DIRECTING AIR POWER AT OPERATIONAL LEVEL: JFAC

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Abstract- In today's world, if war is inevitable, the use of air power is seen as the preferable means of conducting operations instead of financially burdensome land battles which are more likely to cause heavy loss of life. The use of Air Power has gained importance in NATO operations in the Post-Cold War era. For example, air power has undertaken a decisive role from the beginning to the end of the operation in Libya. Policy makers decide to use air power in any type of war, but the question is how to direct air power more effectively at operational level. In search of answers, NATO's Core JFAC (Joint Force Air Command/Component) was established in 2012 to control joint air power at operational level. US had experienced JFAC approach in the Operation Desert Storm in 1991. United Kingdom, France, Germany, Italy and Spain are also directing their air power from their JFAC structures. Joint air power can be directed from a single center at operational level by means of JFAC. In this article, directing air power more effectively at operational level has been studied in the framework of directing air power from a JFAC-like single center carried out by SWOT analysis technique. In order to make a comparison, JFAC-like structure is compared with de-centralized structure. As a result, it is assessed that directing air power at operational level from a single center would bring effectiveness to the air campaign. The study examines directing air power at operational level. Developments at political, strategic and tactical levels have been ignored.

Keywords- Air Power, Command and Control, Operational Level, Air Campaign, Centralized Control, Decentralized Execution, JFAC.

I. INTRODUCTION

In the World War I, when the United States declared war in 1917, Billy Mitchell was already in the theater. Before General Pershing and the American Expeditionary Forces arrived in France, Mitchell asked General Trenchard (later Marshal of the Royal Air Force) to organize air forces for his views in the best way. Mitchell tells;

The only way to handle air power, in Trenchard's opinion, was to unify it all under one command. The air covers everything and it is a substance in which movement takes place irrespective of what is under the flying machine, whether land or water [1].

In WorldWar II, many, if not most of the battles were either primarily land (the European campaign), primarily maritime (the Pacific campaign), or primarily air (the Battle of Britain or the strategic bombing of Germany's industrial centers), historically; therefore, military campaigns conducted along the lines of the separate services are understandable. The separateness of military operations into different mediums is an assumption born from history [2].

Operations in Iraq in 1991 and 2003, Allied Air Forces shredded the enemie's land components before any confrontation with the allied ground troops. Sandstorms made land and sea aviation helicopters not able to fly. But the air force was able to hit enemy tanks during the storm. In 2003 Operation Iraqi Freedom, allied ground forces were able to enter Baghdad without any significant engagement. Allied tanks shredded only a dozen enemy tanks near Baghdad. Why were allied ground troops such at ease? Because, Allied Air Forces had destroyed a large number of enemy tanks and mechanized troops in advance. Upon maneuvering for battle, enemy tanks and mechanized troops fell as open targets for Allied Air Forces. Locations of enemy ground forces were detected by JSTAR and unmanned aircraft systems and were destroyed immediately by Allied Air Forces [3].

Operation Desert Storm in 1991, operations in Bosnia-Herzegovina and Kosovo, Afghanistan in 2001, Iraq in 2003, and finally Libya Operation show that the air power alone had the direct impact on the course of the operation. After gaining air superiority, it was obvious that the air power was also the main power to destroy enemy land components. So, what is the reason for this? Ever changing classical methods of warfare enabled an air commander to direct air power from a single center, and to take initiative to provide all weather operations, precise engagement capability, unmanned aircraft systems, situational awareness-raising platforms, and the use of advanced technology in the operational environment. Centralized control of air power at operational level provided gaining air superiority and use of air power at sea and land operations. It is obvious that centralized control of air power at operational level is the key for success for the establishment of air superiority.

II. HISTORICAL BACKGROUND

A. World War I – American Air Service at St.Mihiel
The Chief of Air Service of the First American Army in September 1918, Billy Mitchell recognized the

need for centralized control of offensive air operations. He requested that all air missions of American Army units, French units attached to the American Army, the French Air Division, and the French Night Bombardment Wing be assigned to him for execution. Mitchell thus pioneered centralized control of air power. By concentrating the almost 1500 Allied aircraft directly supporting the forces in the St. Mihiel's offense, Mitchell achieved both mass and unity of effort [1].

B.World War II – North Africa

The British started the war with their air power parceled out to Army units. British forces in North Africa were outnumbered, so the theater commander, General Alexander, centralized the control of air forces under Air Marshal Sir Arthur Coningham. Coningham and the ground commander, General Montgomery, had equal status. Their headquarters (HQs) were collocated. Furthermore, General Alexander refused to intercede in disputes between the two HQs, so they worked out their problems without Alexander's intervention. Coningham gained air superiority and created operational advantages for Montgomery's forces even though his forces were locally outnumbered.

The United States (US) military entered North Africa through its air power split between the Army Air Force (AAF) and "support" air power assigned as organic air power for individual Army units. The decentralized forces concentrated on providing "umbrella" air cover and direct support for specific ground force units. German ground and air forces gained strength in the face of the decentralized American air effort. The American defeat at the Kasserine Pass in February 1943 forced a fresh look at the air organization. Shortly thereafter, General Spaatz centralized control of American air power in the Northwest African Air Forces. The immediate success of American air power underscored the value of unifying theater air power under a single air commander [1].

C. Korean War

At the beginning of the Korean War, pre-war budget and organizational struggles strongly affected relations between the Services, resulting in poor cooperation. Disagreement between the services over air assets allocation was centered around the centralized control concept of the Air Force and the dedicated air assets concept was used by the Marine Corps. The lack of a unified and integrated air campaign plan resulted in incoherent operations, some at cross-purposes. In addition, land and air campaign planning lacked coordination [1].

D. Vietnam War

In Vietnam the individual services, for the most part, controlled their own air arms. The Army maintained control of its large helicopter fleet as organic air assets. Marines followed their traditional organizational path of assigning an Air Wing to each Marine Division. The Navy maintained complete control of its air assets. Within the Air Force, there was no single air commander. Seventh Air Force was responsible for Air Force's air operations in Vietnam, while Thirteenth Air Force was responsible for Thailand, and Strategic Air Command (SAC) never relinquished command and control of its B-52 bombers. The targeting process further complicated this patchwork of responsibility. Targets were selected in Washington by a small team composed of the joint staff and approved only at presidential level. The result was a major misuse of air power [1].

E. Operation Desert Storm

US Central Command's (CENTCOM) prewar plans and joint doctrine regarding the JFACC (Joint Force Air Component Command) were closely followed during the Operations DESERT SHIELD/STORM. The JFACC's Director of Combat Plans, developed the campaign plan which was transformed first into a Master Attack Plan (MAP) and finally into a flyable Air Tasking Order (ATO). Success of the air campaign was depended on synchronizing theater air assets within a single ATO by which the control of air power was centralized [1].

III. CENTRALIZED CONTROL OF AIR POWER

As an undesirable situation, war is sometimes inevitable. Commanders have always considered balance between success and risk of having casualties. In this context, the use of air power is seen as the preferable means to conduct operations. Moreover, every effort from military or civilian to degrade the burden of war is always welcomed. NATO's new Strategic Concept, adopted at the Lisbon Summit in November 2010, underlines that Lessons Learned (LL) from NATO operations show that effective crisis management calls for a comprehensive approach involving political, civilian and military instruments [5].

In the Post-Cold War era, most significant development in the concepts of military approaches can be considered as the use of air power. For example, NATO's Operation Unified Protector (OUP) was an air heavy operation and the air power alone had been undertaken a decisive role from the beginning to the end of the operation in Libya. From this point of view, the most important issue to consider is how to direct the air power more effectively at operational level. Until the OUP, operational level control of air power had been shared out between Air Component's wartime Headquarter (HQ) JFAC and CAOC (Combined Air Operations Center). During OUP, it was decided to unify efforts

of Air Component (AC) (which was located in Izmir/Turkey at that time) and CAOC (which was located in Poggio/Italy) by moving AC to Poggio. Thus, two centers were able to work in the same geographical location. By this way, some advantages were achieved for better Situational Awareness (SA), Dynamic Targeting and C2 (Command and Control) 8. As an outcome from LL, NATO's Core JFAC (Joint Force Air Command) was established in 2012. JFAC structure with augmented personnel from other HQs and Air Operation Centers (AOC) is conceived for the purpose of air power to be directed from a single center at operational level. The COM JFAC is the commander within a unified command, subordinate unified command, or Joint Task Force (JTF) that is responsible for tasking joint air forces, planning and coordinating joint air operations, or accomplishing such operational missions as they may be assigned. Number one priority for JFAC is air superiority and to provide unity of effort in order to use air power for the benefits of all joint forces [4].
Unity of effort through centralized control of theater air assets is the most effective way to employ air power. COM JFAC provides a Joint Force Commander (JFC) the means to exploit the capabilities of air power in a theater air campaign [1].

JFAC approach provides complex planning progress of air power to be overcome faster in a single center. Even if having an air power with a large number of aircrafts and long-range missiles of cutting-edge technology may have difficulties in achieving goals unless directed effectively.

In OUP, NATO has experienced the need for co-working of AC with CAOC to unify efforts in a single entity during crises or wars. That's why, NATO's Core JFAC was established at Ramstein Air Command in 2012 to be the base for a fully operational wartime JFAC in New NATO Command Structure (NCS). By this way, joint air power could be directed then from a single center at operational level. This was a milestone in NATO for centralized control of air power together with attaching the AC Ramstein directly to the NATO's Strategic Level Command: Supreme Headquarters Allied Powers Europe (SHAPE). Besides NATO JFAC, JFAC capable member countries are being included within the NRF (NATO Response Force) duty cycle. So that, the national JFAC on duty at the time being which was pre-certified by joint exercises is to serve as the NATO JFAC in a probable operation.

IV. SINGLE STRUCTURE VS DUAL STRUCTURE

A. Single Structure

Directing air power from a single center by an augmented JFAC-like structure at operational level is called single structure.

B. Dual Structure

"AC + CAOC"-like structure or more than one "AC + CAOC"-like structure by dividing theater into pieces is called dual structure. AC and CAOC in dual structure are considered as separated operation centers deployed in different geography although CAOC is subordinate to AC.

On the following chapter, single structure is examined by SWOT analysis technique in comparison to dual structure in the context of directing air power at operational level.

V. BENEFIT ANALYSIS OF SINGLE STRUCTURE

Strengths
• JointAirPower Integration • CostEffectiveness • Central Planning • Common Language(Standardization) • Task-Oriented Readiness • TargetingandInformationSuperiority • EasierUse of ISR AssetsforJointPurposes

Weaknesses
• StartupCosts • ResistancetoChange

Opportunities
• SingleAirspacePractice • Economy of Force • Speed, Flexibility, Foresight • Ease ofCoordination • Applicabilityto NATO missions

Threats
• Replacement • PossibleProblemsCausedbyIncreased Number of Staff in A Single Center.

As seen on the table above, taking into account of 7 strengths, 2 weaknesses, 5 opportunities and 2 threats, controlling air power from a single center at the operational level can be considered as beneficial. Some of the most important items are explained below:

A. Strengths

Joint air operations are normally conducted by using centralized control and decentralized execution to achieve effective control and foster initiative, responsiveness, and flexibility.
Centralized control facilitates integration of forces to provide guidance, organization, and control to the joint air effort and maintain the ability to focus the impact of joint air forces wherever needed on the operational area [4].

Considering a small number of immovable property and resources to be used for a single center, directing air power from a single center would be cost effective. Having more number of HQs and staff is the weak part of the dual structure for cost effectiveness. Taking into account of supporting elements (supply, electricity, water and stationery expenses, per diem, etc.) for each HQ, the maintenance cost would increase in dual structure.

In dual structure, operation plans are usually done or a set of orders is received from a higher-level command. Planned tasks are performed by CAOC. But in single structure, Air Operations Directive (AOD), Air Tasking Order (ATO) and Airspace Control Order (ACO) with related Special Instructions (SPINS) are created within the body of single structure and task is produced and performed within this body. Unification in the operational documentation would be provided by single structure. Thus, both central planning and standardization can be achieved in a single entity.

The most important feature of single structure is task-oriented high readiness. Core team is always ready for war. Reserves have to be certified with training and exercises before they are enlisted to their posts. Training records of all the staff are kept. Personnel are met from this pool in a possible operation. Personnel without proper training and lack of joint operation culture cannot be included in the pool.

After 2001, NATO and Coalition Forces mostly used Time Sensitive Targeting (TST) that has gained importance with the experience of operations in Afghanistan and Iraq [6]. Besides, Dynamic Targeting as one of the targeting methods is normally employed in Current Operations (CO). Because the nature and time frame associated with CO (usually the 24-hour period) typically requires more immediate responsiveness than it is achieved in Deliberate Targeting [7]. Dynamic Targeting and ISR re-tasking methods require a high level of information flow. Commanders can make the right decision easier by collecting all information in a single center.

B. Weaknesses

In the transition to the single structure, there could be startup expenses and staff could experience the psychology of resisting change.

C. Opportunities

In dual structure, theater can be divided into more than one control area. Procedures for each control area may differ in such case. Especially boundary line of adjacent Area of Responsibility (AOR) for each Regional Airspace Control and Management Authority may create a risk. Flights or operations covering adjacent AORs would require a constant coordination and authority transfer.

A single airspace will occur when air power is directed from a single center. Airspace Control and Management Measures will be valid for the entire field. Even if the respective airspace were divided into multiple sections due to operational needs, there would be no confusion since the control was centralized. Identification procedures and symbols will also be standardized with the single structure.

A sufficient number of qualified staff is required for operation cycle and operational tempo to continue within a certain rhythm. Dual structure needs more staff in the same field of specialization to support operational cycle but that number can be reduced if the cycle is performed from a single center.

One of the distinctive capabilities of air power is speed. You need time to identify Estimate of the Situation, find out Course of Actions (COA), generate Joint Operation Plan, Support Plan and Daily Guidance, those of which mostly require lots of paperwork. If the time you have is limited, you need speed. Single structure brings you speed that you need. In contrast, flexibility and speed decrease within dual structure.

All the information needed for directing air power will gather in a single center at operational level. Joining friendly air power in a single pool, planning and directing it from a single center will make it possible to have balanced use of power, accuracy on detecting priorities and engaging necessary power to the confirmed targets. On the other hand, some difficulties may happen in dual structure. For instance; some of the information may not reach the appropriate person or the person who needs it. Each element of dual structure acts with the assumption that the information in hand is also known by the other. A shortage during Information sharing can lead to a lack of coordination.

While JFAC Liaison Elements are operating within Joint Force Land Command (JFLC), Joint Force Maritime Command (JFMC), Joint Force Special Operations Command (JFSOC) and JFC/JTF, other force and unit representatives operate as Liaison Elements within JFAC in order to boost the coordination. Also, Fire Support Coordination can be unified through JFAC and Recognized Air Picture can be formed in a single center.

The national JFAC with NATO certification can be included within the NRF (NATO Response Force) duty cycle. So that; the national JFAC on duty is to serve as the NATO JFAC in a probable NATO operation. NATO Force Structure (NFS) JFACs are the primary NRF Air C2 elements and rotate into higher readiness according to the agreed NRF rotation plan. Currently, France, Germany, Italy, and the United Kingdom offer national JFACs for Air C2

in the NRF unit roster. Spain and Turkey are intending to offer similar capabilities to NATO in the near future [9].

D. Threats

When building central control for air power, request for replacement necessitates high-level force protection. If JFAC turns into non-operational during an enemy air strike, operational level control of friendly air power may collapse. According to this scenario, air power could not be able to be directed and then be drifted into autonomous control. Replacement for JFAC must be considered to prevent this kind of situations.

If increased number of personnel come together in a single center occasionally, then extra measures may be needed for accommodation, utilities or Real Life Support (RLS) issues. A wartime augmented JFAC will require a significant number of personnel. For example, Staff from 27 nations has joined Exercise Ramstein Ambition II 2014 (RAN II 14), one of the biggest exercises for the Headquarters Allied Air Command (HQ AIRCOM). For RAN II 14, a total staff of 370 temporarily deployed to Ramstein from CAOC Uedem and Torrejon, the DACCC at PoggioRenatico, national JFACs from France, Germany, Italy, Spain, Turkey the United Kingdom and other organizations like the US Air Force 603rd Air Operations Center, the German, Hungarian, Italian, Norwegian and Polish Air Operations Centers, NATO Maritime Component Command, the Multinational Corps North-East, the Joint Air Power Competence Centre and the NATO Communications and Information Agency. Overall, RAN II 14 brought together some 600 exercise participants [10].

CONCLUSION

The need for centralized control of air power was first recognized in World War I. General Spaatz centralized the control of American air power in the Northwest African Air Forces in World War II. The lack of a unified and integrated air campaign plan resulted in incoherent operations, some at cross-purposes In Korean War and the individual services for the most part, controlled their own air arms In Vietnam. Historically, air power was formed as an embedded unit within the army and was driven by a decentralized control. Later, Air Force was established as a separate force. Then, the control of air power is centralized in the light of experiences and Lessons Learned. For instance, The United States eventually centralized the joint air power during the Gulf War in 1991. Centralized control provides an effective way to direct air power. JFAC structure can be defined as a contemporary example of architecture to the centralized control of air power. NATO established its JFAC as well as France, Germany, Italy, Spain, Turkey, UK and United States of America.

Nowadays, one of the most important aspirations of today's advanced armed forces is to conduct joint operations including planning and execution effectively. To achieve this goal, air power should be directed from a single center. By directing air power from a single center at the operational level;

1) Cost effectiveness can be achieved in accordance with joint military operations and economy of force,
2) Confusion is prevented with the implementation of single airspace,
3) Standardization can be formed,
4) Unity of effort can be practiced,
5) Easier Dynamic Targeting and ISR synchronization can be managed,
6) Information superiority can be obtained in accordance with simplicity, speed and flexibility.

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