

**20th ICCRTS**  
**“C2, Cyber, and Trust”**

**Moving C2 Agility from a Theory to a NATO Practice**

**Paper ID Number:**

123

**Topics:**

Topic 10: Operational Issues

Topic 2: Organizational Concepts and Approaches

**Authors:**

Bulent Soykan

David S. Alberts

**Point of Contact:**

Bulent Soykan

HQ, NATO Supreme Allied Command Transformation

7857 Blandy Road Suite 100, Norfolk, VA 23551, USA

+1-(757)-773-8487

[bulent.soykan@act.nato.int](mailto:bulent.soykan@act.nato.int)

**Abstract:**

Although there are many published works on the theoretical aspects of C2 Agility and aspirational references to agility in various military documents, C2 Agility has yet to be effectively incorporated into NATO policy and doctrine, and while it has been manifested in operations, this has occurred in an ad hoc and idiosyncratic manner. In order to properly operationalize and institutionalize C2 Agility within NATO to make it standard practice, a new mind-set needs to be developed and disseminated across NATO to ensure that operational analysis, planning, execution and assessment adequately considers the need for an appropriate approach to C2. The main aim of this paper is to propose the modifications to doctrinal publications currently used for the command and control of the NATO forces with a focus on an operational level Joint Task Force that are needed to improve C2 and Force agility. In addition, this paper presents a framework for incorporating the theoretical C2 Agility concepts into the NATO operational planning process and systematizing in Allied Joint publications.

**Keywords:** C2 Agility Practice; NATO Allied Joint Publications; Operationalizing C2 Agility; Mission Command Concept in NATO; C2 Agility Mind-set

**1. Introduction**

Agility, the capability to successfully affect, cope with and/or exploit changes in circumstances, has been applied to the art and science of Command and Control (C2) by member nations and two NATO research groups (SAS-65 and SAS-85). The concept of agility, as it is applied to C2, focuses on the suitability or appropriateness of a particular approach to C2 for a given mission and circumstances. Approaches to C2 differ along three dimensions: 1) the ways that decision rights are allocated, 2) the patterns of interactions, and 3) the distribution of information. Looking at historical cases through the lens of C2 agility has confirmed that mission success depends, in part, upon the appropriateness of the approach to C2. C2 experiments have shown that there is no 'one-size-fits-all' approach to C2 and that different approaches to C2 are appropriate for different missions and circumstances. An award winning study recently carried out under the auspices of NATO's Science and Technology Organization (STO) System Analysis and Studies (SAS) Panel concludes that C2 Agility is a capability that NATO should develop and that the theory has matured to the point where it can support practical efforts to improve C2 Agility (SAS-085 Final Report).

It is evident that C2 Agility is a critical capability that needs to be pursued with some urgency by NATO. An opportunity to incorporate C2 Agility concepts and practices exists as part of the need for NATO to certify Joint Task Force (JTF) HQs. Despite pre-defined NATO JTF HQ structures, how these task forces operate can differ in a variety of ways. Exercises can be used to assess the appropriateness for different missions and circumstances. Using exercises to assess various approaches to C2 constitutes an initial step for NATO being able to systematically improve C2 Agility. NATO should build upon and leverage its own and member nations' C2

Agility studies, experiments and capabilities, and begin to test out these empirically supported concepts in more realistic settings.

As a result of analysis, experimentation and the NATO operational planning process, it is possible to tailor aC2 approach for each operational approach. When a significant change in circumstances occurs, this should trigger a reassessment of the C2-Operational approach couple and probably necessitate a change to the C2 approach. Therefore, a new mind-set needs to be developed for guiding operational level NATO commanders and staff for in establishing an initial C2 approach and alert them to the necessity of making adjustments to this C2 Approach when needed. This will potentially result in more optimal decision-making.

In recent years, much attention has been given to the theoretical aspects of C2 Agility and aspirational references to agility in various military documents; it has yet to become effectively incorporated into NATO policy and doctrine, and has only been manifested in operations in an ad hoc and idiosyncratic manner. The key question is how to move C2 agility from a theory to a NATO practice. The overall aim of this paper is to propose modifications to doctrinal publications currently used for the command and control of the NATO forces with a focus on an operational level Joint Task Force. However, in no way does this paper intends to present a concept to supersede and replace existing Allied Joint publications regarding command and control of NATO forces.

The remainder of the paper is organized as follows. Section 2 provides an overview of the future operational environment and associated challenges for NATO forces gleaned from a review of the literature. Section 3 briefly explains the problem that C2 Agility is meant to solve. Section 4 describes NATO Doctrine and C2 Approach, including the mission command concept. Section 5 summaries the major points in this paper and sets out our recommendations.

## **2. Future Operational Environment and Challenges**

Future NATO operations will be characterized by highly adaptive adversaries, equipped with a mix of low-tech and advanced military technology and they will employ new, asymmetric methods to achieve their goals. To meet the challenges of a variety of emerging crisis, whether involving collective defense or for other response operations, NATO forces will require more agile (responsive, flexible, adaptive, innovative, resilient, versatile expeditionary capabilities to create the desired effects and maintain sufficient freedom of action to accomplish the mission at hand. Relevant scenarios and missions range from low intensity operations that assist populations, groups or individuals; such as peace support operations, humanitarian assistance and disaster relief operations, to high intensity combat operations against a broad spectrum of adversaries. These operations may also involve situations, in which there are no specific adversaries but where operations take place in highly unstable areas where little or no governmental or societal authority exists, excluding armed civil populations and criminal groups.

Allied Command Transformation (ACT) prepared the Strategic Foresight Analysis (SFA) 2013 report to address the opportunities and challenges of the future by identifying trends that shape the future strategic context and by deriving defense and security implications for NATO in the long-term. This report is the initial component of the Long-Term Military Transformation of NATO and it constitutes as a blueprint for how the Alliance might transform to anticipate a future. SFA report describes the future as increasingly complex and uncertain, presenting threats and opportunities fueled by an accelerating rate of social, economic, scientific, technological and environmental change. The report concludes that the future operational environment will be even more complex and multidimensional than at the present time, requiring forces to be able to successfully adapt to rapidly changing operational scenarios (ACT SFA Report, 2013).

The trends shaping the strategic security environment can be grouped into five main categories:

- 1) Redistribution and diffusion of global power,
- 2) Rising role of non-state actors,
- 3) Easy access to advanced information technology,
- 4) Shifting demographics and growth of urban environment,
- 5) Still fragile economies of NATO member nations’.

There is no simple, ‘one size fits all’ solution which ensures success for NATO in this ambiguous and challenging future. These challenges require a capability to conduct the full range of military operations with member nations, in a variety of operational environments, and under a variety of circumstances. In other words, NATO must be able to manifest a requisite level of agility. A crucial factor that will determine success is a commander’s competent application of operational art. Subordinates must be able to act in accordance with commander’s intent even in the absence of specific instructions.

The strategic level leadership of NATO fully recognizes the challenges presented by a dynamic and complex operational environment. Recently, NATO’s previous secretary general has indicated clearly that agility is a policy objective, calling for the formation of a spearhead within the NATO Response Force – a Very High Readiness Joint Task Force (VJTF) under the so-called the “Readiness Action Plan” which is intended to guarantee the construction of an agile structure that can “have the right forces and the right equipment in the right place, at the right time.” At the Wales Summit in September 2014, Allies decided to enhance the NRF and to establish a VJTF that will be deploy within a few days to respond to challenges that arise, particularly at the periphery of NATO’s territory. This capability is intended to provide the Alliance the means to respond swiftly to various types of crises anywhere in the world. NATO’s efforts to increase the agility of its future forces can build upon current experiences. For example, NATO forces in ISAF mission effectively demonstrated innovative and agile approaches to C2.

### 3. Problem Statement

In last three decades, much attention has been given to theoretical aspects of C2 agility in the military context. C2 agility theory is highly mature; but very little actually came into practical existence. Academic research, done so far, have laid the foundation for real operational situations. However, the practical experiences and lessons learned from operations have not been fully incorporated and have not resulted in a set of best practices that need to be implemented without delay. Thus, implementation of proposed theoretical solutions to operational challenges, solutions that are support by empirical evidence, is actually the key problem and requirement for NATO. It is on the critical path to a more agile force.

NATO's Network Enabled Capability C2 Maturity Model defined five increasingly network enabled approaches to C2 and placed them in the C2 Approach Space. We can visualize an Endeavor Space where different regions correspond to different mission challenges. Case studies and experiments have shown that each region in this Endeavor Space corresponds to its own region of the C2 Approach Space. This provides a mapping from Mission to C2 Approach that can point us to the most appropriate C2 approach for a mission with certain characteristics and circumstances.

As case studies and experiments have shown, entities that carefully consider the nature of the mission and circumstances they face and initially adopt an appropriate C2 Approach greatly increase their likelihood of success. Given the many different missions NATO can expect to be called upon to undertake, NATO will, over time, need to be able to successfully operate in many regions in the Endeavour Space. There will also be times when an entity is engaged in a highly dynamic situation where the mission, and/or the circumstances will change and one's current C2 Approach will no longer be appropriate. For both of these reasons then, there is a need to be able to employ more than one approach to C2 to be effective and to remain effective. Thus, NATO and its member nations and partners will need to develop the ability to navigate through the C2 Approach Space in response to changing missions and circumstances. This ability to maneuver in the C2 Approach Space is necessary if NATO is to be able to manifest C2 Agility.

However, despite all the efforts, agile C2 approaches have only been manifested in operations in an ad hoc and idiosyncratic manner. These approaches are not based on empirically informed theory or experimental findings, nor were they validated thoroughly in the operations or exercises. Military operations are challenged with insufficient integration of agile C2 approaches with operations planning, resulting in insufficiently harmonized units for achieving tasks that support common strategic objectives. Also they have not fully integrated into lines of capability development activities across the domains of DOTMLPFI (Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities and Interoperability) and effectively incorporated into NATO policy and doctrine.

The key question agility challenge facing planners and commanders is to understand whether a particular C2 approach is appropriate and how to transition smoothly from one C2 approach to another.

#### **4. NATO Doctrine and C2 Approach**

Allied Joint Doctrine AJP-01(D) highlights the importance of mission command and mentions that, when properly employed, commanders can generate the freedom of action for subordinates to act decisively when unexpected developments arise, and exploit promising opportunities. Even though NATO recognizes the importance of mission command in doctrine and practice, NATO nations may differ in the extent to which they employ mission command. For mission command to be appropriately applied, tactical level leaders have to fully comprehend commander's intent and be ready to take the initiative when appropriate. In order for this to be widely accepted and employed practice the concept must be highlighted in appropriate doctrine, education, training, exercises and exhibited by leadership. For this to happen, NATO nations should be part of the doctrine development process. Commanders and staffs need to fully grasp the operational doctrine governing the employment of NATO forces. However, even with appropriate doctrine, education, training and the like, mission command will not be effective without trust. Trust is the main prerequisite for successful team building and allows NATO forces to operate with greater agility in a joint force.

The other main Allied Joint publication is AJP-5 'Allied Joint Doctrine for Operational-Level Planning' presents an overarching construct of operational level planning principles and processes. In AJP-5, "operations planning is defined as the planning of military operations at the strategic, operational and/or tactical levels and "operational-level planning." (AJP-5, 2013). Operational-level planning translates strategic objectives into tactical actions. In the NATO context, operational planning involves the employment of more than one nation and therefore must incorporate perspectives from the strategic and tactical levels, as well as considerations of civilian actors when these are considered necessary for comprehensive planning activities. Operational design develops and refines a commander's operational concept to provide the basis for executable plans.

Operational art builds the critical link between strategy and tactics. Strategy guides operational art by determining the ultimate objectives to be accomplished and by allocating the necessary military and non-military resources. Strategy also defines and imposes limitations on the use of one's combat forces and imposes conditions on tactical combat. To be successful, campaigns or major operations must be conducted within a framework of what is operationally and strategically possible. Because it is a critical link between strategy and tactics, if operational art is poorly applied, no favorable strategic results can be achieved quickly or decisively. Whenever the ends and means at the strategic level are seriously disconnected or mismatched, brilliance at the operational and tactical level can only delay, but cannot prevent, ultimate defeat.

The situation becomes untenable if the political leadership is unwilling to commit adequate sources of power.

The commander at the operational level is normally the Joint Force Commander (JFC) at one of NATO's joint force headquarters. Among the many considerations, operational art requires the JFC to answer the following essential questions from his operational level perspective:

- The ends. What conditions are required to achieve the objectives? What military conditions must be attained in the operational area to achieve the strategic objectives?
- The means. What resources are required to accomplish the proposed sequence of actions? What capabilities and other resources are available and should be applied, within established limitations, to produce these conditions? How are the military and non-military instruments integrated to achieve these conditions?
- The ways. What sequence of actions is most likely to create the required conditions? What broad approaches will establish these conditions? Which instruments of power combine within these approaches? How should actions be arranged in time and space to establish these conditions?
- The risks. What is the likely cost or risk in performing the proposed sequence of actions?

Operations are normally characterized by centralized planning and direction to achieve unity of effort, whereas authority for execution should be decentralized, in other words, delegated to the lowest level appropriate for the most effective use of forces. To enable the execution of such direction a joint C2 structure is required, that must be fully understood at all levels, and thus facilitate the clear, timely and secure passage of guidance/orders, situation reports and coordinating information. Because of the joint nature of the force, the characteristics, doctrine, procedures and equipment of each of the components have to be taken into consideration.

Operations planning tools are one of the key elements of the operations planning architecture. The Allied Command Operations Comprehensive Operations Planning Directive is the basic reference tool for planning staffs. It shapes the Operations Planning Process at the strategic military and the operational level planning process (OLPP) at the joint level. Operations planning without consideration of an appropriate C2 approach would be pointless, and that in turn C2 planning separated from operations planning would also be pointless.

Mission success requires timely and effective decision-making by military commanders at all levels. Mission command allows decentralized and flexible decision-making. In addition to innovative leaders, NATO needs agile C2 structures to enable them. This reinforces the capability to organize and operate based on assigned tasks, with scalable C2 structures which is

able to aggregate and disaggregate quickly and to adapt easily to the circumstances encountered across all domains (NATO recognizes six domains within an engagement space, which are political, military, economic, social, infrastructure, and information) and the full spectrum of military operations.

## **5. Summary and Recommendations**

The 21st century military mission space is large and complex, characterized by extreme uncertainty, and exposed to increased public and media scrutiny. In addition to the high intensity combat operations traditionally associated with the military, potential missions include a wide spectrum of challenges such as counter-insurgency, counter-terrorism, stabilization, reconstruction, and support to multi-agency disaster relief. These complex endeavors require the participation and contributions of a large variety of both military and non-military actors. These challenges demonstrate the requirement of agility in command and control, which has a crucial effect on decision-making processes and success of the missions. NATO forces need to be agile enough to undertake simultaneous challenges across full spectrum of missions. Agile NATO forces will not only improve the Alliance's ability to counter the challenges posed by the global security environment, but also increase the overall capability to face.

C2 Agility necessitates academic thinking, but should not remain as a theoretical concept; it needs to be applied to real military environments in order to facilitate execution of successful NATO operations. NATO forces have to adopt C2 Agility best practices. C2 Agility requires to become effectively incorporated into fundamental principles by which the NATO forces guide their actions in support of objectives, which is authoritative but requires judgment in application.

This paper tries to outline the fundamental principles on C2 function and describe how NATO commanders, supported by their staffs, combine the art of command and the science of control to understand situations, make decisions, direct action, and successfully accomplish missions. NATO joint doctrine is crucial for Alliance forces. In this paper, some modifications to doctrinal publications currently used for the command and control of the NATO forces are proposed. In addition, a framework for incorporating the theoretical C2 Agility concepts into the NATO operational planning process and systematizing in Allied Joint publications is presented. Although it refers to the specific operational level of JTF the proposed solutions are considered relevant to all levels of command. Also, is applicable to both Coalition and Alliance operations. Finally, it is noteworthy that this research is proceeding with further analysis of the assessment of the selected C2 approach's effectiveness.

The major findings and recommendation are:

- Current NATO military doctrine focus on planning and problem solving. They should, where applicable, take on the idea of C2 agility approach to planning, preparing, executing, and assessing operations. Publishing shorter, more accessible, and more collaborative doctrine is utmost important.
- C2 Planners should be introduced as new staff capabilities, fully integrated in the Operations and Plans divisions.
  - C2 approach planning should be fully integrated with operations planning.
  - NATO Defense Planning Process needs to include development of flexible units and structures that can easily operate in situations characterized by ambiguity, complexity and rapid change.
  - Operational and component (tactic) level commanders needs to establish a clear intent in their orders and to trust their subordinates' judgment and abilities to use initiative in response to complex situations.

## References

AAP-6, NATO Glossary of Terms and Definitions (English and French), (2012). NATO Standardization Agency.

Allied Command Operations (ACO) Comprehensive Operations Planning Directive (COPD) v2.0, (2013). SHAPE.

AJP-01(D) Allied Joint Doctrine, (2010). NATO Standardization Agency.

AJP-5 Allied Joint Doctrine for Operational-Level Planning, (2013). NATO Standardization Agency.

SAS-065 NATO NEC C2 Maturity Model Overview, (2010). Paris: NATO RTO. CCRP Publication series.

SAS-085. (2014). C2 Agility Final Report. Paris: NATO Science and Technology Organization.

Strategic Foresight Analysis (SFA) 2013 Report, (2013). HQ, NATO Supreme Allied Command Transformation.