er
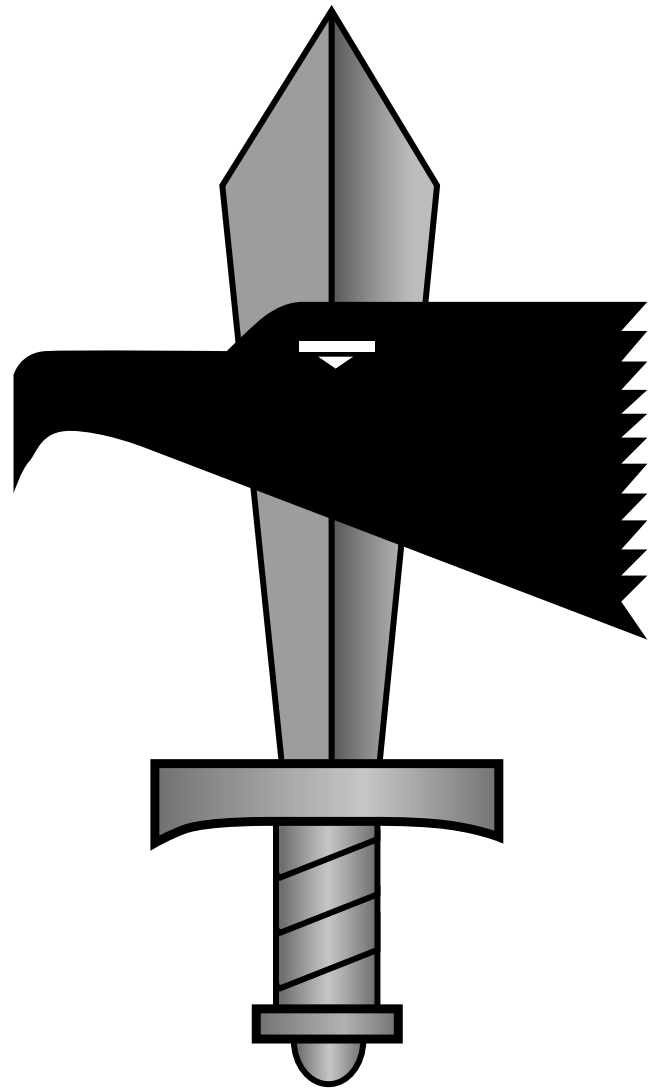
everywhere rapidly

The Magazine of the NATO Rapid Deployable Corps - Italy

NRDC-ITA 2019
Joint skills
in the Corps dimensions

NATO OTAN

NRDC - ITA
UBIQUE CELERE

NATO Rapid Deployable Corps - Italy
Ubique Celere

er
everywhere rapidly

CONTENTS

The current security situation challenges military organizations with the resurgence of old and the arrival of new challenges. As the character of a future conflict cannot be precisely anticipated, we must be ready to face and rapidly adapt to any tasks the Alliance asks of us. As a certainty, however, one can say that apart from the nature of the threat, regardless of the role a military component can play, the old traditional challenges, such as the so called "peer to peer" adversary, will now be nested in a new complex, fast-moving, hyperactive, and hyper crowded operational environment, where both high and low cost technology, creativity, and innovative thinking make conflict a costly and risky business.

To face continuous changes and to create credible deterrence, regardless of the level of responsibility asked of us, operational or tactical, our primary interest is to be at the forefront in the joint approach to operations.

Within the context of a resource constrained environment, readiness cannot be achieved without a deliberate, optimized balance between effectiveness and efficiency. This implies a clear understanding of how to combine and employ available capabilities in time, space, and purpose with the aim of anticipating and preventing the adversary from achieving a strategic advantage.

This is why is this edition of ER we decided to examine sensitive issues such as STRATCOM, targeting, rear area security, Battle Space Management (BSM), deep fires, continuous change and adaptation, logistics and social media. We examined these contemporary challenges with the aim of identifying possible room to create opportunities to be exploited during our continuous transition in support of the Long Term Commitments Plan (LTCP). Specifically, by capitalizing on capabilities and experiences achieved that help support our focus on maintaining a joint mindset. We will maintain our commitment of being Everywhere Rapidly with our usual passion and competency that highlights our honor to serve NATO with distinction.

FOREWORD

er
everywhere rapidly

FIGHTING IN A CROSS DOMAIN ENVIRONMENT. HOW TO CREATE SYNERGY IN OPERATIONS AT CORPS LEVEL WHILST MAINTAINING A JOINT MINDSET

Maj. **Colella**, Italian Army

Some of the 21st century challenges to exercise Command and Control are pivotal to understanding how to fight in a cross domain environment and creating synergy in Operations at the Corps level.

The 21st century has witnessed a significant increase in communication network speeds and closer international networks, increasing the number of people engaged in warfare and complicating its dynamics. In this release of "Everywhere Rapidly" we will investigate how to approach Operations at Corps level, from separate environments to an increasingly integrated, joint mindset. This will be our vector for the design and development of the future force and C2 Concepts.

The next generation of real-time conflict is already starting to emerge. With the rise of user-generated content and social media, witnesses to warfare are emerging not just as bystanders, or victims, but also as reporters.

The instantaneous transfer of information and wide availability to the Internet has increased the number of participants in war. Unarmed actors thousands of miles away can participate in a conflict even by sitting at their computer. The battlefield has become a virtual as well as a physical engagement space. It is no longer fought only on the conventional terrains but also in the web. Any willing person can become a belligerent of war, not just by fighting, but also by instantaneously transferring information, money, or technology, and the ability to organize or promote to a vast number of people from a significant distance.

These challenges have to be understood to find an appropriate answer to exercise Command and Control, how to fight in a cross domain en-

vironment and how to create synergy in Operations at Corps level whilst maintaining a Joint mindset.

The critical operational requirements for NATO GRF-L HQs is to continue to adapt to deter and defend against systematic five dimensional and cross domain warfare around 360 degrees of geographic threat, and increasing threat intensity regardless the level and different roles they will be called to operate. These requirements need to be pursued even at the tactical level as Corps where units could easily sink into dark waters of the tactical fight. We need to enhance joint mindset, and therefore our influence and effect on intended audiences, through better exploitation of information, being more integrated as a force and more adaptable to changing circumstances.

The synergy during operations can be achieved through three interoperability dimensions: People, Process, and Technology. The interoperability approach can lead to maintain the Joint mindset, investing on personnel training, in order to reach a high level of proficiency. Processes are critical to integrate with higher and lower echelons, Joint and single domain oriented. A clear example to mitigate the technological gap is to put in place procedures for all different levels maintaining the cross domain situational awareness. Finally, the technological challenge will be the more difficult one due to budget limitations and resistance to changes that reside in the lazy minds but, once won, it will be easy

to step up and down between Operational and Tactical level, between joint and single domain. Interoperability is part of NATO's DNA, Nations have been contributing all along the history of the Alliance to bring together own best forces and best practice to create concrete foundations. This approach will allow NATO Forces sufficient 21st century capabilities to cope with high-end strategic incursion and low-end mass incursion and instability.

NATO adversaries and other such forces, for example Daesh, are conducting a form of warfare at the seams of complex societies and at the margins of our alliance. NATO must conduct an information-led digital five dimensions future defense that counters disinformation, destabilization, disruption, deception and destruction. To that end, NATO Nations must embrace the revolution in military technology and the application of artificial intelligence, big data, machine-learning and quantum-computing to the battlespace.

Conclusion

This article highlighted the importance of interoperability within NATO to achieving the synergy in Operations at the Corps level. This is necessary in order to adapt, deter and defend against systematic five dimensional and cross domain warfare within a 360 degrees and increasing threat environment. In the following articles of "Everywhere Rapidly" we will try to drive readers through some of the issues we are facing without the arrogance to claim solutions, but indicating a possible direction of travel going forward.

About the Author

Maj. Domenico Colella currently works as the C2IM Staff Officer within the Operations Division, NRDC-ITA.

Common Operating Picture at the forward OPSCEN

er
everywhere rapidly

NRDC-ITA REALIGNMENT TO A CORPS HQ WITHIN A WARFIGHTING SCENARIO: THE QUINTESSENCE OF STRATCOM

Col. **Zouggari**, French Army

StratCom is an important function in a warfighting scenario and plays a role in achieving consistency of effort, coherence throughout the operational levels and seamless synchronisation and integration of lethal and non-lethal military activities.

Introduction

2019 will witness NRDC-ITA realigning from a Land Component Command to a Corps head-quarters. NATO's strategic concept considers the employment of NATO Force Structures, inter alia, in crisis management or cooperative security. But as a Corps HQ, NRDC-ITA could be deployed in the framework of collective defence involving high-intensity combat, potentially in populated areas.

In this scenario, which is likely characterised by the adversary enjoying a high level of influence as well as access to a plethora of lethal and non-lethal technologies, NRDC-ITA would have to coordinate the engagement of several divisions within a joint and multinational context to achieve tactical advantage over the enemy. Focusing on its deep and rear operations, the HQ would rely on combined arms maneuver whilst employing full spectrum capabilities in order to dominate the adversary and win the battle of perception.

The complexity of this operational environment, as well as the nature of Corps operations, will require a greater consistency of effort, coherence throughout the operational levels, coordination with partners and seamless synchronisation and integration of lethal and non-lethal military activities In other words, NRDC-ITA commitment as a Corps in a warfighting scenario may lead to the StratCom[1] function expressing its quintessence.

StratCom justified by the operational environment...

The world is going through dynamic changes that may fundamentally modify the operational environment in which NRDC-ITA, as a Corps HQ, may deploy and fight. In addition to the emergence of non-traditional adversaries and the multiplication of ethnic, religious, economic and social tensions causing instability, the threat presented by near-peer competitors, challenging NATO interests becomes increasingly real. These potential adversaries have already developed sophisticated capabilities and are able to contest operations on land, at sea, in the air, in the cyberspace, as well as in the cognitive environment.

As a Corps HQ, NRDC-ITA could be expected to operate amongst a high density population which is unsure about NATO or potentially hostile, whilst confronting a larger modernised force, whose state apparatus will already have modeled the information environment utilising all instruments of power (Diplomatic, Information, Military and Economic). This enemy would be able to use various capabilities, including weapons of mass destruction, to exploit, disrupt, and disable our command and control systems, having thus the capability to generate mass casualties or to destroy critical national infrastructure.

It is likely that these potential adversaries would

---

[1] StratCom is the integration of communication capabilities and information staff functions with other military activities, in order to understand and shape the Information Environment (IE), in support of NATO aims and objectives.

er
everywhere rapidly

use deniable tactics, rebutting facts and absolving them of accountability. Undoubtedly, this would also include significant propaganda and a concerted disinformation campaign. Unrestricted by moral or ethical concerns, this opponent would probably neither comply with international laws nor with the law of armed conflict in order to gain an advantage.

Such a context would dramatically jeopardize our legitimacy and credibility. It may also undermine any support from local, regional and even domestic audiences.

In this situation, NRDC-ITA's first priority would be to understand the complexity of the operational and information environment in which it is to deploy. This is essential in order to start effectively its shaping phase of an operation. In this regard, the role played by the communications capabilities and the information staff functions, including StratCom, will be essential to identify baselines and assess progress.

The directives and guidance provided by the Corps StratCom Subject Matter Expert (SME) would be paramount for the countering of misinformation or disinformation, as well as the mitigation of any undesired effects as a consequence of friendly or enemy forces.

Finally within the information environment, where the population are at the very heart of operations and a key factor for success, one of the Corps HQ' objectives would be to convince them of NATO legitimacy, while persuading them to reject the adversaries narrative. This is where the consistency of friendly actions, between words and deeds, should be seamless.

Based on the previously mentioned challenges, there would appear little doubt that the StratCom function remains critical at Corps HQ level, through both the implementation of the higher HQ's StratCom framework and the full commitment of the StratCom SME in the planning and decision making processes.

...but also by the nature of Corps operations

As a deployed Corps HQ in a warfighting scenario, NRDC-ITA will indeed be part of a larger ground force, acting in the framework of a joint operation. The vertical alignment with higher

Corps HQ in a warfighting scenario

er
verywhere rapidly
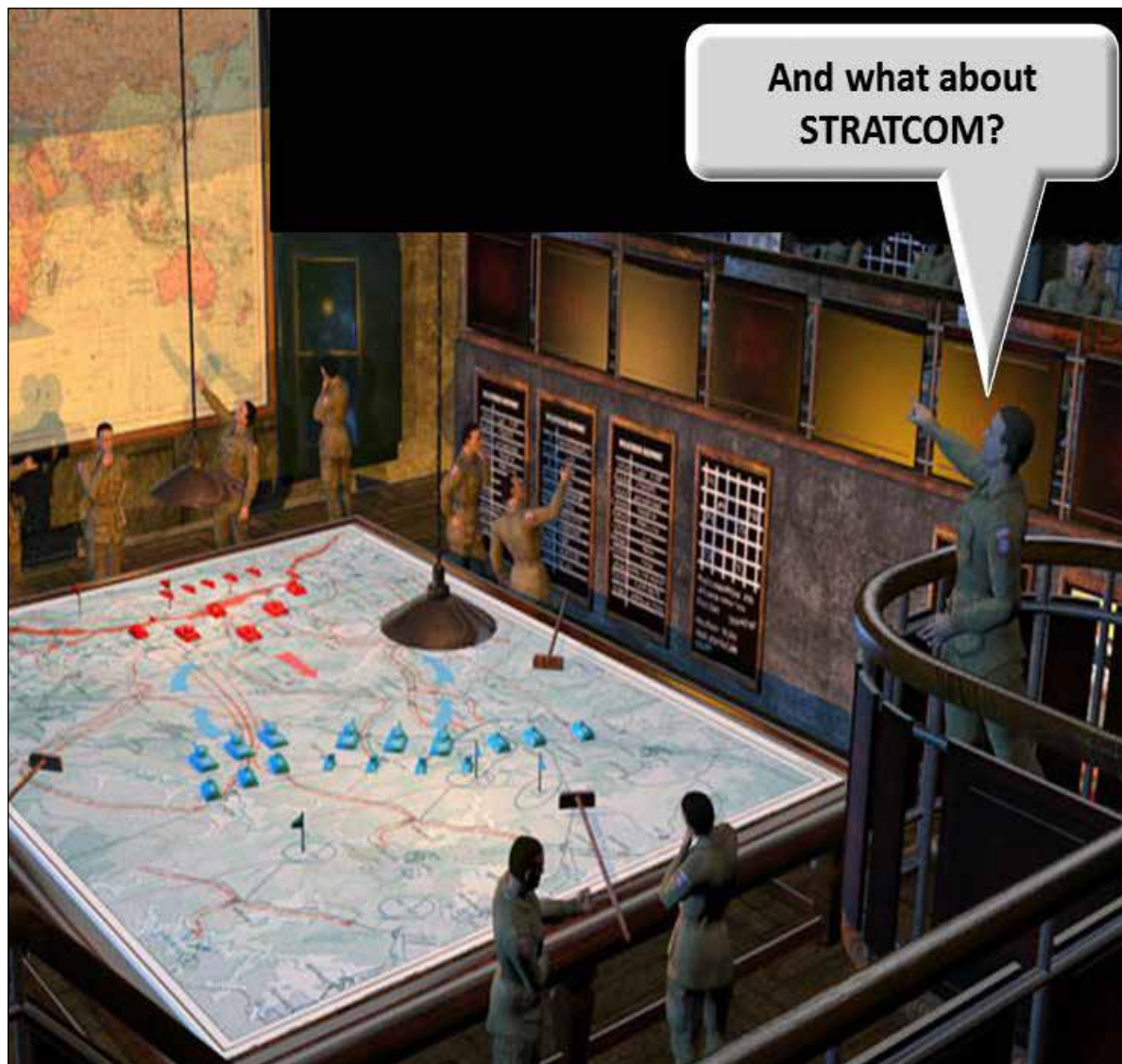
HQs will therefore be crucial in maintaining consistency and coherence of message, in order to link the strategic objectives with our tactical activities.

Our operations would likely involve coordinated activities with local armed forces in a multinational effort. Our partners would not only have different capabilities or equipment, but also different values. Our operations will have to be carefully coordinated and the implications of our actions well considered in order to avoid any cultural shock. Once again, in this, the StratCom SME will be decisive in making this happen.

Throughout the depth of the battlefield, the Corps will conduct simultaneously close, deep and rear operations, mainly offensive to either defeat, destroy or neutralize the enemy…while retaining reversibility for deterrence and controlling the use of force. Our missions would require the employment of mutually supporting lethal and non-lethal capabilities to generate overmatch, to present multiple dilemmas to the enemy, and enable our and higher HQs' freedom of movement and action.

Summarised by the well-known "win the hearts and minds" mantra, the Corps Commander will also have to generate dedicated effects in the Information Environment, notably on the perceptions, attitudes and behavior of specific audience. In the same vein, the absolute need to deny, degrade, disrupt, destroy or influence the adversary commander's means or ability to command and control his forces, will dictate a high employment of information activities.

All these efforts will require the StratCom function to carefully integrate communications capabilities and information staff functions with other military activities to avoid any perception of a "say-do" gap.

Finally, there is no doubt that any involvement of NATO in an ART5 scenario would bring the area of operations under the spotlight of the worldwide media. Our actions would be observed, commented upon, and selectively portrayed to and by the world audience. The perceptions created by our operations may in turn affect our assigned mission and could even lead to losing the support of population. Local and regional audience will have to understand the nature itself of our operations, what is the desired 'end' what are our intended 'ways'. Therefore, StratCom, through telling our story and promoting the right themes, would be essential to foster our messaging and properly influence our selected audiences.

The nature itself of Corps level operations within a warfighting scenario definitely reinforces the importance played by the StratCom function in such a context.

Conclusion

We must ever be mindful of our responsibilities to win in combat, while also creating an environment for lasting peace and stability; circumstances, which used to consider lethal capabilities as being the military efficiency's major factor, have changed. Whilst these capabilities are still required to maintain a conventional deterrence capability or ability to alter the center of gravity of an enemy, they are not the alpha and the omega of success…even in a warfighting scenario.

A Corps HQ could not rely on higher HQs to tackle the challenges rising in the information environment. Nor should it think that the only way to win battles is through the omnipotence of lethal capabilities. Being able to integrate varied capabilities in a coherent plan to achieve specific objectives as well as to tell our story is key for future success.

Each battle will be a combination of information activities as well as fire and maneuver, whose integration falls under the umbrella of StratCom. However, the quintessence of the StratCom function in the context of a warfighting Corps is the improvements generated from a familiarised staff, educated leaders, empowered and competent StratCom SMEs as well as realistic training. In this respect there is no doubt that NRDC-ITA is ready to cope with these challenges **everywhere rapidly** as is stated in its motto.

About the Author

Col. Daniel Zouggari currently works as the StratCom Advisor to COM NRDC-ITA.

er
everywhere rapidly

REFINING BEYOND THE PLAN AT THE CORPS LEVEL, THE COMPLEX DYNAMIC CHANGING FIGHT.

Capt. **Romano**, Italian Army

The new challenges that the NATO's tactical level command, the Corps, faces need to take into account the complexity and dynamism of the modern operational environment.

Currently the Euro-Atlantic area is under pressure along the Eastern and Southern flanks by two strategic competitors. From the East, Russia is attempting to set strategic conditions to reshape European security and its military equilibrium threatening a state-to-state conflict with traditional military approaches to security. From the South, the International Terror Groups (ITGs) are attempting to exploit strategic conditions to dislodge fragile systems of security, remodeling the security environment by a wide range of traditional and non-traditional security threats, providing fertile ground for terrorism, civil war, and extremism. Two fronts, two competitors, two different approaches but with a common end-state: Alliance and European security destabilized.

The operational environment is henceforth, more diverse, complex, fast moving and demanding than at any time. Military forces have to tackle with a modern and complex warfare characterized by the availability of mass communications and social networks, proliferation of advanced weapons, unmanned aerial and ground systems, ubiquitous sensors, dynamic populations, combat forces and varying political systems and ideologies.

The interaction of these elements and activities transforms the already cluttered environment into a hyperactive one. For this reason the Alliance is to get back to the pre-Cold War military strategy culture but with a modernized consciousness.

NATO is moving from a process-centric Crisis Management approach to a Military Strategy-centric one to anticipate its competitors and regain strategic advantage.

In this logic, to gain advantage means planning to contest destabilization, disorder and deny opponents military advantage, being ready to constantly refine plans as the situation dictates. Friction, uncertainty, fluidity, human dimension influence the geo-strategic theatre. Planning remains indispensable but, refining beyond the plan is even more.

Despite of its obviosity, conflict can assume a wide range of forms reflecting the magnitude of violence involved from low to high intensity. The place on the spectrum of a specific conflict depends on policy objectives, military means available, national will, and density of fighting forces or combat power on the battlefield. The highest is the intensity the highest must be the flexibility of mind and the freedom of action required.

This is achievable through a decentralized decision-making and by providing the right capabilities down to the lowest tactical actors. This implies that modern leaders are not to be strictly anchored to plans but be flexible and versatile.

Within this context, and among the huge number of valuable actions identified and delivered by the Alliance in the last years after the Warsaw Summit, it is remarkable the increased importance and operational flexibility given to the NATO Force Structure and to the tactical level of command: the Corps.

When conditions change, the original plan might become inadequate; situational understanding, refinement, ability to quickly organize capabilities and optimize actions in all domains, are critical to seize fleeting opportunities for mission success. Corps must strive to achieve "intent-based synergy" moving beyond plans, synchronization matrices and execution checklists. Tactical level commands' *modus operandi* should be spontaneous and opportunistic, agile and flexible, capable of arranging capabilities in time, space and purpose, to accomplish the mission given by the higher echelon.

Commanders at all levels, and their staff, must demonstrate wise reasoning and the ability to achieve synergy across a dynamic and multi-domain battlespace.

Planning is required and gives the necessary level of appreciation of the battlefield, but as the envi-

ronment changes, deviations, not previously accounted for executing the plan, are to be suddenly identified to increase the possibility of success.

Modern Corps in the modern warfare must be "*competitive in short of war to be competitive in war*"[1], being required to conduct operations in wide areas, striking the deep, fighting in the close and securing the rear. To do this, Corps should support decentralization, establishing and encouraging autonomy of the subordinate Commanders, enhancing freedom of maneuver and survivability to anticipate the opponent's actions.

This way of thinking, strictly related to the mission command, embraces the system of settings to provide proper direction and Commanders' vision to the subordinates to achieve objectives, delivering a clear understanding of the desired end-state of their mission, the reasons to achieve it, and any constraint imposed on its achievement.

Thus, by achieving an intent-based synergy, decentralizing decision-making, placing substantial capabilities at low levels either organic or via flexible access, and allowing subordinates to cooperate and orchestrate cross-domain effects. Mutual trust will be supported among Commanders when exercising their initiative.All levels of command must have a shared understanding of the intent, the mission and the focus of effort, and assume the risks associated with subordinate freedom of action. Through intent-based synergy, subordinates can collectively see opportunities to integrate capabilities across domains and have the freedom to take actions required to win.

In "short of war", the most important task of any military is to prepare for war.

As one of the NATO High Readiness Forces, NRDC-ITA, is maintaining itself ready for immediate employment, everywhere, in any climate and for any type of conflict.

The Headquarters, in line with the new strategic thinking, while preserving the acquired joint mindset and speeding its knowledge up on the threats emanating from the South, is now awakening its dormant warfighting capabilities to be ready to

1   SACEUR Strategic Thoughts.

lead the tactical battlespace as Corps and is looking beyond the plan by setting up the bases for the flexibility, agility, interoperability and decentralization required to properly tackle with the potential opponents.

Thus in a synergic and cooperative manner with higher commands, subordinate and affiliated units to enhance the capability to conduct large scale, high intensity hybrid warfighting against a near-peer adversary in a degraded environment through the establishment of effective, robust, efficient, sustainable, interoperable an agile Command and Control structure.

This implies high level trainings, flexible planning capabilities, enhanced interoperability and survivability, qualified professionalism development, strong leadership, mutual trust and cohesion.

Refining beyond the plan at the Corps level means to develop the mentioned capabilities, centered on the primary resources available: commanders and subordinates. All levels of command must have a shared understanding of the intent, the mission and the main effort, and assume the risks associated with subordinate freedom of action. Mutual trust and risk acceptance hinge on a shared way of thinking.

Conclusion

Due to the current dynamism and multi-domain nature of the operational battlespace, in order to be successful modern tactical level commands must be capable of organising capabilities and optimising actions acrosss all domains. Corps Commanders and their Staff's mind-set must be constantly trained and exercised to be flexible in thought and opportunistic in nature, quickly arranging capabilities in time, space and purpose.

About the Author

Capt. Marco Romano currently works as a staff officer within the Policy & Doctrine Section of the Plans Division, NRDC-ITA.

er
everywhere rapidly

CREATING READINESS THROUGH LOGISTICS IN THE MODERN BATTLEFIELD

Maj. **Ponti**, Italian Army

In recent years, emerging crises and the frequently changing geo-political environment are shifting the aspects of possible conflicts and are reinforcing the idea that logistical support must be more adaptive and flexible to sustain operational manoeuvre.

The readiness

Since the launch of the NATO Response Force (NRF) in 2002, and the Wales and Warsaw Summits, NATO identified the need for Heads of State and Governments to help implement its requirements. The organization of the NRF is based on three main elements held at graduated readiness: the Very High Readiness Joint Task Force (VJTF), the Initial Follow-on Forces Group (IFFG) and the Follow-on Forces Group (FFG). Although the revision and the adaptation of the overall logistic concept are still ongoing, in the past years NATO has made tremendous efforts to identify its shortfalls and gaps, thus reshaping the NRF requirements with an increased size and flexibility for all warfighting functions, allowing for a wider spectrum of tasks to be conducted, for example, implementing the logistic support assets of divisional troops.

Doctrinally, readiness is defined as "*the period of time measured from an initiation order to the moment when the Headquarters or unit is ready to perform its task from its peacetime location or when it is ready for deployment*[1]". From a logistic perspective, readiness can be seen as the ability to receive a unit within the theater area, rapidly build its combat power, and then project and sustain it into an area of operation ensuring freedom of action, extending operational reach, and prolonging endurance. The readiness concept is to be applied in any deployed location, because in my mind for any unit -to be ready- means that it has been provided with the proper logistic support assets and the required commodities, despite its readiness category or the assigned area of operation. In other words, forces are not ready if sustainability cannot be ensured. Some logistic units will have to be deployed at an early stage to set up Reception Staging and Onward Movement, coordinate the main supply routes and establish the basis of a feasible support architecture; therefore they may need to be earmarked with a higher readiness category than their supported forces.

There are several facts and reasons to affirm that 21st century's logistic support is pivotal to the readiness of NATO forces. NATO has drastically changed its attitude and mind set towards logistics, illustrated by the number of conferences, seminars, meetings, and working groups that articulate a new logistic support concept that is more expeditionary oriented to better support the manuever force.

Supporting readiness

Driven by the results of the Wales Summit, Supreme Allied Commander Europe (SACEUR) initiated a series of processes and measures focused at the enablement of the Area of Responsibility. These measures primarily target the following logistic domains: updating logistic roles and responsibilities, Logistic Command and Control (C2) structure, freedom of movement challenges, and immediate support to the first deploying elements of NRF. While this evolution is not yet finished, it is likely to be completed in the next few years.

One of the first tangible results of the new logistic policy was the creation of SACEUR's Standing Joint Logistic Support Group (SJLSG), a strategic level Logistic C2 node. SJLSG would coordinate continuous and seamless planning to provide strategic support to Troop Contributing Nations (TCNs). This includes determining the overarching legal framework between transit Nations and Host Nations, qualifying simplified standards for border crossing point procedures, and transit timings for Diplomatic clearances between the Alliances.The

[1]   MC 55/4: NATO logistic readiness and sustainability policy.

er _{everywhere rapidly}

NATO troops embarking onboard ITA Air Force B-767 KC at Herat airport (Afghanistan). B-767 KC is one of the most valuable STRATLIFT assets available to ITA Armed Forces.

SJLSG is still to reach operational capability; in 2018 the project regained consensus, illustrated by NATO establishing also a new strategic Logistic Command, the Joint Support and Enabling Command (JSEC) in West Germany, to be fully operational by 2023.

When it comes to a "fast deployment", units at high readiness levels should be able to move anywhere without constraints. One obstacle to rapid deployments is the lack of Strategic Lift (STRATLIFT) assets. Only a small number of Armed Forces are equipped with enough means of transportation to deploy their Forces.

The commercial market offers some solutions, but they are limited and sometimes do not meet the required readiness in an area of operation. The following agencies/entities can advise and provide STRATLIFTs or shared solutions:

- NATO Support and Procurement Agency (NSPA) directly manages the Strategic Airlift Capability (SAC) programme, consisting of three wide body aircraft always available for the member Nations. Additionally, NSPA owns in its portfolio the Rapid Usable Enabling Contract (RUEC) "multi-modal strategic transportation" to best fit National requirements;

- The Movement Coordination Centre Europe (MCCE) main purpose is to coordinate and optimize the use of airlift, sealift, land transportation assets of Armed Forces of the member Nations; identify common solutions combining with already planned transportation or organizing missions "ad hoc";
- European Air Transportation Command (EATC) is a Multinational Command for the pooling and sharing of national military assets, to combine air transportation, air-to-air refuelling and aeromedical evacuation.

In order to minimize the transportation and deployment issues, and better meet SACEUR's readiness requirements, it is worth mentioning that in the last decade many NATO Nations, including Italy, have delegated their Joint Operation Headquarters to sign multi-year contracts with national providers to ensure 24/7 availability of Roll-On/Roll-Off (RO-RO) ships and commercial airliners.

NATO Force Integration Units (NFIUs) are another pragmatic example of how NATO has increased its readiness. NFIUs are Joint and combined units on the eastern flanks of the Alliance focused on facilitating the rapid deployment of the NRF within

C-17 "Globemaster": night loading operations at Malpensa airport, Italy.

er
everywhere rapidly

NFIU LTU (Vilnius - LITHUANIA) was one of the NFIUs visited by NRDC-ITA logistic planning team in September 2017 during the preparation phase for NRF 2018 commitment.

their areas of operation or host country. In addition, as a permanent local subject matter expert, NFIUs can provide vital information to planners regarding logistic and support matters.

Host Nation Support (HNS), Contract Support to Operations (CSO) and Multinational logistic solutions, i.e.: Multimodal Logistic Unit (MLU), Logistic Lead Nation (LLN), Logistic Role Specialist Nation (LRSN), are paramount to enhance readiness since they drastically reduce logistic footprints by finding a common logistic solution for all parties involved. Optimizing and reducing the logistic footprint is an added value for Commanders, since they can provide agile and scalable logistic units. Often, TCNs derive provision of Class I (fresh food), Class III (fuel) and camp services by HNS and/or CSO, while Multinational logistic solutions are used to accomplish logistic functions (such as: resupply, in-theatre transportation, and combined air terminal operations) or commodities sourcing, etc.

Information technology, specifically Logistic Functional Area Services (LOGFAS), provides NATO with a software tool that supports logistical planning, logistic execution, and logistic reporting, using an integrated series of computer programmes. NATO developed LOGFAS to optimize and deconflict deployment planning, access to huge amount of data, such as TCNs capability catalogue, and manage logistic information flows and logistic reporting. As an example, Allied Movement Control Centre (AMCC) at SHAPE released the Multinational Detailed Deployment Plan related to the specific Operation after a cycle of movement conferences using LOGFAS tools. In sum, we can say that LOGFAS certainly enables readiness.

Exercising support

Logistic support is of little value if logistic units are not trained, tested, and interoperable. During the preparation phase for VJTF(L)

Intra theatre airlift system (ITAS), both fixed wing or rotary wing, is a feasible multinational logistic solution for cargo and passengers transportation to enhance readiness in area of operation.

er
everywhere rapidly

NRDC-ITA J4 LOGFAS operator is running the LOGFAS tools during the self-inducted exercise Eagle Light III 2019.

2018, NRDC-ITA received from the Italian Army General Staff the coordinating authority to assist and support "Ariete armoured Brigade" in performing the task of VJTF(L) stand-by Brigade for 2018. NRDC-ITA conducted a series of VJTF meetings and interoperability exercises, called Eagle Wings, organized and ran in Solbiate Olona between 2016 and 2017, with the aim of identifying and assessing, together with all the Nations members of VJTF(L) 2018, any possible interoperability gaps and identify adequate mitigation measures.

In October 2018, NATO organized the biggest deployment exercise in the last ten years, "Brilliant Jump 2018". Several thousand troops deployed from their home stations to the designated areas of operation in Norway, in an austere environment. NRDC-ITA HQs and Ariete armoured Brigade participated in this large exercise, to test and verify procedures, tactics, techniques, and also to define new roles and responsibilities in the support and sustainment warfighting function.

Conclusions

The recent work revising and adapting NATO's overall logistic concept will identify shortfalls and gaps, thus reshaping the NRF's peculiarity and requirements. This ongoing effort is vital, not only to re-design roles and responsibilities of all the Logistic Stakeholders, but in particular to ensure that logistic support is tailored to the current scenario and subsequent requirements. The recently created JSEC, the commitment to improve the capabilities of the earmarked logistic support units of the NRF package, and the improvements to freedom of movement in the sphere of the Alliance, all highlight the importance of NATO logistic support in generating and sustaining readiness.

About the Author

Maj. Franco Ponti currently works as a staff officer J4 Supply, within the Support Division of NRDC-ITA.

Exercise Brilliant Jump 2018 - ITA vehicles disembarking from RO-ROs in Andalsnes sea port (Norway). Cargo handling and Reception Staging Onward Movement (RSOM) operations directed and executed by Norwegian Armed Forces.

er
everywhere rapidly

BRINGING JOINT FIRES IN THE DEEP ARENA OF THE CORPS AND AGAINST A PEER + ENEMY

Lt Col. **Tesa**, Italian Army

Delivering effective Joint Fires in the Corps Deep Area is critical to future mission success. This article examines the recent Ukrainian crisis for lessons identified before going on to outline the key factors of success, responsiveness and protection, in fighting against a peer + enemy.

The way to conduct operations for NATO in the next future has significantly changed since the Ukrainian Crisis in 2014. The possible confrontation with a peer + adversary forces a review of how to understand threats and to conduct operations, trying to find a new approach to win battles in a complex and deadly environment. In this framework, in a large scale and conventional conflict, the employment of Corps is mandatory and key for success will be the ability of the Corps to fight in its deep "space", delivering massed fire at long range to destroy the enemy long before the maneuver force is required to close the distance and conclude the fight.

According to AJP 3.2.1 within the battlefield framework the concept of deep, close and rear areas and operations exist. They describe the placement of forces and the conduct of operations and activities in terms of space and time: rear operations are the largely administrative and logistic activities that occur out of contact with adversary forces behind the area in which close operations are occurring and requiring security; close operations are conducted at short range, in close contact and in the immediate timescale, involving friendly forces in direct contact with the adversary; finally, deep operations are those conducted against forces or resources not engaged in close operations, conducted at long range and over a protracted timescale, against adversary forces or resources not currently engaged in close operations, helping to shape the close battle. If a Corps is capable to fight the enemy in the deep, before it is able to enter in contact or to pose a threat to friendly units, the pre-conditions to win the battle in the Close will be set.

Looking again at the Ukrainian Crisis in 2014, the Ukrainian adversaries showed the ability to operate based on a cross functional approach: firstly applying a full spectrum EW surveillance of all the emissions and communications in their Close and specially Deep to identify targets, then focusing the application of UAV to identify the exact location of the targets and finally allocating in real time long range fire strike. Ukraine has discovered that all its emissions were targetable and the adversary targeting strategy was focused on delivering high intensity massed fires on HQs, TOCs and second echelon unit assembling area. In addition, the employment of a huge number of Air Defense assets, often deployed to maneuver units at the lowest level, drives to the conclusion that the Air Force's ability to strike deep, unimpeded into enemy territory, is no longer guarantee, and that without air superiority, artillery might very well be the decisive factor, in opening battles with a duel between adversary artillery systems (counter-fire fight) and massing fires on enemy air defense capabilities. Moreover, the employment of Electronic Warfare Assets, for example the "SPR-3 Artillery Ammo Radio Fuze Jammer Set", capable in jamming GPS Artillery Fuze, UAV remote control link system and radars, drives to the conclusion that in high intensity conflicts defined by combined-arms maneuver units, the employment of artillery based on a precise point on the ground becomes a much more difficult proposition, especially when the enemy has large moving formations of armored vehicles, and the need to operate in absence of airspace control is not a remote possibility and that it's not possible anytime to compensate by employing superior air forces and deep-strike fires.

In the future conflicts against peer+ enemies, the first key factor for success will be responsiveness. As the battlefield becomes more deadly and more dispersed, the need for massed and responsive fires becomes ever more critical to victory, assuring a strong link between the multi-domain sensor depicted to find and locate the enemy (Electronic warfare, Signals

PZH 2000 firing

Intelligence, Cyber, Electromagnetic Survey, Unmanned Air System, HUMINT, Armored formation reconnaissance, Corps patrols, Advance Force and SOF units) and the fire sources (field artillery, fixed wing assets, attack helicopter, maritime surface fires). Moreover, given the huge number of actors in the Area of Responsibility, there is the need to be capable in fully managing the Air Space, coordinating all the resources consuming space there. The element capable to link the sensors to the shooters and coordinate the use of airspace portions, as well as ground space, at Corps level, is the Joint Fire Support Element (JFSE), responsible for the overall planning, coordination and employment of all allocated JFS assets, acting as the single point of contact for JFS coordination. The JFSE is strongly linked to the Corps Deep Operations Concept, a concept that, under the point of view of the desired lethal effects, integrates, prioritizes, synchronizes and executes the delivery of hard effects in support of deep operations, in support of integrated action as part of the corps scheme of maneuver and that will integrate capabilities such as land fires, air, aviation and air defense. In the future, the winning factor will be the capability to reduce to minimum the time needed to hit a target from the moment when it is spotted and positively identified, after having de-conflicted the portion of airspace needed for the delivery of mass fire: the JFSE is built in order to collect all the information needed to strike, to decide which kind of platform is the suitable one to deliver fire and to coordinate
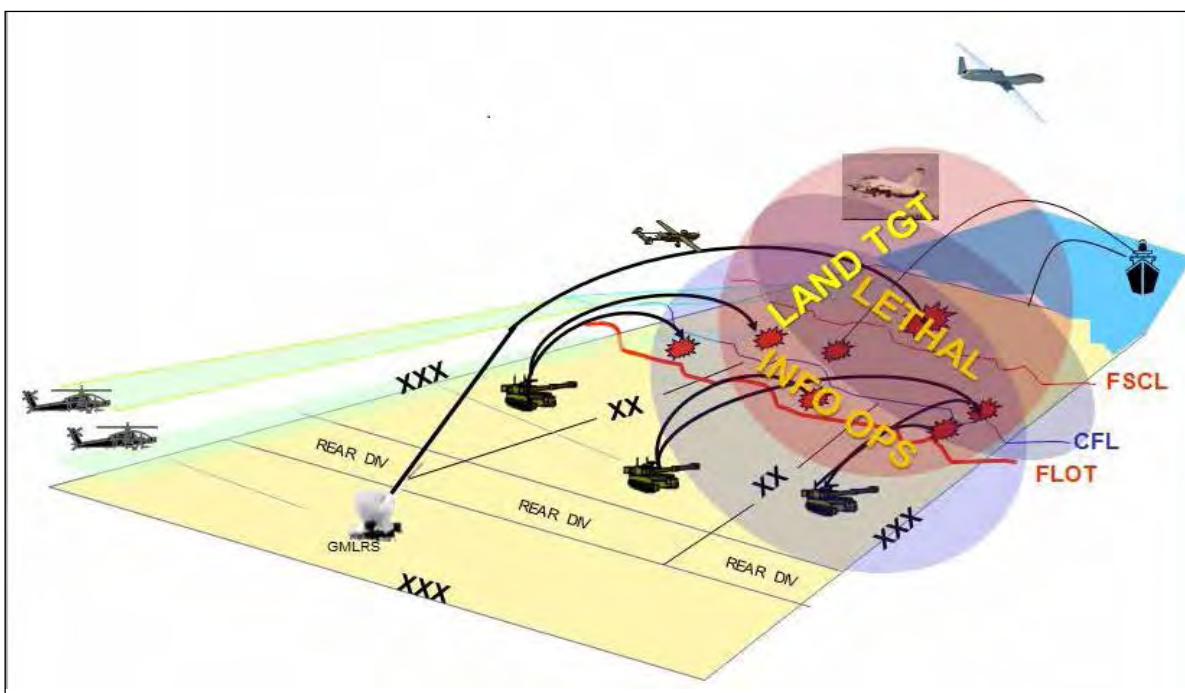
Fire Support Process

Shaping the Corps Deep Battle Space

properly the use of airspace for prosecution, allowing force to be applied precisely, different systems to be concentrated against a single task, and the rapid switching of fire between targets. To sum up the challenge for the JFSE at Corps level will be focusing on how tube and rocket artillery, integrated with the multi-domain, joint force, can mass the fires necessary to destroy the majority of enemy forces well before the infantry and armor close the distance to an enemy (putting more rounds and rockets downrange, in less time, at greater range).

The second key factor for success will be protection. In the same way we are able to detect and engage enemy Command Posts, ours are detectable and vulnerable to enemy. The C2 concept needs to lead to a generation of CPs that are sufficiently agile, low in signature to increase survivability, and able to ensure a higher level of tempo than our adversary, in order to achieve mission success. NRDC-ITA CP Concept comprised a FORWARD Command Element (FWD CE), in charge of the execute function, and a MAIN CE, in charge of planning, refining and synchronizing, deployed within or outside the Corps AOO. From a Survivability perspective, the FWD CE, with reduced emissions, is capable to reduce the risk of being detected and its agile structure grants the capability to be deployed well beyond and to dismantle and relocate in short time, while the MAIN CP outside of the enemy TBM range width support the FWD CE or retain the C2 in case of necessity.

Finally, to maximize protection and ensure the continuity in delivering fire, additional measures should be adopted, leading to a system in which a single fire source is capable to engage a target unassisted, especially in case of communication disruption, under the supervision of the Corps JFSE, and this will be possible only sharing the Recognized Ground and Air Picture at the lowest level, and directly linking the single sensor to the single shooter.

Conclusion

It is important to understand that effective and responsive delivery of Joint Fires in the Corps Deep Area is possible only with the employment of the Joint Fires Support Element. This must maintain the authority to coordinate all sensors on the battlefield and all the available fire sources (including Tactical Air Command and Control capability) in order to guarantee sufficient responsiveness. At the same time the Corps needs to adopt a structure capable of ensuring agility and a low signature, thus increasing its survivability.

About the Author

Lt Col. Luca Tesa currently works as SO1 Ops in the Joint Fires Cell of NRDC-ITA.

Bibliography

1. B. MORGAN, Artillery in tomorrow's wars: maximizing the power of the king of battle, in «Modern War», September 25, 2018;
2. M JACOBSON and R.H. SCALES, The United States needs to get serious about artillery again, in «War on the Rocks», October 6, 2016;
3. P. KARBER, Russo-Ukraine War Lessons Learned, Presentation at the NRDC-ITA Targeting Workshop, May 24, 2016.

er
verywhere rapidly

LESSONS FROM THE PAST MAY GUIDE TODAY'S DEEP OPS CHALLENGES
"THE GERMAN ARMY'S WESTERN FRONT CAMPAIGNS 1917-1918"

Maj. **Schöner**, German Army

Military history can guide and assist us in fighting current challenges. By using a campaign from World War I the article examines 'Deep Operations' from a historical perspective, before finally identifying possible modern solutions.

Introduction

World War I's statistics are truly catastrophic: 8.5 million killed in action, more than 21 million wounded and more than 7.7 million missing or taken as POW[1]. From a military perspective, keeping those incredible numbers in mind, it can be also stated, that during the four years of the war military tactics and techniques were constantly reviewed and revised. This has been called "*the most significant Revolution in Military Affairs (RMA) in the history of warfare*"[2]. Perhaps the most dramatic period of this RMA came in late 1917 until the end of war in 1918, where the most significant changes, that impacted force developments long after The Armistice were established. "*It amounted to the birth of what will be termed the Modern Style of Warfare with the advent of artillery indirect fire as the foundation of planning at the tactical, operational and strategic levels of war – the invention of DEEP BATTLE*"[3]. This article's intent is to give the reader a short overview on the operations conducted by the German Army in the so called "*Fruehjahrsoffensive*" in Spring 1918, then to consider the modern understanding of the Deep Battle and fnially to identify the linkages between 'then' and 'now' and into the future for NRDC ITA as a Corps HQ.

Situation - Spring 1918

The Russian Revolution in 1917 strengthened the German Military Leadership in its belief that it could achieve an overall victory of the War. With the peace negotiations of BREST-LITOWSK, and the subsequent directed peace treaty, the frontline in the East became irrelevant.[4] All German troops were now redirected to the Western Front to reinforce the forces there and achieve the final defeat of the allies in what had become deadlocked positional warfare. The "Dritte Oberste Heeresleitung" (3rd OHL) ("Army High Command") could put all its efforts into forcing a decisive military decision in Northern France. A large offensive campaign was planned by the OHL which aimed to separate the French and British troops in the area of CAMBRAI – St. QUENTIN in the direction of the River SOMME – this was to be known as Operation Michael or the "Kaiserschlacht". In addition to the main effort a number of different follow-on and alternate missions were planned to cope with dynamic changes. Operation Michael started on the 21st March 1918. Attacking across a broad 70 kilometers width the German Army won about 60 kilometers in depth (4200km²) in approximately two weeks[5], which was an enormous success for the 3rd OHL and a radical shift from what had come before. How was this achieved?

1   Grundzuege der deutschen Militaergeschichte", Historischer Ueberblick, Rombach Verlag, 1993, pg. 264
2   "Deep Battle 1914 – 1941: The Birth of the Modern Style of Warfare", Brigadier J B A Bailey MBE, Chief Fire Coordination Branch ACE Rapid Reaction Corps, The British Army Review Number 120, pg. 3
3   "Deep Battle 1914 – 1941: The Birth of the Modern Style of Warfare", Brigadier J B A Bailey MBE, Chief Fire Coordination Branch ACE Rapid Reaction Corps, The British Army Review Number 120, pg. 3
4   http://www.bpb.de/geschichte/deutsche-geschichte/ersterweltkrieg/155304/kriegsverlauf-und-aussenpolitik , access: 200820Lsep18
5   "Grundzuege der deutschen Militaergeschichte", Historischer Ueberblick, Rombach Verlag, 1993, pg.246

er
everywhere rapidly

a. a. Heavy, concentrated and sustained use of artillery firepower in advance of the infantry attack. What was "Revolutionary" was that the calibration of the guns by firing took place at a completely different place so as to confuse the allied command on where the attack was going to occur. Shortly before the attack took place the guns were moved into their operational locations - the allies were thus unable to foresee the actions or prepare for them. The use of meteorological data, and the inclusion of this (air pressure, wind speed, temperature etc) in calculating firing solutions enabled the German Artillery to get a high level of precision with predicted (unfired) target grids. Another Revolutionary aspect was the very precise match of artillery fire within the infantries' attacks by creating a manoeuvre artillery fire plan.[6]

b. b. Considerable effort was put into the targeted engagement of the French and British Artillery; the fire / counter-fire dual was won, in the early days, by the Germans.

c. The use of new so-called "*Buntschiessen*" (the employment of chemicals / gas mixed in with high explosive artillery ammunition),

d. Using aerial pictures (recce in advance) to get a precise knowledge about the enemies' positions and then turning this quickly into accurate grid references and artillery firing solutions,

e. Taking maximum advantage of the surprise that was achieved and the bypassing, where necessary, of strongly defended positions and allowing a certain degree of autonomy of actions with authority given to officers at the company-level to take decisions on how to press home their advantage (and because of the gap in communications - radio communication was still unreliable – it allowed tempo to be maintained in the attack).

This new infantry tactic was called the "*Infiltrationstaktik*". Rather than widening the positions after a breach, the storm troops were to keep moving forward to break through the second and even through the third line of defense on a narrow concentrated front.

Table 1: Overview of the German Offensive Operations in Spring 1918[7]

The combination of those tactics caused confusion within the allied troops that lead to a critical reduction in their defense. They simply under estimated the speed and the power that the German troops were creating. By the 5th of April in 1918 the German "Operation Michael" slowed and other smaller operations also failed. What Clausewitz called the "Kulminationspunkt" (Culmination Point) where the attacker gets ever weaker operating at range from his support whilst the defender gets more and more strong as he concentrates1. The French and British Air superiority was also

---

6   "Der Grosse Krieg: Die Welt 1914 bis 1918", Herfried Muenkler, RoRoRo Verlag 2015
7   http://www.bpb.de/geschichte/deutsche-geschichte/ersterweltkrieg/155304/kriegsverlauf-und-aussenpolitik, access: 020940Loct18

significant, as was the absence of suitable mobile and forward based logistic support to the attackers. Added to gaps in weapon systems (especially countering the British tanks) and the highly trained troops that would be needed for the new "fire and movement" tactics were some reasons for the culmination.

A final attack, conducted on the 15th of July in 1918 in the vicinity of REIMS became a total disaster for the 3rd OHL – the allied troops had been conducting their own military revolution and had now entirely adapted to the German tactics and were prepared. Four weeks later, in mid-August 1918, the 3rd OHL declared that a victorious ending of the war would be hopeless. The Armistice was signed two months later.

Deep Operations Today

"Division and Corps Commanders conduct deep operations against uncommitted enemy forces to set the conditions for subordinate commanders conducting operations in the close area. […]. Deep Operations extend operations in time, space and purpose. As a part of a commanders' concept of operations, deep operations include actions to divert, disrupt, delay or destroy enemy forces and capabilities before they can be used effectively against friendly forces."[8]

Shifting to today and to NATO Doctrine, Deep Operations *"may be decisive operations, but in general they will be shaping"[9]*. NATO doctrine states that to successfully conduct Deep Operations multiple capabilities that are planned and synchronized together are key: Aviation Attacks, Information Operations, Cyber Electromagnetic Activities, Special Operations, Reconnaissance by Forces, Deep Recce and Artillery strikes. Our indirect fire capabilities have significantly developed since World War I, but the broad principles of employment and the technology involved in both targeting and striking can be traced back to this RMA period in 1917-18.

The fundamental purpose of Deep Operations are the same: to enable own forces to conduct operations or to successfully set the conditions in order to achieve the commanders' objectives. Targeting, as the appropriate process of taking the commander's intent and developing the necessary targets for shaping the battlefield is a fundamental of conducting deep operations. By identifying and effecting the High Payoff Target List (e.g. C2, AD, Long Range Fire Systems), the adversary's ability to execute his plan, in both the deep (our rear) and the close will be limited and unachievable.

The operational environment in the 21st Century is now multi- dimensional due to new and rapidly developing technologies that are used by all types of states, armies and adversaries. As stated earlier, in World War I, it was realized that obtaining precise and timely information on enemy positions or capabilities was key to success. The same still applies; Cyber-Threats, Space-Operations, and other dimensions that we may not think about now, must be considered by the Alliance and capabilities developed to engage them at the right time, in the right location and synchronized with the wider plan . No matter in which dimension we operate, there will always be a Deep – in time or in space or both.

Conclusion

As can be seen through the short historical example presented above, Deep Operations are not 'new'. NRDC-ITA, in its realignment to a Corps warfighting HQ must be fully capable of planning, refining and executing Deep Operations across all dimensions of operations in time and space, physically and cognitively. We must shape the battlefield as best as possible in order for the subordinate Divisions and Brigades to be able to successfully conduct operations in the Close. Our ideas and approaches will be tested during several exercises in order to find the best way to achieve the Commander's intent and endstate in order to defeat the enemy and conclude a successful campaign. The implementation of the "Deep Ops Study Group", under the overall responsibility of the JFIRES branch, starts the intellectual development process across the HQ to lead us down a path to achieving ultimate success in this critical area.

About the Author

Maj.Julia Schöner currently works as a staff officer within the Joint Fires and Targeting Cell of the Operations Division, NRDC-ITA.

Bibliography

• Grundzuege der deutschen Militaergeschichte", Historischer Ueberblick, Rombach Verlag, 1993,
• "Deep Battle 1914 – 1941: The Birth of the Modern Style of Warfare", Brigadier J B A Bailey MBE, Chief Fire Coordination Branch ACE Rapid Reaction Corps, The British Army Review Number 120, pg
• http://www.bpb.de/geschichte/deutsche-geschichte/ersterweltkrieg/155304/kriegsverlauf-und-aussenpolitik ,
• "Der Grosse Krieg: Die Welt 1914 bis 1918", Herfried Muenkler, RoRoRo Verlag 2015
• "ATP 3-94.2 Deep Operations", Headquarters Department of the Army, Washington DC 1. September 2016
• ATP 3.2.1 Allied Land Tactics"

er
everywhere rapidly

[8] "ATP 3-94.2 Deep Operations", Headquarters Department of the Army, Washington DC 1. September 2016
[9] "ATP 3.2.1 Allied Land Tactics"

THE NESTING OF CORPS TARGETING INTO THE JOINT PROCESS

Lt Col. **Stirpe**, Italian Army

Targeting is a complex activity which needs to be carefully evaluated at the different levels of command, taking into account human factors and the operational tempo.

There are numerous misconceptions about how the HQ operates at the different levels of command. It is not possible to discuss Targeting in particular without clarifying these misconceptions first. The principal misunderstanding relates to the size and composition of both the Command Post and the Force.

The most common fallacy is that Joint Force is big, Land Component is medium, and Corps is relatively small. Whilst there might be minor adjustments to the size of the HQ in terms of manpower and capabilities when operating at different levels, there would be noticeable differences to the span of command at each of them. Joint HQ assumes responsibility for a large AOR (Area of Responsibility) with Joint Assets under its command. As an LCC (Land Component Command), the AOO (Area of Operations) is nearly reduced and the Ground formations under its command. A Corps HQ will be responsible for a sector with less assets available than an LCC. Consequently the delta between the levels of command concerns the Mission (and the Threat/Battlespace ratio with it): if we are at Joint Level, we are probably facing a relatively small Mission with a low Threat/Battlespace ratio, and will probably operate at a lower tempo.

Alternatively, if we are acting as a Corps HQ, we can assume the Mission will be more demanding and the Threat/Battlespace ratio, and related ops tempo, will be very high. At Land level we will find ourselves somewhere in between. The factors driving the configuration of the HQ at the various levels of Command will be driven by the nature and tempo of the operation.

Following the same line of thought, we can say that NRDC-ITA, in a Joint configuration, will probably be entrusted with full responsibility for a Mission in an Asymmetric or hybrid scenario against an insurgency/terrorist Threat operating at low intensity dispersed in a large AOR (full responsibility in a Small Joint Operation - SJO). Conversely, when operating as a Corps we will be assigned a smaller-level Mission against a high-tech Conventional foe fighting a high intensity battle in a relatively restricted AOR (smaller role within a Major Joint Operation - MJO+).

This rationale leads us to the conclusion that the lower level we are employed at, we can expect the most intense operations. If we operate as a Corps, we have to configure the HQ to operate in the most demanding of the likely environments. That is countering a near-peer adversary capable of high tempo continuous operations.

The human factor

At Corps level, though the range of target sets is unlikely to be as large as addressed by the Joint Force Command and or the LCC, the nature of the campaign (mobile ground units practicing Camouflage, Concealment and Deception - CCD) together with the more limited assets available to prosecute the targets will result in a higher tempo and requires a different configuration than that of a Joint or LC HQ.

The first implication of this is that the Corps-Level Command Post requires 24/7 full functionality. At low operational tempo, meaning within a SJO, it would be possible to operate with a single shift and a small night party working in the JOC; but in order to sustain more intense operations, a three shift system would be required. Consequently, the CE manpower of the Corps HQ could reach three times the PE manpower. Concerning the composition of the Corps HQ's targeting element, and in keeping with the HQ as a whole, Targeting (Intelligence and FireCoord alike) will likely require a three shift system, at least for the management of the Dynamic portion of Targeting. However, when compared to the Joint Force Command and LCC roles, the AOR will be more limited as the Deep "Battlespace" will actually be smaller. The Targets engaged by the Corps are likely be the traditional sets such as Command Posts, logistic support and LOCs, fire elements, air defense and combat units. Given the nature of the tactical battle, Target Development will likely be a hasty process not requiring the detail and procedures

er
_{everywhere rapidly}

necessary to prosecute HVI targets or sensitive infrastructure or to identify and influence audiences. Outside of Dynamic Targeting, a properly manned extended-hours system can probably deal with the deliberate portion of Targeting.

Due to the nature of the intended effects, and limited asset availability, Target engagement will reflect capability selection more on the basis of availability than capability. Assigned prosecuting assets will be very limited: possibly one or two single MRLS battalions. Most Targets will have to be passed through to higher Levels via the Target Nomination process, and their prioritization will be up to superior Authorities.

Also the granularity of our Targets will be less than at higher level: the Corps HQ will be dealing with battalion-level or even coy-level targets, and even with single specialized weapon systems, radars, antennae masts, bridges or even tanks.

While operating at the Joint Operational Level, chief Targeteers will have to interact with higher Level counterparts ranking 3-stars or more, and involve in discussion with them at a much higher level of responsibility. At the tactical Corps level, Targeteers will be dealing with lower levels specialists within our subordinate Divisions or Brigades and at higher Level with our LCC, where the Delegate Authority will usually be at the 1-Star level.

Bottom line about personnel: at the Corps Level there will be a requirement for more personnel compared to the Joint Level, and since they will be dealing with a larger number of mostly-standard Targets, they will require a lower level of specialization than at Joint Level, where an overall smaller number of Targets will cover a wider variety of them. At the same time, ranks of officers involved in the Targeting enterprise at Corps Level need not be as high as at the Joint Level.

Addressing the operational tempo

Hardware and Software requirements will not change, but connectivity will. For example, at Joint level the sophistication and differentiation of links (i.e., the number of referents to deal with diverse Target typologies) will be paramount. At Corps Level, redundancy and reliability will be most important due to the high tempo of the battle.

The higher the Operational Tempo, the larger the requirement for integration between different agencies. This means that compared to Joint and Land configuration, Targeting at Corps Level will ask for tighter (even physical) closeness between TARINT, IRM/CC and ASC within JIC, and of all Intelligence players with FireCoord personnel in order to ensure an uninterrupted flow of activity during the Targeting cycle keeping pace with the conduct of operations.

Another issue to consider is Battle Damage As-

MLRS firing on ATACAM

sessment (BDA). While at higher Levels this can be as deliberate as needed, at Corps Level there will be a requirement for BDA to be run as quickly and frequently as needed to keep the Enemy Combat Effectiveness constantly updated at the appropriate Level and at near real time. This again will translate in personnel requirements and in reliable and redundant communications with Intelligence Requirement Management (IRM) assets and subordinate, collateral and higher echelons.

Finally, the Delegation of Authority by the Corps Commander needs to be at the lowest possible acceptable level, again due to the operational tempo and to the usually standard typology of the targets involved.

In conclusion, the Targeting element of the Corps HQ should be tailored to suit the role of the HQ. Targeting at Corps Level must be viewed as the most fast-running compared to the other levels, and probably the less sophisticated: requiring more personnel at lower ranks, capable of working in a less deliberate and faster way to ensure the effective completion of the Targeting Cycle on a daily basis.

Conclusion

The Targeting element of the Corps HQ should be tailored to suit the role of the HQ. Targeting at Corps Level must be viewed as the most fast-running compared to the other levels, and probably the less sophisticated: requiring more personnel at lower ranks, capable of working in a less deliberate and faster way to ensure the effective completion of the Targeting Cycle on a daily basis.

About the Author

Lt Col Giorgio Stirpe currently works as a Staff Officer in J2 within NRDC-ITA

er
everywhere rapidly

FROM DESERT STORM TO THE NEW CHALLENGES OF THE BATTLESPACE MANAGEMENT AT THE CORPS LEVEL

Maj. **Cotorruelo**, Spanish Army

Several BSM challenges and concerns occurred during the Desert Storm Campaign and some of them are applied to the evolving threats faced today.

"The battlefield is a scene of constant chaos. The winner will be the one who controls that chaos, both his own and the enemies."

(Napoleon Bonaparte)

When Saddam Hussein invaded Kuwait, nobody imagined that General Schwarzkof would lead coalition forces to defeat Iraqi forces 210 days later. Operation Desert Storm lasted only 42 days, starting with the initial bombing campaigns on 17 January 1991. The ground portion of the conflict lasted only 100 hours, beginning on February 24th, and ending on the 28th, with a cease-fire, end to the war, and the liberation of Kuwait.

The success of the campaign is given to several reasons. First the enemy's capabilities were reduced due to the preparation and shaping of the battlefield through the use of deep operations. After that, a synchronized and coordinated flanking maneuver attacking Iraqi forces in Kuwait entering Iraq from Saudi Arabia and then entering Kuwait from Iraq, by moving west across the Iraq-Kuwait border was the end to the war.

A joint multinational effort like that requires extensive coordination and control measures not only to synchronize the combat power but also to increase Coalition forces' safety. Boundaries between units, phase lines to coordinate advances, fire support coordination lines (FSCL) and restricted fire lines were among the measures used. During the offensive, additional procedures were developed to meet specific needs for additional coordination. Commanders were concerned about casualties from friendly fire from the beginning and took account of this danger in formulating their operational plans. Despite the precautionary measures it was almost impossible to prevent casualties from friendly fires given the speed of operations, lethality of weapons and the environmental con-

ditions under which the war was fought. The Pentagon disclosed that 35 of the 148 (23.6 %) American servicemen and women who perished on the battlefield in the Persian Gulf War were killed inadvertently by their comrades.

Almost 30 years later NRDC-ITA is aware of the requirements of success: good preparation and shaping of the battlefield throughout deep operations and synchronized and coordinated ground forces movements in a complicated battlespace where they are not the only users. The risk of fratricide or collateral damages is present and this is the reason why in order to prevent or reduce it, Battlespace Management (BSM) becomes one of the pillars of this HQ when assuming the role of Corps HQ.

BSM evolution

Doctrinally Battlespace management is considered as the use of the necessary adaptive means, measures and procedures that enable the dynamic coordination and synchronization of activities in the battlespace according to the commander's priorities. Battlespace management is not an end in itself, but a capability that facilitates and seeks to maximize operational effectiveness and minimize constraints and can contribute to reducing the risk of fratricide.

During Desert Storm, activities were coordinated and synchronized in accordance with common procedures; weapon systems had proper technology and most of them where integrated in a common Command and Control system in order to prevent blue on blue.

After the Desert Storm campaign, and considering the high ratio of friendly forces killed, there was some research to solve this problem: Identification Friend or Foe (IFF) systems were im-

er
everywhere rapidly

Evolution of Command and Control Systems

proved, GPS became a common tool on weapon systems, and command and control systems evolved integrating joint and combined systems to give more information to the users.

On the other hand, coordination measures, since then, have hardly changed and they are actually in use. We can find other battlespace users present as NGOs, IOs, etc.… and most of them are not integrated in a common operational picture and command and control system, making it difficult, sometimes, to prevent them from military actions.

Moreover, a new element now exists in the battlespace which makes coalition forces aware of a possible sabotage in integrated weapon systems throughout the use of cyber attacks[1]. Command and Control systems are to be encrypted and well protected but the risk of cyber attacks are still present nowadays.

BSM Corps level challenges

Corps level Battlespace management is to be able to coordinate, deconflict, and control the actions of the Corps in the deep, close and rear area of operations (AOO)

The Corps does not act alone in the AOO assigned; there are commands that perform activities that need to be coordinated under priorities established by the Joint Force Commander. The Corps performance could be constrained by higher level actions as per LCC Deep operations, in case of a multi-Corps deployment.

In order to facilitate the management of the crowded battlespace, it can be delegated to different Force Elements (FE), with the capabilities to manage it. But information need to flow, so

due to the high density of the battlespace used, all FE involved in any operation including subordinate units are to be integrated in a unified command and control system.

Weapon systems are more precise and able to work in a common network, sharing all information in real time. But sometimes, something easily feasible thanks to evolution of technology, becomes complicated when you face the new environment…

Civilians use terrain, electromagnetic spectrum and media with a limited control from military perspective, and need to be coordinated and de-conflicted before any action.

Besides, the use of advance technology in a common network makes it vulnerable to possible cyber attacks; this could bring a lack of confidence of our brand new weapon systems and command control and information systems.

Conclusion

Although command and control capabilities were limited in comparison with present day, from a Battlespace Management perspective, Desert Storm was well prepared and took into account all the means available in 1991 in order to try and avoid any blue on blue.

The improvements in command and control systems, and other helpful means, throughout the following years have tried to improve the battlespace information, trying to de-conflict any possible action involving different force elements.

Unfortunately, battlespace has become more and more complicated and the command and control systems' improvements as well as more

er
everywhere rapidly

1 When in July 2015 a Patriot Launcher deployed in Turkey started to do strange things, a cyber-attack to the system was considered as a possible reason.
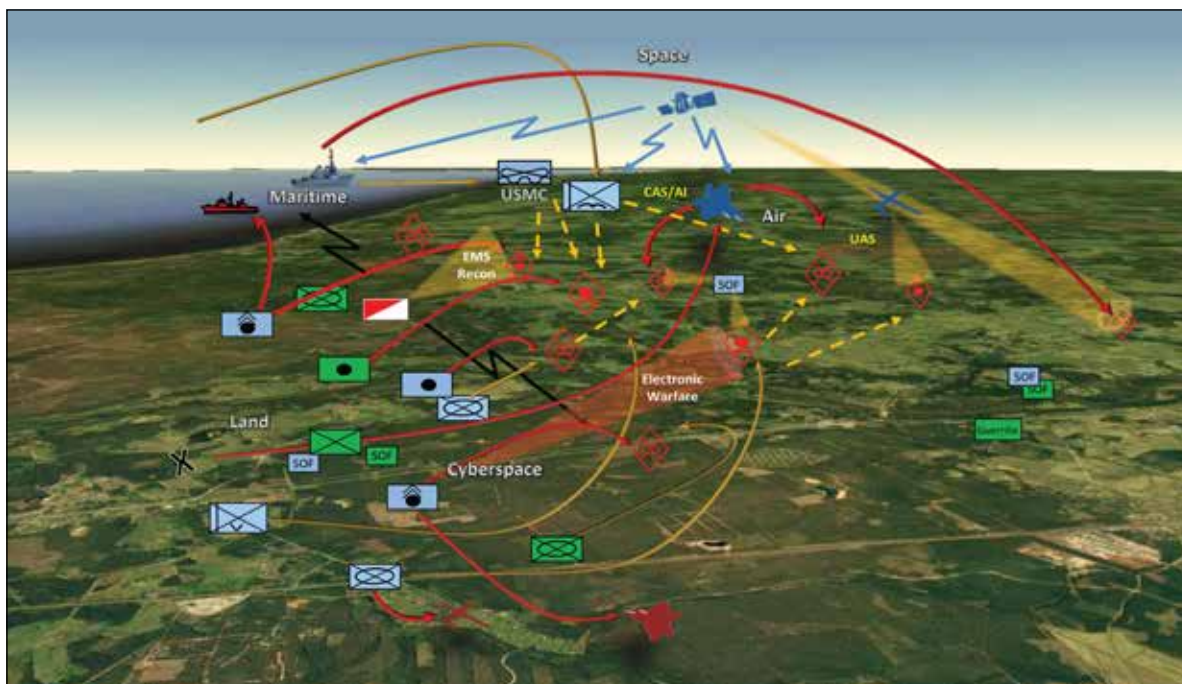
The new Battlespace

precise weapons are not enough to provide the expected results.

Civilians are new actors and CIMIC teams need to liaise with them in order to prevent any collateral damage or conflict in military actions.

Cyber defense is becoming mandatory. Fake information (GPS jamming), or some drones under enemy control, for instance, could be critical in the development of operations. Possible solutions to these problems could be current research known as "Blockchain" which might be able to transfer data, confirming the integrity of the data shared.

Additionally, sometimes looking back it is possible to find simple solutions where technology can't. Although new technologies are giving a lot of information, possible change in our procedures could be an option.

Double checking is probably the best option. Liaison officers become the confirmation of any presence in the battlespace and can be the best way to understand future operations involving different forces for planning purposes. Command and control systems can be real time, common and unified, but you cannot be 100% sure until someone confirms the feasibility before any action. But it definitely takes time.

Finally, in a "scene of constant chaos" it is a balance between fast information and actions, and confirmation that information is secured and late actions. Situation, information and means available, are some of the Commander's tools to make the best decisions in accordance to the current risks.

About the Author

Maj. Jorge Cotorruelo currently works as a BSM staff officer within the Ops Division of NRDC-I-TA.

Bibliography

- Vv.Aa., 11th International Command and Control Research and Technology Symposium Coalition Command in a Networked Era, by D. Griffith, Air Force Research Laboratory, Information Directorate, Information Systems Division, Command Control Engineering Branch, 2006
- Chapter VIII:The Ground Campaign http://es-.rice.edu/projects/Poli378/Gulf/gwtxt_ch8.html
- Christian Lowe, Stopping Blue-on-Blue- How the U.S. military is trying to eliminate the age-old problem of friendly-fire deaths, Sep./2003, www.weeklystandard.com/Content/Public/Articles/000/000/003/086ykhgk.asp
- Nolan Bauerle, What is Blockchain Technology?, Mar/2017; https://www.coindesk.com/information/what-is-blockchain-technology
- "Hackers" give orders to German missile battery, Jul/2015, https://www.thelocal.de/20150707/german-missiles-taken-over-by-hackers

The new cyber domain in the battlespace

er
everywhere rapidly

THE AIR DEFENCE IN THE CORPS AOR

Lt Col. **Chessari**, Italian Army

Air Defence plays a key role is a modern war fighting scenario where a near peer adversary will be potentially encountered. Being given the right priority of assets to defend is crucial for an AD unit to accomplish his mission.

The challenge of the Corps Rear

The security environment has changed tremendously since the end of the Cold War. One of the main attributes of the changed security environment is the blurring of the boundary between the Front and Rear Areas. While in the past the Rear Area was considered largely as a safe and secure environment in which logistics, training, recovery, etc. could occur with little threat of interference, nowadays the Rear Area faces a large number of threats that will significantly impact NATO operations with little to no warning. The blurring of borders within functional domains as well as geographically requires a new conceptual understanding of the Rear Area Operations in order to provide a safe and secure environment for the Corps Operations.

Both in crisis and Conflict an adversary's actions in the Rear Area will be focused on Espionage, Sabotage, Subversion and Reconnaissance activities conducted by Special Forces and Intelligence services. The adversary's activities will be supported by information confrontation, influence operations and supporting technologies like Remotely Piloted Air System and Computer network attacks to disrupt rear area Operations and logistical sustainment, undermine popular support, and in the end harm NATO's cohesion. It is reasonable to assume that with the advance of the manoeuvring unit, the Corps' rear area opens an opportunity for the enemy to target friendly units, not only with the capabilities listed above, but also with conventional weapons such as long-range weapons, long-range artillery and land-attack-cruise-missiles as well as Air Attacks and Airborne Forces.

SAMP_T Launcher

The key mission in Corps Rear Area Air Defence units will then be the protection of personnel, materiel, critical military and civilian infrastructure and logistic facilities, vital networks, essential lines of communication and lines of supply against these threats. Only a secure and protected Corps Rear Area will enable and support the projection, engagement and sustainment of manoeuvre forces involved in the Close and Deep operations.

This mission is part of the wider Force Protection effort to enhance Survivability and protect forces. The Air Defence contribution to Force Protection is vital to face the new challenges posed to the Alliance when a near peer adversary has the Capability to plan and conduct Air Operation in the Corps Rear.

The Front and Rear dilemma

At this point, the dilemma will be how to balance and **prioritize** the limited Air Defence resources within the Corps AOR to protect the manoeuvring unit with Surface to Air Missile (SAM) or Short Range Air Defence (SHORAD).

The prioritization process is similar to the Joint Level to plan and prepare the Joint Air Defence Design. At Corps Level the Critical Assets List Working Group (CALWG) is the venue in which Corps G3 Air starts the planning process by analysing all subordinate units' critical assets to be defended. As previously mentioned this process was tested during several exercises either playing the JTF-HQ or the LCC role, and we could appreciate its effectiveness. With regards to the use of SAM units in the front or in the rear, each commander will naturally desire to be protected by a SAM "umbrella" but

Stinger System during an engagement sequence

we need to understand and communicate that we cannot protect everything. Therefore understanding COM priorities in all phases is essential to guarantee to the maximum extent the AD Protection. SAM Units should be committed to protect high value assets in the rear considering

SAMP_T Firing

also the time necessary to reach the "ready to fire" status which, in some cases, requires from 2 to 4 hours. On the contrary SHORAD and Very Short Range Air Defence (VSHORAD) systems would receive the task to protect manoeuvring unit since they are specifically designed to be more mobile and flexible.

TBMD "while they move". Is it possible?

Another legitimate question considers the possibility of providing Theatre Ballistic Missile (TBM) protection to tactical units as they move. The answer to that question is complex.

The complexity is due to the technical difficulty of the Ballistic Missile Defence (BMD) Mission itself, because it is easy to understand how difficult could be to hit the "small bullet in the big sky." As a matter of fact, with regards to the Missile Defence capability we must return to the past, meaning that to accomplish the BMD Mission we need dedicated forces, in a specific location, with incoming information from several sources (radar[1] or satellite[2]). This is why the Alliance decided to not build a deployable AEGIS Ashore in Romania, similar to the Cold War Homing all the Way Killer (HAWK) Batteries that operated from static locations in Europe from the Baltic to the Black Sea in a so called defensive "belt" as part of the NATO Integrated Air Defence System (NATINADS). The fundamental word at that time was **integration** and this is

[1] AN/TPY-2 is the one used for Ballistic Missile purpose;
[2] SEW (Shared Early Warning) – US sensors.

er
everywhere rapidly

SKYGUARD Launcher preparation

still required today to conduct the BMD mission. How was NRDC-ITA able to provide TBMD protection for the manoeuvring unit during our last exercises, from Brilliant Ledger to Eagle Ghost?" This occurred after informal talks with many stakeholders from the DEU Joint Forces Air Component Command (JFACC) to the Italian Air Defence BDE. The accepted solution took advantage of the technical features offered by the Italian AD System Sol-Air Moyenne Portée / Terrestre (SAMP/T) which, in particular condition, has the capability to self-protect from Ballistic Missile threat without any additional Data coming from a dedicated BMD Radar. In other terms, if within the Corps Troops composition the SAMP/T System is available, with some limitations and always in accordance to the priorities given by the Commander, there may be the capability to provide TBMD to manoeuvre brigades, regardless the presence of a dedicated Shared Early Warning system or Radar.

Conclusion

Future security problems will undoubtedly multiply in number and complexity. Examples that NATO may face include terrorism, insurgency, asymmetric and/or hybrid threats, and the dormant risk for State on State conflict. In such a complex environment, at the Corps tactical level, the added value provided by a strong and efficient Air Defence is critical. While we are not certain if we are moving into a new "Cold War" era; training, preparing and recovering the fundamentals within a new complex and dynamic scenario implies, necessarily, to focus on a near peer or a peer+ enemy competitor context. This article aims to explain the importance played by Air Defence, both against aircraft and Ballistic Missile, in future fights. Concurrently, the problems or questions raised in this article aim to stimulate ideas and discussions amongst the NATO wider community, for years to come. In the end what's important is the continuous and consistent effort to pursue desired collective outcomes, with the means available, to provide the correct right and appropriate expertise within respective NATO HQs.

About the Author

Lt. Col. Giovanni Chessari currently works as SO1 Org&Coord within the Italian Army. In his previous role he was SO1 Air Defence and Air Space Management at NRDC-ITA.

er
verywhere rapidly

NRDC-ITA TRANSITION – CIS INNOVATION, TECHNICS AND PROCEDURES AT A MULTINATIONAL CORPS LEVEL

Lt Col. **D'Alò**, Italian Army

With the high degree of digitalization of NATO Corps, organizational adaptation is considered a milestone to be effectively responsive and resilient. Signal innovation must drive the change, but technology and procedures require a fine balance to be fully effective.

"To improve is to change; to be perfect is to change often."

(Winston CHURCHILL's 1924 speech in the House of Commons).

After almost a century, in the world of digitalization and the cyber dimension, change is still the force which drives success regardless the organization we refer to. Organizations must incorporate flexibility and adaptability to embrace change, or risk being left behind by the forces that do. Organizational change should be considered inevitable in a progressive culture with modern institutions. Accordingly, military forces must be highly responsive to accepting change. The nature of global threats is adaptive and requires a model of flexible deterrence. As a rule, organizational changes impact people, processes and technology, and innovation is essential to build responsive capabilities. Winston CHURCHILL could be considered a pioneer of this concept when he stated that "Without tradition, art is a flock of sheep without a shepherd. Without innovation, it is a corpse."

In general terms, each opportunity of change is likely to fail without innovation. For that reason, change and innovation are the two sides of the same coin, as there is a close relationship between them. Innovation is widely perceived in a military organization as a synonym of Communications and Information Systems (CIS), but is not exclusive to technology. Innovation is an endless spiral and it is related to the level of maturity and the cultural behavior of the organization to change. Traditionally, military organizations are hierarchical, bureaucratic, and conservative. While suggesting rigidity, the military

has generally proven itself capable of evolving through innovation and adapting to the new roles, to overcome setbacks, and eventually achieve mission success. That is usually possible because some inspired Commanders, supported by a proactive and visionary staff, see the need to change as both enduring and vital. In fact, "Innovation never came through bureaucracy or hierarchy. It has always come from individuals" noted by John SCULLEY, former CEO of Apple and president of Pepsi Cola. Technology itself is not enough for providing the superiority and the success on the battle-space. United States Navy Adm. Matthew KLUNDER summarized the concept when he stated that "The days of developing multimillion-dollar systems to counter adversaries with inexpensive asymmetric systems are gone. Instead, the U.S. military should counter them with inexpensive innovations."

A real change, driven by an organizational culture of innovation, must exploit technology only if it is sustainable, fit for use and fit for purpose. Using this principle to guide the NRDC-ITA transition, the J6 has conducted a deep analysis of the command's transition to the Corps role. From 2017, post NRF18 certification, the J6 executed a digital modernization of an NRDC-ITA CIS Target Architecture revising completely the technics to approach such a change. The end state of the study was dual; releasing a milestone document to upgrade the Command procedures in terms of CIS and driving suitable

er
_{verywhere rapidly}

CIS Connettivity satellite assets

investments in technology only where is really necessary and reducing the budget.

With the J6 in the lead of a cross-functional working group, that included the 1st Signal Regiment of Milan, we conducted an in-depth study to completely re-design the NRDC-ITA CIS architecture.
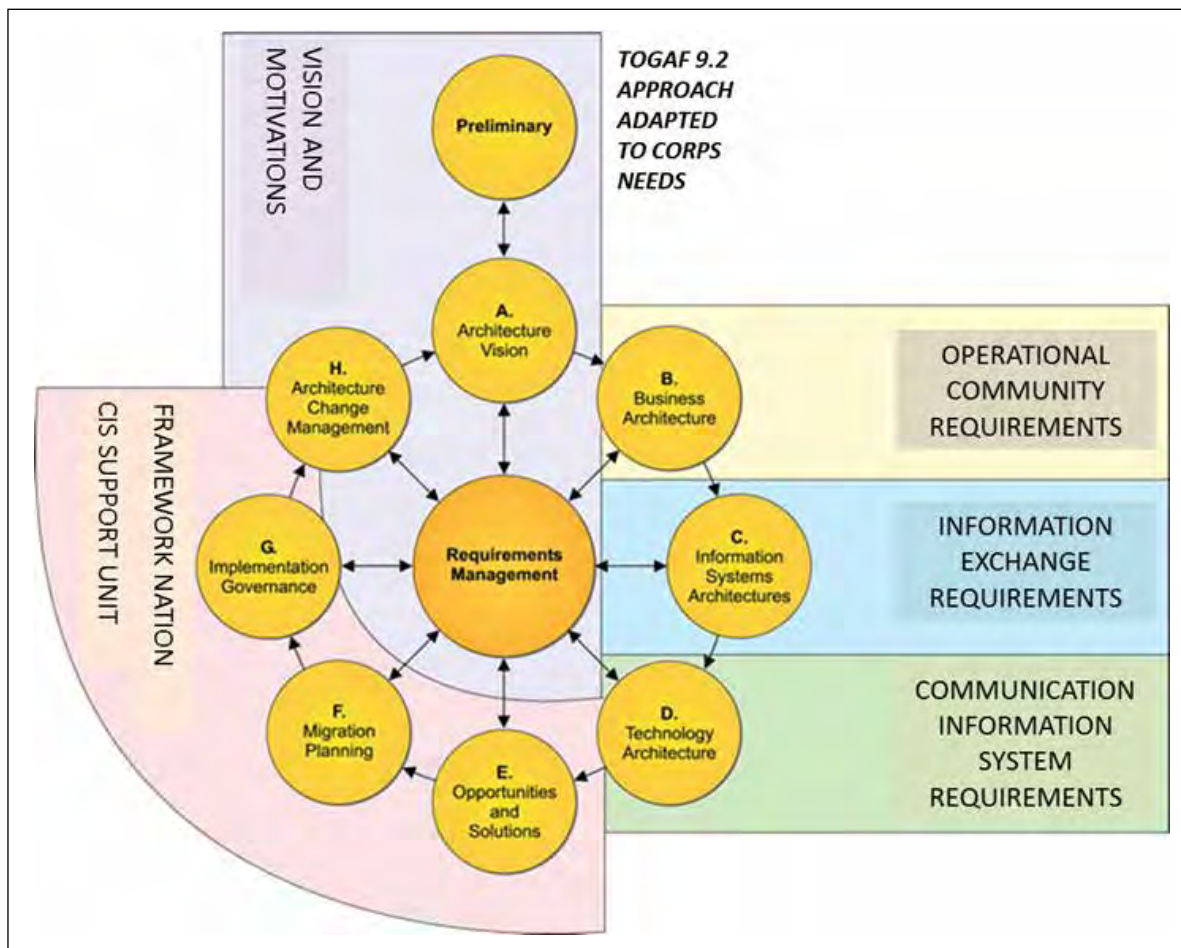
The study identified that NRDC-ITA is well trained to continuously adapt its structure to operate as a Multi-Corps both at the operational and at the tactical level. Thus, after closing the demanding NRF18 stand-by period, NRDC-ITA will be committed to cover again the role of Corps in 2020.

The J6 study provided the necessary details about Mission Need Requirements enabling the updated NATO Minimum Capability Requirements 2016 and anticipating the organizational change. It was primarily based on a series of considerations that drive a wide range of CIS solutions in accordance with the policies to support the Commander's intent. Accordingly, NRDC-ITA must prove its capability to deploy Command Posts (CP) that are more agile, adaptable and responsive. Thus, the design of the CIS Architecture has been constantly balanced between survivability and effectiveness of the conditions. Therefore, after providing an overview of the Command organization, the study has been designed following the best project management methods such as The Open Group Architecture Framework (TOGAF 9.2). The structure of the Architecture includes the ARCHITECTURE VISION, with a general assessment of principles, concerns, stakeholders, the NRDC-ITA HIGH-LEVEL STRUCTURE against Capabilities, C2 Model and CP Concept, the INFORMATION & APPLICATION MANAGEMENT, including IM processes and User Requirements, the CIS SUPPORT all-embracing CIS Concepts,

NATO OTAN — ALLIANCE MODERNISATION

COMMAND STRUCTURE
+ **Joint Forces Command for the Atlantic**
+ **Enablement Command for Logistics**
+ **Cyber Operation Centre**
+ Cyber Rapid Reaction Teams
   + Counter Hybrid Support Teams

READINESS INITIATIVE
30 Air Squadrons
30 Combat Ships
30 Battalions
in 30 Days

MILITARY MOBILITY
Working with the EU

The alliance-medernisation level of ambition

er
everywhere rapidly

CIS Target architecture reference model: TOGAF 9.2

Deployable Point of Presence (DPOP) Architecture and CIS service management. SOLUTIONS & OPPORTUNITIES has been delegated to the National Support Unit encouraging the maximization of the available resources.

With the new demanding NATO doctrine, joint requirements are expected at a tactical level as well. However, if the main challenges at the operational level are related to the interoperability among Component Commands, the mobility and the tactical compatibility of CIS equipment is the real challenge at a Corps level. Moreover, the new CP concepts and the forthcoming Federated Mission Networking (FMN) doctrine make the CIS design more complex. This is because of the needs of reliable and large CIS Trunks, extremely high computational Capability, and business continuity among the different CPs, multi-site database interaction and tactical communication interoperability.

In terms of requirements, a gap analysis was conducted to define the NRDC-ITA CIS quantity and quality deficiencies. Roughly, significant changes crash into the increasing number of deployed entities to be supported and the total amount Deployed Points of Presence to be FMN upgraded. Moreover, the reduced footprint in the area of operations, descending by the CP Concept, demands a binding CIS structure, mainly relying on robust satellite links and a complex disaster recovery system. Finally, multiple tactical communication models were analyzed in-depth, providing the study with a design based on a modern hybrid solution.

The study of NRDC-ITA supports the reduction of the CIS complexity and related risks in terms of the overall CIS. As a consequence, aligning the requirements with the overarching C4ISR NATO Architecture, the CIS Target Architecture of NRDC-ITA is now available to reduce any risks related to the engineering or the acquisition of technology solutions driving the potential CIS investment.

Conclusion

During the transition to the Corps role, NRDC-ITA CIS Target Architecture has been completely re-designed. CIS Mission Need Requirements have been identified and a correct balance between technology complexity and procedures has been achieved enhancing the adaptation. Currently, the flexible Signal Support Model of NRDC-ITA fully enables the organization to rapidly deploy light, agile and responsive Command Posts.

About the Author

Lt. Col. Domenico D'Alò currently works as a staff officer in J6 Plans within NRDC-ITA.

er
everywhere rapidly

THE ENGINEERING DIFFERENCE BETWEEN LCC AND CORPS HQ

Maj. **Greco**, Italian Army

Engineer support is vital in maintaining operational tempo. In the land domain the different responsibilities at the various level of command enable an effective and coordinated employment of engineers.

Over the past 20 years (examples but not limited to Iraqi campaign in early 2000 going through ISAF mission) NATO and partners Engineers have focused Military Engineering (MILENG) support in fighting the Improvised Explosive Devices (IEDs) and supporting the Counter IED (C-IED) strategy, mainly within the *defeat the device* pillar. But MILENG is more than this!

Along NATO Strategic Direction East (NSD-E), the escalation of tension puts on the table an *old new scenario,* where the probability (and possibility) of a conventional warfare is coming back to be an actual, credible and viable scenario in which MILENG has to play the *ancient* role of "shaping the physical operating environment"[1]. *Old new* concepts like minefields, obstacles, barrier plan, abruptly come back to the scene, exposing NATO and Nations to certain deficiencies coming from years of expenditures, training and planning focusing on Non Article 5 Crisis Response Operations (NA5CROs). Those deficiencies clearly indicate the need to re-orient the current approach in planning as well as executing the MILENG support. At this extent, the clear understanding of MILENG capabilities in the conventional warfare environment is required across HQs staff, outside MILENG community.

In defining the MILENG support, the first step is to understand the differences among the levels of command. The focus of this article is to highlight the differences in managing MILENG capabilities between two Tactical Commands: Land Component Command (LCC) and Corps HQ. I will assume that the two levels will be simultaneously employed in order to clearly split the competences of the 2 HQs and make easier their comparison, meaning that I will try to answer the question: what are the differences in MILENG support between LCC and Corps HQs?

Starting about responsibilities, setting the requirement for MILENG support is the primary responsibility of the MILENG Advisor of the Joint Force HQ[2] (formerly called Joint Force Engineer). Given

Route Clearance as C-IED strategy "Defeat the Device"

[1] ATP 3.12.1 "Allied Tactical doctrine for Military Engineering" ed. 2016.
[2] MC 560/2 "MC Policy for Military Engineering", 2017.

er
_{verywhere rapidly}

er everywhere rapidly

Combat Engineer vehicle

the joint directions and guidance for MILENG, it is undoubted that the LCC MILENG Advisor (formerly called Chief Engineer) has a heavier burden being the *technical and coordinating authority* for all land based engineers while, on the other hand, Corps MILENG Advisor has more limited responsibilities only on the Corps Engineers and, considering the direction provided by LCC MILENG Advisor. Nevertheless, it has to be taken into account that the lower the formation level is, the higher will be the involvement with the forces; it means that LCC will execute mostly coordination and high level direction while Corps exercises direct command and control over the Engineer units and formations giving them direct tasks.

The different level of responsibility is not only matter of tasking units and assets but also it has very practical consequences in terms of engineer resource allocation, one of the most sensitive MILENG duties at the various level of command. It is worthy to underline the fact that the Land Component deals mostly with NATO environment while Corps deals with National (or multinational) one. Even if it seems a banal statement, it makes fundamental difference in terms of authority over the allocated resources; LCC could have NATO resources allocated and the possibility to access to NATO common funds respectively by managing the land theatre Engineer Resource Park and being involved in Crisis Response Operations Urgent Requirements/Business Case (CUR/BC) projects process within the NATO Security Investment Program (NSIP) and or Capability Packages planning. On the other hand, following the NATO principle "cost lie where they fall", Corps HQ does not have access to NATO common funds and all funds required has to be from national allocation of multilateral agreements. Corps has to rely on National/multinational resources for

the execution of its manoeuvres/efforts. It is clear that Corps HQ could be dependant of Joint level or LCC in order to have access to NATO resources, whenever the operational conditions allows or requires an additional resource requirements but nations have to reassure the level of stock in NATO storages or pay for the use; basically it means that nations should pay for the use of NATO resources.

At tactical level, the traditional roles of Military Engineers have focused upon the advice and provision of Mobility, Counter-mobility, Survivability and General Engineer Support. Due to the high tempo, it goes by itself that at the lower level of command the focus will be on mobility and counter-mobility support while at the higher the level of formation the effort will shift on General Engineer Support. Survivability remains a focus at all level of commands with different possibility of resources allocation. Concerning the mobility the LCC level will focus on mobility complex tasks (such as bridges) requiring large resources and coordination of HN or contracted engineers mostly focussed in LCC rear area while Corps Engineers, will focus on mobility support to combat units coordinating only MILENG assets re-allocation where the main effort is required or when the sub units capabilities appears insufficient.

When come to talk about counter-mobility there are some significant differences among the two levels of commands. The overall responsibility of the Barrier plan is in the Joint Force hands and it releases the Joint Barrier policy. LCC refines and releases land limitations like Barrier Restricted Areas/Barrier Free Areas (BRA/BFA)[3]. Clearly all commanders could further restrict the freedom of action in terms obstacles/barrier in accordance with the Land policy (i.e. Italian Commanders cannot employ and/ or authorize the employment of scatterable mines

---

[3] BRA is defined as "An area declared by an authorized commander where manoeuvre of friendly forces must not be hindered by barriers. Restrictions imposed may include a complete ban on the emplacement of obstacles in certain areas for specified periods." APP-6 "NATO Glossary of terms and definitions" ed. 2016. BFA is defined as "An area the commander designates as restricted from the emplacement of man-made obstacles, normally to facilitate future operations. " APP-6 "NATO Glossary of terms and definitions" ed. 2016.

er
everywhere rapidly

Engineers in River Crossing operations

in his Area of Operation even if a unit under his command come from an authorized nation). Corps has a direct involvement in the barrier plan being the level where the coordinating measures called *barrier zones* are decided and set (or delegated to Divisional HQ)[4].

In addition to the already mentioned traditional roles, MILENG incorporates areas of expertise such as engineering, Explosive Ordnance Disposal, Environmental Protection, Military Search and Management of Infrastructure besides the significant contribution to Countering Improvised Explosive Devices (C-IED), protecting the force and providing life support[5].

In terms of infrastructures, we can take back to what stated when talking about resources and NATO or national funds requirements/allocation.

As far as the environmental protection is concerned, differences among different levels are quite clear. Joint HQ has to address the Environmental Protection Policy, the LCC has to develop the Environmental Protection Plan, suggesting and prioritising, among other issues, waste disposal methods, while the Corps HQ has to implement the plan not only from NATO point of view but also, and above all, from National point of view. This is because when executing NATO activities "nations bear the ultimate responsibility for the action of its own forces"[6]. It means that the Corps Commander is the ultimate responsible towards NATO, Host Nation (HN) and his Sending Nation (SN) of the actions against the environment made by his forces.

The distinctions between levels concerning Military Search are mostly related to the level of conducting a military search. According to standing doctrine, all level of command must have a Military Search Advisor but it is undoubted that Military Search is a low tactical activity. In this respect LCC HQ would address only the overall limitation when conducting Search while the Corps HQ, command-

ing forces, could have a direct involvement in a Search planning and/or conduct.

Finally, talking about those functions where MILENG provides a significant contribution, the differences come again from the fact that the higher is the level of command lower is the direct involvement in the execution of the tasks. Even if LCC is at tactical level, the level of coordination will require a more accurate planning than an effective control on the subordinate units, this function is, at the end, delegated to the Corps that become the execution arm and de-multiplier of the campaign effort directed by the Joint level and coordinated by LCC in the land domain.

As stated before, all the differences listed are with two different players on the ground at the same time. Other considerations could be made is an HQ is called to deal with the role of LCC for a Corps size force. Clearly the differences will be reduced and in some cases will be completely merged with a main focus in LCC role and the interaction with the Joint HQ.

Conclusion

Ensuring clear delineation of responsibility at the various level of command is essential in order to efficiently allocate engineer resources (which are both valuable and scarce). Corps engineers ensure the MILENG supports the manoeuvre plan, whilst LCC engineers enable reach, coordinating the assets required to support the main effort in line with the Land Commander's intent.

About the Author

Maj. Marco Greco currently works as a staff officer within Engineer Plans, NRDC/ITA and is a member of the Operational Planning Group.

---

4 Actually in current NATO doctrine, responsibilities concerning barrier plan are not addressed. ATP 52-B (superseded by ATP 3.12.1) is the only, outdated, reference concerning Barrier Plan responsibilities.
5 MC 560/2 "MC Policy for Military Engineering", 2017.
6 MC 469/1 "NATO Military principles and policies for Environmental Protection EP)", 2011.

er
_{everywhere rapidly}

WHAT IS THE USE FOR SOCIAL MEDIA AT TACTICAL LEVEL, IF ANY?

Col. **Stoccuto**, Italian Army

The internet and associated Social Media (So.Me.) platforms are increasing the ways of capturing and reporting on activities during crisis and conflicts. In addition, user generated content is leading journalists and the media professionals to reflect upon the changing nature of today's global media and the high-tempo, time sensitive informational cycle.

This new virtual environment offers Commanders an additional front to engage with the enemy and reinforce the legitimacy and credibility of their actions. Inaction in this area creates a vacuum and provides freedom of manoeuvre for adversaries. Therefore activity within So.Me. is necessary to communicate narrative and win in the battlefield of hearts and minds.

Knowledge is generated anew from connections that weren't there before[1].

The rules of war have cardinally changed the effectiveness of non-military tools in achieving strategic or political goals in a conflict that has exceeded that of traditional weapons.

Future conflicts will centre on a competition to impose meaning to people.

Social Media (So.Me.) [**Picture n. 1**] has become one of the main channels through, which people connects and communicates, thanks to a continu-

Picture n. 1 - Social media platforms.

---

1   *Margaret Wheatley, "Leadership and the New Science: learning about organization from orderly universe" Berret-Koehler Pub. San Francisco, 1994 pag.98*

er _{everywhere rapidly}

ous improvement of high level technology able to reach and connect large part of population across the world and the societies.

Billions of people are connected 24/7 through multiple platforms in order to share experiences, documents, video, information, text, audio and links.

Seemingly to the always existed war of information but in a much higher level of hyper governed virtual space, those able to engage the population will succeed in deceiving or directing perceptions into realities, shaping thereby the Information Environment (IE) [**Picture n. 2** "Human Beings as Centre of Gravity of the Influence Based Activities"].

The internet and its So.Me. platforms have already facilitated new ways of capturing and reporting activities during crisis and conflicts. Additionally, user generated content, also known as citizen-journalism, and local media have led the journalists and the media professionals to reflect upon the changing nature of today's global media in a high-tempo, time sensitive informational cycle.

This new virtual stage offers Commanders an additional front to engage enemy actors to sustain and reinforce the legitimacy and credibility of their actions. Furthermore, inaction in this area creates a vacuum offering an ample space of manoeuvre for adversaries. Thus, allowing the enemy the opportunity to communicate their narrative of the battlefield to help win hearts and minds. This is especially relevant in low-intensity conflicts where history demonstrates that winning the peace via stabilization can be more challenging than traditional armed conflict.

We now ask, what tools are available to offensively counter aggressive strategic narratives and which can used by military entities of NATO and the nations?

Military doctrine used to refer to the fundamental set of principles guiding military thinking and helping to define and achieve strategic objectives. Understanding the enemy and getting into their strategic mind-set is a crucial part of this process.

During the Cold War, Alliance military leaders placed great emphasis on this type of understanding. Analysts were trained to think, respond to and perceive situations exactly like their Soviet counterparts. The deconstruction of the adversaries' decision-making process played an important part of operational analysis. Today, however, few military analysts follow this approach and struggle to anticipate the reactions and strategic decisions of their adversary, their target audience.

The success of Information Operations conducted by military forces still depends on a thorough and nuanced understanding of target audiences. Of note, effective exploitation, accomplished by analysts, empowered with the right understanding of the target audience and related relevant content, can really make the difference in the way we are to convey messages susceptible to the addressees. So.Me. analysis can offer valuable insights into the various actors within an information environment, including adversaries, groups of supporters and other key target audiences. This helps the tailoring of messages to particular audiences and creates more effective communication strategies.

At any level, including the operational and tactical, it is essential to review the domain where Social Platforms may offer a wide range and variety of possible reading and understanding of the IE [**Picture n. 3** "Tactical military Exploitation of SoMe – Passive Understanding"]:

- Better understanding of local/regional dynamics;
- Remote visualization of trends in different local environment;
- Early warning and Detection of Non-State and Proto-State actors massing resources;
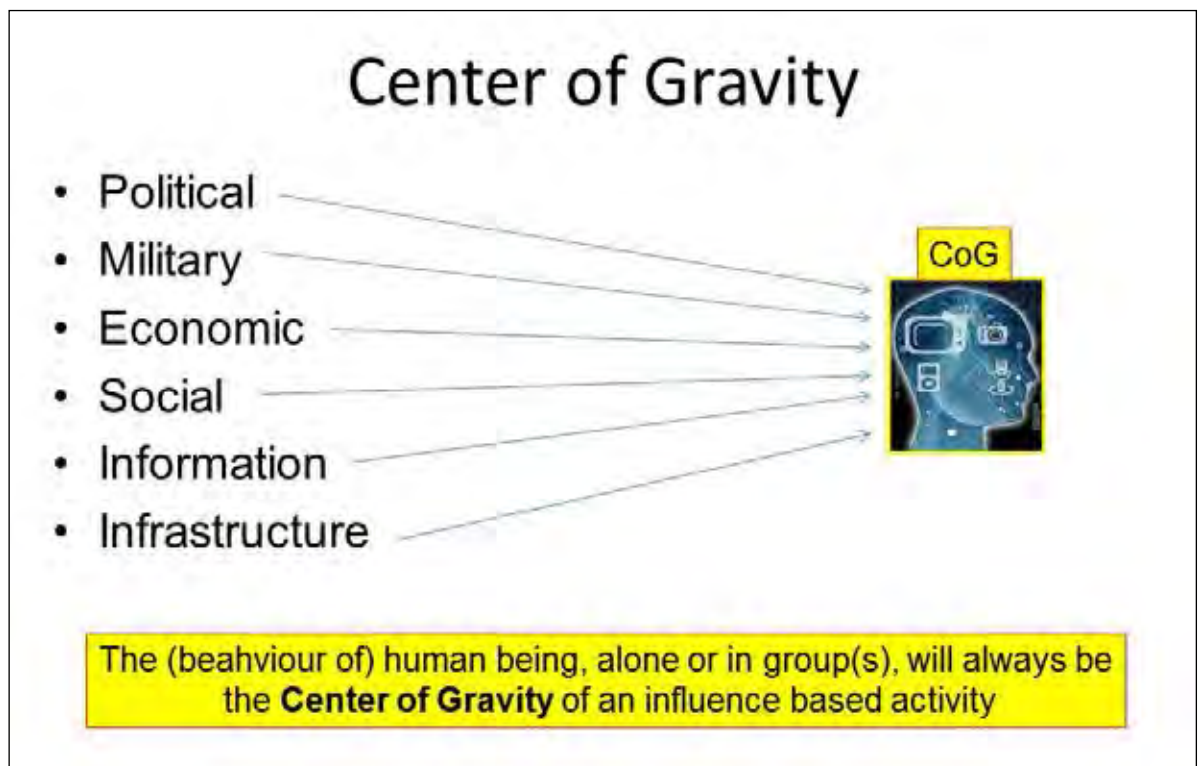
Picture n. 2 - Human Beings as Centre of Gravity of the Influence Based Activities

- Influential network structure;
- Susceptibility to specific topics;
- Personality Profiling;
- Support to open sources intelligence;
- Critical elements for friendly lines of persuasion;
- Awareness of opponent's narrative and propaganda;
- Emotion Detection;
- Contribution to the Measurement of Effectiveness (MoE);
- Geo Localization (Information Cartography):
  • Community Segmentation;
  • Community Susceptibility;
  • Influential Members w/in community;
  • Internal Community Dynamics;
  • Narrative promoted w/in each community;
  • Related Source of Narratives.

Further exploring social media, the audiences can be divided into two distinct parts:
- the first is the domestic audience, which should be thoroughly convinced that military operations are worthwhile, legitimate and supportive of their interests, and we can address it as Strategic Communications rather than PSYOPS in order for governments and decision makers to disassociate their work from 'propaganda';
- the second audience is the adversary, the principle focus of PSYOPS. This audience can be split further into civilian, military and armed populations. The aim of PSYOPS is therefore to influence each target and sub-target audience with a highly tailored and specific approach, either regionally and or locally, in complete and full coherence with the action emplaced and adhering to the necessity to avoid the so called say-do-gap.

Additionally, while the use of social media for Info Ops and PSYOPS might not have a high chance of success when directed against members of groups already radicalized, however, they often prove effective against common and still uncommitted people in their virtual and physical community.

The establishment of something like a "social media cell", however, requires a certain level of delegated authorities and trust by the chain of command. Especially, since So.Me. is an opportunity for our military leadership to present their message to both the military and civilian public spheres. Because social media has become an accepted form of lateral communication between peers, it is essential that military leadership at all levels engage in So.Me. to ensure an accepted military narrative is provided to help shape public opinion.

Military leadership at all levels should engage in social media to provide a stabilizing effect to the so called "Facebook's lateral communications" that, no matter what, would exists despite our leadership lack of direct engagement.

Additionally, we should take notice of the corporate world where a 2015 survey identified that 80.6 percent of respondents recognized social media as important for leaders to engage with customers and investors, while 83.9 percent also believed that social media was an effective tool to improve brand loyalty and helped facilitate deeper connections with the customers, employees, and shareholders.

Finally, most of our political national leaders and many of our most relevant influential personalities in all fields of excellences, already engage in daily communication through social media, suggesting that it is time for the tactical leader to follow suit
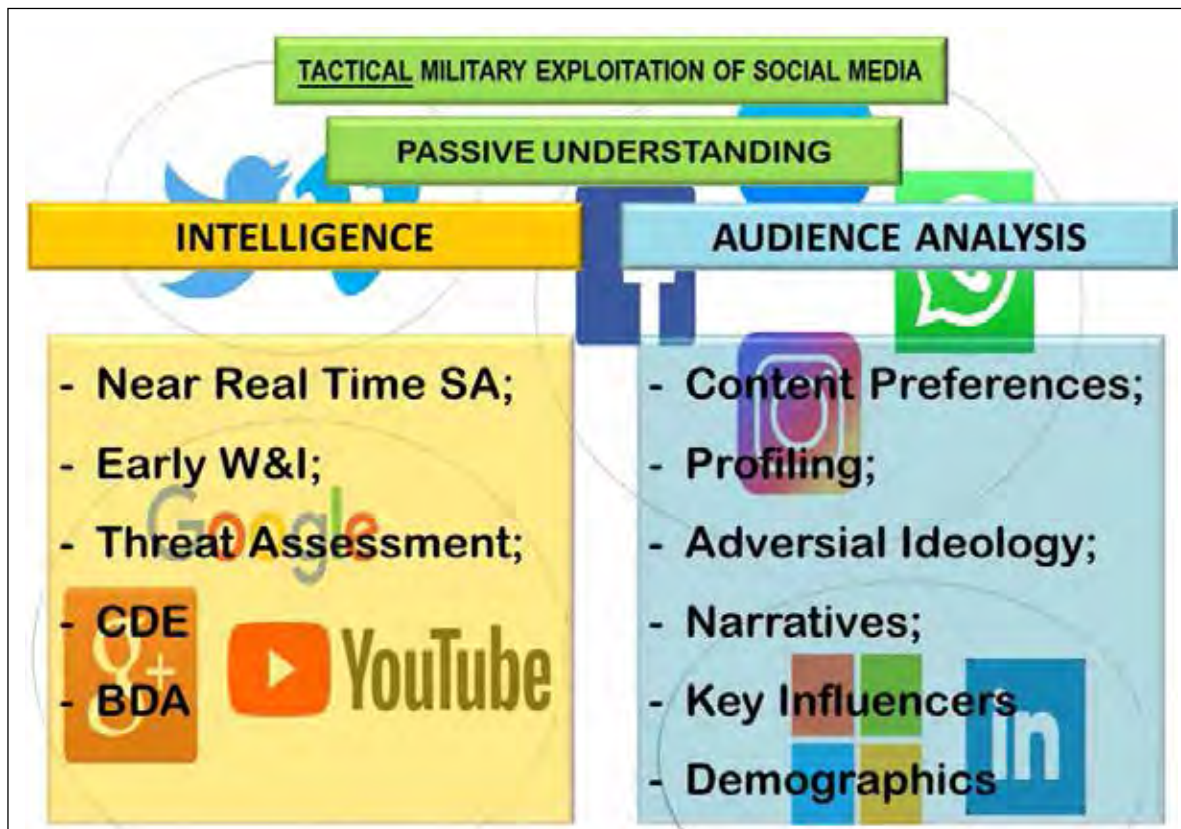
Picture n. 3 - Tactical military Exploitation of SoMe – Passive Understanding

and engage in unit-level social media campaigns.

Is it possible to develop reach-back capabilities to support deployed forces? As So.Me. occurs on-line, i.e. in a virtual domain, since its analysis is not bound to any physical location, a reach-back concept – preferably with the integration of experts with a background on culture and other relevant factors of the operational environment – could be a useful approach within the limitation of resources that a demanding analysis might impose.

However, even in a limited use and application of a proactive stance, the minor tactical level may benefit of a structured Social Media cell, capable of establishing a timely, locally pertinent engagement. Social network media is therefore now not just a question of having new, technologically provided ways of communicating and excreting influence. They are weapon-systems in their own right [**Picture n. 4** "Weaponization of SoMe"], providing actors, state and non-state alike, new intelligence, targeting, influence, operations and command and control capabilities. These new capabilities surely come with challenges; not least politically, legally and ethically!

Conclusion

Although the use of So.Me. might not be effective in engaging and persuading groups already radicalized it does prove effective against those considered uncommitted, in the virtual and physical community.

Since social media has become an accepted form of lateral communication between peers, it is essential that military leadership at all levels engages in So.Me. in order to ensure the accepted military narrative helps shape public opinion.

Military leadership at all levels should engage in social media to provide a stabilizing effect to "Facebook's lateral communications" that would exist regardless of any military activity . The challenge associated of operating in this "domain" is the delegation of authority and the required trust of the users by the chain of command. A structured Social Media cell, capable of establishing timely and locally pertinent content could have tactical military benefits. This would be weapon-system in its own right, providing commanders with intelligence, targeting information, influence operations opportunities and command and control capabilities, whose role would span the breadth of conflict as well as being vital once stabilisation begins.

The Perils of Using Social Media: "War is tough. It's tougher if you're stupid"
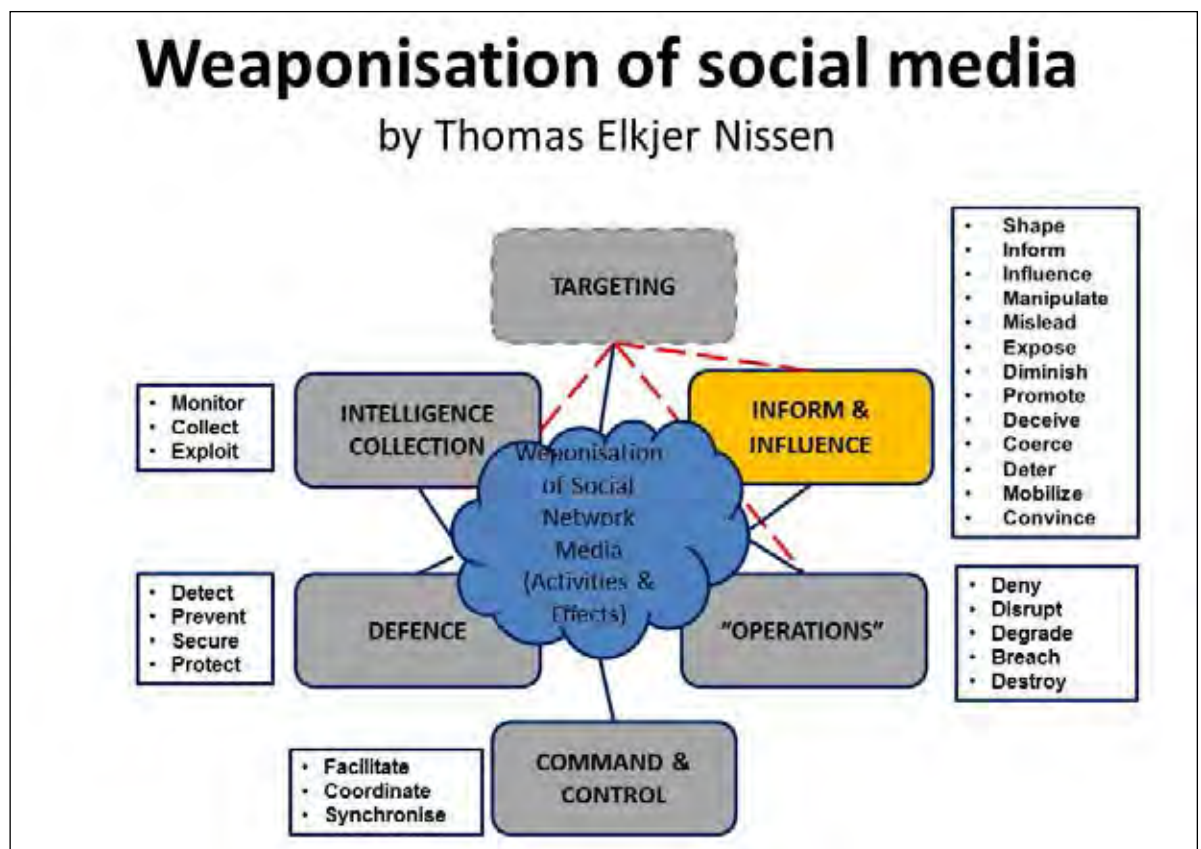
John Wayne

About the Author

Col. Marco Stoccuto is currently the ACOS of the Info Ops section within the Influence Division, NRDC-ITA.

Bibliography

T. E. NISSEN, "The Weaponization Of Social Media" pag. 61, NATO STRATCOM CoE Pub. RIGA LTV, March 2015.

Picture n. 4 - Weaponization of SoMe

WE ARE UNITED
WE ARE SAFE

#WEARENATO

nrdcita Milan

nrdcita Follow us on our Official Social Media Accounts.
NATO Rapid Deployable Corps Italy #WeAreNATO

FACEBOOK
/nrdcitaly

TWITTER
@NRDCITA

INSTAGRAM
@nrdcita

YOUTUBE
nrdc ita

er

verywhere *apidly*