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**OPERATIONAL LEVEL DOCTRINE:  
PLANNING AN AIR CAMPAIGN**

by

Alan Stephens and Gary Waters  
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# **Operational Level Doctrine: Planning an Air Campaign**

**by**

## **Alan Stephens and Gary Waters**

### **Introduction**

There are three levels of air power doctrine, which correspond to the levels of war, as follows:<sup>1</sup>

**a. Strategic doctrine** presents the most fundamental and enduring principles which guide the use of air power in war. Strategic doctrine in the Royal Australian Air Force is contained in the AAP 1000, *The Air Power Manual*. An example of strategic doctrine is the concept of the three campaigns of control of the air, air strike and air support, on which the structure and operations of air forces have generally been based.

**b. Operational doctrine** applies the principles of strategic doctrine to military actions by describing the proper use of air forces in the context of distinct objectives, force capabilities and broad mission areas.<sup>2</sup> It will invariably be concerned with having the right forces in place at the right time to conduct an operation. *Operational doctrine is therefore expressed, first, through organisational arrangements; and, second, through campaign planning.*

**c. Tactical doctrine** applies strategic and operational doctrine to military actions by describing the proper use of specific weapons systems to accomplish detailed objectives. In the RAAF, tactical doctrine will appear in publications such as squadron Standard Operating Procedures (SOPs) and mobilisation plans. A squadron's standard procedure for conducting a formation strike against a naval target—a procedure which would be derived from experience, the weapons available, the

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<sup>1</sup> The second edition of AAP 1000, *The Air Power Manual* (which is currently in preparation) will recognise three levels of doctrine.

<sup>2</sup> RAF, Air Power Doctrine, AP 3000, 1991, p. 6.

capabilities of the aircrew and the capabilities of the target—would be one example of tactical doctrine.

Airmen generally have been comfortable with the concepts of strategic and tactical doctrine, and have applied that doctrine effectively (when supported with adequate resources) in the conduct of warfare and in force structure development and training. By contrast, the place in air force planning of operational level doctrine has not always been well understood.

This paper examines the nature and form of operational doctrine in the Royal Australian Air Force. It argues that the definitive expression of operational doctrine in the RAAF is a theatre-level, joint force, air campaign plan.

### **THE CHALLENGE OF OPERATIONAL DOCTRINE**

The RAAF has invariably excelled at the tactical level of war, and, by definition, tactical doctrine. In World War I (as the Australian Flying Corps), World War II, Korea, Malaya, Vietnam and a number of smaller conflicts, the RAAF has performed with distinction. Similarly, strategic doctrine has usually been addressed with confidence, even if it was not formally articulated before the publication of *The Air Power Manual*. It is questionable, however, whether operational-level doctrine has been approached with the same level of understanding.

There is a straight-forward explanation for this situation. The operational level of war is concerned with achieving strategic goals with the available resources.<sup>3</sup> It is the level of war at which plans are made for the employment of air, land and sea forces. Thus, it follows that operational-level doctrine deals with joint operations and theatre-level campaigns.

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<sup>3</sup> John A. Warden, *The Air Campaign*, Pergamon-Brassey's, 1989, p. 2.



That conclusion indicates why operational doctrine has remained a somewhat elusive concept in the RAAF (and, for that matter, most other air forces).

First, the RAAF has had few chances to exercise genuine planning authority at the operational level of war. Apart from the closing months of the fighting in the Southwest Pacific Area in 1945, when Air Vice-Marshal Bostock's RAAF Command planned and participated in major joint warfare operations,<sup>4</sup> the RAAF has fought as a junior partner of the RAF or the USAAF/USAF; consequently, there has been neither the need nor the opportunity for indigenous (theatre) operational-level doctrine.

Second, the emphasis now being placed on joint warfare in the Australian Defence Force is a relatively recent phenomenon. Notwithstanding the existence since the late-1940s of groups like the Joint Planning Committee, and units like AJASS and the Air Support Unit, the notion of joint warfare did not achieve real impetus until the single service offices were abolished in the wake of the Tange Review of 1973-76, and the integrated Department of Defence established.<sup>5</sup> That is, just as the opportunity to develop operational doctrine rarely arose in war-time, in peace-time it was not needed.

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<sup>4</sup> See George Odgers, *Air War Against Japan 1943-1945*, Australian War Memorial, Canberra, 1968, pp. 451-490.

<sup>5</sup> The Tange Review of the Defence Group of Departments was conducted under the chairmanship of the then Secretary of Defence, Sir Arthur Tange, at the direction of the Whitlam Government in 1973, and its recommendations largely implemented over the following three years. Notwithstanding strong early criticism (some of which can be attributed more to the chairman's peremptory manner than to his recommendations), the Tange Review was a water-shed in reforming the Australian defence forces from independent single services into a joint force.

In summary, strategic doctrine has provided the *raison d'être* for an air force; and tactical doctrine the detail of how to do the job (tactical doctrine is, in effect, a formal record of corporate war-fighting knowledge and operational training procedures). By contrast, operational doctrine has had neither the longevity of strategic doctrine (as, for example, in the concept of the three air campaigns), nor the day-to-day currency of tactical doctrine (as in squadron SOPs). Indeed, for a small air force like the RAAF, operational doctrine which could be *used* conceptually or practically—and which, therefore, could be widely understood and recognised for what it is—has appeared very infrequently.

The end result has been that, in the absence of operational doctrine, strategic and tactical doctrines have tended to collapse in on each other, thereby further disguising the lack of the intermediate level.<sup>6</sup>

That seems not to have caused any significant, immediate problems, a consequence of the fact that RAAF training has been and is largely occupied with the single-service or small joint exercises which are the norm in the ADF. Indeed, for the purposes of small and/or relatively uncomplicated exercises, the application of proven practices (tactical doctrine) which are consistent with fundamental principles (strategic doctrine) is likely to be perfectly adequate.

Equally, though, that cannot be an acceptable long-term approach. Developing the skills necessary to prepare and implement a theatre-level, joint force air campaign plan cannot be left until war is imminent. The clichés/truisms of strategic analysts since Thucydides still apply: 'the world is an uncertain place', and 'prepare in peace'. Also relevant is the observation of one USAF writer who recently noted that campaign planning is the embodiment of the operational art, and commanders at the operational level of war need to practise planning continually.<sup>7</sup>

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<sup>6</sup> Our thanks to Squadron Leader S. Mackenzie, RNZAF, for this observation.

<sup>7</sup> Maris McCrabb, 'Air Campaign Planning', in *Airpower Journal*, Summer 1993, p. 12.

The organisation through which air operations are planned and conducted is an implicit indicator of an air force's approach to operational doctrine. In the RAAF, the Force Element Group Commanders in their role as the Battle Staff are the critical linkage between the operational formation (Air Headquarters) and the tactical formations (the wings within the Force Element Groups).<sup>8</sup>

It is the Battle Staff who are the principal advisers to the Air Commander during the preparation of campaign plans and the conduct of operations, and who are, *ipso facto*, the authors of any RAAF operational doctrine.

Because the RAAF is a medium sized force with limited resources, the opportunities for training at the theatre level are few. No such constraints apply, however, to the development of complex campaign plans. In the absence of frequent, large-scale exercises, rigorous operational doctrine is most likely to be developed through the regular conduct of command post exercises which focus on constructing, testing and revising the format for a theatre-level air campaign plan. As well as articulating authoritative operational doctrine, the process of exercising that plan (or plans) should provide the Air Commander and his Battle Staff with the best available information on the capabilities and resources they will need to *conduct* a major air campaign.

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<sup>8</sup> The RAAF's operational forces are organised into five Force Element Groups (FEGs): Strike/Reconnaissance; Tactical Fighter; Maritime Patrol; Airlift; and Operational Support. The first four groups are commanded by a one-star, Operational Support by a group captain. During a defence emergency, the FEG commanders would relocate to Air Headquarters and, with the Air Command Chief of Operations, become the Air Commander's Battle Staff. (Depending on the circumstances, the Maritime Group Commander might relocate to Maritime Headquarters.)

*The key mechanism in this process is developing an accepted format for an air campaign plan.* One of the USAF's outstanding operational commanders, General Curtis Le May, once stated that the most important thing he learned at the Air Corps Tactical School was the operations order format.<sup>9</sup> Known also as the field order and the operations plan, the operations order provided a concise framework within which a commander could marshal his thoughts and articulate his major actions.

The remainder of this paper presents an indicative framework for planning a theatre-level air campaign. Particular importance attaches to the concept of the Joint Force Air Component Commander, and the planning instruments known as the Commander's Estimate and Centre of Gravity Analysis.

## **PLANNING AN AIR CAMPAIGN**

A plan is a scheme for attaining an objective. This section of the paper presents a framework for planning an air campaign; that is, it describes the process for planning to achieve an objective in a joint force, theatre-level campaign through the application of air power.

### **The Concept of the Joint Force Air Component Commander**

The Concept of the Joint Force Air Component Commander (JFACC) is the starting point for planning a theatre-level air campaign. Historical experience has shown that unity of effort through the centralised control of theatre air assets is the most effective way to employ air power. Centralised authority alone permits multi-role assets to be tasked for the optimum concentration of force and economy of effort, with weapons systems (aircraft, weapons and crews) being directed to the targets of greatest priority, in the right numbers, as operational demands change.<sup>10</sup>

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<sup>9</sup> Quoted in Charles M. Westenholz (ed), *Military Air Power*, Air University Press, Maxwell, 1990, p. 161.

<sup>10</sup> *The Air Power Manual*, p. 36.

Where the principle of unity of effort through centralised command has been observed, air power has been applied to maximum effect in each of the three air campaigns: control of the air, air bombardment and air support for combat forces. Classic case studies include Coningham and Montgomery with the Desert Air Force, Kenney and MacArthur in the Southwest Pacific Area, and Horner and Schwarzkopf in the Gulf.<sup>11</sup> By contrast, where the principle of unity has not been observed and separate control has been exercised by separate commanders, air power has not been used to best effect. In Korea and Vietnam, for example, individual geographic areas of operations were allocated to Air Force and Navy air forces, to the detriment of the overall air effort and, consequently, the overall war objectives.<sup>12</sup>

Important organisational lessons emerge from an examination of successful case studies. The air and land commanders (both of whom are directly responsible to the theatre, or Joint Force, commander) and their staffs must be collocated. They must share the closest possible cooperation and coordination. Each of the environmental commanders must have a deep knowledge and understanding of the other's operations.<sup>13</sup> Those imperatives were not observed in Vietnam and Korea.

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<sup>11</sup> See Vincent Orange, Coningham, Center for Air Force History, Washington, 1992; George C. Kenney, *General Kenney Reports*, Office of Air Force History, Washington, 1987; and H. Norman Schwarzkopf, *It Doesn't Take A Hero*, Bantam, New York, 1992.

<sup>12</sup> Deputy Chief of Staff Plans and Operations, Headquarters, USAF, *JFACC Primer*, August 1992, pp. 4-5.

<sup>13</sup> See Brigadier J.S. Baker, *Report of the Study into AW Command Arrangements*, March 1988, pp. 4-16/17.

In the 1991 Gulf War, the Joint Force Commander, General H. Norman Schwarzkopf, designated his senior airman, General Charles Horner, as:

- JFACC,
- Area Air Defence Commander (AADC),
- Airspace Control Authority (ACA), and
- Coordinating Authority for interdiction.<sup>14</sup>

Horner thus had the necessary authority to plan, coordinate, allocate and task the forces employed in the air campaign. There were some exceptions to Horner's unified command of air assets. For example, he had operational control, but not command, of airlift, tanker and bomber (B-52) aircraft; while neither the USN nor the USMC fully subscribed to the JFACC tasking system.<sup>15</sup> Nevertheless, Horner was given sufficient authority and had adequate resources to discount the sometimes reluctant cooperation of the Navy and Marines. He was in effect the sole tasking authority for all air assets within the theatre.

Under the existing ADF command arrangements, it would be logical to expect the Air Commander to assume the responsibilities of the JFACC.

The JFACC headquarters should be joint, not simply to provide an army and navy presence, but for reasons of clear integration of appropriately-qualified army and navy personnel throughout all functional areas. All JFACC personnel require special training in JFACC doctrine, message formats, automated C2 systems, and scheduling systems.<sup>16</sup>

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<sup>14</sup> *JFACC Primer*, p. 6.

<sup>15</sup> See James P. Coyne, *Airpower in the Gulf*, Air Force Association, 1992, p. 156; and 'Gulf Airstrikes Left Scuds Intact', in *Defense News*, May 17-23, 1993, p. 26.

<sup>16</sup> *Joint Force Air Component Commander (JFACC) Concept of Operations*, Paper by Commanders-in-Chief of US Atlantic Command and US Pacific Command, 15-1-93.

The JFACC's responsibilities are to:

- a. Keep the JFC informed of the planning and conduct of air operations.
- b. Plan, coordinate, allocate, task and execute the JFC's air operations plan in accordance with JFC priorities and apportionment directives.
- c. Develop the JFC's air operations plan based on the JFC's campaign objectives and other broad guidance in relation to the air component's roles, functions, tasks and responsibilities. Part of the plan will be identification and prioritisation of enemy targets for air attack.
- d. Recommend priorities (target and air effort) and apportionment decisions to the JFC. These will be based on the air operations plan, and their success will be measured against that plan.
- e. Organise his joint staff to derive maximum benefit from army and navy personnel and to maximise the effectiveness of the air effort.
- f. Act as ACA and AADC, when assigned by the JFC.

## **Airspace Control Authority and Area Air Defence Commander**

The JFC should normally designate the JFACC as the ACA, whose broad responsibilities include coordinating and integrating use of the airspace defined as the airspace control area. That is, the ACA should develop broad policies and procedures for airspace control and the coordination of all air effort within the AO. The airspace control system must:

- a. be responsive to the needs of the JFC,
- b. provide integration of the airspace control system with that of other nations, especially of a host nation, where applicable, and
- c. coordinate all user requirements.

Based around these requirements, the ACA should develop an Airspace Control Plan (ACP), approved by the JFC. This plan would then be implemented through an Airspace Control Order (ACO). Both the ACP and ACO must afford the flexibility to meet contingencies as they arise to facilitate the rapid employment of forces. While the ACA must have centralised coordination over any air asset in the airspace control area, he does not necessarily need operational control in all cases.

Integration of all air defence systems is essential for successful conduct of air defence operations. Further, air defence operations must be coordinated with other air operations, as well as those on land and at sea. These responsibilities are closely interrelated with those of the ACA. Hence, the JFC should appoint an AADC who would normally also be the ACA and the JFACC.



## The Campaign Plan

There is, of course, much more to the concept of the JFACC than simply appointing a single commander for air forces. If the air campaign is to achieve maximum effectiveness, all air operations must relate to clearly identified strategic objectives. Those objectives in turn must be clearly defined for the JFACC (and his land and sea counterparts) in the JFC's campaign plan.

A campaign plan is the instrument by which a theatre commander achieves strategic aims.<sup>17</sup> Through his campaign plan the JFC sets the operational tempo and direction for the conduct of fighting, and coordinates the logistic support necessary to achieve victory. *At all stages a campaign plan must relate to the strategic objectives.*

The campaign plan is the basis for all other planning, and should reflect five key tenets. It should:

- present an orderly schedule of military decisions and make clear the commander's vision and intent,
- focus on the enemy's centres of gravity,
- schedule a series of major operations in an ordered sequence,
- provide subordinates with operational direction and specific tasks and responsibilities, and
- synchronise air, land and sea activities into a synergistic and cohesive whole.<sup>18</sup>

It is the responsibility of the JFACC and his Battle Staff to translate the JFC's campaign plan into an air campaign plan which bridges the gap between the JFC's strategic objectives and the tactical operations which the flying squadrons will conduct.

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<sup>17</sup> *JFACC Primer*, p. 16.

<sup>18</sup> *ibid*, pp. 16-17.

## **The Strategic Setting**

Before planning his air campaign, the JFACC must understand the strategic setting and make his own estimate of the situation. If he does not complete those two actions, important elements of the air campaign plan may be overlooked.

The strategic assessment provides the JFACC with the context of his challenge by defining the external influences, national values and the likely impact of alliances. *It sets the bounds for what is and is not possible and acceptable.*<sup>19</sup>

Intelligence collection and estimates are the foundation of any strategic assessment, and should be a continuing process in peacetime as well as war. Information the JFACC will need will include:

- the overall strategic objectives,
- explicit assumptions (public reaction, weather, training, endurance, duration, and enemy reactions),
- capabilities (defined by absolute physical capabilities, and limits arising from training, adaptability and friction), and
- costs in terms of finance, equipment, force structure, casualties, and political influence.

## **The Commander's Estimate**

Having informed himself on the strategic setting, the JFACC should then make his own estimate of the situation before embarking on his air campaign planning. This will help him both to identify enemy centres of gravity to attack and friendly centres of gravity to defend.

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<sup>19</sup> For comment on strategic considerations and objectives, see Warden, op. cit., pp. 109-116.

The JFACC's estimate should state all objectives, including political (national and coalition), theatre, and specific air objectives. *Clear links must exist between theatre and political objectives.* An assessment must be made of the relative combat strengths of friendly and enemy forces.

Factors which should be considered during the JFACC's estimate include the following:

- The strength, availability, composition and disposition of air, ground or sea forces which could affect the air situation.
- The effect of recent operations on combat strength and efficiency.
- Aircrew proficiency and familiarity with the operating environment.
- Support available from other services and allies.
- The operating capacity of airfields.
- Weather forecasts and the likely effect of conditions on the generation of sorties.
- Logistics: the capacity for sustainment—resupply, replacement and reinforcement.
- The performance and characteristics of the available weapons systems.<sup>20</sup>

### **The Air Campaign Plan<sup>21</sup>**

The Air Campaign Plan will contain three main components. First, it will define the JFACC's concept of operations. Second, it will identify specific military objectives and target systems in a Master Attack Plan. Finally, it will allocate specific tasks to specific units in a detailed Air Tasking Order.

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<sup>20</sup> *JFACC Primer*, pp. 28-30.

<sup>21</sup> The term 'Air Campaign' is used here to describe the systematic application of air power, as part of the Joint Campaign Plan, as opposed to the strategic level definition of the three air campaigns, namely, control of the air, air bombardment and air support for combat forces.

In the air power context, a campaign is a series of operations which shares a common objective aligned to the overall conduct of the war and which by itself can have an influence on the war.<sup>22</sup> The RAAF level recognises three distinct strategic level campaigns: control of the air, air bombardment and air support for combat forces. One or all of those campaigns might be conducted during the execution of the overall theatre Air Campaign.

The Air Campaign may be the primary or supporting action in a theatre; quite probably it will be both at different times. A good air campaign plan will accommodate either possibility.

An Air Campaign will normally consist of two phases:

- gaining control of the air, and
- other air operations (for example, strategic attack, interdiction, close air support, maritime strike, airlift and airland).

Those two phases may be conducted in parallel, rather than sequentially. However, if circumstances dictate otherwise, or if the enemy has air forces, the fight to gain control of the air must assume priority. Control of the air is the prime air campaign which makes all other military operations—land, sea and air—far easier to accomplish.<sup>23</sup> Indeed, without control of the air, all other activities may become extremely difficult.

For a small or medium sized air force, air supremacy—that is, total control of the air—may not be feasible. Control of the air would therefore have to be established for a particular time and place; that is, it would be localised.

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<sup>22</sup> *The Air Power Manual*, p. 32.

<sup>23</sup> *ibid.*, p. 33.

*Immediately the desired degree of control of the air has been achieved, the air campaign should be directed towards the overall strategic objective through a combination of other operations which strike at the enemy's centres of gravity.*

Sequencing and implementing the phases of the air campaign may be affected by enemy action. The JFACC must be ready to respond if necessary to enemy initiatives, which may necessitate placing some friendly forces on alert or in reserve, or diverting multi-role aircraft to different missions. In some circumstances it may be necessary to embark on intensive close air support operations before gaining control of the air or conducting strategic attacks. For example, if friendly ground forces are engaged from the start of hostilities, they are likely to need air support.

The Air Campaign Plan should describe centres of gravity, the phasing of operations, and the resources required.<sup>24</sup> It will set initial priorities and sequencing for the three air campaigns and explain how the other combat arms will be supported. It will describe how the JFACC expects to fight his part of the battle, through both primary and supporting actions.

Three major planning considerations which confront the air commander emerge from the preceding discussion:

- First, to what extent should he plan concurrent air campaigns for a small to medium sized air force, in which the numbers of assets will always be limited?
- Second, what relative effort should he assign to strategic attacks against centres of gravity and close air support respectively?
- Third, how should he use his air forces in an emergency, such as a rapidly moving enemy ground offensive? In particular, how much priority can he give to the prime campaign, control of the air?<sup>25</sup>

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<sup>24</sup> *JFACC Primer*, pp. 18-19.

<sup>25</sup> Warden, *op. cit.*, pp. 131-6

The way in which the JFACC addresses those challenges will define his concept of operations. The resulting air campaign plan will be a reflection of the commander's and Battle Staff's knowledge, experience and conceptual ability; the available resources; and air power doctrine.

There are several critical considerations which must guide the development of an air campaign plan:

- **The nature of the enemy** must be understood. The JFACC and his staff must know the enemy's strengths and weaknesses, what resources he has, and how he is likely to respond to a range of contingencies. A prudent commander will have made an assessment of his capabilities relative to his opponent. From that, it follows that the JFACC must know how best to use his intelligence resources.
- **Initiative is vital.** The side which takes the offensive in the war in the air has a distinct advantage. If the opposing forces are fairly equal, the side that moves first will gain the tactical and operational initiative.<sup>26</sup> Although the JFACC may have to assume the defensive initially, he should be ready to go onto the attack as soon as conditions are favourable. Once he goes onto the offensive, targeting priorities assume vital importance.
- **Centres of Gravity** are the key to targeting. A centre of gravity is that point where the enemy is most vulnerable; which if successfully attacked is most likely to bring about his defeat. If there are numerous centres of gravity, they may all have to be successfully attacked for the objective to be achieved. *Correctly identifying centres of gravity in relation either to the overall strategic objective or to the immediate tactical objective (depending on the state of the conflict), and then determining how best to attack them is crucial to the air campaign plan.*

A suggested format for an air campaign plan is at Annex A.

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<sup>26</sup> *ibid*, pp. 128-9

## Centre of Gravity Analysts

Key features of a centre of gravity are its importance to the enemy's:

- ability to wage war,
- motivation and willingness to wage war, and
- political body, population, and armed forces.

Additionally, the enemy's consciousness of those factors will have a bearing on the attractiveness of a target.

When identifying centres of gravity, commanders must remember that military operations are conducted to help achieve political objectives. Because political and military objectives are determined by the command structure—a nation's ruling elite—the nature of conflict will be affected by the extent to which each side can influence the other's elite. The national political/military leadership will make decisions based on the cost-benefit relationship associated with the conflict.<sup>27</sup>

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<sup>27</sup> John A. Warden III, 'Employing Air Power in the Twenty First Century', in Richard H. Shultz and Robert L. Pfaltzgraff, *The Future of Air Power in the Aftermath of the Gulf War*, Air University Press, Maxwell AFB, 1992, pp. 63-4.

If the costs can be made to exceed the benefits, then the command structure is likely to be influenced.

*In other words, the ability to identify and attack those components of a command structure most relevant to waging war should be the priority.*

Centres of gravity are both strengths and weaknesses. An analysis of generic strategic centres of gravity indicates that they can be represented by five concentric rings.<sup>28</sup> Starting at the innermost and most important ring and working outwards, those centres are:

- command /leadership,
- key production, especially electricity and oil,
- the transportation system,
- popular support, and
- fielded military forces.

Those are strategic centres of gravity. Centres of gravity also exist at the operational and tactical levels of war, where the goal should still be to influence the operational or tactical level command structure.

While the ‘five rings’ model has general relevance, analysts must avoid the strong tendency towards ethnocentrism in centre of gravity analysis. Targets which may be crucial to one nation or culture may be of little importance to another. The key is to try to get inside the enemy’s head and determine what is vital to him. Country briefs prepared by specialists are a valuable tool here.

It follows from this discussion that the JFACC must also analyse his own force’s vulnerable centres of gravity so that he knows where to direct his defensive effort.

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<sup>28</sup> *ibid*, pp. 64-7.



Centre of gravity analysis can save an enormous amount of effort. For example, it may not be necessary to find and destroy an enemy's 2000 tanks if the 50 fuel and ammunition distribution points which support them can be neutralised. Similarly, it may not be necessary to find and destroy the distribution system if the enemy nation can be immobilised by finding and destroying 10 key electrical generation systems. Finally, it may not be necessary to find and attack the electrical system if the leadership elite can be killed, captured, or made ineffectual.<sup>29</sup>

*Strategic priorities will determine which courses of action are acceptable, while operational priorities including friendly military capabilities) will establish which are feasible.*

In allocating priorities to targets, planners must address degrees of vulnerability, effort required, immediacy of effects, lasting effects, and probability of results.

### **Joint Target Coordination Board**

The selection of targets is not the sole prerogative of the JFACC. All senior theatre commanders must be represented during all centre of gravity analysis and target selection.

Ideally, a Joint Target Coordination Board (JTCCB) should be formed, chaired by the JFACC but under the direct command of the JFC. The JTCCB can help the JFC coordinate target information, provide targeting guidance and priorities, and prepare and refine joint target lists. It provides a mechanism for all senior environmental commanders to influence the targeting strategy. Problems can, however, arise with a JTCCB if it tries to exceed its role of establishing broad target guidance. The Board must not interfere with the JFC's authority to set guidance or the JFACC's ability to plan and conduct theatre air operations. A Board may also be too bureaucratic an organisation to respond rapidly to enemy initiatives.<sup>30</sup>

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<sup>29</sup> *ibid*, pp. 67-8. See also Flight Lieutenant Michael Spencer, 'How Many Weapons? How Many Aircraft?', in *Defence Force Journal*, No. 91, 1991, pp. 26-30.

<sup>30</sup> *JFACC Primer*, pp. 22-3.

In addition to providing the essential target list and priority for air effort, the JTCB also provides a daily review of the overall progress of the air campaign in meeting the JFC's air operations plan, including his objectives and priorities. Its function is to maintain a macro level view of the entire battlefield and balance conflicting priorities with the JFC's guidance and intent. The JTCB will also ensure compliance with ROE and LOAC.

Responsibilities of the JTCB are as follows:

- a. Review joint targeting guidance and apportionment, while providing the JFC with advice on how to achieve his overall aims and objectives.
- b. Assist all components in translating JFC objectives and guidance into individual (but coordinated) plans and operations so as to maximise the air effort in meeting targeting requirements.
- c. Provide broad targeting guidance to the JFACC, based on the JFC's guidance and priorities.
- d. Review the JFC's campaign plans in advance so as to anticipate future operations and their consequent implications for targeting.
- e. Assist the JFC to coordinate all targeting information, provide targeting guidance and priorities, and prepare and refine a Priority Target List (known in American terminology as the Joint Integrated Prioritised Target List – JIPTL).
- f. Define the desired effects of firepower from all sources.
- g. Recommend changes to, or supplementary, ROE.<sup>31</sup>

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<sup>31</sup> *Joint Force Air Component Commander (JFACC) Concept of Operations*, Paper by Commanders-in-Chief of US Atlantic Command and US Pacific Command, 15-1-93.

Target selection is so important that, in the Australian setting, the three environmental commanders (the Air, Maritime and Land Commanders) should constitute the senior membership of the JTCCB. They would approve the choice and priority of targets at the broad strategic level (as, for example, in the ‘five rings’), leaving the detailed selection of precise targets, target sets, aim points and timings to specialist staffs.

### **The Master Attack Plan**

For the Air Campaign Plan to be implemented, three basic actions are necessary. First, the plan has to be translated into precise objectives. Second, specific tasks have to be allocated to specific units. Finally, those tasks have to be coordinated. At all stages of those three actions, the demands of sustainment must be considered.

Translating the Air Campaign Plan into useable instructions for the flying squadrons is done through the Master Attack Plan and the Air Tasking Order.

The Master Attack Plan (MAP) identifies specific military objectives and target systems.<sup>32</sup> It is the end result of centre of gravity analysis, target selection, aim point selection and current intelligence. For example, the Master Attack Plan for the first stages of Desert Storm reflected the following objectives:

- Destroy/ neutralise air defence command and control.
- Destroy nuclear, biological and chemical storage and production capability.
- Make ineffective the national and military command, control and communications infrastructure.
- Destroy key electrical grids and oil storage facilities.
- Deny military resupply capability.
- Eliminate the long-term offensive capability.
- Make the Republican Guards ineffective.<sup>33</sup>

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<sup>32</sup> See Department of Defense, Final Report to Congress. Conduct of the *Persian Gulf War*, April 1992. p. 102.

<sup>33</sup> *ibid*, p. 95.

The JFACC, General Horner, had sufficient air power to execute that plan concurrently ('in parallel'). For a small air force, sequencing will, be necessary, and the JFACC's determination of that sequence will be vital.

Note that the MAP represents a dynamic process and may change with the course of the battle.

### **The Air Tasking Order**

The final stage in the planning process described in the preceding pages, and which has progressively 'flowed down' from strategic to operational to tactical considerations, is represented by the Air Tasking Order (ATO). The ATO is issued daily and allocates specific tasks to specific units. It thus provides aircrews with the details they need to execute the MAP.

Operationally qualified specialists from the JFACC staff and the flying squadrons work with intelligence, logistical and meteorological personnel to add detail to the MAP, such as target assignments, ordnance loads, take off and over target times, route plans, refuelling, call signs and safety procedures.<sup>34</sup>

The processes involved in the targeting cycle are detailed at Annex B.

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<sup>34</sup> *ibid.*, pp. 102-3.

## **Summary**

Experience has shown that unity of effort is essential if maximum effectiveness is to be gained from air power in a theatre campaign. For that reason, air campaign planning rests on the concept of the JFACC, who is responsible to the JFC for setting the priorities and conducting the operational planning for all theatre air power. In completing that planning, the JFACC should follow a ‘top down’ approach, to ensure that the daily Air Tasking Orders given to the aircrews who fly the missions have been developed logically from the JFC’s Campaign Plan, the Strategic Setting, the Commander’s Estimate, the Air Campaign Plan and the Master Attack Plan.

Annexes:     A. An Air Campaign Plan Format  
              B. The Targeting Cycle



## Annex A

### AN AIR CAMPAIGN FORMAT

**THEATRE AIR CAMPAIGN PLAN:** (Number or Code Name)

**REFERENCES:** (Maps, charts, other relevant documents)

**COMMAND RELATIONSHIP.** Briefly describe the command organisation (composition and relationships) for the campaign. Detailed information may be included in a command relationships annex.

#### **1. Situation.**

Briefly describe the situation that the plan addresses (see theatre or commander's estimate).

a. **Strategic Guidance.** Provide a summary of directives, letters of instructions, memorandums, treaties and strategic plans including any global campaign plans received from higher authority, that apply to the plan.

- (i) Relate the strategic direction to theatre requirements in its global, regional and space elements.
- (ii) List the strategic objectives and tasks assigned to the command.
- (iii) Constraints: list actions that are prohibited or required by higher authority ROE, etc.

b. **Enemy Forces.** Provide a summary of pertinent intelligence data including information on the following:

- (i) Composition, location, disposition, movements, and strengths of major enemy forces that can influence action in the theatre of war.

- (ii) Strategic concept (if known), including the enemy's perception of friendly vulnerabilities and enemy's intentions regarding those vulnerabilities.
- (iii) Major objectives (strategic and operational).
- (iv) Commander's idiosyncrasies and doctrinal patterns.
- (v) Operational and sustainment capabilities.
- (vi) Vulnerabilities.
- (vii) Strategic centres of gravity.

NOTE: Assumed information should be identified as such. Reference may be made to an intelligence annex for more detailed information.

c. **Friendly Forces.** State here information on friendly forces not assigned that may directly affect the command.

- (i) intent of higher, adjacent, and supporting Commands.
- (ii) Intent of higher, adjacent, and supporting allied or coalition forces.

d. **Assumptions.** State here the assumptions applicable to the plan as a whole. Include both specified and implied assumptions.

## **2. Mission.**

State the task(s) of the air component command and the purpose(s) and relationship(s) to achieving the strategic objectives.



### 3. Air Operations

a. **Strategic Concept.** (Based on the relevant major elements of the theatre strategy.) State the broad concept for the deployment, employment and sustainment of major aerospace forces in the command including the concepts of deception and psychological warfare during the campaign as a whole. (This section is a summary of details found in annexes.)

- (i) Theatre air organisation. Subordinate to JFACC.
- (ii) Theatre air objectives.
- (iii) Deployment airfields.
- (iv) Operational missions. Consider force multiplication.
- (v) Phases of air campaign in relation to theatre campaign.
- (vi) Timing and duration of phases.

b. **Phase I.** ( NOTE: Provide a phase directive for each phase.)

- (i) Operational concept. Include operational objectives, attack plan, and timing.
- (ii) General missions and guidance to subordinates and components. Ensure that missions are complementary.
- (iii) Forces required by role or capability, aerospace and surface. Should consider Air Force, Army and Navy, and allies.
- (iv) Tasks for subordinate commands and components.
- (v) Reserves Forces. Location and composition. State the most likely contingency missions. Include guidance on surge sorties if used as reserve capability.

(vi) Mobility. Consider transportation, ports, lines of communication, transit and over-flight rights, reinforcement, reception and onward movement and host nation support arrangements.

(vii) Deception.

(viii) Psychological.

c. **Phase II** (and any other phases if there are more than two). Present information as stated in sub-paragraph 3b above for each subsequent phase. Provide a separate phase for each step in the campaign at the end of which a major reorganisation of forces may be required or another significant action is initiated.

d. **Coordinating Instructions.** If desired, instructions applicable to two or more phases or multiple elements of the command may be placed in here.

#### **4. Logistics.**

Brief, broad statement of the sustainment concept applicable to the campaign by phase. Logistic phases must be concurrent with operational phases. This information may be listed separately and referenced here. This paragraph should address:

a. Assumptions (including coalition requirements).

b. Supply aspects.

c. Maintenance and modifications.

d. Medical service.

e. Transportation.

f. Base development.

- g. Personnel.
- h. Foreign military assistance.
- i. Administrative management.
- j. Line(s) of communication.
- k. Reconstitution of forces.
- l. Joint and combined responsibilities.
- m. Sustainment priorities and resources.
- n. Inter-service responsibilities.
- o. Host nation considerations.

## **5. Command, control and communications.**

### **a. Command.**

- (i) Command relationships. State generally the command relationships for the entire campaign or portions thereof. Indicate any shifts of command contemplated during the campaign, indicating time of the expected shift. These changes should be consistent with the operational phasing in paragraph 3. Give location of commander, Air Operations Centre and command posts.
- (ii) Delegation of authority.

**b. Communications.**

- (i) Communications. Plans of communications. (May refer to a standard plan or be contained in an annex.) Include time zone to be used; rendezvous, recognition and identification instructions; code; liaison instructions; and aids of signal communications as appropriate.
  
- (ii) Electronics. Plans of electronic systems. (May refer to a standard plan or be contained in an annex.) Include electronic policy and such other information as may be appropriate.

## Annex B

### THE TARGETING CYCLE

The targeting cycle is fundamental to understanding the role of the JTCB and the JFACC in ensuring the most effective delivery of air power.<sup>35</sup> Phases of the cycle encompass:

- a. JFC mission objective and guidance,
- b. target development,
- c. weapons selection,
- d. allocation,
- e. ATO development,
- f. force execution, and
- g. combat assessment.

**JFC Mission Objective/Guidance.** The JFC states his military objectives and clearly defines what constitutes military success. The JFC's objectives should identify initial targeting priorities; planning guidance, appropriate manoeuvre and movement control, fire support coordinating measures, and criteria for defining direct air support sorties.

**Target Development.** The JFC's mission objective/guidance is used to focus target development. Here, the JFACC develops an Air Operations Plan to meet the JFC's guidance. Broad target categories are nominated by the JFACC to the JTCB based on the JFC's priorities and a critical analysis of the enemy's centres of gravity. The JTCB allocates priorities to target categories and develops the JIPTL for use by the

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<sup>35</sup> See *Joint Force Air Component Commander (JFACC) Concept of Operations*, Paper by Commanders-in-Chief of US Atlantic Command and US Pacific Command, 15-1-93.

JFACC. Specific target requirements are coordinated by the JFACC directly with the other component commanders, who also provide the JFACC with their direct air support plan.

**Weapons Selection.** Based on the JIPTL, the JFACC can identify, prioritise and select specific targets for incorporation in the Master Attack Plan (MAP). Once targets have been validated, appropriate weapon systems are then matched. The JFACC targeting cell develops the MAP based on the objectives, apportionment, direct air support plans, sorties available, and the JIPTL. Targets for a specific day, sequencing and time of attack are contained in the MAP. The coordination between the JFACC and the other component commanders mentioned above occurs in the targeting cell, which must be joint. While the focus will be on targets for air attack, this cell should have the expertise to consider the use other elements which may be in the inventory, such as air-to-surface or surface-to-surface missiles, or Special Forces.

**Allocation.** Based on the MAP, the JFACC Plans Division develops an allocation plan and skeleton for the Air Tasking Order (ATO). At this stage, weapons selection will only have determined the size and composition of the force packages needed to achieve the required offensive damage or defensive action. Once the ATO skeleton has been approved by the JFACC, allocation and allotment are made. Allocation involves total sorties by aircraft type for each mission, while allotment involves the ordering of air missions, possibly from one component to another.

**ATO Development.** The development and generation of the ATO and any other special instructions represents the product of detailed planning by the JFACC, ACA and AADC plans divisions, and provides several levels of detail. For example, every sortie and use of SAMs in the JFC's Area of Responsibility (AOR) must receive instructions from the ACA and AADC.

The ACA must facilitate combat operations without setting undue restrictions; hence, combat effectiveness must be balanced with safe, orderly and expeditious use of airspace. ACA instructions must provide for rapid coordination of any necessary reassigned tasks. On the other hand, the AADC must direct and enforce identification of aircraft and tactics for fighter engagement, as well as techniques and procedures which are appropriate to the threat, friendly air traffic, friendly air defences, IFF technology, weather and enemy capabilities. ACA and AADC instructions can be promulgated in the daily ATO as well as in daily, weekly or monthly bulletins.

Specific JFACC instructions, as well as the JFACC's segment of the ATO, must provide operational and tactical direction to those missions under his tasking authority. The level of detail will necessarily vary depending on the nature of the force package. For example, multi-based, multi-service missions would require more detailed coordination than single-base, single-service packages.

**Force Execution.** The JFACC directs the execution of the ATO and any special instructions. 'Execution day' nominally starts at 0600, with any immediate changes (due to JFC or component commander requirements) being effected by the JFACC.

**Combat Assessment.** Effective campaign planning demands a continuing evaluation of the effect of operations on the campaign plan. While the JFC directs the overall combat assessment (CA), the JFACC provides the necessary expertise to assess ongoing air operations. In this respect the JFACC continuously evaluates the results of his operations and provides his assessments to the JFC who consolidates and evaluates the overall campaign. The JFACC's CA plan incorporates Battle Damage Assessment (BDA), Munitions Effectiveness Assessment (MEA), and recommendations for re-strikes. The CA plan also considers the forces employed, munitions, timing of attacks, and the effects of specific attacks against enemy targets and remaining capabilities. As the cycle continues, the JFACC analyses remaining enemy capabilities and determines the enemy's likely courses of action, all the while balancing targeting priorities and overall targeting efforts. The JFC is always 'kept in the loop'.

## Changes

The effectiveness of the targeting cycle depends, *inter alia*, on the responsiveness of the system to incorporate changes on the day of execution. These changes may occur because of in-flight reports and initial BDA, which will demand near real-time redirection of air effort. The capability of air forces to attack mobile surface forces is increasing and is likely to be a major factor in overall campaign success. This increasing utility of air power is the main reason for needing a JFACC, who provides the essential central authority for coordinating and controlling air operations, with the attendant consequences on any surface battles. The JFACC's air operations centre should be responsible for revising all air sorties, and for coordinating any changes on execution day. While the JFC has the responsibility for apportionment decisions, there may be occasions when the JFACC has to approve deviations without recourse to the JFC. The system should allow for this, on an exceptional basis, while expecting the JFACC to advise the JFC subsequently.



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