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THE INTEROPERABILITY OF THE INTELLIGENCE SYSTEM – A SALIENT PREREQUISITE FOR ACQUIRING INTELLIGENCE COMPATIBILITY

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Abstract: *The information cycle is a means by which the efficiency achieved while conducting joint operations is assessed in terms of information management. In this respect, the information cycle is a model that allows for data to be translated into information to the benefit of decision makers and all parties concerned.*

Keywords: *intelligence, information*

1. INTRODUCTION

The increased role of information in economic, social, cultural and military areas has contributed to the development and increased importance of the concepts and fields based on this like: information warfare, information based war, information systems, information operations, information power, etc.

International commitments are politically made; however, it is the military that needs to translate these into practical terms. Thus, the military decision makers need to have the necessary forces deployed outside the national territory, but each such military mission requires a military structure with the right capabilities and able to tackle the conditions in the area of operations or to fulfill each and every goal of the mission.

It is our opinion that each mission is unique as a result of the circumstances under which it unfolds and the goals it pursues, requiring a military structure that has the necessary size and capabilities. That requires military force operationalization for each mission and a number of mandatory intermediate stages before deployment in the theatre of operations: force projection, staffing, endowment, training, evaluation and certification. The military force designed for various missions needs to have specific information and execution systems able to act in accordance with the specificity of a theatre of operations. Therefore, to this end, during the operationalization of the new structure a number of principles and methods need to be employed to design and size the systems along with system analysis.

Information power changes the manner of conducting wars and thus determines armed forces to also take into account its relationship with the actions undertaken.

Depending on the way command structures manage to gain and use information, they can plan, organize, coordinate and control subordinated forces so that the missions are successfully conducted, and as much as

possible, with fewer resources and human casualties.

During the conduct of operations, commandants have access to a great quantity of information. The fields of interest are varied and the pool of information is diverse since the focus is on understanding the adversary and the confrontational environment and also on acquiring an accurate understanding of the situation and one's own capabilities. Information outputs can be many and hence may stifle the command and control system of the force. Therefore, the information that needs to be delivered to the commandants needs to be carefully selected. If the latter are overloaded with nonessential information, they are not able to accurately asses the threats in their area of responsibility and, as a consequence, cannot make the right decisions.

2. THE INTELLIGENCE SYSTEM - AN ESSENTIAL ELEMENT OF THE MILITARY SYSTEM

Any planning of military actions relies on the information that is available. Every commandant tries to timely foresee the intentions of the adversary in order to make correct decisions and thus accomplish the mission assigned within the parameters already established.

Technological progress has heavily influences human activities, military ones included. In this respect, a modern intelligence system needs to be capable to continuously acquire information about the area of operations, the adversary, weather forecast, etc. However, the mere gathering of this is insufficient since it further requires that it is analyzed and disseminated with a view to enabling a forecast on the adversary's intentions and possibilities.

The possibilities to gather data are unlimited; however, the planning area requires information from specific fields. Therefore, the military intelligence analysts analyze and interpret the data required based on their experience and skills. The result of this process consists in a set of information that allows commandants to prepare and conduct battles under their own terms. It is worth noting that these activities aimed at collecting data and information is useless if the intelligence cycle works inefficiently, if the information does not reach the planners and the commandants in a timely manner and in such a way that it can be instantly used.

During operations commandants have access to a great amount of information related to every aspect of the theatre of operations and of the battle field. The available information covers a large number of fields concerning both own forces and the adversary's such as: size, identity, equipments, location, refueling status, number of losses, replenishment, fuel reserve, available ammunition, etc. An equally large amount of information concerns the area of operations and details like climate, weather, terrain, socio-political influence, to name just few. Selection of the information to be delivered to commandants is to be of particular concern: if they are stifled with non-essential information they are not able to assess the impact of the threats in the battlefield and hence cannot make the right decision.

One of the basic requirements for action planning is that every commandant identifies what information is needed concerning allied and enemy forces from the very beginning in order to make a decision and elaborate the operations order – OPORD. The questions requiring answers are included in the Commander's Critical Information Requirements = CCIR. These questions can be formulated from the moment a commandant assumes command for the new mission and continues all along mission analysis and planning. Based on CCIR, intelligence planners elaborate Commanders Priority Intelligence Requirements = PIR. These are the key questions that truly require answers so that the commandant is enabled to prepare and successfully conduct military action.

Military forces consist of intelligence structures that meet operational requirements. They are designed depending on the type of missions in order to meet the information needs of commandants at various decision making levels. The commandants of tactical combatant forces need tactical information and therefore the subordinated intelligence force is

designed in such a way that it meets the need for this type of information.

The intelligence force must focus on identifying the causes of the local problems and the means to be employed by the commandant to defuse tense situations and modify the behavior of the main political and military leaders in the area. The goals of intelligence activities are to anticipate the evolution of the situation and, in particular, to forecast the likely deterioration of the security environment or humanitarian problems in the area.

The participation of several nations under a unique command in order to accomplish the goal of multinational operations requires interoperability at several levels: operational, procedures, doctrine, technical, etc.

In intelligence terms, all of the above requires information supply to the forces of the various nations involved and receiving information from them. The flow of information is both among military structures and between the latter and non governmental organizations. Consequently, a set on intelligence procedures and criteria for information dissemination for is required for each multinational operation.

One way to solve the problem of standardization in the intelligence area is to use existing agreements (for example NATO STANAGs) as a starting point for establishing a common ground for interoperability. Since each multinational operation is unique, these standards are modified and adapted to the specificity of the mission. The interoperability of the intelligence system is to be established based on procedures and agreements that include clear dissemination criteria, the boundaries for information dissemination, definitions of specific terminology, taxonomies and other filed related guidelines.

The supply of valuable and timely information depends on the existence of optimal parameters for the intelligence system. The leadership of the military structure is to impose the working of the intelligence system so that it has access to information in a constant manner, in the fields of interest, in the already agreed form and through the convened channels. The quality of information underpinning future decisions and the command of the mission are indicators of the proper working of the intelligence system.

There are a number of elements that are characteristic of intelligence systems. Regardless of their nature, military or other, the intelligence system consists of data, information, intelligence, information flows and circuits.

The military intelligence system relies on a number of resources: human, theoretical and material. To operationalize a unit in order to collect information requires specialized technology.

One of the most evolved types of technology needed by the intelligence systems to collect IMINT intelligence is represented by unmanned aerial vehicles (UAV). The latter can be equipped with a wide range of sensors and technology that enable IMINT structures to conduct a wide array of missions.

One of the advantages of using UAVs is the capacity to conduct missions under highly threatening conditions that may lead to highly valuable casualties and to transmit intelligence in "real" or "almost real" time.

The successful accomplishment of missions on behalf of the IMINT structures in various theatres of operations has contributed to an increased interest for UAVs on behalf of the military and not only. In this respect, the use of these vehicles in other operations like monitoring key areas, environmental control, fire detection and monitoring, anti terrorist operations, etc. has also raised a lot of interest.

The employment of UAVs in the past actions provided the intelligence structures and the decision making factors important data about events and activities in the area of responsibility in a short period of time. Many of these platforms are technologically enabled to transmit data in a digital form so that the intelligence process is shortened and the military leader benefits from "real" or "almost real" time intelligence.

Besides the endowment of the system with the technology required by various intelligence sources, an information (hardware and software) subsystem must be also established within the intelligence system.

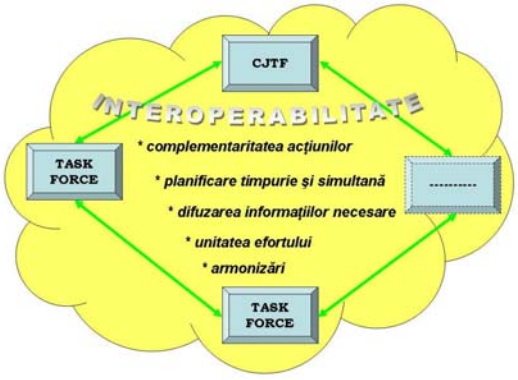
The information system needs an internal secure network identical to the one that the military structure already has. Additionally, the intelligence system must have terminals within the main networks used by NATO or by the states from within multinational coalitions: NATO SECRET, ISAF SECRET, CENTRIX, NIPRNET, SIPRNET etc. The software part of this system is to include interfaces that allow communication with databases (CIDNE, ANALYST DESKTOP, PATHFINDER, etc.).

3. THE INTEROPERABILITY OF THE INTELLIGENCE SYSTEM

The interoperability operational procedures, doctrines, technology, etc. of the forces involved in alliances or coalitions renders their efficiency and effectiveness. Thus, the "interoperability" concept requires a joint definition. Therefore, it is important that the development of capabilities is focused on intensifying interoperability among their own armed forces and with those of the alliance or of the coalition in order to endure effective multinational operations.

Interoperability in the intelligence area is established based on procedures and agreements that stipulate clear criteria and boundaries for information dissemination, definitions of specific terms and other filed related guidelines.

The basic principles to be applied in order to accomplish interoperability in the intelligence area presented in Figure 1.



Complementary actions
Early and simultaneous planning
Dissemination of all necessary information
Unity of effort
Harmonization

Fig. 2 Basic principles underpinning intelligence interoperability

Maintaining unity of effort – the personnel in the intelligence area, regardless of their affiliation, must view threats both from a national perspective and a multinational one. Any threat to one of the elements of the coalition or alliance made by a common adversary is a threat to the whole coalition/alliance.

Accomplishing harmonization – differences among coalition partners' doctrines and intelligence procedures are inevitable. Therefore, an important element for efficient intelligence activities at multinational level is the availability at all levels to make the necessary harmonization in order to eliminate the major differences in this area.

Early and simultaneous planning – the planning for operations done before taking actions is called early planning. The principle is applied by identifying the types of intelligence that can be disseminated to the forces of the other nations at the beginning of the operations. Moreover, the procedures and the agreements in the intelligence area allowing access to information are needed so that planning by various parties at different times during the operations is possible.

Dissemination of all necessary information – every coalition member must supply useful intelligence to the other partners and also comply with the existing national and coalition procedures and agreements.

The data on the sources and the methods employed to obtain information are shared with the other coalition members only upon obtaining approval from the national agency responsible for these aspects.

Force protection is another area where this principle must be applied. Any information concerning force protection is critical and must be immediately revealed to the decision making factors and troops.

Even if some information from certain sources cannot be disseminated, the resulting intelligence outputs are to be structured in a manner that makes it possible for partners to be informed on certain aspects related to it.

The successful application of this principle also requires that the C(J)2 personnel is familiar with the national doctrines, procedures, agreements in the intelligence field. If all these are respected and the principle is employed, an efficient information flow is ensured among the elements of a multinational force.

Complementary actions – all efforts in the intelligence area of every nation must be complementary. Each nation has its own intelligence system with its inherent strengths, weaknesses and capabilities. The host country – fro example- can significantly contribute to force protection given its available capabilities in the field. Complementary actions contribute to overcoming certain difficulties and to eliminating the weaknesses within the intelligence systems of certain troops. All capabilities and national resources in the intelligence area must be made available in order to include them into the intelligence process from within the theater of operations. In order to plan and coordinate multinational operations in the field of intelligence collection it is essential to establish a unit in charge with managing intelligence collection.

4. CONCLUSIONS & ACKNOWLEDGMENT

The judicious organization of the intelligence system in operational units is a factor contributing to the efficiency of the military structure and is to rely on the method of systemic analysis. The latter allows the identification of the current status, the current weaknesses, as well as the actions to address these and thus achieve efficiency.

The intelligence system in operational units can be established by putting into practice all the ideas presented by this paper. Moreover, it needs to continuously update in accordance with the latest technological and scientific developments.

Regardless of the level of performance of an intelligence system in operational units, this is heavily influenced by the changes in the surrounding environment, the inputs, the intelligence deliverables, the goals of the information system, etc.

All of the above results in reduced efficiency, stopvepipes in information flow, system errors – to mention just a few of the problems that may occur.

Therefore, the mere concern for designing a modern intelligence system in operational units and coordinating all the stages leading to the operationalization of these units is not enough.

Competitiveness in the intelligence field is maintained through the continuous analysis of the intelligence system from within operationalized units and this aims at "conducting a complex study on existing information flows and activities, the amount of processed information, the scope of the intelligence system and the endowment with the technology that allows highlighting the strengths, the limits and weaknesses of the current intelligence system in order to establish the general requirements" that are to

underpin the improvements in the intelligence system of operationalized units.

The comprehensive understanding of the intelligence system of operationalized units must rely on systemic analysis since this method allows for grasping the likelihood of a system to disintegrate given its loose relationships or stovepipes. Lack of coordination, overlapping structures, communication blockages among various elements, rigid planning, lack of coherence among goals, delayed correlations lead to imbalances and hence to the need to reorganize the system.

Continuous improvement of the intelligence system by employing all sources is mandatory so that missions can be accomplished as a result of highly credible information, good decision making and, ultimately, highly diminished casualties among one's own troops. Intelligence interoperability and compatibility can be acquired by connecting our intelligence system to the allies' system and this is an essential prerequisite for including defense information management into the framework of integrated defense resources management.

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