62%	28%

10% voided the question

**(3) Mustard Gas**

**45. Which chemical weapon would be most suited to drones?**

Mustard Gas (64%)

Because of this answer, the 'drone-friendly' properties of mustard gas (C<sub>4</sub>H<sub>8</sub>Cl<sub>2</sub>S) were explored further and two ex-UNGCi officers (who worked with weapons inspectors in late 1990s Iraq) were questioned why? One of them, a full serving NATO Colonel, replied:

*“By 1998, we had eliminated most of Iraq's chemical weaponry, tens of thousands of munitions and hundreds of tons of weaponized agents. Despite this, there remained concerns.”*

1. Iraq's mustard gas was almost pure
2. In shells, it had a shelf life of decades
3. It was easy to produce and load into munitions
4. It was never really established how many shells remained stockpiled or buried

*“The concern amongst old colleagues now is not just the proximity of terrorism in Syria to these chemicals or the recruitment of ex-Iraqi insurgents to organizations that are increasingly becoming para-militaries, but the proximity of the war to Hezbollah's Drone Program.”*

No.	Statement	Impossible	Unlikely	Possible	Very Possible
46	Highlight how easy it would be to deliver chemical weapons by drones.	6%	12%	64%	18%

## Conclusions

The four main areas of research set out to: (1) assess the seriousness of the threat, (2) gauge the perceived value of drones to terrorists, (3) explore how far it is believed that terrorists are actively developing a drone capability and (4) determine the level of consensus as to the implications of such a transformation of terrorism were they happening or to occur.

The analysis in this report demonstrates that the use of UAVs for weapon delivery purposes and surveillance is serious and an achievable, desired task for terrorists; UAVs will enable terrorists to strike at their enemies in ways that are as yet undetermined. Moreover, the technical development and proliferation of unmanned aerial vehicles for military and civilian purposes will contribute to the growth of this threat. It has also been demonstrated that drones are of incalculable value to terrorists and that terrorists are believed to be developing a drone capability. As for the implications:

1. The use of UAVs to deliver chemical weapons poses a real risk.
2. Small conventional payloads would cause severe destruction.
3. The most likely threat will come from improvised and assembled drones as opposed to off-the-shelf products.
4. Existing air defense systems are of little use against small, fast flying UAVs.

For further answers on the essence of terrorism and its propensity to use drones practical, academic, state sponsored research that is based on primary resources and within an historical context is desperately needed – not a repeat of the recent milieu of individually launched categories and denominations of terrorism research in which the distinctions have been largely artificial, politically charged and, in any case, usurped by the Arab Spring of 2010 and events subsequent to the fall of Zine El Abidine Ben Ali, Hosni Mubarak, Ali Abdullah Saleh and Muammar Gaddafi.

Unfortunately, after the attack of 9/11, terrorism-research descended into an industry that was policy led and partisan; ‘new-terrorism’ became the fresh genus to which many ‘species’ of terrorist were assigned by privately funded research and wealth-driven publications. It was deemed to be unlike anything hitherto witnessed and, of such lethality and complexity, that nothing past compared to it. Its goals, as Hoffman stated, were “*almost transcendental*”. In conjunction with G. Fry’s ‘*contending images of world politics*’, what Fukayama called the ‘*End of History and Huntington, the Clash of Civilizations*’, the consequence of this school of thought has put lives at risk, especially with regards to drones; by overestimating the capabilities of terrorists to deploy WMD<sup>15</sup> over the last decade, their capabilities to deploy drones in this decade have, as a direct consequence, been seriously underestimated.

In short, there was little ‘new’ about ‘new-terrorism’ and the apocalyptic rhetoric of much post-9/11 literature hence needs to be shelved if the threat posed by drones is to be adequately addressed. ‘Old-Terrorism’ is simply too riddled with accounts of mass casualties (RIRA, Omagh, 1998), the indiscriminate targeting of civilians (IRA, London, 1939), utopian dreams (Red Brigades), divinely inspired goals (Zealots and Thuggees), indeed all the traits that are the hallmarks of ‘new-terrorism’. Simply put, if the threat of drones is dismissed on the basis of past exaggerations and policy driven academics, the West will be unprepared for the first drone attack.

To summarise, the argument for terrorists not using drones, is not just blighted by historical precedents, artificial parameters, premature judgements and those on the front-line fighting terrorism, but the X-factor of the unknown – for example, how will the youth of today respond to Jihad in 20 years? Understanding not just the history of terrorism, but terrorism as a political, modern phenomenon is hence of paramount importance and salient to understanding its recent para-militarization and how practical research can be applied to the question. To conclude, although new ‘hi-tech-terrorism’ is a very different creature to old ‘low-tech-terrorism’, the consensus across NATO is that it is very much of the same species and that its capacity to use drones lies in its blood. ■

<sup>1</sup> Press TV Live Event Recording - October 11, 2012, [http://www.youtube.com/watch?v=bGc\\_4M0iCWw](http://www.youtube.com/watch?v=bGc_4M0iCWw) Accessed: 07/03/13

<sup>2</sup> Conference call with reporters 22/01/13 Speakers: Admiral Dennis Blair, Former Director of National Intelligence, Micah Zenko and Douglas Dillon Fellow. Transcript <http://www.cfr.org/counterterrorism/us-drone-strike-policies/p29849> Accessed: 12/04/13

<sup>3</sup> <http://www.jftc.nato.int/JFTC%20Magazine3/index.html> (pg. 42)

<sup>4</sup> <http://www.thetimes.co.uk/tto/news/uk/defence/article3727927.ece>

<sup>5</sup> Major Shannon Beebe, 29/10/08, Transcript: [http://www.defense.gov/dodcmsshare/BloggerAssets/2008-10/10300809453720081029\\_MAJBeebe\\_transcript.pdf](http://www.defense.gov/dodcmsshare/BloggerAssets/2008-10/10300809453720081029_MAJBeebe_transcript.pdf) Accessed: 04/01/13

<sup>6</sup> Department of Defense, Capstone Concept for Joint Operations, Version 3, (Washington, DC: Department of Defense, January 15, 2009), 1-18

<sup>7</sup> UPI.com, 25/01/13, [http://www.upi.com/Top\\_News/World-News/2013/01/25/Expert-Terrorists-may-start-using-drones/UPI-64791359102600/](http://www.upi.com/Top_News/World-News/2013/01/25/Expert-Terrorists-may-start-using-drones/UPI-64791359102600/) Accessed: 17/03/13

<sup>8</sup> The Guardian, 05/06/2012, <http://www.guardian.co.uk/world/2012/jun/05/al-qaida-drone-attacks-too-broad> Accessed: 15/12/2012

<sup>9</sup> Robert M. Gates, □A Balanced Strategy: Reprogramming the Pentagon for a New Age, Foreign Affairs (January/February 2009), [http://www.defense.gov/home/features/2009/0509\\_qdr/gates-article.html](http://www.defense.gov/home/features/2009/0509_qdr/gates-article.html) Accessed: 14/02/2013

<sup>10</sup> Testimony statement by D. M. Gormley before the Subcommittee on International Security, Proliferation and Federal Services of the U.S. Senate Committee on Governmental Affairs February 12, 2002 <http://www.google.com/url?sa=t&rc=t=j&q=&esrc=s&frm=1&source=web&cd=2&ved=0CDQQFjAB&url=http%3A%2F%2Fwww.hsgac.senate.gov%2Fdownload%2F%3Fid%3D8d073fbc-fcda-4c8e-864c-82fbc9fd456&ei=mK6MUblDIIiltAaHh4DwAw&usg=AFQjCNEI0nKMrEeRQc94luOuUqLmpT3h3Q> Accessed: 17/12/2012

<sup>11</sup> CNN 08/10/2012 <http://edition.cnn.com/2012/10/01/opinion/bergen-world-of-drones> Assessed: 14/02/2013

<sup>12</sup> First Person View

<sup>13</sup> “Observations from Above: Unmanned Aircraft Systems and Privacy” Harvard Journal of Law and Public Policy, Volume 36, Issue 2 – Spring 2013

<sup>14</sup> The Times 01/04/2013 <http://www.thetimes.co.uk/tto/news/uk/defence/article3727927.ece> Accessed: 04/04/2013

<sup>15</sup> Laqueur was not alone in this school of thought (see: Lesser et al. 1999, Neumann 2009, Juergensmeyer 2000, Hoffman 2002 and Kegley 2002).



# The Change of Post Ceremony at the Joint Force Training Centre

■ **Radostawa Kubiczek,**  
JFTC Public Affairs Specialist

After three years of dedicated service at the Joint Force Training Centre (JFTC), Brigadier General Jaromír Zůna, the Centre's Deputy Commander/Chief of Staff, bid farewell to the City of Bydgoszcz. On 25 July he handed over his responsibilities to the Hungarian Brigadier General László Szabó.

The Change of Post Ceremony took place at the JFTC compound and gathered many high ranked representatives of the Czech, Hungarian and Polish military world as well as local authorities and the Centre's friends. In the presence of Lieutenant General Petr Pavel, the Chief of the General Staff of the Czech Armed Forces and Rear Admiral Waldemar Głuszko, the Deputy Chief of the General Staff of the Polish Armed Forces, Major General Pavel Macko, the JFTC Commander, thanked General Zůna for great cooperation and welcomed his successor on board.

"Although we say that the success of commanders and the key leaders is always resulting from hard work of all subordinated members of the unit, it takes an extraordinary leadership and effort of the leader to achieve it. General Zůna has been such a leader, who has tremendously contributed to the success and highest ever credit that the JFTC today has in the whole NATO" - said General Macko, and added: "General Zůna's remarkable contribution will be forever written in the history of the JFTC with golden letters. (...) Due to his initiative and unreserved personal involvement we have developed very complex and effective planning system for the whole JFTC without which we would not be able nowadays to manage ever growing intensity of our training support and other significant activities."

Addressing the outgoing Deputy Commander/Chief of Staff directly, General Macko

said: "Jaromír, we all congratulate you! You have accomplished your mission in an extraordinary manner. Thank you for your support! Thank you for your unforgettable contribution to this centre and NATO community here in Bydgoszcz, thank you for your dedicated service and support to the Alliance!"

Also General Zůna turned to the distinguished guest and the JFTC staff to share his thoughts and good memories related to the Centre, the Host Nation and the City of Bydgoszcz. "One of the largest NATO projects of the last decade, vested with the mission of a great importance for the Alliance, swiftly developing from almost nothing to everything in just a few years, soaked with the zeal for innovative solutions and fortunate with the plethora of good motivations among the people serving and working at the JFTC." - General Zůna described the centre and promised that his dedication to the JFTC would not end with the end



of his service in Bydgoszcz. “During my tour of duty I have been striving to do as much as I could for the JFTC within the confines of my position. That means that I still consider my mission as a yet unfinished book and therefore I am obligated to support the JFTC and its mission even after my official departure, through variety of means and from wherever my next assignments may take me. That is the legacy I am taking with me and this is my promise to all of you” - said the outgoing Deputy Commander/Chief of Staff and stressed that he would do his best to sustain professional links with JFTC and to become a regular visitor to the city of Bydgoszcz. At the end of his speech General Zúna addressed all those who had supported him during his service at the JFTC: “Let me express my deepest gratitude to all the members of the JFTC Team for your collegiality and friendship. I am also grateful for all the support I received from the representative bodies of the Czech Republic in Poland, namely the Embassy of the Czech Republic in Warsaw and the Consulate of the Czech Republic in Bydgoszcz. I will also cherish in my heart the friendship of so many of my Polish friends who I had the privilege to meet during my tour of service at the JFTC. Please accept, from somebody who has been for the last

three years at the helm of the institution, my sincere wish of all the best and many future achievements to all of you, to this institution and the city of Bydgoszcz, which has become my second home.”

The Czech party expressed their special thanks to the Honorary Consul of the Czech Republic in Bydgoszcz, Mr. Dariusz Zimny and to Major General Zbigniew Tłok-Kosowski, the Chief of the Inspectorate for the Support of the Polish Armed Forces. Lieutenant General Petr Pavel presented the Honorary Consul with the *Laudi Memorabilis* award and General Tłok-Kosowski was decorated with the General JUDr. Viktor Spevacek Honorary Medal of Logistics of the Armed Forces of the Czech Republic.

The outgoing Deputy Commander/Chief of Staff's outstanding performance at the JFTC was recognized by Poland and the Czech Republic. He was awarded with the Golden Medal of the Polish Armed Forces –Rear Admiral Głuszko decorated General Zúna on behalf of the Polish Minister of Defence, and with the Silver Commemorative Medal of the Slovak Armed Forces, presented by Major General Pavel Macko on behalf of the Slovak Minister of Defence.

The incoming Deputy Commander/Chief of Staff congratulated his predecessor.

“Within the short history of the JFTC, this staff has gone through almost unprecedented development. Today, the JFTC is well established within NATO's Command Structure, and has become the focal point for ongoing joint and combined tactical level training of NATO forces, commanders and staffs. General Zúna, congratulations to you and the staff under your strong leadership.”

General Szabó pointed out his priorities for the service at the JFTC. The continuity of effort being the first one. “All orders, directions and guidance issued by my predecessor remain fully effective. They will be changed only after due consideration and staff review if and when appropriate” – stressed General Szabó. As the second priority enhancement of professionalism was listed. “The JFTC must continuously develop and take advantage of its level of professionalism gained so far. It should become a premium player, a first choice for NATO commanders when it comes to training before operational readiness or deployment to theatre”. Also promotion of NATO values and strengthening the JFTC community will be General Szabó's main focus.

“I am absolutely confident, that with his distinguished military experience as well as successful accomplishment of the complex mission of the



chief of staff of the headquarters which commanded and coordinated real operations of more than 48 thousand security forces on the ground in Northern Afghanistan, General Szabó will easily manage to take responsibility of our staff, pick up the mission from General Zúna and move the bar for the JFTC staff even higher” – said General Macko welcoming his new Deputy Commander/Chief of Staff. “László, you are coming to the JFTC in a very challenging time (...) I need you to put all your experience and wisdom for the success of the JFTC team, step forward and assist me and my successor in leading this capable team towards new challenges which are ahead of us. – the JFTC Commander

addressed General Szabó and added: “I wish you a lot of success and I am looking forward to working closely with you. I can assure you that you will have my full support as well as support and respect from all staff members. Welcome on board!”

Both outgoing and incoming Deputy Commanders/Chiefs of Staff received many warm words also from Lieutenant General Petr Pavel, the Chief of the General Staff of the Czech Armed Forces and Rear Admiral Waldemar Głuszko, the Deputy Chief of the General Staff of the Polish Armed Forces, who also passed wishes from Lieutenant General Mieczysław Gocuł, the Chief of the General Staff of the Polish Armed Forces

and from Mr. Tomasz Siemoniak, Polish Minister of National Defence. Other distinguished guests, who participated in the ceremony, including, His Excellency Jan Sechter, the Ambassador of the Czech Republic to the Republic of Poland, Mrs. Ewa Mes, the Voivode of the Kujawsko-Pomorskie Province, Mr. Łukasz Niedźwiecki, the Deputy Mayor of Bydgoszcz and Mrs. Anna Mackiewicz, the Deputy Chairman of the City Council, joined to best wishes for General Zúna and General Szabó.

“Members of the JFTC and members of the NATO community in Bydgoszcz - it has been an honor to serve with you” – said General Zúna at the end of his speech. ■



# British Foreign Policy on the Road to Damascus

■ **Christopher Charles McKeating,**  
Military Advisor – Future Forces Exhibition & Conference 2014

*Editor's note: This article was submitted on the beginning of September 2013.*

Last month, in an unprecedented challenge to the British Prime Minister's authority, the UK parliament rallied to the opposition and voted against the government's call to support the United States in an attack on Syria; a parliamentary coup d'état that was as ingenious in the making as it was heinous in practice. Whilst however a victory for the plotters and the undeniable fact that David Cameron and his Foreign Secretary lost a degree of political credibility - the price that was paid for this entailed putting hundreds, if not thousands of innocent lives at risk. What is of more concern, however, is that this might someday prove to have been the defining moment in an about-turn on British Foreign Policy and how this could impact on the world. No matter what the arguments, Miliband's 'Damascus Plot' stands as an event of such political intransigence that it has transcended the immediate debate over the use of chemical weapons in Syria, both here and in the United States, and divided the UK - a country dependent on an alliance in which its support of America is fundamental to security across much of the world and a country that is shortly to vote on leaving the European Union. It could not have come at a worse possible moment.

## Johnson's London – In Defense of the Realm

Although there is unlikely to be any long-term, adverse effect on the UK's relationship with the United States, it has nonetheless undergone a profound change. More importantly, the United Kingdom has been accelerated to a crossroads that it had hitherto been approaching with caution and the direction she takes from here will have untold consequences for Europe and NATO. For Syria, the Middle East and the world, only time will tell what this venture has cost. The only relative comfort is

the irony that Labour's plot may soon throw the future of British Foreign Policy into the hands of the Mayor of London. Compared to the 'Great Disraeli' only last week by Thatcher's former Home Secretary, he is the man who has been presiding over the capital and its 16 billion pound budget for the past 5 years.

*"We need to raise our eyes beyond Europe and rekindle our relationship with the Commonwealth"*

### Boris Johnson, Mayor of London

Like Disraeli, Johnson is a gentleman, a rogue of a statesman and with enough charm and charisma to cheer up Ebenezer Scrooge, he has brought a brand of conservatism and a lease of life to British politics that has transformed the city of London. Born in the United States and bred in the United Kingdom, like that other great Victorian of the time, Dickens, he is a master of the language they share and what it actually means to be British. He has also brought leadership, vision, results and, as a consequence, stands today at the head of a formidable electorate and a court that has long been a rallying point for taking what he has achieved in London to the rest of the country – to rally for a resurgent Britain; a Britain with a vision beyond London; a Britain with a vision beyond Brussels; a Britain with a vision beyond the accepted beliefs of the elite; a Britain with a vision beyond that of the United States.

## Commonwealth of Nations vs The European Union

Importantly though, Johnson's vision is not about reviving the past or entertaining vain-glorious thoughts of Empire. Johnson's vision is about the future and to which ports we are headed. In fact, one only has to look at his

premiership of London and the global, ultra-modern metropolis that it has become to see his vision for Britain. It is about the fact that Britain remains economically, militarily and politically, a major force in the world; that Britain continues to be a sea-power with a fleet of 4 nuclear-powered ballistic missile submarines, Vanguard, Victorious, Vigilant and Vengeance, each armed with 16 Trident 2 D-5 ballistic missiles (with each missile capable of delivering up to 12 warheads more than 4,000 miles with an accuracy measured in metres); that Britain has the sixth largest economy in the world and the world's largest financial centre; that Britain has an annual expenditure on her military of some 60 billion dollars and that Britain, alongside the US, Russia, China and France, remains a permanent, veto-wielding member of the United Nations Security Council. Johnson's Britain is about weighing anchor on the 20<sup>th</sup> Century and realizing her potential for the 21<sup>st</sup>.

Without due care, what this translates to for the European Union and the United States is the possibility of a seismic shift in geo-political alliances. The reason for this is that without Great Britain, the United States would cease to be a European Power and Continental Europe would not be the Europe we enjoy today - it would be an untested entity and politically, economically and militarily, a weaker bloc - for irrespective of Britain's commitment to the EU Project over the last 40 years, it has been shaped and molded as much by what Britain has done and not done, as any other European member. The US and the EU need to take note: be it in their best interests or not, the British might well just hoist their flag and set sail without them.

## Road to Damascus

That the relationship between the United States and Britain has been wilting for decades

and, although unexpected, that last month's politics did not come as any great surprise is not the point. The reason for this is that the 'Damascus Plot' is far from just the latest snub in a long line of spats between the allies. It is different in that this time round the British electorate represents a new generation. Simply put, adhering to dictats from Brussels on the one hand and securing ambitions for Washington on the other is an old game that few in the UK are any longer interested in playing. To compound this, the wars of Iraq and Afghanistan and the aggressive nationalism of the Bush and Obama administrations have projected an America that is unrecognizable from the America we knew just a few decades ago. What Cameron hence found on the 'Road to Damascus' and what the opposition took advantage of was that the so called 'shared values and common goals of Atlanticism' are today largely perceived to be little other than the dying ideologies of a time in which, during the Cold War, British interests were routinely sacrificed to US-led initiatives.

With Johnson's vision however, the country could be led beyond the bureaucracy of the EU, beyond the insular interests of the United States and beyond the politics of long dead presidents and wars. With Johnson's vision, Britain could 'rekindle its relationship with the Commonwealth' and, with powers like India onboard, have a marked effect on the world. With Johnson's vision, the country could once again set sail East of the Ghosts of Suez.

## East of the Ghosts of Suez

In fact, with the Foreign Secretary having last year courted Canada, Australia and New Zealand with a network of 'Commonwealth Embassies', that vision has already been put into play. To compound it, some of the biggest gains in UK exports over the last two years have been to Commonwealth countries. Indeed, with an estimated population of 2.245 billion, almost 22% of the world's landmass and with countries such as Canada, Australia, South Africa and New Zealand and a nominal gross domestic product of \$10 trillion, the opportunities for Britain are obvious. Moreover, with globalization and a world in which the Cold War has been dead for a quarter of a century, increasing co-operation between the English speaking countries of the old Empire and the other 50 countries of the Commonwealth makes more sense today than

it has ever done. Economically, militarily and politically, a revival of the Commonwealth is also an attractive proposal for the other 53 members, especially the 16 of which Queen Elizabeth remains the Head of State. But it is not just the magnetic qualities of the transformed international scene that is causing the 'Johnsons' to pull the UK from its anchorage between the US and the EU; it is very much the British people themselves.

The reason for this is not the oft-quoted nostalgia for Empire or any real fears over loss of sovereignty to Brussels. Nor is it the machinations of what is the world's third largest network of embassies and diplomatic missions that the UK has across the globe. It is something simpler. The fact is, that to be British today, entails allegiance to a political identity that transcends race, creed, colour and, to a degree, state. Like London or the British Monarchy which, with the 16 Commonwealth Realms, is in effect an international institution in itself, today's UK is a country that is inherently international, inherently global and inherently a sea-power. In just the last ten years, for example, the number of foreign-born citizens of England and Wales has risen by nearly 3 million to 7.5 million people. In fact, through births and immigration, the UK has the fastest growing population in Europe. Like Johnson's London and globalised trade, the Commonwealth has been built upon layer upon layer of soft-power with the UK - a century of business relationships that transcend political relationships and a network that is people driven, entrepreneurial and young. With one in ten British soldiers being from the Commonwealth, even its armed forces have been internationalized. In a way, Johnson's London has become a macrocosm of the world in a microcosm of the world - an Empire in itself.

As a result and as reflected in the staggering rise of Nigel Farage's UK Independence Party, the first Coalition Government since the Second World War and Johnson's calls to once again set sail beyond Europe, the 'Damascus Plot' has accelerated the inevitable and put both the United States and Great Britain into a position that neither state was ready to handle. Even joint strikes on Syria now and attempts to repair the 'special relationship' would be met with skepticism and resignation and demands for a shift back to a closer partnership with Europe would be too little, too late. Unfortunately, as a direct result of Miliband's

Coup, the end of 'Atlanticism', the concept of an Atlantic Community in which Britain was uniquely-placed, could disappear with the tide.

## The Ghost of Libya

Whilst of course the United States and NATO would undoubtedly remain valuable as a framework for inter-cooperation and regional security, fighting for NATO led-objectives would appeal to few and the costs for Europe, particularly for those countries that joined NATO after the collapse of the Soviet Union, would be high. The key cost for Europe initially is likely to be defense expenditure. For although the 'European Army' or the EU's ability to project itself does not work terribly well with the British, it would not work without them either. The reason for this is that the reality of the matter is that Britain has provided over 20% of the average number of troops deployed from the EU and a similar percentage on military expenditure for years. Furthermore, what Libya showed was that whilst Europe was able to initiate a UN mandated intervention, it was not able to follow it through politically or militarily; Germany abstained from the vote that mandated the action and, without the logistics of the United States, what was achieved would not have been possible. Unfortunately, if the United States continues to shift its strategic focus to the Pacific and Johnson's Britain becomes a reality, the EU hence risks the very real possibility that, if faced by a crisis that is of little importance to the US again, they will be standing alone, without an army.

## Conclusion

None of this shift in British policy at home and beyond will be easy. But there is simply no real alternative for the UK - as a result of the vote on Damascus, it is rapidly accelerating towards a shift in its alliances, trade and foreign policy. Europe and the United States hence have to recognize that the assumptions on which British Foreign Policy has rested since the Suez Crisis - a privileged but dependent relationship with the United States and a close but detached affair with the European Continent - have outlived their shelf-life. Without acknowledging and addressing this, the country will simply vote for Johnson and redevelop its relationship with the other 53 Commonwealth members. ■



## **Major General Neyko Nenov, Commander of the Bulgarian Land Forces**

Major General Neyko Nenov was born in 1961 in Trankovo, Yambol district.

His military education includes Vasil Levski National Military Academy, Veliko Tarnovo, Bulgaria; General Staff Faculty, G. S. Rakovski National Defense Academy, Sofia, Bulgaria; United States Army War College, Carlisle Barracks, Pennsylvania. He also holds a master's degree in Law from

the St. Cyril and St. Methodius University of Veliko Tarnovo, Bulgaria.

General Nenov started his military career as a platoon leader of a Motorized Infantry Regiment in 1985 consequently holding all command positions in Bulgarian Land Forces' units. From 2005 to 2010 he held a variety of senior command positions at national and international level to

include Commander, South Eastern Europe Brigade (SEEBRIG), Romania; commander, Multinational Brigade – Kabul, under ISAF command and Chief of Staff, NATO Joint Force Training Center, Bydgoszcz, Poland. Major General Neyko Nenov assumed responsibility as the Commander of the Bulgarian Land Forces on 1 November 2012.

# **For the Service in the Centre**

## **■ Major General Neyko Nenov, Commander of the Bulgarian Land Forces**

From July 18, 2008 to July 22, 2010, I had the honor to serve as the Chief of Staff in NATO Joint Force Training Centre (JFTC), Bydgoszcz, Poland. It was an immensely dynamic period both in terms of reaching full operational capabilities (FOC) of the JFTC's Training facilities, relocating the personnel from its temporary location in Dwernickiego

Street to its permanent location on Szubińska Street, and the launch of the most advanced (at that time) command information system.

Then, the training focused primarily on NATO current operations. In this regard, a pilot course of OMLT above Kandak level training started in October 2008 for the first time in the new training

facilities. It was followed by a pre-deployment training of individual augmentee staff for the Regional Commands South and North Headquarters and Mission Rehearsal Exercises of ISAF Regional Commands South and North Headquarters for the first time in Bydgoszcz.

The capabilities of the JFTC training facilities and promoting them

within NATO community enabled the conduct of various forums, conferences and courses such as the Allied Command Transformation Military Member of the year 2008 selection, 9-th International Senior Non Commissioned Officers Symposium, 2009 Allied Command Operations Electronic Warfare Conferences, Allied Command Transformations Manpower Conference, Allied Command Transformations Public Affairs Conference, two Counter-Improvised Explosive Device Courses, etc. which the JFTC had the pleasure to host.

Being a NATO “Crown Jewel”, the Joint Force Training Centre attracted the interest of many senior leaders, and it was visited by the NATO Secretary General – Anders Fogh Rasmussen, the Polish Minister of Defense - Mr. Bogdan Klich, the Supreme Allied Commander Transformations - General Stephane Abrial, the Commander of the Joint Forces Command Brunssum - General Egon Ramms, the Allied Commander Transformation Deputy Chief of Staff, Joint Forces Trainer - LTG Karlheinz Viereck, ACT Deputy Chief of Staff for Capability Development - Vice Admiral Carol Pottenger.

Along with all these challenges, we strived for promoting the community spirit among the nations engaged. In 2009 the Joint Force Training Centre Allied Club was officially opened followed by the first JFTC Ball the organization of which has become a wonderful tradition.

### **For the People and the Team I Worked With**

As a Chief of Staff, I had a chance to work with extremely well prepared professionals and experienced officers. As you are well aware, the successful performance of the leader is due, to a great extent, to the excellent interaction and dedication of his subordinate staff. I would like to mention a few names: Colonel John O’Hey and Lieutenant Colonel Dietmar Henke with whom we

worked very successfully and implemented all planned training events at an exceptionally high level.

If my tour of duty has been assessed a successful one, I am placing my assistants and the members of my team the credit for the success. Among them I can mention Directors of Staff Operations (DOSO) Lieutenant Colonel Daniel Peteterson and Matthew De Pirro who stayed by my side and on whom I relied in my everyday work.

Thanks to General Bager’s competent guidance and leadership, and Admiral Zarychta’s personal commitment we have raised the JFTC’s role, credibility and recognition within the Alliance. I am happy that in the course of our joint work not only did establish wonderful working relationships, but made good friends as well.

### **For the Host Nation**

I have no doubt at all that one of the main reasons for us to succeed is the wholehearted support and warm hospitality we were offered in Bydgoszcz, Poland. Excellent cooperation with the Host Nation civilian and military authorities at national and local levels also contributed to the successful execution of the Centre’s mission.

I am happy to have had the opportunity to serve in a friendly country and in a wonderful city which can boast of a rich historical and cultural heritage, where besides the hard work, we had a chance to enjoy numerous local and international events of culture and sports. Bydgoszcz has always fascinated me as being very alive and full of special atmosphere, offering plenty of entertainment and recreation opportunities. Frankly speaking, my service in Poland is a time which I will always remember with delight and satisfaction.

### **For the Personal Contribution**

Taking over the position of the JFTC Chief of Staff from my prede-

cessor, Brigadier General Panagiotis Mavropoulos, I received a very good legacy in terms of running the routine tasks and organizing the training process. Different challenges like applying the JFTC’s new organizational structure as well as various training events, conferences and visits held at the JFTC new training facilities, helped to further develop these processes and to unite the JFTC’s branches and members of all nations. It was a time of hard work and its outcome I personally find as summarized in the speech of JFTC commander, Major General Bager during my farewell ceremony, “You have been a great Chief. I have always felt very comfortable having you by my side to support me, advise me and properly explain things when I was on the brink of doing something unreasonable. (...) Your loyalty could never be disputed and your ability to see things from different perspectives was really exceptional”.

Certainly, there is always room for improvement and it is my hope that our successors will continue to develop and build upon our achievements.

### **For the Experience Gained During the Assignment**

I have always considered working in a multinational environment extremely significant and hugely rewarding not only from a professional perspective but from a personal point of view as well. Not only are you given a chance to acquire different methods and working patterns but also to broaden and develop your knowledge of different cultures, customs and traditions, something that goes hand in hand with working with representatives of different nations.

Undoubtedly, I have always tried to use the new methods and useful patterns I have learned while working in multinational environment in my daily routine in such a way that it would help raise the interoperability of the Bulgarian Land Forces. ■



# Becoming International

■ **Imiśława Górska,**  
the Principal of the ISOB

**The International School of Bydgoszcz (ISOB) seeks to develop students of the world through the International Baccalaureate Organization’s programmes: Primary Years and Middle Years**

What makes the ISOB “international”? Is it the curriculum that includes study of different cultures or an international body of students? Maybe a canteen which serves foods of different countries? What do schools in Bombay, India or in Berlin, Germany and finally our International School of and in Bydgoszcz, Poland have in common? The answer is the International Baccalaureate Organisation’s programmes which define 10 most important attributes of an International Person and provide the answer to “What we want students to learn?”.

The International School of Bydgoszcz is a Non-Public General Educational Complex of the University of Kazimierz Wielki, formed on 2 March 2009 and situated at 23 Gałczyńskiego Street - Błonie, Bydgoszcz. The complex consists of:

- Private Primary School - International School of Bydgoszcz
- Private Middle School - International School of Bydgoszcz
- Private High School - International

School of Bydgoszcz

- Private Pre-School (from age 5)

But let’s come back to the question “What do we want students to learn?”. We are aware that our students cannot possibly learn everything by the time they leave school but that is why we can instill in them the desire to keep questioning throughout their lives. Many parents possibly noticed the IB Learner’s Profile displayed on the school walls. The profile helps our students and teachers establish goals, plan units of inquiry and finally - to assess performance. The ISOB students contribute to discussions in a meaningful way. They do not shy away from challenging questions and, once they know the answer they follow up asking “why?” The Programme requires our teachers to write a single, concise sentence expressing a globally significant central idea that is truly universal and therefore worth studying by any school in the world.

## Primary School Pupils

The IB Primary Years Program (PYP) is designed for students aged 5 to 12 (grades 0 - 5). It is a transdisciplinary programme of international education designed to foster the development of a child. It focuses on the

total growth of the developing child, touching hearts as well as minds and encompassing social, physical, emotional and cultural needs in addition to academic development. The PYP curriculum has an international perspective where the diversity of student experiences and backgrounds is welcomed. A PYP school strives towards developing an internationally minded person who demonstrates the attributes of the Learner’s Profile, and represents qualities of a life-long learner.

## From Early Puberty to Mid-Adolescence

The age from 11 to 16 is a crucial period of personal, social and intellectual development, of uncertainty and questioning. The Middle Years Programme (MYP) is designed to guide students in their search for a sense of place in their natural and social environments. Through highlighting the importance of ‘Approaches to Learning’ (ATL) the MYP focuses students on how they learn, and helps them find out about themselves as learners so that they can develop learning skills. The MYP provides an academic framework that encourages students to embrace and understand the connections between traditional subjects and the real world, and become critical and reflective thinkers. ■

# What are ISOB students like?

## **Inquirers.**

They develop their natural curiosity. They acquire skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning and this love of learning will be sustained throughout their lives.

## **Knowledgeable.**

They explore concepts, ideas and issues that have local and global significance. In doing so, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.

## **Thinkers.**

They exercise initiative in applying thinking skills critically and creatively to recognize and approach complex problems, and make reasoned, ethical decisions.

## **Communicators.**

They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. They work effectively and willingly in collaboration with others.

## **Principled.**

They act with integrity and honesty, with a strong sense of fairness, justice and respect for dignity of an individual, groups and communities. They take responsibility for their own actions and the consequences that accompany them.

## **Open-minded.**

They understand and appreciate their own cultures and are open to perspectives, values and traditions of other individuals and communities. They are accustomed to seeking and evaluating a range of points of view, and are willing to grow from the experience.

## **Caring.**

They show empathy, compassion and respect towards needs and feelings of others. They have personal commitment to service, and act to make a positive difference to lives of others and to the environment.

## **Risk-takers.**

They approach new situations and uncertainty with courage and forethought, and have independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.

## **Balanced.**

They understand the importance of intellectual, physical and emotional balance to achieve personal well-being for themselves and others. IB students are active participants in a wide range of aspects of campus life, as well as focusing on their academic development.

## **Reflective.**

They give thoughtful consideration to their own learning and experience and are able to assess and understand their strengths and limitations in order to support their learning and personal development.



We are sure that our pupils will become internationally minded persons!

## New Year's Reception

With close to 100 guests, including several members of Polish Parliament, Mrs. Ewa Mes, the Voivode of Kujawsko-Pomorskie Province, Mr. Rafał Bruski, the Mayor of Bydgoszcz, numerous representatives of military and civilian organizations, the Joint Force Training Centre inaugurated another busy year.

The New Year's Reception, that took place on 18 January, created a perfect opportunity to summarize the Centre's work in 2012, to give an overview of the JFTC Commander's plan for 2013 and to meet with all authorities and institutions that supported the centre throughout 2012.



## Bydgoszcz NATO Unit Volleyball Competition

This was the third time that a volleyball contest involving NATO organizations in Bydgoszcz took place. The 3rd NATO Signal Battalion (3NSB), the NATO Joint Force Training Centre (JFTC) and the JFTC Support Unit delegated their teams for the competition.

The teams played round matches and set the order based on the result of the round play qualifications. The 3NSB nominated two teams so the chance was high that this time they would be able to win the Champion's Cup and take it from the JFTC Support Unit who actually had won the last

two events. However, the ultimate effort was not there yet to defeat them. The final result was that the JFTC Support Unit played well and deserved the Champion Cup this year, the second place went to 3NSB Team One and the JFTC got the bronze medal.

The event took place between 19 and 21 February.



# Life at the JFTC 2013 in Retrospect



## The Best of the Best – the JFTC Commander's Awards for Excellence

2012 was one of the busiest and one of the most successful years in the whole history of the Joint Force Training Centre. Numerous training events, exercises, workshops and conferences followed one another and kept the JFTC staff working at full speed for the twelve months. The intensity of work created a great challenge for the centre's personnel but due to their highest professionalism and commitment the JFTC managed to conduct the events smoothly and completed all tasks successfully.

All these inspired the JFTC Commander to establish a new tradition for the centre – the annual JFTC Commander's Awards for Excellence. On 14 February 2013, for the first time Major General Pavel Macko awarded and honoured the best seven members of his staff.



## Conflict-Crisis-War.

### Scholarly Conference of the Kazimierz Wielki University and the JFTC

Conflict-Crisis-War. Security in Global and Regional Perspective – this was the subject of a scholarly conference that took place between 9 and 10 April in Runowo Krajeńskie. This joint effort of the Kazimierz Wielki University (UKW) and the Joint Force Training Centre (JFTC) gathered close to 50 participants and created a platform for discussions focusing on theoretical and practical security concepts.



## The 7<sup>th</sup> JFTC International Day

It was a perfect day for an event like this. On a beautiful sunny Friday, 17 May, around 400 people, soldiers and civilians working at all NATO entities in Bydgoszcz together with their families, but also the JFTC friends and guests, arrived in the Bydgoszcz NATO training centre compound to celebrate the 7<sup>th</sup> International Day.

With national stands, teams wearing national colors, loud music and a huge playground for children – this is how the JFTC, the NATO Communication and Information Agency Squadron Bydgoszcz, the 3rd NATO Signal Battalion, the JFTC Support Unit, the Allied Command Counterintelligence and the JFTC National Support Elements cultivated

one of the best Bydgoszcz NATO annual traditions.

14 nations – Albania, Bulgaria, Czech Republic, Estonia, France, Germany, Hungary, Italy, Lithuania, Poland, Slovakia, Spain, Turkey and the USA – promoted their countries with regional food, beverages, small giveaways and tourist information.



# Life at the JFTC 2013 in Retrospect



## The JFTC Ball Charity Lottery Supported the Salus Homini Foundation

Following the Joint Force Training Centre's annual tradition, another charity lottery was organized during the 4th JFTC Ball in November 2012. All participants of the ball opened their hearts and...wallets and collected almost 5000 PLN with the aim of helping people in need. This time the JFTC supported the Salus Homini Foundation.

On 18 April the JFTC Deputy Commander and Chief of Staff, Brigadier General Jaromír Zůna, accompanied by Mrs. Alina Zimny, the Honorary Consul's representative, met with Mrs. Dobrosława Jedynak, the Salus Homini President, and handed over a projector, a wall screen, three air anti-bedsore mattresses and a laptop.

## The Joint Force Training Centre Bid Farewell to Brigadier General Grzegorz Buszka

Former Joint Force Training Centre (JFTC) Deputy Commander and Liaison Officer to the Host Nation, Brigadier General Grzegorz Buszka, completed his service at the Bydgoszcz NATO training centre. On 22 April, the JFTC members bid farewell to General Buszka, thanked him for his dedicated service and wished him a lot of success in the future.

“I am not saying good bye, but see you soon.” – said the JFTC Commander, Major General Pavel Macko, to General Buszka. “But I am sure, that you will remain in close relationship with the JFTC. You are a member of the centre and you will always be wel-

come here.” General Macko also highlighted General Buszka’s commitment to the centre. “The JFTC is losing a very valuable key-leader. His contribution assured very close and good relationship between the centre and the Host Nation, Poland. As a real soldier, who gained a lot experience in leadership, he highly contributed to the JFTC mission and his support to training events conducted by the centre was invaluable.”

During his service in the JFTC he filled in for the JFTC Commander and personally directed or led many important exercises and activities organized by the JFTC in Bydgoszcz or in other locations.



## Slovenian Students Explore the JFTC

Representatives of the Slovenian Student Association of Defence Studies (SSADS) visited the Joint Force Training Centre (JFTC) on 23 April. A group of 50 students arrived in Bydgoszcz to deepen their knowledge regarding NATO and its subcommands and to see how the Bydgoszcz NATO centre works. At the JFTC they met also with students and lecturers from the Kazimierz Wielki University (UKW). The event took place between 19 and 21 February.



# Life at the JFTC

## 2013 in Retrospect



### Academic Guests at the Joint Force Training Centre

Students of the Polish National Defence University (NDU) and students of the Defence Studies at the Kazimierz Wielki University (UKW) in Bydgoszcz arrived at the JFTC compound to learn more about the Bydgoszcz NATO training centre and to see the facility where NATO soldiers prepare for their missions, including the one in Afghanistan.

On 20 May more than ten Polish officers, students of the Defence Policy Postgraduate Studies at the Polish NDU, led by Brigadier General (ret.) Zenon Smutniak, the group coordinator, met with Brigadier General Wojciech Grabowski, the new JFTC Liaison Officer to the Host Nation, and with the JFTC staff.

Three days later, on 23 May, students of the UKW Defence Studies visited the JFTC. A group of sixty students met with two officers serving at the Bydgoszcz NATO training centre. The officers provided the guests with background knowledge regarding the centre and showed them the auditorium, classrooms as well as some tools that are used at the JFTC in support of training.

## 6<sup>th</sup> Primary School NATO Knowledge Competition

Why and when was NATO established and what does its symbol represent? What does the Article 5 of the Washington Treaty mean for the Alliance? Who is the current JFTC Commander and what does the “JFTC” abbreviation stand for? These are only few examples of questions that participants of the annual NATO Knowledge Competition for Primary Schools of Bydgoszcz had to face. For the sixth time in a row the Joint Force Training Centre supported the event.

Close to 60 participants from 10 schools entered this year’s competition. They responded to the invitation of the Primary School No. 38 in Bydgoszcz, the main organizer of the event, and came to grips with a difficult rivalry. The final part of the competition took place on 3 June.



# Life at the JFTC 2013 in Retrospect



## Bastille Day at the JFTC

It has already become a tradition that every July the JFTC French community invites all Bydgoszcz NATO staff for the Bastille Day celebration. So it was this time. The event took place on 19 July, five days after the official French celebrations, and consisted of a formal ceremony held at the JFTC compound in the morning with a “bal populaire” in the evening.

The formal, military ceremony gathered all civilian and military JFTC personnel. It was chaired by the centre’s Commander, Major General Pavel Macko, who in his speech highlighted the importance of values disseminated by the French Revolution and their connection to the current NATO mission.

In the evening, the JFTC members and guests enjoyed themselves during a delicious barbecue filled with good French music.





## Slovak Contingent Celebrates National Holiday.

There are many national holidays celebrated at the JFTC by its member nations. For Slovaks September is special because of two anniversaries.

On 1 September 2013 Slovaks celebrated 21<sup>st</sup> anniversary of the establishment of the Slovak Constitution which became the key platform for formation of sovereignty and independence. The Constitution of the Slovak Republic is based upon the right of all nations for self – determination. Based upon our culture, traditions and values, it guarantees human rights, freedom, and equal opportunities for everyone.

Although the second event is not a national holiday, it is special for all men and women in uniforms. On 22 September the Slovak Armed Forces celebrate their day. The Day of the Armed Forces of the Slovak Republic has been celebrated in Slovakia since 1997. It is celebrated on that particular day to commemorate the 1st victory of Slovak volunteers at Brezova pod Bradlom in the revolutionary year 1848, when the suppressed Slovaks stood up against the power of Austro-Hungarian Empire regular army in their fight for freedom and independence.

For the third consecutive year the Slovak contingent at the JFTC celebrated the two holidays together with other national contingents. The JFTC Commander, Major



General Pavel Macko in his opening speech welcomed guests of honor, including Slovak Ambassador H.E. Vasil Grivna, the former JFTC Deputy Commander Brigadier General (ret.) Grzegorz Buszka, and many others. The Commander expressed his gratitude for continuous support to the JFTC mission. In his speech, the Senior National Representative, Colonel Miroslav Fazik, explained historical context and background of the events. On the occasion of the 20th Anniversary of establishing the Slovak Armed Forces selected staff officers were awarded commemorative medals.

The event culminated by a Slovak reception where samples of Slovak traditions, culture and cuisine were served.





# German Unification Day

**Speech on the Day of German Unity by Colonel Klaus-Peter Kieser, German Senior National Representative at the JFTC**

The 3<sup>rd</sup> October 2013 marks the 23<sup>rd</sup> anniversary of national unity for the German people. The Germans' decade-long desire of overcoming the rift within the country had finally been fulfilled in a peaceful manner so they could live in a united democratic and social constitutional state! What will never be forgotten is what the allied forces and Poland contributed to German unity and to overcoming Europe's division.

Already as early as December 1970, former Federal Chancellor Willi Brandt opened the new dialog by his gesture of humility and penance in front of the Monument to the Warsaw Ghetto Heroes. This was a vital step regarding German-Polish relationships.

The peaceful mass protests of the "Solidarnosc (solidarity) members" served as a role model for many courageous activities in the former countries of the Warsaw Pact culminating in the collapse of the Berlin Wall. Thanks to the brave attitude of the people, changes were brought about leading to the fall of communism and to the new era of freedom and inner peace for many nations. The fall of the Berlin Wall in this context became the symbol of the fall of the mental wall, which was even stronger than a brick wall.

These events inseparably linked our both nations. It goes without saying that many architects from all over the world contributed to German unity.

Let us not forget the civil rights campaigners who insistently opposed to a dictatorship. Or the churches which gave shelter

to those encouraged to seek freedom. What many people felt at the time was: change must be brought about.

At this point in time the Monday prayers and Monday demonstrations began in the former eastern Part of Germany. At first only few, then more and more brave people took to the streets. They freed themselves from dictatorship - without bloodshed. The desire of the people for freedom had always been on their minds. What had been violently crushed by tanks in 1953 was finally unstoppable in 1989. This is the peoples' historic achievement. Their courage struck the world.

Without the European freedom movements, the German reunification would not have been conceivable. Not without the Polish workers with the Polish Pope behind the scenes, John Paul II, who preached on site "Don't be afraid". "Solidarnosc" has fought every bit for its freedom and, thus, for ours as well. I would like to emphasize this especially here in Bydgoszcz where Solidarnosc had its most courageous supporters.

Not without Mikhail Gorbachev who - during the course of glasnost and perestroika - relinquished the Soviet Union's claim to power dominating other countries, thus enabling self-determination. Not without the Hungarian government that was the first one to open up their borders. And, above all, not without the great big help from our friends in the USA, France, Great Britain and the others, who then had expressed their confidence by agreeing to the reunification.

There were anxieties and resistance. Many asked themselves the question of whether it will go well when entire Germany

will be united again. Who could blame them, given the aberrations, horrors and catastrophes that emanated from Germany during the first half of the 20<sup>th</sup> century.

Far-sighted statesmen helped to overcome the fears and resistance and enabled life in peace, freedom and self-determination. For all of this, we are infinitely grateful.

Today's Europe is the fulfillment of the dreams of many generations of Europeans. But it is something not to be taken for granted.

We have every reason to defend this Europe as well as the basic values of our states and great European cultural achievement. This differentiates our continent more than anything else from other continents, for it harbors values that make up the "European way of life".

Let us all be proud of what has been achieved. But we are not done, yet. It is important to preserve the freedom and who should know this better than we in the JFTC.

It is our daily task to train soldiers and NATO members in order to enable them to contribute their knowledge and experience towards securing peace and freedom whenever and wherever it may be necessary.

We move forward with courage and confidence. The last 23 years have shown us what we are jointly capable of achieving.

The German Community at the JFTC looks forward to celebrate this important moment in the history with all of you during the "German Oktoberfest 2013" on the 29<sup>th</sup> of October.

To our common future!

## PUBLICATION GUIDELINES

1. The articles should be submitted in English;
2. The articles should be 1000-5000 words long;
3. The articles should be delivered as electronic files on a CD/DVD to the following address:  
Joint Force Training Centre  
ul. Szubińska 2  
85-915 Bydgoszcz  
Poland  
or sent via an e-mail to the following address:  
[pao@jftc.nato.int](mailto:pao@jftc.nato.int);
4. The articles should be written in Microsoft Word format, single-spaced, Times New Roman font, 12 size, A4 paper size;
5. Photos sent as an illustration for the articles should be sent in JPEG files, minimum 500KB;
6. The author of the article should provide the editor with a short information about his profession, academic title, professional affiliation and contact details.



**TRANSFORMATION  
THROUGH TRAINING**