

# **PROSPECTS OF THE COMMAND AND CONTROL SYSTEM IMPLEMENTATION IN THE NAVAL FORCES**

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## **1. THE CURRENT STAGE OF THE GLOBAL AND REGIONAL SECURITY ENVIRONMENT**

**T**he maritime security concept is a very complex issue; lately it has been the prevalent topic in the forum debates of the naval leaders from NATO and EU. The key solution for the maritime security risks, threats and challenges is represented by cooperation, interoperability, information exchange and preventive actions. Leading the forces in these changing security environment conditions draws the necessity of having a command and control system (C2), regarding the transformation of the new force structure.

Like any other mission, the implied mission of the C2 system upgrading must have a unique objective, from which the specific tasks and objectives emerge. The Naval Forces transformation, together with the Armed Forces restructuring process logically imposes the assumption of this new implied mission – the C2 system upgrading, whose top priority is to achieve the interoperability requirement.

## **2. CONCEPTUAL DELIMITATIONS**

Leading the Naval Forces implies the command act as well as the control process. Theoretically speaking, this is exercised in two domains, at three levels.

**COMMAND** represents the vested authority in order to direct and coordinate a military structure. The command objective is to obtain operational and maximum administrative efficiency.

**Directing** is the process of planning, decision-making, setting priorities, forms of instructions and imposing decisions.

**Coordination** is setting during operations according to the developments and coordinating in time and space missions and planned actions, to achieve the best result; in naval terms, coordination may include control functions.

**CONTROL** is the exercised authority over a part of the subordinated structure activities, or other temporarily subordinated structure, which assumes responsibility of orders and execution. The commander's authority can be transferred or delegated entirely or partially.

**Full command** is the commander's authority and military responsibility and consists in giving orders to subordinates. The term „command” as used in NATO involves a lower degree of authority than its national equivalent. No NATO or other coalition commander has full command over his forces, because the NATO force generating states will delegate only the operational command and control. This term covers all aspects of actions (operations) and military administration and applies only within the country.

### **3. THE COMMAND AND CONTROL SYSTEM**

The exercise of the command act implies the existence of a hierarchical structure and a C2 system.

Any command and control system is hierarchically structured and includes the means of assigning orders, compiling and disseminating information.

In Navy, from a theoretical point of view the command act is structured on two distinct levels. Practically, these levels are interwoven according to the purpose and importance of the mission, the forces composition and arrangement, and the district, area or theater of operation.

The Naval Operational Component (NOC) is for the Naval Forces the particularly designed and designated structure for operational command, in time of peace, as well as for crisis and wartime, both at tactical and operational levels.

Normally, within a large task force or when the forces are dispersed, where decentralization of the decision-making process is needed, the functions of direction, coordination and control may be delegated to subordinates. Nevertheless, a centralized command is the straightest way for a commander to use his experience and skills.

Within the National Defense System framework, the Navy Staff is directly under General Staff and provides leadership to all subordinated structures. Naval Forces conduct independent action, along with the other services of the Romanian Armed Forces or within multinational groups.

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In this chain of command, the Navy acts to defend and promote Romanian interests and sovereign rights, at sea and on river, independently or jointly with other forces within the NATO and EU framework and regional organizations.

The Naval Forces also contribute actively to the achievement of regional maritime security, especially during peacetime, through participation in regional initiatives and maritime security operations, having the leading role along with the Border Police and the Romanian Naval Authority.

The exercise of command in the two areas, namely operational and administrative, is more obvious in crisis situations and war, because the complexity of the problems to be solved requires sharing the responsibilities of the specialized structure. The continuity of the command act is done by the measures set for the transition from peace to crisis or war, which requires full manning of the Peacetime Establishment and other gradual measures designed to achieve functionality of the structures to be able to carry out the mission assigned to them.

In the operational command of military operations, the successful mission requires seven steps: receiving the mission, mission analysis, COA development and approval, orders production, execution of mission and after action evaluation.

Operational command (OPCOM) is the commander's authority to assign missions or tasks to the subordinated commanders, to engage the unit, to change the destination of forces and to retain and delegate operation and/or tactical command as necessary. OPCOM does not include administrative or logistical responsibility. OPCOM may also be used to denote a commander's forces. OPCOM would normally be exercised at the strategic level.

Operational Control/OPCON which is exercised in the Naval Forces by the NOC, represents the delegated authority to a commander to: lead the forces so that they can accomplish specific missions or tasks usually limited in purpose, time and location; engage subordinated units; retain or delegate the tactical control/TACON for these units. OPCON does not include administrative or logistic control. OPCON is under the OPCOM and has limited authority. OPCON may not reassign or redirect forces.

### **4. COMMUNICATION INTEGRATED SYSTEM**

In the case of Naval Forces, the complexity of the Black Sea environment adds new traits and increased importance to intelligence and to compiling and disseminating information. For this purpose it is necessary to provide the Naval Forces with a communication integrated system and the related logistical support, to ensure management and information processing, in order to carry and deliver the information from its source to end-users, unaltered and untainted.

The Naval Forces communication integrated system will ensure the information flow and participation in joint actions within the Alliance by means of modern and secure radio and data communications.

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The Naval Forces communication integrated system is part of the acquisition program and is organized in two sub-programs: NAVCIS stage I and NAVCIS Support Acquisition.

The Naval Forces communication integrated system is a complex hierarchical system consisting of wireless communications, IT, radio relay and infrastructure necessary to command and control centers, flexibly interconnected by fixed or temporary established communication lines, supported by administrative elements and SOP.

To support information management, an adequate communication infrastructure was set up, in order to perform the information flow in the Naval Forces; it consists of two components:

**The Land Component**, which provides:

- monitoring and operating the airspace for force protection, monitoring the sea space (with a surface and a submarine component), river and land space (especially the Danube Delta), to perform the main task of combating threats in these environments;
- requirements of information transfer for NOC and SCOMAR;
- group liaison for the deployed units (platoons, companies, Marine Corps Battalion, logistical task group);
- individual/ team links (individual radio station UUS - handheld);
- radio coverage (UHF range) for Dobrogea area.

**The maritime component**, which provides:

- external voice, image and data communications capabilities, via radio channels, using radio modems, voice and data encryption devices, ship-to-ship and ship-to-shore, in order to develop interoperability and the capacity to act within a national or NATO task group, according to MC-195.

### **5. C2 INTEGRATION**

Command of the Naval Forces implies a number of specific requirements for the command and control system, depending on the specificity of data links for each type of surface ship, aircraft, and submarines and on the diversity of the procedures used in different situations, distances and missions, which makes it more difficult to have complete coverage of the management needs.

The joint command and control centre for NOC and SCOMAR at operational level is the main infrastructure to support business management in the Naval Forces. It integrates all the information received and summarizes the results of integration as standards to be used by the subordinated structures and the armed forces, through direct interconnection with the command and control thereof.

The operational communication integrated system is the main infrastructure for the information flow between the Naval Forces components and the other services.

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This system:

- will cover the information exchange needs between NOC, SCOMAR and other external beneficiaries;
- is the input/output gate for SCOMAR (link to external sensors and similar systems)
- provides radio networks for the Naval Forces (with own and allied ships);
- provides special networks/links (HF/UHF DATA LINK; SATCOM, NGCS).

Of utmost importance in the field of information exchange is to develop lines of secure and stable communications, allowing steady stream for the international exchange of information in real time. Therefore, the command and control requirement is related to the communication interoperability as a prerequisite and essential condition.

The integrated operation of all sensors is required in equipping the Naval Forces with a system that ensures the development and use of NATO-REP (Recognized Environmental Picture), to provide a complete and uniform geospatial, meteorological and oceanographic picture, for planning and conducting joint operations in a specific time and location.

The main mission of the system is to generate the recognized maritime picture for the ship C2, transfer it alongside DATA LINK network to NOC C2, use dedicated consoles and merge in specialized data the applications provided by SCOMAR, STASA or MCCIS.

This is achieved through the integration in NOC CIS of the data from all sources to realize a single and unique maritime picture, to include all the possible threats existing in a given time, a picture that can be exchanged between the NOC CIS consoles in order to plan and conduct the operation.

**6. CONCLUSION**

The C2 system is a key element for the Naval Forces and a priority for the procurement program, as long as the necessary funds for the acquisition of this system are provided, in which case the program can be accomplished in the next 8 to 10 years.

