

TRANSLATING NATIONAL OBJECTIVES INTO THE  
EMPLOYMENT OF AIRPOWER

Research Paper

Presented To

The Directorate of Research

Air Command and Staff College

In Partial Fulfillment of the Graduation Requirements of ACSC

by

Lt Col Hussain Al-Qattan

Maj Kevin Beebe

Maj William Bernard

Maj Stephen Brummond

Maj Mark Kelly

DISTRIBUTION STATEMENT A

Approved for public release;  
Distribution Unlimited

April 1996

19971120 007

New Text Document.txt

14 NOVEMBER 1997

This paper was downloaded from the Internet.

Distribution Statement A: Approved for public release;  
distribution is unlimited.

POC: AIR WAR COLLEGE.  
AIR COMMAND AND STAFF COLLEGE  
MAXWELL AFB, AL 36112

THIS COPIED FILED IN 2000



## **Disclaimer**

The views expressed in this academic research paper are those of the authors and do not reflect the official policy or position of the US Government or the Department of Defense.

## *Contents*

	<i>Page</i>
DISCLAIMER.....	ii
PREFACE .....	iv
ABSTRACT .....	v
INTRODUCTION.....	1
Background.....	1
Problem Statement .....	2
Thesis.....	3
LITERATURE SEARCH AND METHODOLOGY.....	4
TOOLBOOK OVERVIEW.....	6
Command and Control (C2) Structure (Chapter 2) .....	6
Strategic Planning Process (Chapter 3) .....	7
Air Operations Planning (Chapter 4).....	8
Air Tasking Cycle (Chapter 5) .....	10
C4I Tools (Chapter 6).....	11
BIBLIOGRAPHY .....	14

## *Preface*

What needs to be done? That question is asked by everyone from the flight lead planning for the execution of a single strike package to the four star general preparing for a major regional conflict. The answers to their questions lie within the process that translates National Command Authority (NCA) direction through the steps leading to the execution of an Air Tasking Order (ATO). The processes involved in that translation are little understood and not well illustrated or defined.

This Air Force Air Command and Staff College research project provides a Computer Based Training (CBT) environment where a novice can explore the path that translates strategy into tasking. This application will allow the novice to connect the dots and fill in the blanks to trace strategy and tasking from the strategic to the tactical level of war. That ability is key to integrating aerospace power into the Joint Force Commander's concept of operations for the range of involvement from operations other than war to major regional conflicts.

We greatly appreciate the contributions of Dr. David Arnold, Director of Research Evaluations, Air Command and Staff College, Maxwell Air Force Base, Alabama, for his guidance and critical analysis in developing this ToolBook. Additionally, we would like to thank Lieutenant Colonel Jay Fawcett, Air Ground Operations School, Hurlburt Field, Florida, for his keen insights into our project.

### *Abstract*

The United States has emerged as the only world superpower with the capability to conduct extensive global military operations. However, conducting operations without linking them to objectives leads to uncoordinated strikes and ineffective campaigns. While most theorists would agree with the necessity of linking objectives to tasks, the process of translating national strategic objectives into specific applications of power is complex. Military decision makers and warfighters at all levels must understand these processes to ensure a successful prosecution of a wide range of activities, from operations other than war to major regional conflicts.

The USAF Air Ground Operations School, responsible for training Joint Force Air Component Commanders (JFACC), specifically requested an educational device to train new JFACCs in the operational art of conducting air campaigns based on national strategic objectives. These JFACCs need a training tool which condenses a vast amount of information to an easily understandable and receptive format. This research project fills that need. It provides a self-paced computer tutorial ToolBook that decreases learning time and increases retention through graphical illustration of the processes involved in air operations planning.

Additionally, the ToolBook's application extends beyond the training of new JFACCs. Its training function has direct benefit for any student of the application of airpower. Combatant Command staffs, Joint Air Operations Center personnel, theater

target planners, students of military colleges, and operational aircrews can benefit from this ToolBook.

## Chapter 1

### Introduction

*Objectives are key to success in strategic war. When we go to war with a state or with any strategic entity, we must (or certainly should) have objectives and these objectives, to be useful, must go far beyond those such as merely beating the enemy or wrecking his military forces.*

—Colonel John A. Warden  
Key Architect of Desert Storm Air Campaign

### Background

Challenges in the international security landscape coupled with reductions in the United States military force structure mandate that we use the military instrument of power judiciously. We can not afford to waste the efforts of a single soldier, sailor, airman or marine. We will have to tailor our forces assigned for war and operations other than war against the specific objectives of the National Command Authorities (NCA). The ability to trace those objectives from the NCA down to a single aircraft attacking a target is vital.

History is replete with examples of the need for congruence between political and military objectives. The Korean War provides an excellent demonstration of how changes in political objectives forced immense changes in military objectives. In the beginning, President Truman adopted the United Nations Security Council resolution

calling for repelling communist forces from South Korea. After the success of Inchon, the objective changed to freeing all of Korea. After Chinese forces entered the conflict, the objective changed yet again to seeking a cease fire and resolution by negotiation. All three objectives called for dramatic changes to the military objectives associated with them.

More recently, in Somalia, the military struggled to keep a clear focus on strategic objectives. The strategic objectives were not clearly defined and began to change as the operation progressed. These changes became known as “mission creep.” “In essence, political agendas of key participants in the operation sought to expand the (Unified Task Force) activities and areas of operation beyond their initial, carefully limited scope defined by the mission of securing the environment for humanitarian relief operations.”<sup>1</sup> United States Central Command planners did not have concise, easily understandable objectives by which to plan operations in Somalia.

### **Problem Statement**

The tracing of strategic, theater, and tactical objectives to a specific task is a complex process. It is little understood and not well defined. Individuals newly assigned to planning staffs at every level within the Department of Defense must be able to translate NCA direction into the application of the military instrument of power. However, no comprehensive, easily accessible, consolidated reference that can illustrate how NCA direction is translated into the application of air power is available.

This ToolBook has direct benefits for any student of the application of airpower. Those who benefit include:

1. Headquarters staff, from the major commands to the air staff.
2. Students of military colleges.
3. Combatant Command staffs, theater target planners, and system operators
4. Joint Air Operations Center personnel, combat plans and operations.
5. Operational aircrews, mission planners, base support personnel.

## Thesis

To integrate aerospace power into the Joint Force Commander's concept of operations, everyone involved in the application of that power—from the Joint Force Air Component Commander to the aviator pressing the pickle button—must understand how strategic, theater, and tactical objectives are developed. Providing a comprehensive, user friendly, computer-based learning tool to students of airpower employment of airpower will facilitate learning how those objectives are developed according to joint doctrine. Commanders and supervisors at every level should not only understand how our strategic, theater, and tactical objectives are developed, but also be able to teach that process to their subordinates.

The objectives of this project, then, are to:

1. Tailor the ToolBook for an audience which consists of students of the employment of airpower.
2. Condense a vast amount of joint doctrine and operational art information.
3. Provide this information in an easily accessible format.
4. Make extensive use of visual presentation methods to convey concepts and ideas.
5. Apply research team member's experiences in flying operations, air operations planning, and command and control execution.

## Notes

<sup>1</sup> Freeman, Waldo D., Robert B. Lambert, and Jason D. Mims, "Operation Restore Hope, A USCENTCOM Perspective," *Military Review*, September 1993, 61

## Chapter 2

### Literature Search and Methodology

Research and study of strategy and objectives have been amply recorded by scholars and military professionals. However, those studies tend to focus on strategy and objective determination only at a specific level. For example, there is an exhaustive body of knowledge about how national level objectives are formulated by the political leaders. Similarly, many military professionals have written about how they conceived military objectives for their particular campaigns. What has been overlooked is how those national objectives get translated to military objectives and how the military objectives eventually get translated to the application of force on the battlefield.

The thesis of this research project was based upon the following premise: our task was to try to remain true to the published word as spelled out in the joint publications. We believe we accomplished that task. Joint doctrine provided the overarching framework within which the specific processes are described. Additional literature was used to amplify concepts which were not fully developed in the joint publications.

The command and control structures illustrated are based on the Goldwater-Nichols Act of 1986 as depicted in Joint Publication 0-2, Unified Action Armed Forces (UNAAF). The strategic planning process is principally adapted from Joint Publication 5-03.1, Proposed Final Pub, Joint Operation Planning & Execution System, Volume I

and the Armed Forces Staff College Publication 1, The Joint Staff Officer's Guide. The joint air operations planning and tasking processes discussed in the ToolBook is based on joint doctrine as presented in Joint Pub 3-56.1, Command and Control for Joint Air Operations, as well as that taught by the Center for Aerospace Doctrine and Research (CADRE), Maxwell AFB, Alabama in the Joint Doctrine Air Campaign Course (JDACC). The discussions of Command, Control, Communications, Computers and Intelligence (C4I) data automation tools relied on a variety of contemporary sources to insure the most current information was available for the ToolBook user. Sources included personal correspondence with JCS/J6 regarding the current state of evolution of the Global Command and Control System, interviews with Joint Planning Tool experts, and analysis of Contingency Theater Automated Planning System training products.

## Chapter 3

### ToolBook Overview

#### Command and Control (C2) Structure (Chapter 2)

*For when the king is on the field nothing is done without him; he in person gives general orders to the polemarchs, which they convey to the commanders of divisions; these again to the commanders of fifties; the commanders of fifties to the commanders of enomoties, and these to the enomoty. In like manner any more precise instructions are passed down through the army, and quickly reach their destination. For almost the whole Lacadaemonian army are officers who have officers under them, and the responsibility of executing an order devolves upon many.*

—Thucydides  
Peloponnesian Wars, 422 B.C.

Chapter 2 of the ToolBook uses text and graphics to illustrate the war-fighting chain of command from the NCA down to the joint air and space forces. It explores the various command and control arrangements possible in a joint force and the type of command at each level. It also explores the various arrangements of Joint Force Air Component Commander (JFACC) organizations and Joint Air Operations Center (JAOC).

The key to success in any military operation is to have a clear and discernible chain of command and control (C2). Understanding the C2 within a military operation allows one to trace strategic objectives from the National Command Authorities (NCA) down to the flight lead preparing to employ airpower against a specified target-strategy to task.

When a crisis occurs, the President exercises command and control of the military war fighters through the Secretary of Defense (SecDef) to the combatant commanders of the unified commands (CINCs). The Chairman, Joint Chiefs of Staff (CJCS) serves as the principle military advisor to the Secretary of Defense (SecDef) and the President. Most communication between the SecDef and CINCs flow through the CJCS. Combatant commanders exercise command and control over the joint force assigned to the operation and task subordinate commanders.

### **Strategic Planning Process (Chapter 3)**

Chapter 3 depicts how national and theater level actors shape our strategies and subsequent tasks. The much quoted military theorist Carl von Clausewitz stated, “war is merely the continuation of policy by other means.”<sup>1</sup> Wars are fought for political purposes in support of a grand strategy. This is a portrayal based solely on what is contained in joint doctrine. In reality, the execution of the strategic level process has varied from crisis to crisis. The crisis may propel the actors to accomplish all the steps in the process or time constraints may permit only completing a few.

The chapter opens with a discussion of the system used for command and control by the actors in the Joint Operations Planning and Execution System (JOPES). Our aim is to trace missions and subsequent tasks during an actual crisis. Therefore, the Crisis Action Planning (CAP) process component of JOPES is used to illustrate how national and theater level actors shape our strategies and subsequent tasks.

No one individual really makes our national security strategy or arguably even decisively influences it. Our government is based on a system of checks and balances to

preclude the monopoly of power in any one individual. Nevertheless, the President in his role as the National Command Authority wields powerful influence. The President must ultimately choose the Course of Action (COA) for the crisis based upon the recommendations and information provided by the actors discussed in the remainder of the chapter.

The actors reviewed in the CAP process are the President, Secretary of Defense, other national security council members, Chairman of the Joint Chiefs of Staff, and combatant commanders. The authority, processes involved, and products produced by those actors in their roles within the CAP process are discussed.

Finally, the chapter shows the relationship of the JFC to the actors in the CAP process. It demonstrates how the JFC performs campaign planning to transform the approved COA into a theater campaign plan.

### **Air Operations Planning (Chapter 4)**

Chapter 4 explores joint air operations planning, also known as air campaign planning. The objective of this chapter is to demonstrate how the JFACC translates the guidance contained in the JFC's theater campaign plan into a joint air operations plan. The air operations planning process is the tool by which the JFACC envisions and proposes the best use of theater airpower to obtain the JFC's objectives.

The ToolBook initially discusses the roles of the JFACC and the JAOC in joint air operations. It then presents a five phase planning model designed to assist the JFACC and his staff in developing the information necessary to build an air operations plan.

Phase one is Operational Environment Research. In this phase, the ToolBook explores various types of information needed to fully understand one's adversary and the environment in which operations will occur. This information includes intelligence, logistics, and friendly elements of information as well as analysis of air superiority cases and the level of conflict.

Phase two is Objective Determination. Here, the ToolBook demonstrates the linkage of airpower objectives to higher level military and national objectives. It also introduces the concept of air tasks, those specific actions to be taken by airpower to achieve objectives, and shows how these tasks are accomplished through the execution of air and space roles and missions.

Phase three is Strategy Identification. In this phase, the ToolBook shows how air strategy must be derived from higher level military strategy, just as objectives are. It then develops the concept of air strategy as a planned, specific method for using air and space assets to achieve specific effects. It explores various air strategy choices and shows how a good strategy is actually a proper mix of choices.

Phase four is Center of Gravity (COG) Identification. The ToolBook borrows from the work of Colonel John Warden and HQ USAF/XOOC (CHECKMATE) to illustrate a five ring model used to analyze an adversary as a system. It shows how COGs, those targets most worthy of attack, can be identified from the analysis and explores considerations to be taken into account in selecting a method of attack. Lastly, this section points out the need to measure the degree of success in achieving the desired effect against a target.

Phase five is Air Operations Plan Development. Here, the ToolBook shows how the work performed in the first four phases are brought together in a coherent plan. It shows how the JFACC phases air operations to synchronize them with the overall campaign and prioritizes his objectives in each phase. It also illustrates the process of linking objectives to tasks, and tasks to targets to ensure that every target attack supports a higher level objective. Finally, it shows how this information is consolidated in the form of the Master Air Attack Plan (MAAP).

### **Air Tasking Cycle (Chapter 5)**

Chapter 5 discusses the air tasking cycle. The objective of this chapter is to demonstrate how the JFACC and the JAOC transform the long-term guidance contained in the air operations plan into a daily sequenced plan of attack, the MAAP, and a joint ATO suitable for execution. Although the air tasking cycle is implemented slightly different by each of the air capable services, the joint doctrine model accurately illustrates the actions that occur.

The joint air tasking cycle model is a six phase process that focuses targeting efforts on supporting operational requirements. Phase one is JFC/Component coordination. The ToolBook shows the interaction between the JFC, the JFACC, and the other component commanders as they develop priorities and planning guidance.

Phase two is Target Development. Here, the ToolBook demonstrates how priorities and guidance provided in phase one are used to develop the Joint Integrated Prioritized Target List (JIPTL), a single target list designed to support the JFC's objectives and the needs of the joint force components.

Phase three is Weaponing and Allocation. In this phase, the ToolBook illustrates the process by which targets from the JIPTL are joined with allocated air tasks sorties to create missions for inclusion in the daily MAAP. It also highlights those “fog of war” conditions that make the daily MAAP development effort more complicated than the initial MAAP efforts completed during air operations planning.

Phase four is Joint ATO Development. The ToolBook graphically shows the elements of information required to create a flyable ATO and presents an example of a completed ATO.

Phase five is Force Execution. The ToolBook demonstrates how changes to planned air operations often arise during the course of execution. The JAOC must be responsive to these changes in order to fully leverage the capabilities of joint airpower.

Phase six is Combat Assessment. The ToolBook shows how results from the force execution phase are analyzed with the intent of determining if the desired effects were achieved. Analysis of execution results are then used as inputs for subsequent air tasking cycles.

## **C4I Tools (Chapter 6)**

The tremendous amount of data necessary to translate national objectives into specific combat tasks in an Air Tasking Order requires a robust set of Command, Control, Communications, Computers and Intelligence (C4I) tools. The objective of this chapter is to show how the Global Command and Control System (GCCS), Joint Planning Tool (JPT), and Contingency Theater Automated Planning System (CTAPS) are tools used at

the different levels of the strategy-to-task construct to enhance command and control as well as assist in theater planning and air operations planning.

The significance of this chapter is evident; the nature of warfare is changing due to the explosion in the technical means of collecting, storing, analyzing and transmitting information. As a result, today's technology presents opportunities not previously available to the military. This chapter explores how that technology can help warfighters at all levels plan and execute military operations. Two of the tools explained in this chapter (GCCS and JPT) are just now being integrated into the C4I architecture. This chapter gives the novice an instructional tour of the capabilities of all three tools.

The first section in this chapter addresses the role of the Global Command and Control System (GCCS) in the command and control infrastructure of the military. General John M. Shalikashvili, Chairman of the Joint Chiefs of Staff, stated, "I will support only one [Joint] Command and Control System." GCCS is that joint command and control system designed to carry the military into an interoperable C4I future. The section examines how the GCCS supports warfighters and decision makers at four levels: National Command Authorities, Service Components, the Joint Force Commander and the Joint Forces Air Component Commander. Specifically, it addresses GCCS's role in warning and intelligence, worldwide communications, operational planning, and mission execution.

The second section shows how the Joint Planning Tool is used at the theater level to conduct air operations planning and facilitate development of the Master Air Attack Plan. This is a new tool which is scheduled to be released into the CTAPS database in the fall of 1996. As a stand alone system, however, it has many useful applications. The most

important is the capability for the planner to create an audit trail of the connectivity between a specific application of airpower and national strategic objectives. By linking tasks to objectives at the theater, political and national level, planners can answer the question, "Why are we attacking that particular target?"

The last section of this chapter discusses the role of CTAPS in creating an Air Tasking Order. Because CTAPS takes outputs from several other processes and creates the executable order for operations, it is important to understand how this system works. The ToolBook concentrates on three applications within CTAPS that contribute to the development of a prioritized target list, a plan of employment that integrates assets and targets, and an airspace deconfliction plan.

#### Notes

<sup>1</sup> Clausewitz, Carl von. *On War*. Edited and translated by Michael Howard and Peter Paret. Princeton, NJ: Princeton University Press, 1984, 11.

## ***Bibliography***

- AFM 1-1. *Basic Aerospace Doctrine of the United States Air Force*. 2 vols., March 1992.
- Armed Forces Staff College Pub 1. *The Joint Staff Officer's Guide*. Washington DC: Defense Printing Service, 1993.
- Britt, Lt Col David. *The CHECKMATE Air Campaign Concept Development Process*. HQ USAF/XOXWC, July 1993.
- Brunhaver, Maj John S. and others. *Air Campaign Planning Tutorial*, Version 95.20. (A Multimedia ToolBook, ACPT20.TBK), Air Command and Staff College, Maxwell AFB, AL.
- Carpenter, Maj P. Mason and Maj William Eliason. "Planning and Executing an Air Campaign. (Unpublished AF/XOXS briefing), 1995.
- Clausewitz, Carl von. *On War*. Edited and translated by Michael Howard and Peter Paret Princeton, NJ: Princeton University Press, 1984.
- CTAPS Executive Course, Version 5.1.1. (A Multimedia ToolBook, CTAPSCBT.TBK), USAF Air Ground Operations School, Hurlburt Field, FL.
- Department of the Air Force. *United States Air Force Executive Guidance*. December, 1995.
- Department of the Air Force. *JFACC Primer*, 2d edition. Washington DC: Headquarters US Air Force, February 1994.
- Department of the Air Force. *Cornerstones of Information Warfare*. USAF Concept Paper, 11 August 1995.
- Department of the Air Force. *Final Operational Requirements Document (ORD) for a Contingency Theater Automated Planning System (CTAPS)*. CAF (TAF-305-88)-I/II/III-A (Increment 2), 8 February 1995.
- Deptula, Col David A. Planning an Air Campaign, The Master Attack Plan, version 7. (unpublished ACSC briefing), March 1996.
- Deptula, Col David A. *Firing for Effect: Change in the Nature of Warfare*. Arlington, VA: Aerospace Education Foundation, 24 August 1995.
- Fadok, Maj David S. John Boyd and John Warden: *Air Power's Quest for Strategic Paralysis*. Maxwell AFB, AL: Air University Press, February 1995.
- Freeman, Waldo D., Robert B. Lambert, and Jason D. Mims, "Operation Restore Hope, A USCENCOM Perspective." *Military Review* (September 1993): 61.
- Global Command and Control System: From Concept to Reality. Washington, DC: JCS/J6, 12 June 1994.
- Hernandez, Robert A. *The Global Command and Control System: The Command and Control System for All Joint Task Forces*. Alexandria, VA: Defense Technical Information Center, 9 March 1994.

- Hurley, Marcus. "JFACC: Taking the Next Step." *Joint Forces Quarterly* (Spring 1995): 60-65.
- Joint Chiefs of Staff. *Global Command and Control System User Concept of Operations*. Washington, DC: JCS/J3, 1 December 1995.
- Joint Doctrine Air Campaign Course (JDACC). *Air Campaign Planning Handbook*. Maxwell AFB, AL, April 1995.
- Joint Publication 0-2. *Unified Action Armed Forces (UNAAF)*. Washington, DC: Defense Printing Service, February 1995.
- Joint Publication 1-02. *Department of Defense Dictionary of Military and Associated Terms*. Washington, DC: Defense Printing Service, March 1994.
- Joint Publication 2-0. *Doctrine for Intelligence Support to Joint Operations*. Washington DC: Defense Printing Service, April 1995.
- Joint Publication 3-0. *Doctrine for Joint Operations*. Washington, DC: Defense Printing Service, February 1995.
- Joint Publication 3-56.1. *Command and Control for Joint Air Operations*. Washington, DC: Defense Printing Service, February 1995.
- Joint Publication 5-0. *Doctrine for Planning Joint Operations*. Washington, DC: Defense Printing Service, April 1995.
- Joint Publication 5-03.1. *Joint Operation Planning & Execution System (Vol I)*. Washington, DC: Defense Printing Service, Proposed Final Pub.
- Joint Publication 6-0. *Doctrine for Command, Control, Communications, and Computer (C4) Systems Support to Joint Operations*. Washington, DC: Defense Printing Service, May 1995.
- Keaney, Thomas A. and Eliot A. Cohen. *Gulf War Air Power Summary Report*. Washington DC: U.S. Government Printing Office, 1993.
- Seifert, CDR Al. "Letter clarifying Common Operating Environment." JCS/J6V.
- United States Air Force, Air Ground Operations School. "Contingency Theater Automated Planning System Advance Sheets." Joint Air Operations Staff Course, 8A. Hurlburt Field, FL, May 1995.
- United States Air Force, Air Ground Operations School. "Joint Air Operations Center (JAOC) Advance Sheets." Joint Air Operations Staff Course, 3H1. Hurlburt Field, FL, December 1995.
- Warden, Col John A. III. *The Air Campaign, Planning for Combat*. Washington DC: Pergamon-Brassey's, 1989.
- Warden, Col John A. III. *The Enemy as a System. Concepts in Airpower for the Campaign Planner*. Edited by Lt Col Albert U. Mitchum. Maxwell AFB, AL: Air University Press, 1993.