RAAF Air Power Studies Centre

REGIONAL AIR POWER WORKSHOP

TOWNSVILLE

4-8 SEPTEMBER 1995

Edited by John Harvey and Mark Lax
Disclaimer

The views expressed herein are those of the authors and workshop participants and do not necessarily reflect the official policy or position of the Department of Defence, the Royal Australian Air Force, the Government of Australia or the official policy or position of the respective Armed Forces, Air Force or Governments of the overseas participants.

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ABBREVIATIONS

AADC  Area Air Defence Commander
ABCA  America, Britain, Canada, Australia
ABRI  Angkatan Bersenjata Republik Indonesia
ABW   Air Base Wing
ACA   Airspace Control Authority
ACAUST  Air Commander Australia
ACC   Air Component Commander
ACDA  Arms Control and Disarmament Agency
ADEX  Air Defence Exercise
ADF   Australian Defence Force
ADFP  ADF Publication
ADFWC  ADF Warfare Centre
AEW   Airborne Early Warning
AEW&C  Airborne Early Warning and Control
AFC   Air Force Cross
AFDS  Airfield Defence Squadron
AFDW  Airfield Defence Wing
AFP   Armed Forces of the Philippines
AFO   Air Force Office
AHQ   Air Headquarters
AIDCC  Australia Indonesia Defence Coordination Committee
ALG   Air Lift Group
AM    Member of the Order of Australia
ANZUS  Australia, New Zealand and United States
AO    Area of Operations
APEC  Asia Pacific Economic Cooperation
APSC  Air Power Studies Centre
ARF   ASEAN Regional Forum
ASCC  Air Standardisation Coordinating Committee
ASEAN  Association of South East Asian Nations
ASP90  Australia's Strategic Planning in the 1990s
ASW   Anti-Submarine Warfare
ATC   Air Traffic Control
ATO   Air Task Order
ATOC  Air Transport Operations Centre
ATTU  Air Transportable Telecommunications Unit
AWACS  Airborne Warning and Control System
BCDR  Base Commander
BDA   Bomb Damage Assessment
C²    Command and Control
C³J   Command, Control, Communications and Intelligence
CAS   Chief of the Air Staff
CCEB  Combined Communications and Electronics Board
CDF   Chief of the Defence Force
CDR   Closer Defence Relations
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<td>CER</td>
<td>Closer Economic Relations</td>
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<td>CGS</td>
<td>Chief of the General Staff</td>
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<td>CGSAC</td>
<td>Chief of the General Staff Advisory Committee</td>
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<td>CIW</td>
<td>Counter Insurgency Warfare</td>
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<td>CNS</td>
<td>Chief of Naval Staff</td>
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<td>CNSAC</td>
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<td>CSBM</td>
<td>Confidence and Security Building Measure</td>
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<td>CSM</td>
<td>Conspicuous Service Medal</td>
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<td>Defending Australia 1994</td>
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<td>Deputy Chief of the Air Staff</td>
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<td>DAPSC</td>
<td>Director, Air Power Studies Centre</td>
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<td>DARA</td>
<td>Directorate of Army Research and Analysis</td>
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<td>DC</td>
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<td>DCP</td>
<td>Defence Cooperation Program</td>
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<td>Department of Foreign Affairs and Trade</td>
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<td>DGMTSP</td>
<td>Director General Maritime Studies Program</td>
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<td>DMZ</td>
<td>De-Militarised Zone</td>
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<td>DSE</td>
<td>Defence Scientific Establishment</td>
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<td>DSTO</td>
<td>Defence Science and Technology Organisation</td>
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<td>ECM</td>
<td>Electronic Counter Measures</td>
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<td>Exclusive Economic Zone</td>
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<td>FEG</td>
<td>Force Element Group</td>
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<td>FOB</td>
<td>Forward Operating Base</td>
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<td>FPDA</td>
<td>Five Power Defence Arrangements</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GNP</td>
<td>Gross National Product</td>
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<td>HQADF</td>
<td>Headquarters Australian Defence Force</td>
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<td>HQLC</td>
<td>Headquarters Logistic Command</td>
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<td>HQTC</td>
<td>Headquarters Training Command</td>
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<td>IADS</td>
<td>Integrated Air Defence System</td>
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<td>ICAO</td>
<td>International Civil Aviation Organisation</td>
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<td>JASINC</td>
<td>Joint Australia Singapore Cooperation Group</td>
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<td>JATDCC</td>
<td>Joint Australia Thailand Defence Coordination Committee</td>
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<td>JFACC</td>
<td>Joint Force Air Component Commander</td>
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<td>JFAO</td>
<td>Joint Force Area of Operations</td>
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<td>JFC</td>
<td>Joint Force Commander</td>
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<td>JORN</td>
<td>Jindalee Operational Radar Network</td>
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<td>JTCB</td>
<td>Joint Target Control Board</td>
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<td>MAP</td>
<td>Master Attack Plan</td>
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<td>MPA</td>
<td>Maritime Patrol Aircraft</td>
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<td>Maritime Patrol Group</td>
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<td>MSP</td>
<td>Maritime Studies Program</td>
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<td>North Atlantic Treaty Organisation</td>
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<td>NDP</td>
<td>(US) Naval Doctrine Publication</td>
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NZ  New Zealand
NZDF  New Zealand Defence Force
OSG  Operational Support Group
OSS  Office of Special Studies (Philippines)
OTH  Over the Horizon Radar
PAF  Philippines Air Force
PAR  Post Activity Report
PKO  Peace Keeping Operations
PNG  Papua New Guinea
PNGDF  Papua New Guinea Defence Force
POE  Point of Entry
QAP  Quadripartite Advisory Publication
QSTAG  Quadripartite Standing Agreements
QWG  Quadripartite Working Group
RAAF  Royal Australian Air Force
RAF  Royal Air Force
RAN  Royal Australian Navy
RBAF  Royal Brunei Air Force
RDC  RSAF Doctrine Committee
RDF  Rapid Deployment Force
RMA  Revolution in Military Affairs
RMAF  Royal Malaysian Air Force
RN  Royal Navy
RNZAF  Royal New Zealand Air Force
ROE  Rules of Engagement
RRP  Radar Reporting Post
RSAF  Republic of Singapore Air Force
RTAF  Royal Thai Air Force
SADC  Sector Air Defence Commander
SAF  Singapore Armed Forces
SAM  Surface to Air Missile
SDF  Self Defence Force
SDSC  Strategic and Defence Studies Centre (at the Australian National University, Canberra)
SEATO  South East Asia Treaty Organisation
SOP  Standard Operating Procedure
SR93  Strategic Review 1993
TAOR  Tactical Area of Responsibility
TFF  Tactical Fighter Forces
TNI-AU  Tentara Nasional Indonesia - Angkatan Udara
TTCP  Tripartite Technical Cooperation Program
UAV  Unmanned Aerial Vehicle
UK  United Kingdom
UN  United Nations
US  United States of America
USAF  United States Air Force
USN  United States Navy
ZOPFAN  Zone of Peace, Friendship and Neutrality
OPENING ADDRESS

Presented by Group Captain John Harvey
RAAF Air Power Studies Centre
Royal Australian Air Force

On behalf of the Chief of the Air Staff, Air Marshal Les Fisher, I would like to welcome you all to Townsville to this the third Regional Air Power Workshop. Air Marshal Fisher has asked me to particularly welcome our overseas guests and representatives from other Services and the Department of Defence. While it is a rare and valuable opportunity for so many RAAF officers at this level to get together, it is the chance to hear and discuss with others their views that makes these workshops so important.

The CAS sends his apologies for not being able to welcome you personally, as you can imagine, he has many other activities to occupy him. Before we begin the 1995 Workshop, a little bit of history.

As I previously mentioned, this is the third workshop but they were initiated as a result of a conference conducted in Melbourne in October 1992. That conference, titled The Qualitative Edge, brought together speakers from the most senior levels of regional air forces and senior academics with the aim of improving communication between Air Forces of the region.

As a result of that conference, the first Regional Air Power Workshop was held in Darwin in August 1993 with the dual aims of further strengthening regional ties and promoting a wider understanding of air power. Attendees were at the Group Captain/Colonel level and all presentations were given by the RAAF.

The second workshop was held in Darwin in August 1994 and addressed both theoretical and practical issues associated with the application of air power, as well as the potential for regional cooperation activities. The workshop was a major shift from the first in that the range of participants was expanded to include representatives from the RAN, Australian Army, and Department of Defence. Most importantly presentations were not limited to RAAF personnel but included regional Air Forces as well the expanded Australian perspective.

This year I like to think we are in the process of making history. As for last year we have a wide range of participants with extensive knowledge of the role of air power in regional security and the selected theme is developments in doctrine.
The development and communication of doctrine fulfils two key functions which are consistent with the basis of these workshops. Firstly, appropriate, well understood doctrine is essential for the effective application of air power. Secondly, awareness of each others' doctrine is, at the practical level, important in achieving interoperability but more generally it is an important element in increasing transparency and improving understanding in the region. Both are key ingredients in increasing cooperation and creating stability in the region.

You will have all received a copy of the programme. While aiming to follow the program in general, the main aim of the workshop is to generate discussion - the question and answer periods and round-tables are probably even more important than the presentations themselves. While some cynics would perhaps refer to such ‘Confidence Building Measures’ as ‘Conference Building Measures’, I’m sure we can and have achieved much more than that.

Again, on behalf of Air Marshal Fisher, welcome to the Workshop.
Presented by Wing Commander Ric Casagrande
RAAF Air power Studies Centre
Royal Australian Air Force

It is indeed a pleasure to again be able to participate in this forum and today spend a few minutes with you summarising the events and proceedings of last year's Workshop. I will cover the main points and issues raised last year. These of course are more comprehensively set out in the APSC 1994 Workshop proceedings, which contain all of the presentations given in Darwin. I will now highlight the main themes from those presentations and some of the discussion they engendered.

As we have already heard, The Qualitative Edge conference, for the first time in Australia brought together a number of regional air power perspectives and directly led to the first Regional Workshop in 1993. Last year’s theme of regional air power cooperation, built on the work of the 1992 conference and discussions held at the inaugural Workshop in Darwin in 1993.

Unlike 1993, which had predominantly RAAF speakers, last year the emphasis was on a broader range of views on this important subject. To that end, all participating nations were asked to, and did, contribute to the discussion, primarily by providing presentations which were later published. In addition, the Australian policy perspective was provided and Army and Navy discussed their regional cooperation activities. To complete the workshop, some specialist areas were covered which included, an update on ADF force development, and particular RAAF activities exercises and issues.

Last year's conference was held in Darwin and was supported by the then RAAF Commander Northern Area. Nations participating were those we have represented here today, except for Thailand who were unable to send a representative. From the RAAF we had the Officers Commanding the operational wings of Air Command and key staff officers from the Defence Department, HQADF and Air Force Office. From the Army we had a representative from the Directorate of Army Research and Analysis and Captain McCaffrie from the Royal Australian Navy’s Maritime Studies Program.

After the formal welcome, the keynote address was given by the then director of the Air Power Studies Centre Group Captain Gary Waters. He set the scene for the two day workshop by describing the development of Australian policy on regional engagement, and how it had evolved over the past few years. This led to a discussion on the role of air power in the regional engagement process when he focussed in on particular air power
activities. These were air defence and fighter operations, strike and reconnaissance operations, maritime air operations, airlift operations, and operational support.

To carry out cooperative activities in these fields it was evident that there needed to be close links which would enable an effective communication flow between tactical, operational and strategic levels. The activities outlined in the address would enable these links to be established. This present Workshop is one such multi-lateral venue which serves as a starting point for the forging of these links.

During the subsequent open discussion, most nations participating confirmed that at the heart of this process was bilateral tactical training and exercises. However, looking further ahead, it was suggested that for campaign planning purposes there was a need to move from the tactical level through the operational level to the strategic level by cooperating in exercise planning and controlling. It was expected that this would occur with time and that we would move from bilateral to multi-lateral arrangements. Of course, this would have to be done at a pace that would suit all nations involved.

To enable all participants to understand current Australian Defence Policy on regional engagement Ms Di Johnstone from International Policy Division in the Australian Defence Department gave a presentation on the government policy paper - Strategic Review 1993 (SR93). She explained the development of defence policy in Australia and why there was a need for the review, which of course has since been followed by the Defence White Paper Defending Australia 1994 (DA94). SR93 was the first defence policy statement since the demise of the Soviet Union in 1989 and was a critical document which described defence strategy after analysing the strategic situation. It contained the important conclusion that there exists 'no specific source of potential military threat to Australia and its interests.'

A number of other important matters were also raised most of which have been subsequently reaffirmed in DA94. In particular, these were:

- the continued centrality of the strategy for the defence of Australia,
- an increasing emphasis on regional engagement,
- continued effort on sustaining the US alliance,
- an expanded role in global security, and
- an improved national capacity for national defence or self-reliance as this is termed.
The discussion that followed led to the point being made that the strategic partnerships, formed through the regional engagement policy, enabled enhanced military contacts with many regional nations. It was also acknowledged that the Australian-US relationship served not only Australian security interests but also the region generally. Again it was reaffirmed that each nation had to move at their own pace and the level of cooperation possible would depend on each nation's particular ability to interact. For example, the level of Australia-Singapore activities may not be possible at this time between Australia and other regional nations.

Following Ms Johnstone's presentation there was a short brief on some air law issues which were pertinent to the overall discussion. Fundamental to regional cooperation and possible activities is a common understanding of the requirements under international law. To this end, the concept of operations law was discussed and the AAP 1003 - Operations Law for RAAF Commanders was introduced. Such basic concepts as sovereign airspace and international navigation rights were raised as part of this discussion. It reaffirmed the impact of the law on most international operational activities.

We then moved on to the regional presentations but I will summarise those later. I would now like to summarise Navy, Army and Air Force regional cooperation activities. Our Navy has a long history of regional engagement, defining it as encompassing all RAN activities within the region and in Australia which benefit other regional navies. Navy representative, Captain Jack McCaffrie, reaffirmed the need for this cooperation and our Navy's commitment to it. He highlighted some areas of regional tension including Korea, boundary disputes, offshore resource claims and territorial disputes, such as in the South China Sea.

He then went on to demonstrate how the RAN builds confidence by being involved in the continuing regional security dialogue, training courses with regional participants and the development of the Strategic Maritime Information System. Of course the Navy also participates in the major joint and combined exercises with regional Navies and Air Forces, including exercises KAKADU, STARFISH and RIMPAC. Also, as a matter of course, the Navy maintains virtually a continuous presence in the Indian Ocean, South-East Asia and the South Pacific.

As for future issues, the Navy will react to government policy within the physical limitations of its capacity with an increasing focus on bilateral and multi-lateral initiatives. It was predicted that the present pattern of activity would continue with some change of emphasis in the defence cooperation program as regional nations became economically stronger. It was clear that the RAN, despite being a relatively small Navy in global terms, had a lot to offer as part of Australia's contribution to regional cohesion.
Lieutenant Colonel Brian Hewitt from DARA then set out the Australian Army approach to regional trust and confidence building. He described how the Australian Army Plan identified the promotion and strengthening of links with regional associations as one of its key goals. This goal reinforces the long standing links with the US, New Zealand, Malaysia and Singapore and commits Army to pursuing a strategic partnership with South-East Asian nations.

Specific activities with a number of countries were outlined. These covered detachments, exchanges, exercises, training and education, and visits. Future prospects were also examined with the suggestion that the ADF could be doing more and Army was assessing a number of these proposals. These proposals included: fostering shared strategic interests, regional peacekeeping, joint operations, advice and consultancy, training/study/exchanges and combined exercises. It was acknowledged that the process of enhanced regional security should not be rushed because the development of a true sense of regional confidence and trust would require the continued effort of all involved, and the Australian Army would be part of this process.

The RAAF presenters provided an operational flavour through a presentation on the recently concluded PITCH BLACK exercise and other airlift and maritime regional cooperation activities. Briefs were presented by the commanders who were involved in these activities. Group Captain Waters also presented a comprehensive paper on the topic, describing the full range of RAAF regional activities. He stressed that while the Government's view very much supports an increase in these activities, such cooperation cannot be on Australia's terms only. The development must proceed on the basis of an equal partnership.

As regional nations modernise their Air Forces there should be increased opportunities for closer and more meaningful cooperation across the gamut of the air power spectrum. This was described as the challenge facing regional Air Forces and it was predicted that the first test of this cooperation could be in peace operations.

Commander Operational Support Group (OSG), Group Captain Rick Jones, (the host this year at Townsville), spoke on the capabilities available within his command. He described OSG's role and capabilities as it carried out its mission to support air and other designated forces operating forward. He also described the Group's recently concluded work during PITCH BLACK 94 and the development of a concept of operations so that the Group could move forward and plan to support a variety of situations. These may include UN deployments, aid to the civil community, humanitarian assistance and other regional contingencies. These capabilities had clear potential to enhance Australia's broader security interests.
The final RAAF presenter came from HQADF, a member of the staff of the Director General Force Development (Aerospace), or DGFD (Air) as it was then. Group Captain Peter Criss brought the workshop up to date on the progress of several important air projects. These included AEW&C, tactical light transport capability to replace the Caribou medium tactical airlift, the C-130J acquisition and proposals for the lead-in fighter. Well so much for the Australian presentations.

From our international guests, the first cab off the rank was the Singapore representative, who highlighted the potential for trouble in our relatively stable region. He considered: Korea, territorial disputes over the Spratly Islands, the Sino-US dispute over human rights and the US-Japan trade disputes. In this environment, attempts to ensure peace and stability must be supported by a cooperative spirit amongst regional neighbours. He identified the following lessons from the 1991 Gulf War:

- that peace must not be taken for granted,
- air power is a crucial factor in modern warfare, and
- multi-lateral cooperative efforts can effectively resolve international conflicts.

Efforts in Cambodia were also mentioned as well as the recent ASEAN security dialogue, the emergence of the Asia-Pacific Economic Cooperation (APEC) group and the continued success of FPDA and IADS in particular. All these point to increased levels of security cooperation. Singapore also stresses national resilience as a component of regional resilience and its defence policy is a combination of total defence, deterrence and diplomacy. This was demonstrated by using the 'poisoned prawn' or 'porcupine' analogy.

In Singapore, air power is given a high priority given the countries strategic circumstances. Air power also offers some particular advantages for regional cooperation, as it has been at the forefront of Singapore’s regional cooperation activities. As regional nations built up their air capabilities, the Air Forces were urged to promote mutual understanding and develop workable means for operating together through a variety of means.

New areas of cooperation were suggested such as technical cooperation, and combined humanitarian and relief missions. While bilateralism was still relevant, the benefits of increased multi-lateralism were also identified. It was suggested that multi-lateralism should complement rather than replace bilateralism. Finally, the region was urged not to be totally inward looking but nations should continue their involvement in international organisations in the common pursuit of global peace and welfare.
The Indonesian representative then gave an overview of Indonesian Defence Policy. He described their system of 'total people's defence' whereby all national resources and infrastructure are mobilised to protect vital national interests. Using this concept of total defence, Indonesia develops national resilience, a multi-dimensional concept used to resist national threats. Once established, national resilience then can enhance regional resilience.

The Indonesian Armed Forces - ABRI, are the core of the total defence system. The Air Force is the enforcer of state sovereignty and law of the air. Like other Air Forces, the Indonesian Air Force has a high demand on resources. To enable it to carry out its designated role special measures have been taken to modernise the Air Force and assist it keep up with technological developments, but resources are limited. One of the identified steps which could be utilised to solve such resource constraints is increased regional cooperation. The Indonesian view is that defence and security cooperation with other countries should be devoted to promoting national and regional resilience. This will lead to the maintenance of peace and stability.

Last year the New Zealand representative did not flinch from the mentioning of the Bledisloe Cup victory by Australia¹. Though I am sure we will hear about this year's result later from our New Zealand friend I prefer not to raise the subject nor the America's Cup². Group Captain John Hamilton then covered New Zealand's defence policy which stemmed from a review conducted in 1991. He stated that his Government had identified four desired outcomes for defence planning:

- maintenance of New Zealand sovereignty and development of a national profile,
- promotion of New Zealand exclusive national interests,
- stability in the region, and
- ongoing promotion of world peace and international stability.

The aim of New Zealand's defence policy was described as 'being able to maintain a credible minimum' in terms of its defence capability. This is done by focusing on the maritime environment to detect, identify intercept and if necessary engage any intruder.

¹ The Bledisloe Cup is a Rugby Union Football Trophy contested annually by Australia and New Zealand.

² In 1995, New Zealand secured both the Bledisloe Cup and the America's Cup Trophies!
What New Zealand offered the region was then discussed. This covered the P-3K Orion Maritime Patrol Force, the A-4 Skyhawks, air transport support and (New Zealand Defence Force NZDF) helicopter operations. While the NZDF seeks contact with forces that have higher levels of capability, it can still provide good engineering and basic trade training. Using this baseline, the New Zealand approach is to get involved in the region as much as possible. Some of the more important activities were highlighted and these included EXERCISE STARFISH; A-4 deployments for KAKADU and WILOH, training at the Korat air manoeuvring range in Thailand and the annual IADS ADEX; and air transport meets including AIRDROP and SHORTHAUL.

In terms of training, the Royal New Zealand Air Force (RNZAF) has trained Malaysian and Singaporean pilots and was again looking at their ability to provide helicopter flying training for Singapore with the possibility of lead-in jet training for the RAAF. Presently, all RNZAF navigators and Air Electronics Officers are trained at RAAF Base East Sale. Other training on a variety of courses is also provided to a range of regional countries.

The NZDF view was that air power offers a most effective way of contributing to regional security. It is responsive, mobile and visible. Cooperation enables the NZDF to bolster its capabilities and ease the burden on others. Cooperation was expressed as being in New Zealand's interest and part and parcel of self reliance in partnership.

Then Major Zainal from Brunei took the podium. He described Brunei's national defence policy as not yet fully established. Its military forces provide a very limited capability, centring on the core defence concept. This concept has been formulated in concert with Singapore and hinges on the ability to provide for the basic defence of Brunei.

There is a planned expansion of the armed services, but this is in the very early stages. National defence is underpinned by a policy of bilateral alliances and treaties. Air power is seen as enhancing the effectiveness of Brunei's surface forces and the establishment of a role for air power is still at an early conceptual stage. Currently, the priority is on developing an air defence capability, specifically through the development of a national control centre and an early warning capability.

Brunei's acquisitions in relative order of priority were described as:

- maritime patrol aircraft (CN-235),
- transport aircraft (CN-235),
- fighter (likely to be from the UK and possibly Hawk), and
- medium-lift helicopters.

In terms of exercises and training, Brunei is currently involved in:

- pilot and technical training with the UK,
- specific training and certain exercises with Singapore,
- assistance from Australia with respect to helicopter selection,
- discussions on common training with Malaysia on the Hawk, and
- conducting a helicopter championship for ASEAN.

Being a small nation, Brunei feels susceptible to external threats and Major Zainal stated that its future security lies with its regional neighbours, particularly the other ASEAN members. Therefore, it stresses diplomacy and friendship with all nations.

Colonel Balajadia from the Philippines gave the workshop an insight into the history of military developments in his country, with a focus on the Air Force. This traced the growth of the Air Force from its genesis in 1917 and through the post war era. Since World War II, the Philippines Air Force (PAF) has been concerned with suppressing internal disturbances. In 1987 the Government again shifted priority to internal security with air power playing a prominent part.

The unique circumstance of the Philippines' experience was discussed by the Colonel as the Philippines moves from its counter insurgency role to refocus on external matters. To give effect to this fresh focus, a modernisation program over the period 1990-2001 has been implemented. This will enable the PAF to play a larger role in regional defence cooperative activities. The PAF firmly believes that a well tailored regional cooperation scheme is essential to deter direct confrontation or full escalation to war.

I hope that those who were at last year's Workshop will agree with me that it was a great success. It is often the informal sessions as much as the more formal presentations that bear the best fruit. Last year there were many opportunities for such informal discussions on matters of common interest and a number of proposals were made. The information exchanged, proposals made and friendships built remain the intangible benefits of these workshops. Indeed, these benefits have the potential to outweigh the other significant outcomes of the Workshop. Thank you for your attention and I hope you enjoy the 1995 Workshop.
THE 1994 DEFENCE WHITE PAPER AND
AUSTRALIA'S STRATEGIC OUTLOOK

Presented by Mr Peter Jennings
Director of Strategic Policy
International Policy Division
Australian Department of Defence

INTRODUCTION

Defending Australia 1994 (DA94) set in place a framework for increasing regional defence co-operation at the same time as Australia promoted its traditional alliances and its policy of encouraging greater defence self-reliance. The document was an evolutionary one, building on past Australian defence policy statements going back at least to 1976. But in terms of its support for regional defence engagement, DA94 represented a significant new emphasis in Australian security thinking.

This paper assesses trends in regional security, studies the likely future roles of the major powers in the region, and considers the potential dangers which remain a feature of our security environment. This environment is the framework within which regional engagement is being pursued. The Defence White Paper made the broad judgement that the Asia-Pacific security environment is becoming more complex and less predictable.

WHY A NEW WHITE PAPER IN 1994?

Although new White Papers appear only every six years or so, strategic planning and review is a continuous process. The major public documents Defence produces allows the organisation to synthesise current policy thinking, and to make some judgements about future directions in strategic trends. The White Paper is part of a continuum of major defence planning documents, which include the 1976 and 1987 Defence White Papers, the 1991 Force Structure Review, Australia’s Strategic Planning in the 1990s, the Foreign Affairs 1989 document, Australia’s Regional Security and the strategic basis for the White Paper, Strategic Review 1993.

The most obvious reason why it was necessary to produce a new White Paper was because Australia’s strategic environment had significantly changed since the previous White Paper was produced. For example, the former Soviet Union featured much more in the 1987 White Paper than in DA94, not only because of its naval presence at Cam Ranh Bay, but also
because of the danger perceived at the time of the Soviet Union promoting instability in the South Pacific island states.

In only eight years, the strategic environment has changed enormously and in ways that could not have been have predicted. In 1987 no one was predicting that the Soviet Union would collapse as fast and as completely as it did, nor that its strategic interest and influence in the Asia-Pacific would retreat as fast as they did. For that matter no one was predicting that it would have been possible to hold a largely peaceful election in Cambodia, or that a simmering twenty-year-old dispute in Bougainville would become a full-blown separatist insurgency.

A second reason for producing a new White Paper was to keep key audiences informed about defence policy. The White Paper was written with three audiences in mind; the Australian community, the international community, and the Defence Organisation.

For the Australian community, White Papers explain how the government is carrying out its fundamental responsibility to protect Australians from armed attack. They must show why sustained defence expenditure is needed for our security.

As Australia seeks to promote regional and global security - and by extension its own security - the White Paper must also explain defence policy to the international community. As a document that explains our policies and plans in detail, including equipment capability development, it is an important trust building measure - particularly since we would like to encourage other countries to produce public Defence statements.

Finally, within the Defence Organisation the White Paper explains to all Defence people how the work they do contributes to the defence of Australia. It also provides guidance on how to apply the government's policies in areas like capability development and scientific research for defence.

**STRATEGIC OVERVIEW**

The starting point for the strategic analysis in the 1994 White Paper is that two defining developments - the end of the Cold War and the economic transformation of East Asia - are fundamentally re-shaping the Asia-Pacific strategic environment.

In many ways, the Cold War era sustained an artificial Asian security environment. Bipolar strategic competition between the Soviet Union and the United States created a filter through which events like the Korean and Vietnam wars were interpreted. The scope for regional powers to act independently of the central strategic balance was constrained. In
particular, the two major Asian powers, China and Japan were limited in their behaviour by historical circumstance; Japan by the loss of World War II and the constraints of the Peace Constitution; and China by its choice of communism and subsequent isolation from the economic dynamism of the region for 40 years.

That environment is ending. In the first half of the twenty-first century, the security dynamics of the region will be transformed by the emergence of China as a global power with - at least on some measures - the world's largest economy. In the same period, Japan will develop a more active and autonomous international security role, even if - as we expect - the US-Japan security alliance endures. And the eventual re-unification of the two Koreas, or at least a significant reduction in tensions on the peninsula, will result in substantial change to the United States' military presence in North Asia.

The factor driving these changes is economic growth. For example, if we consider Gross Domestic Product (GDP) for 1994 for the world's fifteen largest economies, China rates tenth and South Korea, eleventh. Australia is fourteenth. But a more important consideration is the rate of growth. Over the last fifteen years, as fully developed economies, Europe and the United States have had the lowest growth rates over that period. The newly industrialised economies (countries like South Korea and Taiwan) have been growing around eight per cent a year for the last twenty years. Likewise, China's growth has been phenomenal, averaging ten per cent a year for the last decade. At this rate China's economy will double in size in about eight years. The point I wish to make is that Asia is the new area of economic dynamism as we approach the twenty-first century.

One should be cautious, of course, about economic projections. We cannot assume that growth will remain as constant as these projections imply. Indeed what will happen to China's future economic growth is one of the key strategic questions of the moment, because of the implications this has for China's role in the region. Also, we have seen what can happen with predictions, (such as in Japan's case), as when economies mature, growth levels tend to decline.

The key point to note is that the Asia-Pacific region has been the engine of world economic growth for the last decade. This growth has reached such a momentum that it will continue at least for the rest of the decade, if not longer. Growth of this scale underpins the rising strategic importance of a number of countries in the region, and it highlights the changing distribution of power in the Asia-Pacific.
DEFENCE SPENDING AND WEAPONS MODERNISATION

One direct link between economic growth and security concerns is the way the prosperity of the Asia-Pacific is assisting defence spending and weapons procurement. The modernisation of Asia-Pacific defence forces, including the acquisition of weapons systems with increasing levels of capability, is a significant long term trend in the region.

The impact of the end of the Cold War has been to bring about a significant decline around the world both in terms of overall defence budgets and in weapons imports. According to the United States' Arms Control and Disarmament Agency (ACDA), global spending on defence in 1993 had reduced to the level reached in 1968 (as measured in current dollars). The total is a not-inconsiderable US$868 billion. The biggest reductions, of course, were in the former Soviet Union and Warsaw Pact countries.

If we consider the top 20 Defence spenders in 1993, obviously the United States is in a league of its own, but it interesting to note a number of Asia-Pacific countries are now in the top twenty. In recent years some ASEAN countries have increased their defence expenditures in real terms. But the increases have been modest and should not cause alarm. Most of the countries of ASEAN now devote about the same proportion of their national wealth to defence (in some cases, a lower share), as they did ten years ago.

Turning to weapons acquisition, the impact of the end of the Cold War has been to drastically cut weapons purchases around the world. According to the ACDA, in 1993, the world arms trade was worth US$22 billion - the lowest level since the mid-1970s, and a 70 percent drop since the peak year for arms exports of 1987 - when the global market was worth US$74 billion.

If we examine the ACDA Arms Imports figures given as a proportion of global imports for 1993, we see that the Middle East is still the largest arms market, taking some 43 percent of the global share in 1993. Western Europe has the second largest share, taking about 15 percent. East Asia takes a far greater proportion of world's weapons exports than it did a decade ago. Its share has increased from 9.6 percent to 12.4 percent that year. Oceania by comparison took only 1.6 percent of imports and during the same period, the ASEAN states have roughly maintained the status quo. Other regions' imports of weapons have dramatically declined.

Another development we have seen over the last decade has been the rise of a sophisticated and substantial defence industry base in the Asia-Pacific. This too has added to the capabilities of regional defence forces.
The conclusions we can draw from the economic and military data are self-evident. First, the rate of economic growth in the Asia-Pacific is dramatically changing the regional balance of power. The North Asian countries in particular are emerging as great powers. They will have tremendous economic and strategic influence in the twenty-first century.

Second, economic growth has fuelled significant defence spending and defence equipment modernisation programs. Unlike much of the world, the Asia-Pacific region has not taken a substantial peace dividend. Nor has it engaged in an arms race, in the sense that countries have been aggressively arming in reaction to what their neighbours are doing - the Korean peninsula excepted. But it is true to say that military forces throughout the region are becoming much more capable than they were a decade ago. With these considerations in mind, let me now to consider prospects for how the major powers will behave in the region.

**UNITED STATES**

The 1994 White Paper judged that the United States will continue to play a key stabilising role in the Asia-Pacific for the foreseeable future. We are confident that the United States understands it has a fundamental interest in remaining engaged in the region, although the specific details of that engagement - like the numbers of troops it stations in Japan and South Korea - can be expected to change from time to time. Washington has a primary strategic interest in avoiding the emergence of a new and powerful strategic rival - it does not want a re-run of the Cold War with an Asian superpower. And its economic interests are strong.

The other dimension of United States engagement in the Asia-Pacific is, of course, its security presence. Can we continue to have confidence in the military capability of the United States?

The Clinton Administration’s Bottom-Up Review proposes significant force reductions. The more dramatic of these include:

- Aircraft carriers will be cut to eleven plus one carrier held at a lower level of readiness.

- Overall ship numbers will be reduced to 346. (Remember when President Ronald Regan was talking about a 600 ship navy? - that was just seven years ago!)

- Army active divisions will be reduced to ten, and air force fighter wings to 20.

These cuts are obviously important but even after they are implemented they leave the United States with unrivalled military capability. And the
United States military presence in the Asia-Pacific has not been significantly affected by these proposals so far.

So, the United States will, for the remainder of this decade, keep military forces in the Asia-Pacific at around 100,000 personnel. This was confirmed in the East Asia Strategy Report issued by the Pentagon in February 1995. But beyond that time-frame we would be unwise to expect the United States to continue to have such substantial numbers of forward-deployed troops. It is likely that strategic developments in north Asia, particularly on the Korean peninsula, will result in some troop reductions some time next decade.

The United States, however, will maintain forces in the region over the longer term. Its military presence is an essential feature in maintaining peace. If it goes, Japan would almost certainly develop the full complement of military capabilities. Not only would that raise real worries in the region about the re-emergence of Japanese militarism, but the only sure thing about the ensuing strategic competition between China and Japan would be that the smaller countries of the region would be the real and powerless losers.

So one of the conclusions of the White Paper is that we need to work hard at our bilateral alliance with the United States and through multilateral institutions like Asia-Pacific Economic Cooperation Forum (APEC) and the ASEAN Regional Forum (ARF) to reinforce the constructive linkages between the United States and the Pacific. One aim will be to provide evident and convincing reasons for the United States Congress and American public opinion, of why it is in America's own best interests to stay strategically engaged in the Asia-Pacific.

JAPAN

Turning to Japan, the 1994 White Paper states that a key-stone in Asia-Pacific security is the United States-Japanese alliance. At the military and security level the alliance is working well. Trade disputes between the United States and Japan are of concern, particularly if their negative effects spill over into the defence area. So we would hope that the United States and Japan will be able to address their trade difficulties. However, even with this problem, we think that the United States-Japanese military alliance will remain an important feature of regional security. At present Japan substantially underwrites the cost of basing facilities for the United States military presence, spending $3.2 billion to host United States troops in 1995.

Japan will not move too fast to develop a significant force projection capacity or make unilateral moves on regional security. Tokyo is very conscious about how its neighbours perceive its actions. The 50th
anniversary of the end of the Second World War has again brought to the surface the question of Japan’s need to apologise for its war guilt. If anything, the internal political difficulties Japan has in coming to terms with its past will slow its ability to take on new security roles.

Nevertheless, the signs clearly point to Japan emerging in the longer-term as a more substantial player in security affairs. It wants a permanent seat on the United Nations Security Council, and Tokyo’s dispatch of troops last year to Zaire to assist with the Rwandan relief effort, and to Mozambique, demonstrates its acceptance of a greater international peacekeeping role.

Japan’s continued acquisition (and development) of highly sophisticated weapons systems will increase Self-Defence Force capabilities. Japan has already done most of the easy things. It is now pushing up against more sensitive issues like improved troop lift and operational air-to-air refuelling capabilities, and sophisticated ballistic missile defence systems.

THE KOREAN PENINSULA

A few words about the Korean peninsula. The stakes on the Korean peninsula are high. The North could not prevail in a military conflict - and a nuclear weapon would not change that.

But the North, with 650,000 troops within 100 kilometres of the demilitarised zone and a lot of heavy artillery now deployed to the front-lines - could do enormous damage if it struck suddenly. The prospect of North Korea in slow but terminal decline, possibly possessing a nuclear weapon and possibly struggling with an unresolved leadership problem is one that rightly worries Seoul, Tokyo and Washington. Handling this issue has been a major test for the Clinton Administration.

Over the long-term though, it is difficult to see how the North Koreans can make a success of their current position. One has to conclude that North Korea has little prospect of independent survival on its own terms. The challenge for the United States and its allies is to manage the process of decline without moving closer to war.

INDIA

India has a large, growing and increasingly open economy. Continued economic growth would provide a basis to further develop its military capabilities. However, there are some issues with the potential to undermine stability. There is the possibility that religious and ideological sectarianism could threaten national unity, prospects for
continued levels of high economic growth are not assured and the ever-
present need to improve living standards and address serious internal
security problems limit the resources India can devote to military
acquisitions.

New Delhi’s strategic preoccupations are focussed on China and Pakistan.
Although India’s diplomatic relations with the United States have come a
long way in recent years, they are not close. India’s plans of the 1970s
and 1980s for maritime force structure modernisation have been slowed,
principally for financial reasons, and because higher level defence
priorities are taking budget precedence. India’s current maritime
capabilities are significant in regional terms, but they fall short of a
capacity to project force well beyond the littoral.

CHINA

Let me turn to China. The greatest security objective for the Asia-Pacific
will be to find ways of integrating China as a full partner in the region’s
economic prosperity and stable security system. China is reluctant to
embrace measures to promote greater openness or ‘transparency’ as the
current jargon has it, especially with respect to its longer-term defence
strategy and military modernisation. China’s diplomacy favours
ambiguity and freedom of manoeuvre with regard to security plans.

China is also modernising its armed forces, including its nuclear weapons’
capabilities. It has taken advantage of the Soviet Union’s collapse to buy
a large amount of Soviet defence equipment and technology at low cost.

It will be some time before China has a substantial force-projection
capability - the pace of its military modernisation is slow, but steady. But
China does aspire to a role as the dominant power in Asia. If we look for
areas where China might flex its improving military muscle, then the
South China Sea and the various reefs in the Spratly Islands are the
obvious candidates.

Apart from its military capabilities and plans, China presents us with a
number of economic and political imponderables.

What will happen when Deng dies? There has been speculation that
China could split-up in the absence of an orderly succession after Deng’s
death. We think the forces keeping China together will prevail, but short
of the country breaking up, the range of credible outcomes in China is still
very wide. Whatever successor regime emerges, the tasks confronting
Beijing are enormous.

First, there is a need to generate consistently high levels of growth. Too
high, and China risks an overheating economy with increasing inflation.
Too low, and the economy will not be able to meet the growing aspirations of China's population. China's second problem will be to manage significant internal population flows, as people move to the seaboard and the economic development zones in search of a better life-style, this is already placing enormous pressures on China's infrastructure. But the most significant problem of all will be how China manages its political evolution. It is difficult to see how the existing regime will be able to allow fast growth and increasing personal wealth without at the same time more elements of pluralism and free expression coming into domestic politics. Yet it appears that their aim is to try to prevent such an opening developing. It is perhaps in this area that the biggest threat to China's domestic stability will emerge.

**SPRATLY ISLANDS**

Let me briefly mention the Spratly Islands. With the recent Chinese occupation and construction of facilities on Mischief Reef, which is also claimed by the Philippines, there has been concern about the prospect for a serious conflict over the competing sovereignty claims in the South China Sea. Already we are seeing renewed interest by some claimant ASEAN countries in reinforcing their presence on disputed islands.

The prospect of conflict would obviously increase if major oil or gas reserves are confirmed and efforts made to extract them before joint development zones are agreed. The improvements a number of the claimants are making to their ability to defend their claims in the South China Sea will continue - and this will make any conflict more serious and lethal.

Managing China's engagement into the economic life and security interests of the Asia-Pacific is one of the prime objectives of the various multilateral organisations currently being promoted in the region. Both APEC and the ARF potentially serve an important strategic purpose by reinforcing China's links to the region and increasing the stake it has in the prosperity, and hence the strategic stability, of the Asia-Pacific.

**MULTILATERAL SECURITY INITIATIVES**

These thoughts about China lead me to talk about our policy of developing closer multilateral and bilateral relations with countries in our region.

Australia's regional engagement policy is a response to the end of the Cold War and the growth in influence of the major Asian powers. The region has become less predictable and harder to analyse, with more countries playing a larger role and military capabilities increasing all round. As the
White Paper states, the combination of these developments '...could produce an unstable and potentially dangerous strategic situation in Asia and the Pacific over the next fifteen years.'

What is needed in the region is a better and more widely accepted set of 'rules of the security game' to ensure that China's engagement, Japan's development of a wider security role and the emergence of a unified Korea all take place within a pre-existing stable security framework. The development of these 'rules of the security game', or confidence and trust building measures to use the use a more commonly heard phrase, is an important aspect of the work now being embarked upon in the multilateral ARF, and in an indirect but equally more important way in the Asia-Pacific Economic Cooperation Forum.

If the region is to meet all of the post-cold war security challenges, multilateral organisations are needed to complement existing bilateral alliances and relationships. We expect the ARF to yield useful returns in coming years, particularly in the area of promoting greater transparency in defence policies and activities through suitable confidence building measures.

We are not emphasising multilateral engagement and increased bilateral defence contacts for their own sake. This is directly related to our fundamental interest in the defence of Australia. To the extent that multilateral engagement and bilateral contacts make the region safer, and to the extent that our participation in these activities helps to shape security outcomes in our interests, then this is a very important part of our overall approach to defending Australia.

In that context, let me say that we were very pleased with the outcome of the second ARF meeting held in Brunei on 1 August 1995. The meeting discussed a range of security issues including the South China Sea. An inter-sessional work program was endorsed addressing peacekeeping, search and rescue and confidence building measures. Because of the range of inter-sessional activities now being undertaken by the ARF, we anticipate that the Australian Defence Organisation will become more centrally involved in ARF processes as military-to-military contact and exchanges of strategic perceptions increase.

Now that the ARF is developing momentum, it is important to keep the process moving. If we do not keep the momentum, then the ARF will not be able to build a more substantial role in regional security affairs. So far the region's approach to these issues has been the correct one. The ARF has been a valuable addition to the region's security architecture, and it will continue to make incremental steps in the right direction. But we should recognise that there is a long way to go to entrench habits of

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security co-operation in the region. The ARF is not yet ready to take on a conflict resolution role.

We aim to take this process of cooperation further in the next few years. We will look for opportunities to add greater depth and weight to our bilateral defence relationships in the region. Specifically we hope to enhance high level dialogue on strategic perceptions and take advantage of the region's military modernisation programs to develop more demanding combined exercises and training activities, as well as possible joint production and support arrangements for some shared military capabilities.

Enhanced cooperation between Australian and Southeast Asian countries on security and defence issues will help to maintain a stable regional environment, not least because they help to create a critical "strategic mass" in Southeast Asia - which is important in the context of the region's future relationship with the major powers in north Asia. The expansion of ASEAN to include Vietnam, and later possibly Cambodia, Laos and Myanmar will also serve this important strategic objective and open up new possibilities for co-operative defence relationships.

Multilateral engagement is only one part of Australia's strategy for cooperation with its neighbours. We are also working at building bilateral ties as well. This is based on a close co-incidence of interest between Australia and South-East Asia.

- We have a long history of co-operation on defence and security issues.

- We broadly agree on key elements in the region's strategic outlook.

- We are working together to develop a multilateral approach to security issues - so far with some success.

- Australia's bilateral defence relationships with each ASEAN country have never been better - and they are getting more substantial every year.

- Last, we understand the point that, occasional difficulties aside, we really have no other choice but to work together to develop a voice for the small and middle powers in the region.

These factors give reason for a positive outlook for the future of regional security co-operation.
CONCLUSION

Let me conclude, by summarising the major points I have outlined today.

First, the Defence White Paper - DA94 is part of the evolution, but not a revolution, in Australia's defence policy. The Australian government's highest defence priority will remain to provide for the defence of Australia. However, it should be remembered that the themes of increasing defence self-reliance within the context of our alliances and bilateral relations are also the central pillars of the policy.

Second, we are giving much greater emphasis to building bilateral and multilateral ties with the countries of the Asia-Pacific, and specifically South-East Asia. The aim is to foster a regional environment favourable to our interests, and which benefit the region as a whole. This reflects the significant shifts which are taking place in the security of the region following the end of the Cold War.

Third, we recognise that the end of the cold war and the increasing military capabilities in the Asia-Pacific have made Defence's task harder in terms of being able to forecast strategic developments and, more importantly, of being able to exert a significant influence on our strategic environment.

Fourth, we are cautiously optimistic that increasing multilateral cooperation, along with existing alliances and bilateral relationships will provide a basis for managing these changes in a peaceful and ordered way.

Finally there are still some very difficult security problems in the region - like North Korea, and sovereignty disputes over the Spratly Islands.
RAAF AIR POWER DOCTRINE DEVELOPMENT

Presented by Group Captain John Harvey
Director RAAF Air Power Studies Centre
Royal Australian Air Force

INTRODUCTION

As you are all aware, this workshop has been convened to discuss doctrine development, specifically in relation to regional Air Forces. As a starting point it is useful to examine the term ‘doctrine’ and to look at what it means. The mere mention of that word may make some participants eyes glaze over - and we have only just begun the workshop - yet doctrine is not just about rules or history but about fresh ideas and new approaches sprinkled with a wealth of experience both collective and personal.

THE NATURE OF DOCTRINE

Definition

A good point to start of course is with a definition. The first in the Australian Defence Force Publications (ADFP) series, ADFP 1, defines doctrine as:

Fundamental principles by which military forces guide their actions in support of national objectives. It is authoritative but requires judgement in its application.5

Application of Doctrine

As this definition indicates, doctrine is for the guidance of the wise but for the obedience of fools. Or, as one RAAF officer has put it, Doctrine is the first, not the last word on what we do and why.6

4 This paper was produced in part by Wing Commander Mark Lax of the RAAF Air Power Studies Centre.
5 ADFP 1 ‘Doctrine’ para 102.
6 Operational Support Workshop paper (held at APSC) by Wing Commander Graham Langley, p. 3.
The Need for Doctrine

A reasonable question to ask is: Why bother developing and documenting doctrine? One possible answer to this question is provided by the RAAF’s Air Power Manual which considers that:

Recording and refining the collective memory of central beliefs
enforces a discipline and clarity of thought that helps sustain
the dynamic process of doctrine.\(^7\)

And when considering the importance of doctrine, the United States Naval Doctrine Publication NDP1 - Naval Warfare - states that:

The success of an organised military force is associated with the
validity of its doctrine. Doctrine is the starting point from which
we develop solutions and options to address the specific war
fighting demands and challenges we face in conducting
operations other than war.\(^8\)

Sources of Doctrine

Doctrine is generally sourced from three areas - theory, technology and historical experience. Theory, in the guise of far-reaching conceptual thinking is most necessary, but is nevertheless hypothetical, emanating from the vision of theorists. Vision alone is not enough - it does not provide sufficient substance.

The second area - technology - has at times taken its cue from doctrine (that is, doctrine has led technology), but there have been many technological breakthroughs that occurred for reasons other than doctrine, and doctrine must be flexible enough to accept such changes. That said, existing doctrine should not be discarded out of hand with each technological change. The two are intrinsically tied together - neither independent of the other, rather, according to Dr Richard Hallion, the USAF Historian, 'each generates a synergistic impulse that encourages and strengthens the other.'\(^9\)

Historical experience provides the real substance about what has and has not worked in the past, and the circumstances of the time. Experience moves the air force of today beyond hypotheses or educated guesses and


\(^9\) Hallion Dr R., Doctrine, Technology, And Air Warfare - A Late Twentieth Century Perspective, Airpower Journal, Fall 1987, p 17.
into the realm of providing 'proof'. It adds a practical dimension to the theoretical one. It also carries with it a requirement to retain objectivity and a sense of awareness about the conditions of the past and the changes of the present. Critical analysis of what happened and why, is necessary so that institutional 'statements of faith' which cannot be proved, can be treated with care.

It is the integration of the theoretical and practical dimensions with innovation (through technological and procedural change) that leads to effective doctrine.

What do we want Doctrine to do?

Regardless of what we determine 'doctrine' to be, we also must decide what we want the 'doctrine' to do for us. Let me pose some suggestions.

- We want doctrine to reveal capabilities of air forces while offering guidance on how best to use those capabilities. Such guidance must be enduring yet flexible (or in other words be valid over time yet responsive to change).

- It must provide guidance, and I stress guidance, to personnel, yet remain open to interpretation at all levels else we become cramped in our imagination by fighting past wars not preparing for future ones.

- We want doctrine to guide research and development effort, yet it must adjust to and evolve with technological innovations.

- Further, we want doctrine to set out maxims and imperatives for the employment of military power, yet continue to remain subordinate to national policy.

Ultimately, however, the purpose of doctrine is to achieve successful operations. According to Major-General Willcocks\textsuperscript{10}, the Director General Land Warfare UK, there are three elements to doctrine:

- It should be timeless - recording those enduring tenets which are a distillation of proven military wisdom.

- It should be practical - the 'here and now' application of those enduring tenets to today's circumstances, using today's technology, equipment and structures, to formulate one's own approach to warfare. It must also provide a sound basis for training.

• It should be predictive - that is, applicable to future conflicts no matter how improbable or impossible they may seem. How many could have predicted a Gulf War, a Bosnian Crisis, a Somalia, or a Rwanda? Would our current doctrine survive the true test of war or operations other than war? (Perhaps we might consider the role of air power in operations other than war for next year’s conference).

**Limitations of Doctrine**

The limitations of doctrine must also be recognised. Doctrine is conceptual and a set of principles only. Organisational and employment means still have to be established. In many cases these are called directives and tactical procedures. Directives help establish the organisational means and tactical procedures help establish the employment means. These directives and procedures, while based on doctrinal principles, lack the time-enduring hallmark of doctrine.

Others, however, see doctrine operating at many levels, roughly corresponding to the levels of war. In an army sense, the Australian and British Armies call these levels:

• Military doctrine - the highest level based upon Government policy,

• Operational Doctrine; and

• Tactical Doctrine.

We in the RAAF have the Air Power Manual as a statement of the highest level of doctrine, with operational doctrine best described as air campaign planning and tactical doctrine as essentially procedures and tactics. It is the higher level or strategic doctrine I would like us to focus on in the next two days.

**RAAF AIR POWER DOCTRINE**

**Australian Air Publication 1000 (AAP 1000)**

Air power doctrine for the RAAF is, as I’ve already discussed, documented in the AAP 1000 - The Air Power Manual. The first edition was published in 1990 with the second, and current edition, published last year. One point I need to stress is that while the RAAF produces air power doctrine it does not relate to the RAAF alone. The RAAF is not the only provider of air power within the ADF and certainly the RAAF is not the only ‘customer’. Because of the tri-Service involvement, production of doctrine is done in conjunction with the other two Services.
RAAF Process

The RAAF recognises the need for constant revision of its doctrine and has a process in place to make sure that it is carried out. Development and modification of air power doctrine for the RAAF is the responsibility of a Doctrine Review Board, chaired by the Chief or Deputy Chief of the Air Staff. Members of the Committee comprise all three Services as well as HQADF, and is generally at the two and one star level.

There is also an Air Power Doctrine Working Party which is responsible, through the Director Air Power Studies Centre (DAPSC), to DCAS for the coordination of input from RAAF, HQADF and other Service sources. Like the Board, the Working Party has representatives from all three Services but is generally at the Colonel (equivalent) level.

The Working Party accepts constructive comments passed on from the Force Element Groups, Wings and Squadrons and we listen to what groups such as this Workshop have to say about the present and the future developments of regional air power.

As part of the review process RAAF Command and Staff College, in conjunction with the Air Power Studies Centre, has been tasked each year to examine the doctrine and consider the need for change. The APSC has also cemented links between those responsible for developing doctrine and those responsible for historical research - the RAAF Historian is also the Deputy Director of the APSC.

To translate doctrine into action, the APSC continues to forge closer ties with Air Headquarters, Logistics and Training Commands and with the planning and policy staffs of Air Force Office and the force development staff of HQADF. These ties must take cognisance of the joint nature of military operations and account for RAN, Australian Army and HQADF considerations as well. On top of this has come the realisation that there must also be a regional focus in the RAAF's deliberations - to identify the issues which may face regional air forces in the future in terms of joint and combined operations.

The Need to Review

The Air Power Manual identifies a number of reasons to modify doctrine, which include:

- domestic, foreign, or defence policy changes;
- technological and scientific developments;
- intelligence assessments;
• military decisions and policy reviews; and
• individual commander's proposals based on new procedures.

Doctrine Awareness

Even the most well developed doctrine is of no use unless it is widely available, read and understood and, most importantly, translated into action.

To make it understood, the RAAF (through the APSC) produced the AAP 1000 and AAP 1001 - The Condensed Air Power Manual and introduced training and awareness programs. The APSC is currently completing a major study of air power doctrine awareness throughout the ADF but particularly within the RAAF.

Current Status

Last month I received agreement from DCAS, chairman of the Doctrine Board, that a formal review of the Air Power Manual would not be required for at least 12 months. The APSC will continue to monitor developments and receive input but a formal change is not planned in the near future. This is not to say that there are no pressures existing that will lead to an eventual change but rather that we are not yet ready to embrace them. I believe there are two factors which will have a fundamental impact on air power doctrine. These two factors are:

• The impact of work on effective joint doctrine for the ADF; and
• The impact of the so-called 'Revolution in Military Affairs (RMA)', particularly in the area of what has been called 'Information Warfare'.

JOINT DOCTRINE

The biggest issue I believe the RAAF is going to face in terms of doctrine is how air power doctrine fits within joint doctrine - a consequence of how air power fits within fully integrated joint military power. The ADFP 1 states that 'Joint Doctrine and procedures are drawn extensively from Single service doctrine and procedures'. The differences between the maritime, land and air environments have led the three Services to develop their individual philosophies concerning the employment of force.

11 ADFP 1, para 104.
Not all are necessarily written down, but they have been developed and practiced nevertheless.

Yet this does not mean to imply a hierarchy between joint and single Service doctrine, rather there is an interaction between the two so each must complement the other.

I have been involved in the development of ADFP 6 ‘Operations’ which is essentially joint doctrine at the Operational level. I believe at this stage the hard questions are being avoided. For example, while for air power practitioners it would appear obvious that control of the air is a fundamental requirement for carrying out a successful military operation, there appears no willingness to adopt that concept as part of joint doctrine.

**Combined Doctrine**

While I have used the term joint doctrine, and there are more than enough complications there, we must not forget the need for effective combined doctrine. The creation of a formal security alliance within the region is generally seen as far away. Operating together, however, may occur at much shorter notice - even if it is in the context of a UN-type peacekeeping operation.

Questions regarding the doctrine to be used must be addressed. One possible approach is to adopt the doctrine of the nation contributing the largest forces but perhaps more of a ‘common denominator’ approach may be more appropriate. Considerable work is required in this area and the follow on area of procedures and tactics to enable interoperability.

**REVOLUTION IN MILITARY AFFAIRS**

I will now briefly make some comments about what has been referred to as the Revolution in Military Affairs and then relate it back to implications for regional air power doctrine. The RMA is seen as the combination of ‘Information Age’ technologies and appropriate doctrine and training.\(^{12}\)

As one defence analyst has pointed out:

> The profound effects of the information revolution imply a need to reconsider many of the central tenets of military strategy, doctrine and organisation. Indeed, dominance of the

information spectrum may foster the new paradigm of “control warfare” that will supersede its attrition- and maneuver-oriented (sic) predecessors.\textsuperscript{13}

The term RMA was originally used by the Soviets. Certainly the Russians have acknowledged the existence of a RMA and the need for doctrinal change to meet it.\textsuperscript{14} As a result of the Coalition’s victory in the Gulf War, a retired Soviet military scientist called for a ‘prompt and fundamental review of existing [Soviet] ideas and propositions in the field of tactics and doctrine.’\textsuperscript{15} He concluded that Iraq’s defeat was not caused by ‘any weakness in weapons or combat equipment, but by the habit, dogmatism, stereotype, and conventionalism in the leadership of the troops.’\textsuperscript{16}

Features of the RMA

The current RMA has four major identifying features:

- technological developments, particularly extremely precise, stand-off strikes;
- dramatically improved command, control and intelligence;
- information warfare; and
- sensitivity to casualties - including civilians and fighting forces on both sides of a conflict.

Technological Developments

The defining characteristic of the present RMA has been seen in terms of technological developments, with many hailing the Gulf War as a turning point in the nature of warfare. A major feature of these developments has been the removal of the traditional relationship between range and accuracy. Precision long range strikes may, to a large extent, replace


\textsuperscript{15} ibid, p. 29.

\textsuperscript{16} ibid.
close-range encounters. It has been argued that these precision weapons have redefined the meaning of mass.

The other key feature of the Gulf War was the emergence of stealth. For the foreseeable future specialised stealth aircraft will be beyond the budgets of regional nations. It must be remembered, however, in another form stealth has been around for some time, and here I refer to conventional submarines.

Cost

One US analyst has commented that the only certainty about the current rapid rate of technological development in conventional warfare 'is its spiralling costs, which are driving the price of individual aircraft up into the tens of millions of dollars' and even the hundreds of millions of dollars for the B-2. Some airmen, referred to as 'lonely renegades' have called for a retreat to larger numbers of less capable aircraft.

Love-Hate Relationship

Dick Hallion argues that the Air Force is a service that is, and rightly so, wedded to technology. This relationship is, however, a love-hate relationship. While we have been ready to accept such technologies as precision navigation and precision guidance there still remains a reluctance to accept developments such as Unmanned Aerial Vehicles (UAVs).

DRAMATICALLY IMPROVED C²I

One of the outcomes of recent technological developments - particularly in the area of computers - has been the dramatic improvement (or at least the potential for it) in Command, Control and Intelligence. Certainly within the RAAF, Air Command now recognises effective command and control facilities as a capability in its own right.

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18 ibid.
Information Warfare

The end of the Cold War has coincided with what Alvin and Heidi Toffler have referred to as 'the Information Age' and terms such as terms 'information warfare', 'information dominance', and 'knowledge based conflict' have been introduced.

Recognition of the importance of information in warfare is not new - the need to obtain information and deny the enemy's access to information has been a feature of conflict since it first began. What is new is the recognition of a systematic approach to information dominance. General Fogleman, current chief of the USAF, has described five dimensions of warfare. Up until the beginning of the 20th century warfare operated in two dimensions - on land and at sea. The introduction of the aircraft introduced the third, vertical, dimension. The use of space indicates what he calls the fourth dimension. Fogleman sees information as having an 'an ascending and transcending influence - for our society and military forces'. He classifies 'information operations' as the fifth dimension.

At the lowest level an information advantage can be seen as an effective 'force multiplier'. At the tactical level, for example, the USAF argues that the F-22's integrated avionics will give the pilot the situational awareness to assess and act faster than an opponent. At the strategic level modern theorists argue that access to information is becoming the centre of gravity for advanced nations.

Information Control as a Campaign

If one accepts the importance of information dominance, perhaps the RAAF's existing doctrine which recognises the three campaigns of air control, air strike and air support, needs to be expanded to include a fourth campaign, that of 'information control'.

If identified as a separate campaign it could be approached either as:

- a precursor campaign to the control of the air campaign; or


\[21\] ibid.
• a campaign that is concurrent with the other three to facilitate their execution.

While information control would not be a campaign achieved solely by the application of air power, as for the existing ‘air support’ campaign, it should be explicitly recognised by the RAAF so that what air power can do for the joint commander is clearly identified.

Control Warfare

With the arrival of the information age theorists have identified the emergence of a third paradigm of warfare - ‘control warfare’. The three paradigms are shown in Table 1.

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<tr>
<th>Modes</th>
<th>Attrition</th>
<th>Manoeuvre</th>
<th>Control</th>
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<td>Aims</td>
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<td>Example</td>
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<td>Epitomised by:</td>
<td>Industrialisation</td>
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Table 1 - Three Paradigms of Warfare

The first paradigm has been described as attrition warfare and was characterised by World War I. The development of the internal combustion engine led to greatly increased mobility and led to manoeuvre warfare, characterised by World War II. Warfare in the information age is seen as control warfare.

Control Warfare

In control warfare there is no need to destroy enemy forces but rather to remove the enemy’s ability to effectively to control those forces or to maintain control by them. The aim is to impose our will by paralysing the enemy.

To a certain extent control warfare - in the form of control of the air - has been recognised by air forces almost since they first existed. As I said previously, the RAAF identifies control of the air as the primary air campaign - a prerequisite for other forms of effective military action. While air control is seen as the fundamental air campaign there is no reason why air control must be achieved by the Air Force alone or even predominantly through the use of air power. For example, air control may
be achieved by default - i.e. the enemy may have no air capability. This was the case in Sri Lanka until recently when Tamil Tigers acquired surface-to-air missiles which then seriously affected the operations of government forces. When action must be taken to gain air control it may be effectively carried out by land or naval forces. Again using the case of the Tamil Tigers, it would probably be more appropriate to use ground forces to either directly attack the units with the SAMs or deploy forces around the airfields so that they did not represent a threat. In a maritime operation air control may effectively be achieved by naval vessels.

Just as air control can be achieved by capabilities from other Services, sea and land control can be achieved by air power. Current RAAF doctrine defines air power’s role in these environments essentially in the form of ‘air support’ but, depending on the circumstances, air power may be the predominant form of combat force in achieving the required level of control.

While ‘sea control’ has been seen as essentially a function of naval forces, aircraft with advanced sensors, high speed (relative to their targets) and significant endurance can offset their perceived limitation of impermanence and provide the necessary level of ‘control’.

And while it is accepted almost as a truth that only land forces can seize and hold territory, the value of this belief is questionable. First, as the Gulf War showed, air power has reached the stage where it can devastate land forces. Second, the need to seize and hold ground may have decreasing relevance in future conflicts. It may be that the level of land control required may be achievable solely, or at least primarily by air power.

Perhaps we need to consider sea and land control, like air control, as fundamental air campaigns.

**Joint Doctrine**

This brings us back to the earlier theme of the need for effective joint doctrine which provides guidance on the appropriate mix of forces and how they should be employed in specific circumstances. For that we must understand the strengths and weaknesses of all forms of military power and this then reinforces the need for well developed single Service doctrine.

**Sensitivity to Casualties**

Sensitivity to casualties is increasingly seen as many nations ‘centre of gravity’. This sensitivity extends not only to the enemy’s civil population but also to their fielded forces and also to one’s own armed forces. Air
power is seen as politically attractive because it provides the possibility of reduced casualties on both sides of the conflict. This preferred method of fighting will require accurate intelligence, precision and stand-off capabilities. The term 'zero-dead' wars has been coined in the United States to describe its aimed for method of fighting.

Certainly in the Gulf War Saddam Hussein was aware of this sensitivity:

Iraq did not have to defeat the allies or even come out ahead in the body count. There was no hope of that. But if Iraq could not scare the American-dominated coalition out of attacking in the first place, it had to cause the coalition enough pain so that the popularly elected Western governments would seek a compromise.\textsuperscript{22}

The success in restricting casualties in the Gulf War has resulted in high hopes for the future use of air power. As the situation in Bosnia has shown however, air power has its limits - even if they are due to political constraints. Precision weapons can do much to limit the loss of life but they cannot take on all missions - smart weapons do not represent a panacea.

One of the outcomes of the sensitivity to casualties has been an increased interest in the development of non-lethal weapons - including those that incapacitate or immobilise personnel and those that disrupt infrastructure. Anti-personnel weapons, however, raise complex legal constraints where for example, it is contrary to the Chemical Weapons Convention to use tear gas to incapacitate enemy forces but it is acceptable to shoot them.

In the 1990’s there has been increasing interest in the use of UAVs. Again a large part of the interest is because of sensitivity of death or capture of aircrew. (As you will be aware two UAVs were recently lost over Bosnia\textsuperscript{23} - the political impact of that was far less than if they had been piloted aircraft).

The use of UAVs will be a matter of significant interest to air forces as armies look to acquire UAVs for what will generally be tactical reconnaissance tasks and the navies seek to acquire conventionally armed cruise missiles in what has been traditionally air force strike roles.


\textsuperscript{23} Three Predator UAVs were deployed to Bosnia in July 1995. Within the first week two had been lost, one to ground fire and another was deliberately crashed by the controllers after an engine malfunction. See \textit{Two Predators Destroyed in Bosnia}, Aviation Week and Space Technology, August 21, p 24.
Other Influences

Another major influence on doctrine development will be an increasing demand for air power in operations other than war. The term 'air power' has become a part of everyday discussion - especially so now with NATO operations in Bosnia. Air power doctrine must not ignore what is likely to be an increasingly frequent form of air power employment. This is a huge topic in itself and I won't pursue it further now but I believe it could perhaps be the basis of a future Workshop.

CONCLUSIONS

This has been a rather quick overview of the nature of doctrine, its importance and factors which affect its development. I believe that the RAAF has been very effective in defining and documenting its doctrine to date and has appropriate processes in place to refine its doctrine in response to external and internal influences.

And while no major review of air power doctrine is planned in the immediate future, the implications of the need to develop effective joint doctrine and the more fundamental implications of the revolution in military affairs will be a major consideration for the future.

There are many challenges out there - the key requirement is for innovative thinking based on a detailed knowledge of the application of air power so that enduring principles can be retained while rejecting outmoded ideas and adopting new ideas. For the remainder of the Workshop we will hear numerous other views - from specialist areas in the RAAF, other Air Forces and our sister Services. I look forward to hearing those views and thank you for your attention.
DOCTRINE DEVELOPMENTS IN THE RAN

Presented By Captain Jack McCaffrie, RAN
Director General RAN Maritime Studies Program
Royal Australian Navy

INTRODUCTION

The situation with doctrine development in the RAN has determined an approach to this paper which is somewhat different to that suggested by the Director of the Air Power Studies Centre. My approach is a more general one; referring fairly extensively to the development of doctrine in other navies as well. The reason for this, as some of you here might already know, is that the RAN and most other navies have neglected the whole subject of doctrine. Nevertheless, for a variety of reasons, at least two navies (the USN and the RN) have begun to take remedial action in recent times.

The issues which the paper will examine include; what doctrine is, what issues impact on doctrine as well as what it influences, and how it is approached by navies including the RAN.

WHAT DOES DOCTRINE MEAN IN THE RAN?

The first issue which this paper needs to grapple with is determination of what doctrine actually means in the RAN. This is more than a matter of definition but I will begin with that. For those of you very familiar with the subject this will not hold any surprises, nor perhaps a great deal of interest. But, by way of explanation, I am hoping that this paper will allow me to dispose of two birds with one stone: I have to run a workshop in Navy on the subject of doctrine before the end of the year and I am hoping that this paper will form a foundation for it.

One of the secrets of getting the matter of doctrine more readily accepted within the RAN could very well be selection of a definition which shows the subject to be non-threatening. The reason for this is that there are many in the RAN for whom the word conjures up visions of inflexible rules governing the conduct of naval operations. Likewise, there are others for whom the word can be easily dismissed with claims that we already have it, or that we have all the concepts and that it is merely a matter of articulating them. Both views are held at high levels and both views are potentially counter-productive, because to a very large degree they are inaccurate.
In examining definitions of doctrine we can begin with a dictionary definition used by Dr Jim Tritten of the USN Doctrine Command:

Doctrine is a principle or body of principles presented by a specific field, system or organization for acceptance or belief.\textsuperscript{24}

That in itself is not particularly illuminating, although it is a start point. For military organisations which have always had relatively formal means of defining how they do their job, a major issue has been the absence of a common approach among military services of all nations. This then leads us to a definition specifically military in its application, and again United States in origin:

Doctrine is fundamental principles by which the military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgment in application.\textsuperscript{25}

The USN view also holds that it applies at every level of warfare; that is strategic, operational and tactical and begins to include political factors as the level of warfare rises.\textsuperscript{26} Two further characteristics of doctrine are that it can be joint and it can be multinational. These will be referred to in somewhat more detail later.

One of the reasons for doctrine having a threatening face for some in the RAN is their assessment that it means, or can at least result in, dogmatic and inflexible interpretations of how navies ought to fight. The draft RN doctrine document \textit{BR 1806: The Fundamentals of British Maritime Doctrine} tries to lay that fear to rest at the very beginning of the document. It states that doctrine must be founded in history; the study, analysis and interpretation of experience. It then acknowledges that once written down it can acquire a status which discourages change and points to the need to prevent the written word from becoming dogma.\textsuperscript{27}

Consequently, any attempts to develop a specific RAN doctrine must also emphasise this point. Clearly too, this can be achieved by careful drafting and by an appreciation at the outset of the writing process that the desired output is not something which is so prescriptive and specific that


\textsuperscript{25} ibid., p. 3.

\textsuperscript{26} ibid.

it discourages initiative and flexibility. The RN publication does address this issue also by suggesting in the Introduction that the aim is to address the principles that govern the translation of national security and defence policy into maritime strategy and operations.\textsuperscript{28} Doctrine pursued at this level should not be inflexible. It should lead to discussion and to innovation.

Equally important, it must be understood by those implementing it. Sir Julian Corbett, a distinguished British historian, made this point when discussing strategic doctrine, noting that it was:

\begin{quote}
not enough that a leader should have the ability to decide rightly; his subordinates must seize at once the full meaning of his decision and be able to express it with certainty in well-adjusted action. For every man concerned must have been trained to think in the same plane; the chief’s order must awake in every brain the same process of thought; his words must have the same meaning for all.\textsuperscript{29}
\end{quote}

This is not a call for rigid adherence to instructions but for an appreciation of objectives. This kind of thought was also reflected in Nelson’s simple instructions to his captains, such as ‘close action’ which was usually interpreted as ‘engage the enemy more closely’.\textsuperscript{30} Such orders indicated Nelson’s confidence that his subordinates were completely familiar with contemporary naval doctrine - or at least Nelson’s interpretation of it. Nelson’s views also suggest that doctrine can be both useful and flexible, because he expected his subordinates to act as necessary to achieve his objectives.

This is important for the RAN as it tries to come to terms with a formally articulated doctrine. And as we try to do so we would do well to heed another warning; this one issued recently by Rear Admiral David Cooney USN (Rtd). In a recent edition of the US Naval Institute Proceedings he argued that:

\begin{quote}
Perhaps what we need is more operational training and less dogma so that doctrine flows from experience, not theory.\textsuperscript{31}
\end{quote}

If the RAN decides to follow the USN and RN lead by establishing its own doctrine, something still to be determined, then one of the first steps will be establishing a definition which fits the RAN’s circumstances including

\textsuperscript{28} ibid., p. 1.
\textsuperscript{29} ibid., p. 2.
\textsuperscript{30} ibid., p. 1.
\textsuperscript{31} US Naval Institute Proceedings, September 1994. p. 29.
the almost certain joint nature of most maritime operations now and in
the future. Selection of a definition will also be influenced by the existence
of joint doctrine in publications like ADFP 6.

Another issue which will need to be resolved early in the development
process is the level at which RAN doctrine will be pitched. There is no
doubt that we already possess sufficient tactical publications covering the
employment of maritime forces in specific situations. Whether they are
more correctly titled procedures than doctrine is arguable and not an
issue that this paper will take any further.

If we are to produce naval doctrine which will be instructive, to our own
people and to those outside the Navy, then we will need to concentrate at
the higher levels of warfare; the operational and strategic levels. By
concentrating at these levels we will also have to articulate in general
terms what a navy is, why it exists, what it does and how it does it. While
this should not be impossible, it may not be as easy a task as the more
dissmissive of the critics of doctrine tend to suggest. Like many things, if it
were easy it would probably have been done by now.

**ISSUES WHICH INFLUENCE MILITARY DOCTRINE**

To help further in determining what doctrine is there is some merit in
examining issues which can influence it. Among these are; current policy,
available resources, current strategy and campaigns, current doctrine,
threats, history and lessons learned, strategic culture, technology,
geography and demographics and types of government.32

Current policy as it emerges from national policy drives military doctrine
but not necessarily in any straightforward way. *Strategic Review 93* and
*Defending Australia 94* ought to be the primary policy documents which
influence our military doctrine. But we must also take account of other
policy statements, such as those relating to foreign policy and those
relating to UN demands or requests for military assistance.

Available resources, an outcome of current policy, also influence doctrine.
They will determine the force structure and consequently the need to
devise doctrine for newly introduced weapons systems. There should also
be in place a mechanism whereby doctrine development for new systems
is conducted in parallel with systems development - not after they have
been introduced into service. In some circumstances there will also be a
need to develop doctrine for weapons systems which are not in our own
inventory, perhaps for resource reasons, but are in the inventories of
regional nations. This could be in support of cooperative naval efforts with

the forces of these nations and might, for example, include operations with Singapore's Airborne Early Warning and Control aircraft and in future, operations with the Royal Thai Navy's aircraft carrier.

Current strategy and the subordinate campaign or operational concepts should also have a substantial impact on military doctrine. Australia's military strategy of depth in defence should determine how the ADF responds to military threats to our national interests or sovereignty. This response, our operational concepts, should in turn pave the way for the development of our military doctrine. In this sense, for example, if threats to our offshore territories were to be seen as in any way likely, the ADF would articulate an operational concept for their protection which in turn would determine the military doctrine - how the forces involved would act. Clearly, the RAN ought to have a substantial input into such developments.

Another influence on doctrinal development is the doctrine which already exists. For the RAN the ideal situation would be that its own doctrine would influence new doctrine needed to cope with changing situations. Realistically, however, the situation is that the RAN will be influenced by existing Army, RAAF and joint doctrine. This will be especially the case where existing doctrine impacts on maritime operations. It would also be fair to say, however, that the development of RAN doctrine will be affected by the existence of informal Navy doctrine - the understanding which exists as to how our naval forces will operate.

For many military organisations, threats, existing or potential, will influence doctrine. For others, our own included, threats are difficult to identify and so other factors may be substituted. In our own case we can substitute 'capability' meaning the range of maritime capabilities which exists or is planned for the region and which conceivably could be mounted against us. These capabilities will affect doctrine by determining the forces with which we would respond and the way in which they would be employed.

If, as the paper argued at the outset, doctrine should be founded in history and the analysis and interpretation of experience, then the influence of lessons learned should be significant. The lessons involved will be those from combat experience and major exercises and simulations - our own and those of others. The key to correct doctrine development will be in ensuring that the experience called on is and will be relevant to the future employment of our forces. For example, which of the maritime warfare lessons from the Gulf war, our most recent conflict, are truly relevant to how we intend employing our forces in future regional conflict? Perhaps the Soviet inclination to study the Falklands campaign to gain an appreciation of the use of limited-capability aircraft carriers in distant
operations is instructive? To what extent was the Falklands campaign relevant to prospective Soviet naval operations in the early 1980s?

Other, perhaps lesser, issues with the capacity to influence doctrine include strategic culture - the way in which individual services and different countries fight. Hence, nations and their armed services can have reputations for offensive or defensive, effective or ineffective fighting methods. Undoubtedly, our military doctrine will be influenced by our own strategic culture, encompassing traits from the 'ANZAC Spirit' to the 'Nelson touch'. This will have to be taken into account, together with our assessment of the strategic culture of any potential enemy when we develop our own doctrine. We will also need to consider the inherent difficulty of making major doctrinal changes such as those which confronted navies as the aircraft carrier took over from the battleship.

Technology, current and future is also a determinant of doctrine. Perhaps RAN doctrine should concentrate on espousing the methods by which small groups of surface combatants would fight in confined waters against sophisticated threats. Likewise, maybe it should take account of emerging technologies, such as unmanned aircraft and their potential for maritime tasks. As Tritten pointed out too, there is a case for developing 'the doctrine a nation would like' and having industry respond to that. This would apply to the RAN and Australia only to a limited extent.

Although they may be included in some of the above factors, geography and demographics should not be ignored for their influence on military doctrine. In Australia's case they point to a strong maritime focus in it. Geography might also be expected to result in a strong emphasis on afloat support in RAN doctrine. Likewise the nature of the government is an important influence, with democracies in general now reluctant to sponsor extended and bloody conflicts.

THE IMPACT OF MILITARY DOCTRINE

In this attempt to further the understanding of military doctrine we also need to examine its impact on other concepts; some subordinate, others at a higher level. Those affected include tactics, techniques and


34 ibid., p. 266.

35 Tritten, Naval Perspectives, p. 11.
procedures, rules of engagement (ROE), training and education, force structure, campaign planning, strategy and policy.\textsuperscript{36}

An example of the way in which doctrine influences tactics is the relationship between \textit{ATP 28: Allied Antisubmarine Warfare Manual} which contains functional ASW doctrine and \textit{ATP 1: Allied Maritime Tactical Signal and Manoeuvering Book} which contains the instructions for executing a variety of ASW tactics. These are also supplemented by other publications concerning 'techniques' relating to the operation of systems and 'procedures' covering detailed instructions for the operation of equipment.

ROE will be influenced by doctrine to the extent that the way in which any military organisation proposes to operate or fight will play a large part in identifying the rules for any specific situation. In a naval sense, for example, whether and the extent to which a navy like the RAN is prepared to operate beyond the range of land based air support will impact on the selected ROE.

Clearly, training, initial and advanced, will be influenced by doctrine. Initial training must be done in accordance with it. Indeed, initial and advanced training will be the means of ensuring that doctrine is passed on to members (old and new) of the organisation. Advanced training, in all likelihood will also go beyond current doctrine, exploring new ways of achieving objectives. And there is an educational aspect to the issue as well. Doctrine education is a fine opportunity for the Navy to explain to the public the what, why, and how of its job. The USN doctrine publications certainly take this approach, as does the RN book, if to a lesser degree. Both of these approaches are much more public oriented than is the RAAF Air Power Manual. That is not intended as criticism, merely recognition of two different approaches. How the RAN will approach it has yet to be decided. But, with a Maritime Annex to ADFP 6 in the mill there is scope for an RAN publication which takes the USN/RN line.

Doctrine also impacts on organisation and force structure. As some new technology is introduced, doctrine must be developed for its employment. This in turn determines force structure and the manner in which the organisation will be structured to deal with it. A recent example involving the RAN was the introduction of surface combatants capable of carrying combat helicopters. Despite the RAN's long experience of operating aircraft at sea from a carrier; flights of one or two helicopters on frigates posed quite different problems. A new squadron organisation had to be devised; one which was capable of providing the training and subsequent supervision and support for small detachments operating away from the parent squadron. Helicopter force structure must also take account of the

\textsuperscript{36} ibid., p. 12.
new operating methods, at least in so far as the numbers must allow for training to continue ashore when flights are embarked in their ships. Did the RAN have a doctrine in place to facilitate this significant change in operating philosophy?

Even while campaign planning can be an input to doctrine where there is no existing written doctrine, subsequently, campaign plans must be affected by military doctrine. Those who are involved in planning campaigns will bring their individual service doctrinal principles to the task, to be melded with whatever joint or combined doctrine forms the basis of the campaign. Strategy, in turn, is affected by campaign planning. For the RAN an implication could be, for example, that the strategy for employment of naval assets in the strike role would be determined by the national military doctrine relating to strike as an option available to government.

As Tritten says 'Simply put, military doctrine affects how we fight, train, exercise, organise, what we buy and how we plan.' 37 What should have become evident in the previous two sections of this paper is the way in which doctrine influences and is influenced by most, if not all, of the issues which are important to the functioning of a navy - or any other fighting force.

**HOW NAVIES DEAL WITH DOCTRINE**

This next section of the paper will recount how navies deal with the subject of doctrine. The account will be limited to the two navies which I know have published or are about to publish doctrine, together with an expression of the present RAN position.

First, the USN which has made major strides in recent years. Like most navies, at least in recent times, the USN had no formally or publicly articulated doctrine up to the point at which the Cold War was said to have ended. My understanding is that if the USN had had its way that situation would not have changed since. Among the more prominent reasons for the change which has occurred and the acceptance of the need for a doctrine was pressure from a Congress no longer prepared to have its navy disappear over the horizon to do its own thing, out of sight and out of mind. Consequently, the USN realised that justifying ongoing activities on the basis of the Cold War 'Maritime Strategy Extended' would not reap the necessary budgetary support. Accordingly, there arose a need to have readily available some means of explaining clearly and simply the purpose of the USN in the newly emerging strategic circumstances.

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37 ibid., p. 15.
The USN response was to establish its Doctrine Command in Norfolk Virginia, close by the other single service and joint doctrine centres, under the command of a Two Star officer with a staff of about 200. Understandably, they took some time to establish just what needed to be done and how best to do it. Having done this the Command then ensured that a comprehensive review process was put in place to guarantee a level of commitment from those involved in the process. Despite some early setbacks, the Command has begun producing a series of publications under the signatures of the Chief of Naval Operations and the Commandant of the Marine Corps. There are six books in the series:

- NDP 1  Naval Warfare.
- NDP 2  Naval Intelligence.
- NDP 3  Naval Operations.
- NDP 4  Naval Logistics.
- NDP 5  Naval Planning.
- NDP 6  Naval Command and Control.

The warfare, intelligence and logistics publications have been produced and released to the public.

The USN Doctrine Command comprises officers from the USN, USMC, US Army, USAF, USCG and from foreign navies. The organisation works directly to the CNO and is organised into directorates dealing with:

- Joint and Combined Doctrine,
- Doctrine Development,
- Strategy and Concepts, and
- Evaluation, Training and Education.

The USN approach thus far has concentrated at the operational level and on a doctrine for today's navy. Indeed, comments made by one of the prime movers in the USN process suggest that there was a need to recognise the operational level of war. This is an issue with which some in the RAN have also been grappling quite recently.

Because of the lack of formally established and published 'naval doctrine' in Western navies, the USN approach looked to the major lessons of history to help them define doctrine. One of their arguments was that previous doctrine could be found by looking for shifts in the existing concepts of war when the militaries of the world reacted to the

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38 Discussions between the writer and Dr James Tritten at US Naval Doctrine Command on 28 February 1994.
introduction of new technology. With the USN a latecomer to the field of doctrine there had to be some deliberation as to where its single service or more correctly Navy-Marine multi-service doctrinal effort would fit into the overall picture. The view put forward by Jim Tritten is that the individual Services have the primary responsibility for development of tactical level doctrine, but there may be some blurring of the lines of responsibility. For example, within the context of joint doctrine, the Commander in Chief of the new US Atlantic Command is developing tactical doctrine for tactical level joint task forces.40

But, at the same time, the Services cannot help intruding into the operational and even strategic levels of warfare as they attempt to explain their roles in raising, training and equipping forces.41 Consequently, as Tritten points out, single Service doctrine cannot help but influence joint doctrine. My own view is that joint doctrine cannot be formulated without a thorough understanding of how the single Services propose to fight. So, even in our own case, where joint doctrine publications are preceding naval ones, they can be written only with some implicit, and hopefully agreed, understanding of how naval forces do intend to fight. Furthermore, to be effective, doctrine must contain two essential elements; how the military thinks about warfare and how it acts when in combat.42

One other issue relating to joint doctrine and the USN is that the Chairman of the Joint Chiefs of Staff is responsible for development of it, but the USN experience thus far seems to have been that the joint doctrine centre (actually Joint Warfighting Center) tasks single Service ones rather than producing everything itself. The joint centre functions more as a review and coordination authority.43

An issue which the USN has forecast as being likely to create difficulties is consistency between joint doctrine and the single Service variety. In the US context, single Service doctrine is not supposed to be inconsistent with joint doctrine. Undoubtedly, the same will apply here, which will mean that RAN doctrine will need to be drafted with existing joint Service doctrine very much in mind. The issue of which Service’s doctrine should predominate when one Service is operating in support of another will also need to be resolved, although it may not be the potentially major problem for us that it could be for the US forces where joint operations is still not an entrenched philosophy.

40 Tritten, Naval Perspectives, p. 4.
41 ibid.
42 ibid., p. 6.
43 Discussions with Dr Jim Tritten, 28 February 1994.
Another navy which has taken up the challenge posed by doctrine recently is the RN. It has not chosen to do so in the manner selected by the USN, if only for resource reasons, but it has consulted with the USN Doctrine Command. The RN decided in the Autumn of 1993 that the time had come to develop a statement of British Maritime Doctrine; mainly because the other two services had their own doctrine publications and because joint doctrine was already being developed. There like here, the Army influence was strong. And in the RN there was a realisation that with the prospect of published joint doctrine in the near future there was a need for the maritime aspects of doctrine to be set out, lest they receive insufficient attention in the United Kingdom's overall joint approach.

An original draft was produced by the Spring of 1994 and was followed, predictably, by a long process of comment and redrafting. The task was managed by several officers under the oversight of the Directorate of Naval Staff Duties as well as a number of civilian academics, including Eric Grove. Input was also sought from the other services as well as the USN Doctrine Command. Following a seminar at the Royal Naval College Greenwich in late 1994 a third version appeared in early 1995. With the help of the newly formed Doctrine cell set up at the Maritime Warfare Centre at HMS Dryad, a fourth draft was then produced, as the basis for the final version.

The aim of the RN publication is to cover the higher aspects of doctrine; thereby providing a basis for teaching, training and tactical development within the Navy as well as generating wider understanding of the distinctive nature of maritime forces and the environment in which they operate. It has set out to do this by fusing historical insights with current thinking and terminology in a way that is intended to be clear as well as thought provoking. While the authors of the RN volume want all RN and Royal Marines officers to read it, they ask that officers be introduced to it at the mid-seniority Lieutenant level. They also suggest that Warrant Officers be introduced to it on promotion. Like the USN documents, BR 1806 is also intended for a wider readership, including the other Services, the civil service, Parliament, the academic community and the media.

Having avoided it for as long as possible the paper must now turn to doctrine and the RAN. How has the RAN dealt with the issue? That we have not achieved very much in terms of developing RAN doctrine is less

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45 ibid., p. 2.

46 ibid.

47 ibid., p. ii.
because nothing has been done than because what little has been done has not been well coordinated. In January 1993 the Maritime Studies Program was tasked by the Chief of Naval Staff to present a paper to his advisory committee (CNSAC). That task was bequeathed to me when I took over the job of DGMSP and I have not felt under any pressure to produce a result in this particular issue. The task was prompted by ideas already being considered by the then CNS and an article in the US Naval War College Review entitled 'A Call for an Official Naval Doctrine' and written, perhaps predictably by an United States Air Force officer.

The aim of the paper which the Director General Maritime Studies Program (DGMSP) was to present to CNSAC was to outline how the RAN should approach the subject of doctrine and to identify the authority within the Navy best placed to take on the subject. On this particular issue little or no progress has been made, although DGMSP has the approval of CNS to conduct a workshop later this year to provide the answers sought by the CNS almost two years ago. The lack of progress is the result of the ongoing ambivalence within the Navy towards the subject and a lack of capacity among those with an interest in doctrine.

But, some progress has been made in other respects. In November 1992, Commodore Sam Bateman and Commander Dick Sherwood, then of the Maritime Studies Program published 'Principles of Australian Maritime Operations' as a Strategic and Defence Studies Centre (SDSC) Working Paper. This was a wholly unofficial document but it did represent, if comparatively briefly, an attempt to provide a rationale for the use of naval forces in an Australian context. The working paper included sections on:

a. maritime strategic theory,
b. a historical view of maritime power in Australia,
c. Australia's maritime interests,
d. an Australian maritime strategy, and
e. roles associated with Australian maritime operations.

At the same time that this work was produced, the Maritime Studies Program attempted to produce an official version. This was to have been a substantial publication, endorsed by CNS, and of similar size as the RAAF Air Power Manual. Several chapters of variable quality have been written by a number of authorities, but again, a lack of capacity within the Maritime Studies Program has prevented the revision and editing processes from advancing any further. This publication, if it ever sees the light of day will in effect be the RAN's Doctrine Manual.
One other initiative which has been undertaken recently is the placement of an RAN Commander in the US Naval Doctrine Command. Although the officer has only been in this position for one year he has produced some informative and worthwhile reports on USN developments.

The planned end of 1995 Navy workshop on doctrine - now more likely to be the early 1996 workshop - is intended to bring together a small group of naval officers with an interest in the subject, together with representatives from the other two services (subject to approval) to examine the need for a published RAN doctrine, the nature and content of the doctrine and to recommend who in the Navy should have responsibility for the ongoing development of doctrine. A significant factor in determining whether responsibility should rest with DGMSP is our limited capacity to undertake another major and ongoing task. On the other hand, we have taken on the job of helping to draft the maritime supplement to ADFP-6 Operations. To do this however, we will need to take on a consultant.

**CONCLUSION**

This paper has ranged widely over the topic of 'Doctrine and the RAN' perhaps a good deal more widely than the workshop organisers had expected. And what conclusions can be reached about doctrine and the RAN?

One conclusion which can be reached is that, by definition in the first place, doctrine must come to be seen as something non-threatening, necessary and even useful (within the Navy and outside) if the concept is to be embraced wholeheartedly by the Navy. Such a definition has been presented in the paper. It emphasises that doctrine is not dogma, requires judgment in application and should be founded in experience.

We can also conclude that the necessary education process would be assisted by consideration of the issues which influence doctrine as well as those issues on which doctrine impacts. In its consideration of these factors the paper has shown that doctrine is fundamental to the orderly development and successful operation of a Navy.

Another conclusion which can be drawn is that the imperatives which drove both the USN and the RN to develop and articulate publicly their own doctrine exist to some extent already in Australia. Although we do not face the budget situation confronted by the USN following the end of the Cold War, there is no indication that our access to funds will increase substantially in the near term. The need to be able to articulate our rationale and needs may yet emerge in much the same way that it did for the USN. Furthermore, the existence of formal doctrine in both Army and
the RAAF does suggest that the development of joint doctrine would be much better informed if there were available an RAN contribution to it.

The paper also made the point that single service and joint doctrines must be consistent. This would be so much easier for the Navy if our own doctrine were formalised in a written form.

Finally, the paper concluded that the RAN’s approach to doctrine thus far has been ambivalent and somewhat uncoordinated. A decision by the RAN in favour of a formally articulated doctrine will require a much more committed approach for the future.
AUSTRALIAN ARMY DOCTRINE DEVELOPMENTS

Presented by Colonel Adam Fritsch
Director, Army Doctrine Centre.
Australian Army.

INTRODUCTION

The Australian Army places considerable importance and a high priority on the development and production of doctrine. Doctrine provides the basis for all of our training. Our view of doctrine is reflected in the following comment by General George Decker to the US Army Command and General Staff College in 1960.

Doctrine is indispensable to an Army... Doctrine provides a military organisation with a common philosophy, a common language, a common purpose and unity of effort.

WHAT IS DOCTRINE?

Definition. Doctrine has been defined in numerous ways and not always consistently. Definitions range from that contained in ADFP 101 which defines doctrine as:

The fundamental principles by which military forces or elements thereof guide their actions in support of national objectives. It is authoritative but requires judgement in application.

To put that simply, doctrine is what is taught.

Both of these definitions define doctrine but at opposite ends of the spectrum. The doctrine developments which I will address in this paper fall into the area of the first definition. These are the fundamental principles which require judgment in application and deal with the conceptual aspects of doctrine. Our Army doctrine ranges from the descriptive but not prescriptive to that which is taught, generally termed tactics, techniques and procedures, which is more prescriptive than descriptive.

The Doctrine Model. The model which the Army is presently using for the development of doctrine, is shown in Figure 1.
While this model has its limitations, it does separate doctrine and the fundamental principles from guidance, whether this be strategic, financial or related to force structure. Doctrine then becomes our sound professional judgement that we apply to guidance to develop our concepts, plans and operations or exercises. By subsequently testing those plans and conducting operations or exercises, we can use the experience to validate and review our doctrine. Doctrine must reflect our strategic guidance and facilitate our meeting the requirements of that guidance, but it must also be enduring and allow us to accept unexpected changes in guidance without generating the requirement to re-develop doctrine.

**The Army Doctrine Centre.** To develop doctrine in the Australian Army, the Army Doctrine Centre has been formed as an element of Headquarters Training Command. A number of research, development and writing staff are located at Georges Heights to develop and produce higher level doctrine. Out-posted to a number of Army schools are more junior doctrine writers whose task it is to develop lower level doctrine. This doctrine sits at the tactics, techniques and procedures level.

**INPUTS INTO DOCTRINE DEVELOPMENT**

**Strategic Guidance.** While strategic guidance does not directly effect the development of doctrine, doctrine must support the training required to conduct operations in support of that guidance. Using the experience we are gaining from exercises and activities such as EXERCISE KANGAROO 95 (K95) we are validating and reviewing doctrine to ensure it adequately addresses the capabilities and tasks required of the Army in the defence White Paper, Defending Australia 1994 (DA94).
Army Office Studies. Concurrently, Army is conducting a number of on-going studies into both capabilities and force structure. The principle study at present is Army 21 (A21) which is a fundamental review of capabilities and force structure requirements to meet the guidance of DA94. This study may have major doctrinal implications for both Army and the other Services if it identifies major changes in the application of combat power and other capabilities.

Land Command Concepts. As one of the three joint commanders, the Land Commander's concepts for the conduct of operations in the defence of Australia have to be taken into account. In developing his concepts, he will base his plans on current doctrine. His tasks and the employment of his capabilities may necessitate a review or a change in emphasis in doctrine. One obvious area of importance that must be covered in doctrine is the conduct of military operations within the civilian infrastructure and in centres of population. Our doctrine on military operations is weak in this aspect, but it will be vitally important in operations on the Australian mainland or in Australian territories.

Joint doctrine. Joint doctrine is essential for the effective defence of Australia and for the integration of the complementary capabilities of the three Services if we are to fully exploit the air-sea gap and develop depth in our defence. Army doctrine not only has to meet the Army's needs but it must incorporate those aspects necessary to facilitate operations with each or both of the other Services.

America Britain Canada Australia Forum. The ABCA armies program continues the close cooperation developed by the allied armies during the second world war. The program participants are America, Britain, Canada and Australia with New Zealand having observer status. The aims of the ABCA program are to:

a. ensure the fullest cooperation and collaboration among the ABCA armies,

b. achieve the highest possible degree of interoperability among the signatory armies through material and non-material standardisation, and

c. obtain the greatest possible economy in the use of combined resources and effort.

The impetus of the ABCA program is maintained by Quadripartite Working Groups or QWG's which address particular areas. The Army Doctrine Centre is Australia's delegate to QWG doctrine. The result of a QWG's work is published in Quadripartite Standing Agreements (QSTAGs) or Quadripartite Advisory Publications (QAP). Individual armies are then responsible for incorporating the appropriate information into its own.
doctrine. The air force is party to a similar arrangement in the Air Standardisation Coordinating Committee (ASCC) program.

**Sponsors/Head Of Corps.** Each pamphlet in Army's series of doctrine publications has a sponsor. The sponsor is normally an organisation but may be a particular appointment or individual who possesses special knowledge or expertise. Their role is to direct doctrine development and they are responsible for assisting in the identification of doctrine development requirements, devising structure and content of doctrine pamphlets and providing technical clearance of draft pamphlets. For a large part of our doctrine, that responsibility resides with the Heads of Corps who are also the training adviser for their Corps.

**Own Research.** The final input into doctrine is from our own research. Research is conducted into Post Activity Reports (PAR) as well as into Australian and overseas campaigns and operations. Considerable effort is devoted to distilling the real implications of past activities and ensuring the correct lessons are drawn. We cannot afford to only find evidence that supports preconceived or biased ideas that subsequently point us in the wrong direction.

**DEFENDING AUSTRALIA 1994 (DA94)**

**DA94** The Defence White Paper, Defending Australia 1994 (DA94) identifies key capabilities that direct the development of our doctrine to ensure we are able to meet our strategic guidance.

**Self Reliance.** The first of these is that the government's defence policy is founded on a policy of self reliance. We are required to maintain military capabilities to defend our country without depending on help from any other country's combat force. Of greater import, is the requirement for us to be able to conduct the necessary strategic and operational planning for this defence strategy. Australia has a long history of military involvement and planning at the tactical level as the junior partner in coalition forces. Our strategy and operational planning has been subordinated to, firstly, that of the United Kingdom, and then, to that of the United States. We now need to develop the skills necessary for our own effective strategic and operational planning. If we are to employ our capabilities effectively and efficiently, we must be able to translate national strategic objectives to military strategic objectives then into the operational or campaign plan and finally to tactical operations.

**Short Warning Conflict.** DA94 acknowledges that there are no countries in our region with the capability to mount a major conventional attack on Australia sufficient in size to seize and hold significant territory on the continent. However capabilities extant in our region or that are likely to be introduced within a few years can sustain an increasing range
of operations. These operations range from small raids to larger and more protracted operations. This range of operations and the types of conflicts have been termed short warning conflicts. Short warning conflicts and the types of operations that they could involve guide the type of response that we may have to make.

**Expand and Adapt to Major Conflict.** While DA94 acknowledges that a major attack on our continent is not credible and therefore is not a force determinant, it does require us to maintain the ability to adapt and expand our forces quickly to meet any such possibility. Doctrine for major conflict must be maintained and a suitable means to transition from the low intensity type of operation in short warning conflicts to the higher intensity of major conflict must be developed.

**Multinational forces.** The Defence White Paper identifies the fact that Australia has important interests beyond the defence of our own territory and that planning for the defence of Australia must take full count of our broader defence interests. The ADF, and the Army in our case, may be called upon to undertake activities and operations elsewhere in our region and in other parts of the world in cooperation with neighbours, allies and international institutions. We must be prepared and have the doctrinal base to effectively contribute to and to be able to integrate into a multinational force.

**Peace Operations.** In accordance with our government’s policy of contributing to global activities and operations, Australia has ongoing commitments to peace operations sanctioned by the United Nations. These operations are becoming increasingly complex and a range of activities including peace-keeping, peace-making, peace-enforcement and peace support operations come under the peace operations umbrella. To maintain focus and avoid 'mission creep', our doctrine must assist in defining the various operations and the types of activity involved in each.

**STATEMENT OF DOCTRINAL PRINCIPLE**

Over the past nine months, Army has been developing a statement of doctrinal principle in order to identify deficiencies in doctrine against our guidance and to determine priorities for doctrine development. The Chief of the General Staff Advisory Committee considered that statement in July and CGS subsequently endorsed it. The statement of doctrinal principle covers a number of areas.

**Brigades.** Army doctrine is to move towards the brigade as the fundamental building block for operations within the range of short warning conflicts. Brigades will be structured to conduct independent and dispersed operations. The brigade headquarters structure is sound and developing it into a small divisional headquarters will be resisted.
Division. While brigade operations are likely to be dispersed and independent, they will still require command and control to be exercised by a tactical level HQ. This Headquarters may be joint.

Corps. There is little likelihood for Corps or echelons above Corps operations in short warning conflicts. However, a basic level of doctrine should be maintained consistent with ABCA doctrine. Doctrine is to be developed using the ABCA model based on a Corps for major conflict.

Doctrine. Doctrine needs to be sufficiently adaptable and versatile to cope with the movement from the range of short warning conflicts to major conflict but the first priority is for doctrine to support operations within the range of short warning conflicts and to align with the force-in-being.

Operations with Allies. There is a requirement to be able to readily integrate an Australian force into a multinational divisional or corps organisation.

Implications. The implications of this statement of doctrinal principle are far reaching. This statement will direct our doctrine development for the next few years. Using the brigade as our fundamental building block but with a commanding tactical headquarters, our force-in-being model for the development of doctrine for short warning conflicts will look like Figure 2.

![Diagram](image)

**Figure 2 - Force-in-Being Model**

The 1st Australian Corps model which is presently used for higher level conflict doctrine will cease to be used. In its place, we will use the agreed ABCA Corps model to which Australia can expect to contribute a brigade. This model is depicted in Figure 3.
Figure 3 - ABCA Corps Model

The model provides a range of realistic capabilities, equipment and organisations suitable for doctrine development and training for major conflict. Using the ABCA model will also facilitate the integration of an Australian force into a multinational force.

LOOKING TO THE FUTURE

Operational Art. As we are planning for operations independent of friends and allies, we need to develop doctrine for the conduct of our own campaigns and to be able to link strategic objectives to tactical operations. Army has been developing a pamphlet on the operational art for the past six years. That work has provided the basis for Australia Defence Force Publication (ADFP) 6 - Operations - which is presently only issued in draft form. Single service Supplements are planned for that publication and the Army Supplement will provide the link between joint operational planning and single Service Army doctrine. Operational and strategic objectives can be achieved with relatively small tactical forces and the operational planning requirements need to be clearly enunciated.

End State. There is a need to develop the concept of end state to ensure the achievement of national or strategic objectives. There have been instances of successful military or tactical objectives being achieved without the national or political end state being achieved. This, together with the operational art, needs to be developed in our doctrine.

Revolution in Military Affairs (RMA). With the purpose of gaining the edge and driving change, the ideas and development embodied in the generic term, RMA are of fundamental importance. It is too early to single out particular developments, but priority should be given to determining the doctrinal effect of digitisation of the battlefield, information warfare, the tactical decision-making process and intelligence preparation of the battlefield.
**Combat Power.** At the strategic level we have, of necessity, developed an economy of effort strategy. Such a strategy is not contrary to the requirement to develop the maximum combat power against an enemy at the decisive point. The separate but complementary elements of combat power are fire power, in all its forms, manoeuvre and morale. Our strategy of depth in defence and the great distances that we need to cover dictate a requirement for a high degree of mobility and the ability to manoeuvre both forces and firepower. Firepower in all its forms must be available to meet rapidly changing situations. Firepower can be provided by any of the three services and control arrangements need to be in place to quickly bring firepower to bear.

Similarly, mobility requirements will necessitate joint operations to overcome geographical or environmental obstacles. Amphibious operations will be necessary with the number of distant and close islands such as Melville, Bathurst, Groote, Horn and Thursday that lie in potential areas of operation. Air support will be required to overcome the constraints of geographical distances in operations as well as the limitations imposed by the climate, in particular, during the wet season.

Morale will be a constant problem with a debilitating climate and a low and frustrating level of activity in most areas. Sustainment and rotation requirements will require careful evaluation.

**Response to Incursions.** Although the air-sea gap is a formidable obstacle, it is not impermeable and the lower the level of conflict, the more permeable it is likely to be. The lower the level of conflict, the more dispersed enemy operations are also likely to be as a range of covert means is used to gain entry to the country. Our activities in short warning conflicts are generally described as detection, protection and response. Both detection and protection will be conducted concurrently as well as each relying on the successful conduct of the other. Response tasks could range from pre-emptive to deter operations or activities in an area to reactive, where they are initiated as a result of enemy action. Response does not imply a passive stance but could be active where response to developing situations may involve strike operations. Our stance will not remain defensive but will aim to seize the initiative and to move to the offensive.

**Support Operations.** Doctrine and training have to be developed and implemented for a range of support activities. An essential one, but one probably not strictly regarded a support, is command, control, communications and intelligence (C3I). We must have developed and in place capabilities that allow us to conduct operations to defeat an adversary. Good C3I will be necessary not only within each service but in a joint operation. The ability to operate within an enemy’s decision making cycle and the ability to bring overwhelming combat power to the decisive point at the critical time will be dependent on the responsiveness of our command arrangements.
Logistic support is undergoing major development and restructuring. Modern management practices are being introduced and technology is being utilised to control and retain visibility of logistic operations. Rather than lines of supply, we are developing a seamless logistic continuum as well as utilising the civilian and local infrastructure to provide support.

One of the main areas to be addressed in short warning conflicts is rear area security. While we would normally regard the area behind a Joint Force Area of Operation (JFAO) as the rear area requiring security, there will be large parts within the JFAO which will not be secure or lie within a Tactical Area of Responsibility (TAOR). Brigade TAOR are unlikely to be contiguous yet there will be considerable logistic and administrative movement between TAORs that will require security.

THE DOCTRINE DEVELOPMENT PLAN

Using guidance provided in DA94 together with the statement of doctrinal principle, we have developed a plan for the production of Army doctrine to meet our requirements. Our priorities for doctrine development flow from the requirement for self-reliance in the defence of Australia and the types of activities likely in the range of short warning conflicts.

Our first priority is to develop and articulate the conceptual framework of our fundamental concepts. The pamphlets to be addressed as a matter of priority include our fundamentals of land warfare to include the concepts of the operational art and end states, operations in defence of Australia to examine the range of possible operations, brigade operations to address the conduct of the various types of operations themselves, and logistics in support of short warning conflict.

Our second priority is to develop the doctrine for the detection and protection tasks. Doctrine to meet this requirement will include command and control, surveillance and counter surveillance and operations in urban terrain.

Our third priority concentrates on our response and manoeuvre capability addressing motorised, amphibious and airborne operations.

Our final priority is to develop supporting doctrine for activities such as logistics in support of multinational operations.

CONCLUSION

The Army has a comprehensive range of doctrine that addresses conventional operations. Doctrine must now be developed to enable the
Army to be able to effect the strategy for the defence of Australia as outlined in DA94. Our statement of doctrinal principle provides a sound basis for the development of doctrine to meet the many tasks that we are required to be able to undertake. With our force-in-being we must be able to meet the range of operations that could be mounted using capabilities extant in our region. Our doctrine must also be adaptable and versatile enough for us to transition from short warning conflicts to major conflict. We have to be able to contribute to and integrate into a multinational force and we must be able to contribute to peace operations. Overlying this is the increasing necessity to be able to conduct and contribute to joint operations. Campaigning, end states, RMA and C3I are all aspects of our profession that we will need to develop and understand. Reaching agreement within Army on these matters will be a challenge as will reaching agreement between the Services. We have identified the need, we know what we have to do and we have developed our plan. The next few years will be challenging and interesting.
RAAF ASPECTS OF REGIONAL ENGAGEMENT POLICY

Presented by Group Captain Stephen Gray
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Royal Australian Air Force

In addressing RAAF aspects of regional engagement policy, policy guidance mechanisms in place ensure that RAAF regional engagement is in keeping with Government policy, and is no different in intent and application to that of the RAN, the Australian Army, the Defence Science and Technology Organisation (DSTO) or any of the other seven programmes in the Australian Department of Defence.

ADF regional engagement policy originates in its broadest sense with Government. The Strategic Policy Coordination Group, comprising representation from the Departments of Defence, Foreign Affairs and Trade, and Prime Minister and Cabinet, is a forum for frequent high level consultation on the full range of strategic and security related issues. The public manifestation of Government defence policy guidance is a White Paper such as Defending Australia 94, released by the Australian Government in November 1994. White Paper guidance is interpreted by Headquarters ADF, and CDF will subsequently provide direction to the single Services in terms of the objectives which should be achieved in relation to regional defence cooperation. Having been provided with CDF direction, the single Services formulate programs of overseas activities which are subsequently coordinated into a single plan of activities by HQADF. This plan is then submitted to the Government (the Minister for Defence) for approval.

Consultation On Regional Engagement Activities

To be of value to the participants, regional engagement objectives must represent mutually beneficial activity; therefore, importance is now placed on developing mutual objectives. These objectives must be agreed at the outset, and regular consultation should be undertaken to ensure that activities remain relevant to all parties.

In our region, bilateral consultation is commonly achieved through a three-tiered approach to defence cooperation. The highest level of consultation is usually at two or three star level and is referred to as Defence Policy Discussions. These are generally followed by Review Committee talks at the two star level, and sub-committee or working group talks chaired by one stars and supported by Service staff officers. Examples of this structure include the MAJDP - Malaysia Australia Joint Defence Programme, the JASINCG - Joint Australia Singapore Coordination Group, the AIDCC - Australia Indonesia Defence
Coordination Committee and the recently formed JATDCC - Joint Australia Thailand Defence Coordination Committee. In the multilateral forum, another higher level of discussion at the four star level may precede these meetings, for example, the Britain-Australia-New Zealand (BRITANZ) Principals meeting at four star level or the Five Power Defence Arrangements (FPDA) Ministers Meeting.

**OBJECTIVES OF REGIONAL ENGAGEMENT**

Regional defence engagement is not a new element in Australia's defence policy. Since World War II Australia has placed high priority on influencing its wider strategic environment to serve strategic interests. In the process, a set of bilateral and multilateral defence relationships have been established in our region that are notable for their breadth and strength. These relationships not only contribute to Australia's own security situation through the generation of a greater level of awareness, understanding and insight, but also to that of the region as a whole. Regional defence engagement encompasses all those activities and policies that help to influence stability by strengthening common national interests, mutual trust and understanding. From an Australian perspective, the bilateral and multilateral defence relationships that have been built up over many years form the essential foundation for the future development of regional defence engagement.

Regional defence engagement is thus an integral part of Australia's defence policy. While we must develop capabilities for defending Australia, our approach to regional engagement adds another dimension to our defence effort by seeking to minimise the likelihood of threats to the region, our neighbours, or our own territory and interests. These two elements of our defence policy can, and must, work in harmony, and in accord with our alliance commitments and interest in global security.

In recent years regional defence engagement has gained greater prominence in our overall defence policy for a number of reasons. In broad terms, Australia has recognised that the global shift in economic and military power has produce a more fluid, complex and less certain regional security environment that has increasingly important implications for our own security, and that we need to do more to influence this environment and to promote an understanding of each others interests. This trend in Australia's strategic military agenda fits in with the broader trend towards closer integration with Asia across the entire spectrum of government policies.

At the same time, development in technology, industry, economics and military capabilities of our neighbours in South-East Asia has widened the scope for cooperation. Increasingly, though to differing degrees, many countries within the region are expressing support for regional
engagement with the objective of achieving the same goals as Australia through cooperative activities to counter the uncertainties of the post-cold war Asia. Australia sees regional nations focusing more on external rather than internal security. The increasingly sophisticated regional capabilities now being acquired mean that we are all finding more common ground and recognising the benefits of cooperation.

To meet these challenges and take advantage of these opportunities, we need to examine carefully what kinds of activities do most to further our strategic interests. It may not be necessary to devote many more resources to regional engagement to achieve our objectives, but in some areas we may need to continue to re-shape our approaches to meet each of your needs more effectively. To do this we need your feedback and advice, open and direct.

With the exception of FPDA, which has an operational aspect, and the alliance with New Zealand, under which we assume that we would operate alongside the New Zealand Defence Force (NZDF) in time of war, our renewed emphasis on regional defence engagement is focused on enhancing Australia's security by reducing the prospect of conflict, rather than seeking allies and making formal commitments in case of war. This has implications for practical issues such as the extent to which Australia, and indeed all sovereign states, are prepared to share information, technology, encourage interoperability and collaborate on capabilities. Within the spirit of cooperation, overall priority must be given to maintaining and enhancing Australia's self-reliant defence capability, but there will be trade-offs between activities devoted to developing our own capabilities and those devoted to regional engagement. These trade-offs will be at the margins but we need to establish how they are to be made. All countries within the region must accept and respect that sovereign right as a normal part of international relations.

Given our strategic interests and outlook, Australia has a number of objectives in defence engagement with countries of the region, some of which may be summarised as follows:

- building strong bilateral relationships with regional countries which support Australia's regional defence goals to foster understanding, cooperation and mutual confidence and trust;

- assisting regional neighbours to develop military capabilities and professional standards that meet legitimate self-defence needs, and to deter potentially hostile influences that could affect national or regional stability;

- contributing to frameworks that allow disputes to be resolved without resort to force;
• maintaining the United States strategic commitment to the region;
• encouraging China to become more engaged in the resolution of potential security threats and to be more responsive to regional concerns;
• assisting Japan in pursuing its security interests in the region without discomfort to itself or others;
• encouraging responsible defence planning based on transparency and hence moderating the growth of defence expenditure;
• discouraging strategic developments that would significantly raise the level of capability and represent a potential threat to Australia or the stability of the region; and
• assisting Australian companies in export opportunities to sustain industrial capabilities important to our own defence.

The primary objective of Australia's regional defence engagement is not to defend the region, but to use defence relationships with regional countries to contribute to our own security. This approach also enhances the security of the region as a whole.

**ADF REGIONAL ENGAGEMENT ACTIVITIES**

The following broad groupings cover the range of activities that can be undertaken to serve our own or regional strategic interests. Not all are appropriate to all countries; we should seek a mixture that represent a balanced equitable approach to all nations and are based on activities that reflect the shared interests of particular countries.

• **Defence Cooperation (DC) Programs.** DC programs have played a valuable role over a long period of time in developing defence relationships which contribute from cultural understanding through to training and, more recently, combined exercises. Traditional cooperative programs have relied on Australia playing a fraternal role and fully funding DC projects. The relativities are now changing, and increasingly the countries concerned have a clearer need of their DC need and preferences and have defence budgets that provide a capacity to pay for desired programs, or those that have previously been provided to them. Many countries now meet DC costs in areas such as travel, training, exchanges and exercises. Others are moving in this direction and our approach is to encourage the achievement of this independence
and the ideal of mutual DC benefits through the mutual commitment of resources, including financial resources.

- **Focused Approach to High Level Contacts.** High level contacts between senior ADF and Defence officials and their regional counterparts can be valuable in laying the basis for common approaches, cultural understanding and developing areas of cooperation. Personal contact is viewed by the ADF and the Chief of the Air Staff as extremely important in opening doors and building mutual confidence and trust. There is a need, however, to ensure that these contacts are used for more than 'reciprocating hospitality' or 'getting to know you' purposes. Visits must be targeted to meet specific purposes to ensure access to people who can influence initiatives or decisions.

- **Exchanges on Strategic and Defence Planning Processes.** Visibility of defence planning processes promote regional reassurance and can lead to reduced defence expenditure. The types of information that could be published include defence planning documents, planning processes, equipment acquisitions and submissions to the register of conventional arms transfers. Each country should expect to get value for what it gives, and should hence encourage exchanges from other countries.

- **Defence Participation in Regional Security Dialogue Processes.** These processes are in their early stages and are currently primarily the province of foreign ministries. However, there is scope for defence involvement as members of delegations, or at lower level discussion forums such as the APSC sponsored Regional Air Power Workshop in Townsville.

- **Intelligence Exchanges.** Engagement on intelligence matters incorporates a wide range of activities; including information sharing, conferences, and training within the constraints of the cooperative arrangements with partners. We could contribute to assessments on global issues, peacekeeping operations, counter-terrorism and trafficking in drugs and weapons. Intelligence exchanges are a sensitive area for most countries and may take some time to develop. Nevertheless they help to build confidence irrespective of any information which may be exchanged.

- **Exercises.** Exercising provides an opportunity for our forces to familiarise themselves with the regional operating environment, for others to see our forces and likewise for us to observe the forces of regional countries. Australia's priority is on exercising with countries of close strategic interest, and exercises should be conducted on a cost sharing basis.
• **Training and Personnel Exchanges.** Training is an area in which Australian expertise has been valued and our training facilities seem well regarded in the region. Australia is prepared to use these facilities to assist regional countries to improve their competence and professionalism. Additionally, training can establish useful linkages with personnel of other defence forces and provide an insight into alternative approaches to military issues. Priority will, therefore, be given to courses and exchanges that promote personal and professional contact between defence organisations and military forces. They should focus on reciprocal transfers of skills, and on building professionalism in technical areas as well as in other areas such as logistics management and force structuring.

• **Use of Australian Facilities.** The facilities which show greatest promise for use by regional countries are those associated with air force training, conventional explosives testing, maritime training and exercising and counter-hijack training. However, in all cases, arrangements for such access will be considered case by case to ensure that they do not supplant ADF activities and that Australian rights and interests are preserved. Where appropriate, benefits such as reciprocal access, cost recovery, industry participation and/or combined exercise opportunities may be sought in return.

• **Logistics Cooperation.** With the increasing sophistication of regional defence inventories, logistics cooperation is becoming a growth area for regional engagement. Logistics cooperation holds potential benefits for both parties. For the donor, Australia believes it should provide economic efficiency, and an insight into the supportability of regional capabilities. It may also support defence industry and defence sales interests.

• **Defence Science Cooperation.** DSTO has a role in regional defence cooperation, and as regional countries develop their capabilities there will increasingly be advantages in seeking to develop genuine cooperation in this area. At risk in such cooperation could be long standing associations with non-regional organisations and the issue of transfer of intellectual property; hence close management of this type of cooperation is essential.

• **Resource and Financial Management Cooperation.** In recent years Australia has responded to invitations from several regional countries to assist in improving management practices in their defence organisations. We have conducted seminars focussed on corporate planning, project management, better information systems and managing for results. These programs have been targeted on Defence organisations rather than improving public sector performance more widely. For reasons of economy and
affordability, such courses concentrate on 'training the trainers' and recipients are encouraged to meet the costs of such training. Such courses are not provided in circumstances where they supplant Australian training needs or can be provided by management training specialists.

- **Defence Industry.** Defence aims to promote Australia's support industry's interests in either selling to, or collaborating with, regional countries. Thus, nations bilaterally are able to exploit commercial opportunities that arise through defence engagement, and through that become more firmly part of the region.

- **United Nations Sponsored Peacekeeping Operations.** Australia may from time to time provide resources for UN-sponsored or endorsed regional peacekeeping operations. Where possible, such operations will contribute, either directly or indirectly, to our strategic interests. When we participate, we should seek opportunities to progress our broader interests in regional engagement. Indirect benefits of relevance within the region will include provision of training opportunities for the ADF, encouragement of a sense of strategic community with regional participants and the provision of opportunities for operational cooperation with regional forces.

We do not expect to undertake all of these activities in each relationship, but we would seek a mixture of activities that reflects our mutual interests. We would not pursue particular activities with a view to replicating the Australian Defence Organisation, its structures or administrative processes in other countries.

**Current RAAF Activities**

In reviewing RAAF regional engagement activities, of prime note are the Five Power Defence Arrangements (FPDA), involving Malaysia, Singapore, New Zealand, the United Kingdom and Australia. FPDA was formed in 1971, and provides a framework for regional exercises, exchanges, training and discussions. Additionally, the integrated air defence system (IADS) contributes to the air defence of Malaysia and Singapore. The RAAF plays an important role in IADS and currently provides the two-star commander, as well as other staff.

The major maritime exercise, STARFISH, is conducted under the auspices of FPDA (involving as it has up to 42 aircraft in past years). Another exercise, CHURINGA, involves F/A-18 deployments to Malaysia (twelve weeks) and Singapore (four weeks), and also involves C-130s and tankers. F-111s have also deployed to the peninsula since 1975.
RAAF P-3C Orions fly patrols in South-East Asia, such as GATEWAY (a joint maritime surveillance program between Malaysia and Australia). The RAAF is also involved in BURBAGE patrols in the Indian ocean which are used to position aircraft in Butterworth for GATEWAY. As part of BURBAGE the aircraft overfly major shipping routes in the Indian ocean. As well, the RAAF has conducted EXERCISE PENGUIN with Brunei.

The Royal Malaysian Air Force (RMAF) undertakes C-130 air drops and low-level navigation training at RAAF Richmond. Approaches have also been made from Malaysia for assistance with the introduction into service of the F/A-18D. The possibility of the RAAF providing operational and technical training on the C-130 and Caribou has also been explored.

Singapore has had fighter aircraft detachments at Darwin, Amberley, and Williamtown for many years. Pilot training for the Republic of Singapore Air Force (RSAF) is well established at RAAF Pearce in Western Australia. Additionally, Singapore uses the Delamere Air Weapons Range and the Shoalwater Bay Training Area regularly. Australia and the US participate in a major air defence exercise in north Australia each year. Known as PITCH BLACK, the exercises have also involved Singapore since 1992.

Special Australian-New Zealand exercises are conducted such as TASMANEX, which is a maritime strike, anti-submarine warfare, and surveillance exercise. The RAAF and Royal New Zealand Air force (RNZAF) also participate in WILLOH exercises involving fighter aircraft exchanges between Williamtown and Ohakea. The RNZAF undertakes navigator training in Australia, and currently provides fleet support flying for the Royal Australian Navy, operating A-4s from Nowra, with deployments to Williamtown. RNZAF A-4 Skyhawks have begun using RAAF AAR aircraft.

KANGAROO exercises have been conducted every two years in Australia for the past twenty years. As from K95, which has just finished, wider regional involvement than in the past has been sought. The KANGAROO series will in future be held every four years. Another series of exercises on a smaller scale and including more regional involvement, will be conducted in between KANGAROO exercises, also every four years. The first one is likely to be conducted in 1997.

The Air Standardisation Coordinating Committee (ASCC) makes a positive contribution to interoperability between Australia, the United States, the United Kingdom, Canada and New Zealand. The future may include the opportunity to expand the concept of ASCC to include a regional standardisation regime - to look at combined operations, peacetime cooperation, logistics support, and exchange of equipment and information.

In conjunction with CHURINGA deployments, the RAAF participates in THAI BOOMERANG. This exercise first occurred in 1992 at Korat where the RAAF used the Air Combat Manoeuvring Instrumentation range.
AUSTHAI exercises have been conducted involving Thai F-27's/Nomads and RAAF P-3Cs.

The RAAF has also conducted navigator training for the Royal Malaysian Air Force (RMAF) and, in the past, the Royal Thai Air Force (RTAF). Joint special operations are also conducted in the NIGHT PANTHER series of exercises.

Airmen-to-airmen talks have been conducted regularly with Indonesia during reciprocal visits. RAAF F/A-18s and Indonesian Air Force fighters have flown together since 1993. The next fighter exchange is planned for October this year in Darwin. Also, during the AUSINA exercise in 1993, Indonesian air force personnel flew in RAAF P-3Cs and RAAF personnel flew in Indonesian Nomads.

AUSINA 94 involved crews planning and debriefing activities together, and common procedures were developed and information exchanged. There was also an exchange in 1993 between a No 36 Squadron C-130 crew and a TNI-AU crew which involved tactical transport flying and airdrops. Known as RAJAWALI AUSINDO, the exchange occurred again last year. During exercise NEW HORIZON 94, our P-3s, F/A-18s and F-111s participated in combined maritime training with the Indonesian Navy.

Further afield the RAAF conducts patrols in the South-West Pacific such as SOLANIA, in which exclusive economic zones are patrolled for fisheries surveillance.

Cooperation has also been achieved in terms of improved transparency through published doctrine, lectures, and workshops. For example, the RAAF published its air power doctrine in 1990, and released its second edition in 1994. In 1993 the APSC visited Singapore, Indonesia, and Malaysia, and was visited by delegations from Thailand, Malaysia and a team from IADS. In addition, two colonels from the Philippines Air Force studied at the APSC (for two weeks each), as did one RNZAF Squadron Leader (for twelve months). In 1994, two Malaysian lieutenant colonels visited as did two lieutenant colonels from Singapore. Officers from the Philippines and Indonesia are currently studying at the centre. The APSC conducts an extensive lecture program to armed forces staff and defence colleges throughout the region, with the most significant commitment being a two-week course in Kuala Lumpur.

In addition to the increasing closer relations between the APSC and regional air forces, other RAAF education institutions have been and continue to be involved in providing places for regional air force personnel. For example, the RAAF Command and Staff Course at Fairbairn and the Basic Staff Course at Point Cook regularly offer places, and personnel from regional countries have been included on certain supply and explosives training courses. In addition, the Defence International Training Centre at Laverton provides an important opportunity for
overseas personnel to understand the Australian culture, prior to undergoing specific courses. These specific courses include Qualified Flying Instructor and Navigator courses.

In 1992, the RAAF hosted a regional conference in Melbourne, entitled The Qualitative Edge: a Role For Air Power in Regional Cooperation. Following the success of this conference, the inaugural Regional Air Power Workshop was conducted in Darwin in 1993, followed by a second workshop in 1994. We are currently taking part in the third of the series.

CONCLUSION

Over the next fifteen years, the strategic environment in Asia and the Pacific is likely to be more demanding and to be determined more than ever by the policies and approaches of the regional countries themselves. In these circumstances, Australia's engagement with regional countries as a partner in determining the strategic affairs of the region will be an increasingly important element in ensuring stability. We will develop our dialogue on strategic and defence issues with key countries in the region, and will aim to promote an environment which sustains a stable pattern of strategic relationships and avoids destabilising strategic competition.

The activities which we pursue with regional countries with these broad interests in mind will include bilateral programmes aimed at cooperation in developing defence capabilities and professional standards appropriate to the legitimate needs of the countries concerned. We will continue to foster, through dialogue, an accurate understanding of Australia's strategic interests and security concerns and ensure that we in turn understand the perceptions, concerns, and capabilities of neighbouring countries. This will reflect Australia's commitment, shared increasingly by our neighbours, to transparency in defence policy development and force planning. At the multilateral level, we will maintain our firm commitment to FPDA. We will participate actively in processes which foster a sense of shared strategic interests and will encourage the continued evolution of cooperative security approaches in the region. We aim to ensure that these processes are inclusive and provide scope for the major powers of Asia and the Pacific to engage constructively with each other and with other countries of the region.

In the defence relationships we promote through these approaches, we will identify opportunities for defence material exports and for defence industry collaboration. This will help develop and support Australia's defence industry base, broaden our defence cooperation with regional countries and contribute to Australia's export performance.
In short, the RAAF is pursuing the objectives of Government and Defence policy and is prepared to listen to your needs for cooperative activities, and proceed at a pace that is comfortable to you. In seeking to engage our regional neighbours in constructive cooperation the underlying principle is that the associated activities must be based on mutually developed lines and contribute to the development of not only regional capability but also understanding and trust. I hope this short presentation has given you an understanding of the policy basis and the breadth of the RAAF's regional engagement activities.
DOCTRINE DEVELOPMENT IN THE RSAF

Presented by LTCOL Jimmy Tan
Republic of Singapore Air Force

I am delighted to speak to you on doctrine development in the Republic of Singapore Air Force. I propose to cover the subject by discussing some considerations influencing our doctrine development before going on to our doctrine development process and organisation. Finally I would like to touch briefly on some of our areas of focus.

CONSIDERATIONS INFLUENCING DOCTRINE

The doctrine of any Air Force is influenced by considerations of geography, socio-economic factors, technology and national security policies. I would like, however, to highlight some peculiar constraints that we in Singapore have to contend with and which affect the way we develop our doctrines. These primarily concern resources.

Space

The acute lack of space as a consequence of our size is a significant constraint that the Singapore Armed Forces (SAF) in general and the Air Force in particular have had to contend with. Doctrinal concepts like the multi-layered air defence concept for Singapore was a natural outcome of this constraint. In addition to the impact lack of space has on the development of our doctrines, is the problem it presents in exercising elements of the doctrine. The opportunities afforded by friendly countries like Australia for the RSAF to train in them, have been particularly helpful in this regard. We have also invested in the creative use of technology in the form of simulators and other forms of computer-aided training and evaluation to alleviate this problem.

Manpower

Singapore has a relatively small population. This brings into sharp focus the need at the national level to balance the requirements of maintaining a credible defence force with the needs of the civilian sector. The SAF as a whole has had to overcome this constraint in a number of ways, each bearing its own impact ultimately on doctrine. These include:

- **Conscription.** Conscription is a feature of the SAF and this includes the Air Force. All male Singaporeans are required to serve
full-time in the Armed Forces for 2-2 1/2 years and then serve in the reserves. In our context the reserves are operationally ready at all times; ready to fight side-by-side with their active counterparts should the need arise. The requirement to maintain conscripts and reserves at high levels of competence and availability requires consideration in the design of management and training systems.

- **Technology.** Technology that is available, suitable and affordable is used to reduce manpower overheads wherever possible without compromising our capability. Novel ways have to be found to cut manpower needs without affecting effectiveness and efficiency.

- **Fighting as an Integrated Force.** To optimise resources, the Air Force will fight as an integrated force with the other Services so that capability of the SAF is not measured by the strength of its individual services but their combined strength.

The overall framework of our doctrine is derived from national defence and security policies. This can be explained as follows:

**National Defence and Security Policies**

Singapore’s defence philosophy is not built on the premise of any existing external threat. Deterrence and diplomacy are the twin principles of our National Defence Policy. A deterrent capability based on self-reliance, will prevent threats from arising in the first place. But deterrence alone cannot preserve the peace. As a small nation it is vital we have as many friends as possible.

Diplomacy underlines Singapore’s commitment to good relations with friendly countries, especially our neighbours. Defence diplomacy commits to build more and more channels of cooperation and interaction between the SAF with the armed forces of our friends, those in ASEAN, the FPDA countries and beyond. A resilient Singapore with an effective and capable armed force contributes to enhancing regional resilience.

**Doctrine Development Process**

To understand our doctrine development process, it is necessary to understand our history. The RSAF started off as an Air Defence Command in the late sixties and the doctrines used then were largely adapted from the Royal Air Force (RAF). We had RAF seconded officers and our fighter pilots were initially trained in the United Kingdom. The priority of the Air Force then was on the acquisition of basic skills. That was the learning stage of the RSAF. Doctrines were largely at the tactical level and they were not formalised.
By the seventies, we had pilots trained in United States, United Kingdom, and France in addition to those trained at home by a diverse band of instructors, some whom were from the RAAF (and still fondly remembered, I might add). The RSAF was still in the build-up phase and the orbat was changing with the inclusion of the A-4s and air defence assets. With the growing capabilities, the Air Defence Command became the RSAF, a separate service in 1975. In terms of doctrine development, the emphasis was on tactical doctrines. It was an interesting period as the different training backgrounds of our operators contributed to a hodgepodge of ideas. This had its advantages. The mind was not closed to a particular way of doing things and the ability to consider alternatives without undue emotion became a key feature of our doctrine development.

The early eighties saw further development of the orbat as the F-5s became operational and air mobility needs of the Army became recognised. The size of our air force and considerations such as economies of scale saw the retention of the helicopter orbat in the air force. The development of tactical doctrine in the area of air mobility of the army became a bi-Service responsibility. There were similar developments in operating with the navy. By the mid eighties, we were in a phase of consolidation. The Air Force was maturing and it was becoming apparent that doctrines of larger Air forces with their higher order of capability and differing theatres of operations may not in all cases apply to an Air Force such as ours. Additionally we had our peculiar constraints and ways to overcome them had to be found. Our doctrines had to be suited to our perceived roles, operational environment and circumstances. It was then that the Air Force’s doctrinal process began to take shape.

Time was of the essence and the approach we took was to accept certain fundamental doctrinal propositions of the more established Air Forces as bases to develop form. The classic doctrine development models advanced by the USAF staff colleges were of little relevance at that stage. A small doctrine office was set up and the first versions of operation doctrine were developed. Tactical doctrines were also being formalised. The reason we went that way was essentially one of expediency. Operational level doctrine was in many ways the working level doctrine at the air force level. It saved us time in developing a basic framework. To have engaged in basic conceptual re-examination at that stage would have had its own pitfalls and would have taken a toll on time. We were also ready to cull from the collective experience of our operators with their diverse backgrounds, the approaches and practices that worked for us.

By the late 80s the emphasis on Joint Services integration was evident and a Joint staff set-up was established. Doctrines at the tactical level for participation with the Army and Navy were being explored. The early nineties saw further emphasis on the integration of the three Services. Doctrine development had to take into account the requirements of the Joint Staff. A doctrine development process was
formalised with emphasis on the development of tactical and operational doctrine.

**THE DOCTRINE DEVELOPMENT SYSTEM**

Today, doctrine development has become a process. Indigenous doctrinal positions and relevant doctrinal practices of established Air Forces are discussed and tested to the extent possible in exercises before being evaluated for adoption as RSAF Doctrine.

The development of SAF doctrine comes under the purview of the Joint organisation. Air force level doctrines are developed within the Air Force doctrinal process and where participation with other services are required bi-Service forums are held. Doctrinal imperatives are not necessarily top down, perhaps as a throwback from our early days of development. Currently Air Force doctrines are classified as operational doctrines and tactical doctrines. We consider operational doctrine as that which provides the methods and approaches for operational tasks at the Air Force level. It basically answers the question of what needs to be done. Tactical doctrine is a translation of operational doctrine at the squadron/unit level, covering tactics which are unique to aircraft/weapon/equipment type. It essentially answers the question as to how things are to be done. I must add though, that in some cases we have had to argue that tactical doctrines which had been written earlier had assumed principles of operation doctrine that were codified later.

**RSAF DOCTRINE ORGANISATION**

The RSAF doctrine hierarchy is three tiered. At the apex, is the RSAF Doctrine Committee (RDC). RDC is the approving authority for all Air Force doctrine. The Committee is constituted by the principal heads of Departments and Formation Commanders and is chaired by Chief of Air force. The RDC also directs the implementation of approved doctrines into the training system.

Subordinating to this Committee is a Working Group constituted to discuss and work out for approval all doctrinal matters. The Committee is chaired by the Head of Air Operations and has representations from the principal Formations and Bases. This Committee discusses doctrinal issues that have arisen in the course of training and exercises and also identifies areas that need to developed. The Committee also considers the consistency of air force doctrines with any new development at the SAF level and provides guidance for documentation. Further this Committee is empowered to approve all tactical doctrines.
Tactical doctrines are developed by the Formations or Bases. Each Formation or Base has a Doctrine Committee headed by the Formation or Base Commander to consolidate the effort. Tactical doctrines are required to be consistent with operational doctrines.

Members are appointed to each of the Committees on the basis their ability to best contribute the effort. The Doctrine Development Branch at RSAF Headquarters provides the secretariat for the two main Committees and provides a member to the Formation or Base Committee.

AREAS OF FOCUS

Operational Doctrine

The RSAF has adopted a functional approach to the classification of these doctrines. Doctrines are developed for what would be roles in the RAAF context, for example, Air Defence, Counter Air Operations, Strategic Interdiction, etc. This approach was adopted possibly due to the way we have developed. Currently the emphasis is on participation operations. By this I mean Air Force participation in the Land and Maritime operations. Here the combined exercises that RSAF participates in with friendly countries such as those in the FPDA have been particularly useful. EXERCISE STARFISH for example, an FPDA maritime and air exercise, gives us the opportunity to work with the major surface units and aircraft of these countries. Similarly EXERCISE MERLION gives us a perspective of working with both the US and our own Navies.

Doctrine discussions with the Army and Navy are held at bi-Service Departmental levels and cleared with their respective Service Headquarters.

Updating Tactical Doctrine

As the Air Force upgrades, so there is a need to update tactical doctrines. As we are the users as opposed to the initiators of technology, adapting to one’s operating environment has to be a deliberate process. Our special constraints, which I mentioned earlier, makes it all the more challenging.

Doctrine Dissemination Process

Equally challenging as formulating doctrine is the issue of disseminating doctrine in useable form to the different levels of the Air Force. It is vital that we are able to get the users to understand why they operate the way they do and to get feedback as to what needs to be reviewed. In this area I understand that the Air Power Studies Centre has mooted several ideas.
and we would be looking forward to discussing them during the workshop.

CONCLUSION

Doctrine is a developing area in the RSAF. I hope I have been able to give you an insight into our considerations, our doctrinal process and some areas of focus. It remains for me to thank the APSC for their kind invitation and I look forward to participating in the Workshop with all our friends here.
AIR DOCTRINE DEVELOPMENTS IN TNI-AU

Presented by Kolonel Ariyanto
Tentara Nasional Indonesia - Angkatan Udara
Republik of Indonesia

INTRODUCTION

In order to be able to understand the existence of a doctrine in the Indonesian Armed Forces (ABRI), particularly in the Indonesian Air Force (Tentara Nasional Indonesia - Angkatan Udara or TNI-AU), a certain way of thinking is required. This is mainly due to the difference between the Indonesian Air Force and the air forces of other countries.

TNI-AU is an integral part of ABRI and is the main component of the state defence and security force in aerospace and functions both as a defence and security force and as a socio-political force.

The position, task and function of TNI-AU as stated above, will in turn form the basis in preparing doctrine, which functions as the guidelines for TNI-AU.

In order to acquire a broader understanding, a brief explanation concerning the implementation of Indonesia's State Defence and Security Politics, will be given. It is derived from a higher level doctrine and one of the sources in developing doctrinaire regulations.

The implementation of the State Defence and Security is based on Pancasila, the philosophical basis of the Indonesian State as mentioned in the fourth preamble of the 1945 Constitution. The State Defence and Security is a national defence and security effort, involving all national potential and forces in defending the freedom and sovereignty of the state, the unity and cohesion of the nation and territorial integrity, and the achievement of national objective.

INDONESIA’S STATE DEFENCE AND SECURITY PRINCIPLES

The implementation of State Defence and Security is based on principles derived from ideological, constitutional and conceptual foundations, which covers:

- The people of Indonesia should have equal rights and duties in the defence of their country.
• The defence of the nation is the privilege and responsibility of every citizen.

• The people of Indonesia love peace, but they love their freedom and sovereignty more.

• The people of Indonesia are against any form of colonisation and adhere to a free and active foreign politics.

• The form of resistance in defending the freedom and sovereignty of the country, has the characteristics of in totality, territorial and manifested in the total people's war.

• The Indonesia people's armed struggle is accommodated in the Indonesian National Force (TNI = Tentara Nasional Indonesia) with the Armed Forces as the core, in its peacetime manifestation.

• The unarmed struggle of the Indonesian people is the total aspect of life of the people in supporting the armed struggle to achieve its objective.

THE AIM OF THE STATE DEFENCE AND SECURITY

The aim of Indonesia's State Defence and Security is to ensure the existence of the Unitary State of the republic of Indonesia based on the Pancasila and the 1945 Constitution, against all kinds of threats both from internal and external sources and to secure the efforts in achieving our national objective.

THE FUNCTION OF THE STATE DEFENCE AND SECURITY

In order to be able to achieve the objective of the State Defence and Security, the following functions are implemented:

• maintain and enhance national vigilance;

• maintain and enhance territorial unity and all aspects of national life;

• maintain and enhance the national resilience by developing the awareness of having a society, a nation and a state;

• maintain and enhance public security and order and enforce state's law;
• maintain and develop the capability and force of the State's integrated defence in the effort to develop Total People's Defence and Security System;

• maintain and enhance the solidity of the integration among the Armed Forces, and between the Armed Forces and the people; and

• develop a strong State defence and security force, manifested in TNI with ABRI as the core.

**INDONESIA’S STATE DEFENCE AND SECURITY EFFORT**

State Defence and Security Effort covers the following:

• **Defence Effort** - active defensive actions to negate any forms and manifestations of external threats and continuously develop and maintain national deterrence.

• **Security Effort** - active and preventative actions to negate any forms and manifestations of internal threats and continuously develop and maintain national deterrence.

**THE ROLE OF THE INDONESIAN ARMED FORCES**

In relation to State Defence and Security effort, the roles of the Indonesian Armed Forces are:

• ABRI as a defence and security force, manifests the readiness and responsiveness of the state and nation in implementing state defence and security, by taking initial actions against any threats and also guides the people in conducting the total people's defence.

• ABRI as a socio-political force, manifests the call of duty and determination to participate in determining the objective, guidelines and politics of the state, by putting itself as the vanguard, the stabiliser and the dynamiser in the national effort to fill in the freedom.

In order to be able to implement the dual role as mentioned above, ABRI is developing six main capabilities:

• **Strategic intelligence** - the capability to monitor and evaluate the internal and external strategic environmental developments and the capability to conduct territorial surveillance.
• **Defence capability** - the capability to deter, prevent, hinder and destroy the enemy that intends to invade.

• **Security capability** - the capability to deter, prevent, and take actions or destroy the internal opposing forces that undermine the authority of the government and establish, maintain and safeguard the security and order of the nation.

• **Socio-political capability** - the capability of the ABRI, together with other social forces, to ensure the national stability and to enhance national resilience, in order to facilitate the smooth continuity of the national development.

• **Territorial capability** - the capability to maintain a territorial deterrence in supporting the state defence and security interests.

• **Support capability** - the capability to increase the effectiveness and efficiency of conducting the mission of ABRI.

**FORCE UTILISATION**

To ensure the existence of the state of the nation with all the interests thereof and the achievement of the national objective, ABRI is directed to be able to conduct both the defence operation pattern and the security operation pattern. The form of operations utilised in conducting the two patterns are:

• strategic intelligence operations,

• territorial operations,

• combat operations, and

• public security and order operations.

In their implementation, the operations can be conducted individually, supported by or supporting other operations.

The four components of ABRI; the Army, Navy, Air Force and the National Police, in essence has their respective single media capability. From past experience we know that on each operation it is required to have a superiority on every media and that means that each operation should always be conducted through more than one media. In order to achieve the desired operation mechanism, the operations method of ABRI is conducted through Joint Operations or Supporting Operations.
INDONESIAN AIR FORCE

ABRI as the state defence and security manifests itself through the elements developed and maintained by the Army, Navy, Air Force and the National Police. In relation to the state defence and security force readiness, the mission of TNI-AU are:

As a State Defence and Security Force

- To implement the maintenance of air power in order to be able to defend the integrity of national air territory.

- To implement the maintenance of air security and enforce law in the air.

- To support the implementation of Army, Navy and National Police missions.

As a Socio-Political Force

- To secure and ensure the success of the national struggle to fill in the freedom.

- To encourage any effort to escalate the welfare of the people of Indonesia.

- To encourage and expedite the development of democratic and constitutional life in every aspect of national development.

To support the implementation of its mission, TNI-AU has these functions:

As a State Defence and Security Force

- To conduct initial actions through aerospace media against any form of threats.

- To secure and enhance law in the air.

- To guide and train the people in conducting the task of state defence and security in aerospace.

- To maintain the capability and the force of state defence in conducting the state defence and security in aerospace.
As a Socio-Political Force

- To secure, guard and implement the state ideology Pancasila and the 1945 Constitution.

- To participate in the decision making regarding government and state matters in the framework of developing constitutional and democratic life.

- To secure and ensure the success of the national development.

- To maintain and develop a national unity, dynamic and solid national stability to ensure the success of national development.

- To implement social communications with social organisations and socio-political forces.

TNI-AU MAIN CAPABILITIES

To support the realisation of ABRI's six main capabilities, the efforts to develop TNI-AU are directed toward five main capabilities of TNI-AU, as follows:

- **Air Operations Basic Capability** - covers the capabilities of: Strategic Air Assault, Aerospace Defence, Counter Air, Air Interdiction, Close Air Support, Special Air Operations, Airlift, Air Surveillance and Reconnaissance and Maritime Air Strike.

- **Air Operations Special Capability** - covers the capabilities of: Air refuelling, Electronic Warfare, Early Warning and C3I, Air Intelligence, SAR, Psychological Warfare, Weather service and Combat Documentation.

- **Air Potential and Air Mindedness** - the capability to develop and maintain such awareness.

- **Support Capability**.

- **Socio-Political Capability** - includes general and special Armed Forces socio-political capabilities.
ENGAGEMENT STRATEGY

The existence of TNI-AU is essentially due to the existence of the aerospace as a media of struggle. The consequence of being an integral part of ABRI, is the existence of interrelations between the mission, objective and strategic aim of TNI-AU with the strategic conception of ABRI. Therefore, the strategy and form of TNI-AU operations should always be interrelated and synchronised to the strategic conception of ABRI.

Referring to the five main capabilities of TNI-AU, the strategic objective that has to be achieved and the strategic approach steps, the engagement strategy of TNI-AU are as follows:

- as the State Defence and Security Force, through air deterrence, air supremacy and air strike; and

- as the socio-political force, through the strategy of establishing, controlling and consolidating socio-political conditions.

CONCLUSION

The sources of doctrine regulations in TNI-AU are the ABRI's Doctrine of Struggle and the Republic of Indonesia's Doctrine of Defence Security. The regulations will be developing in accordance with the demand in strategic environmental developments and the progress in science and technology, but still in Total People's Defence and Security context. Although the mission of the TNI-AU has a specific characteristics with differentiate it from other Air Forces, namely maintaining the National Aerospace power potential and as one of ABRI's socio-political forces, TNI-AU is also developing its universal capability. Foreign influence can be absorbed and utilised as far as it is not in contradiction to the national and state values.
DOCTRINE DEVELOPMENTS IN THE RTAF

Presented by Group Captain Pongpan Tepsuporn
Thai Air War College
Royal Thai Air Force

First of all, I would like to thank the Royal Australian Air Force and the Air Power Studies Centre for the warm invitation extended to me. It is a great opportunity and a privilege for me to be standing in front of you, here in one of the world's leading countries and in front of the key persons of your respective Air Forces.

My presentation today will be on doctrine developments in the Royal Thai Air Force (RTAF). I will also talk about the structure of those developments, how and from where we derived our present air power doctrine and last but not least, the doctrine itself.

We, the RTAF, have long been trying to develop our own air power doctrine - this is, separate from the Americans. The reason for this is because the United States operates on a global scale, while our operations are likely to be more localised. Additionally, the nature of our environment is almost totally different, especially when you compare the vast desert in the Gulf War for example to the thick jungle in my region.

BASIC CONCEPTS

Our basic idea of deriving air power doctrine or the best way of employing air power is done through the combination of three important factors. We consider:

- the characteristics which encompass the nature of air power;

- the ideas, concepts or the theory of how to win the air war with maximum benefit and minimum loss; and

- the history of war and air power which actually becomes a real life test for our doctrine. This is because war is nothing but a clash of doctrines - theirs against ours.

So in this process of deriving the doctrine with these three factors, you can clearly see that doctrine should not and must not be stagnated because, even if only one factor changes, our doctrine will also need to be changed. One of the dangers is that if you let your doctrine stagnate by not updating it, you will be behind your adversaries.
AIR POWER CHARACTERISTICS

Now let me turn our attention to those three factors. Let us first have a look at the air power characteristics or the nature of our 'tool' to win the war.

Air power has speed that is presently unmatched by land power or sea power. We can be over targets within minutes.

Range is another benefit when compared to land and sea power. Especially with refuelling tankers, air power can reach anywhere in the world. It is truly global.

The most unique characteristic could probably be its flexibility. You can change your target almost anytime, even after launching your air power. You can choose where, when, and how much fire power you would like to place on your targets.

Not only is it a devastating weapon, but air power is also a highly precise weapon, both in terms of air-to-air and air-to-ground.

AIR POWER CAPABILITIES

Let's now have a quick look at the air power capabilities or what it can do. The key capabilities are:

• **Responsiveness.** Air power can be responsive to all kinds of environments and is also time responsive.

• **Mobility.** Aircraft can be mobilised, deployed or dispersed in order to meet the mission, and they can be deployed quickly.

• **Survivability.** The nature of speed and precision combined with sophisticated modern technology increase the survivability of air power against the enemy's weapons.

• **Presentation.** Air power can appear quickly and be ready to use immediately. This is deterrence.

• **Penetrative Ability.** Air power can penetrate into the enemy's heartland without any restriction due to time or weather.

• **Destructiveness.** Air power is a highly destructive weapon and can be used against all kinds of targets.
• **Observation.** Aircraft can be widely used as an observation platform. This can be done over land and sea, both in peacetime and war by utilising the aerial picture and modern electronic processes. Aircraft can also be extremely useful in observing the enemy’s movements and gathering data.

**AIR OPERATIONS**

Now let me turn your attention to the second factor. There are two elements in air operations - strategic and tactical. We in the RTAF strongly believe that no air operations with acceptable losses can be initiated before air superiority is gained. This is because you will undoubtedly be confronted intensively by the opposing air force. Only after air superiority is gained (regardless of what level of superiority, be it local, theatre or total air supremacy) can all other air operations be initiated. With this basic idea in mind, we came up with the following prioritised objectives for air operations:

• air superiority,

• air strike (be it air interdiction or close air support), and

• joint operations.

Our key factors to success must be developed hand-in-hand. These are:

• quality of our personnel,

• advanced technology, and

• tactics.

**HISTORY AND RTAF DOCTRINE**

I would now like to consider our third factor - the history of war and in particular, the air war.

Famous strategists in the past, like Sun Tzu, Clausewitz and 'Billy' Mitchell can be quoted. Examples from Sun Tzu are:

The best way to win a war is winning without having to fight (the basic idea for deterrence).
Know your enemy and know yourself.

Additionally, the Clausewitzian trio of fog, friction and chance, in my opinion, did not really have much impact on the development of air power doctrine.

Billy Mitchell's idea of 'unescorted bombers will always get through' proved fatally wrong in World War II when the German Luftwaffe inflicted heavy damage on the unescorted US bombers.

Lessons learned from the World War I, the Korean War, the Middle East Wars, Vietnam, the Falklands War or the Gulf War all proved that no major operations can be successful when the enemy is still enjoying air superiority. Conversely, no war was lost militarily when we have the air superiority.

RTAF DOCTRINE

Now that I have talked about the three factors that influence the development of doctrine, I will turn specifically to the RTAF doctrine.

Basic doctrine is what we believe is the best way to employ air power. This includes:

- a recognition of air power's characteristics; and

- the RTAF principles of war, which are:
  - Objective,
  - Offensive,
  - Concentration of Force,
  - Economy of Force,
  - Surprise,
  - Security,
  - Unity of effort,
  - Manoeuvre,
  - Simplicity, and
  - Morale.

At the operational level, our missions are classed as Strategic Air Operations and Tactical Air Operations. Strategic Air Operations include Air Superiority and Air Strike. Tactical Air Operations include the following six tasks:
• counter air operations,
• air interdiction,
• joint operations,
• air reconnaissance,
• airlift, and
• specialised tasks.

DEVELOPMENT OF JOINT DOCTRINE

The development of joint and combined doctrine is now under way. I am sorry that I cannot give you any more information on this issue at this time, simply because it is not at an advanced enough stage.

RTAF DEVELOPMENT

The RTAF is undergoing some changes. We are now in the early stages of developing our capability in various areas. These include:

• acquisition of sophisticated combat aircraft for dual roles,
• stand-off weapons,
• improvement of Royal Thai Air Defence System (RTADS),
• upgrading our electronic combat capability, and
• upgrading our surface-to-air defence system.

SUMMARY

I have taken your valuable time in talking about the RTAF structure, doctrinal development, how and from where we derived our present air power doctrine, the three factors that could have some impact on our doctrine and RTAF doctrine itself.
Again I would like to thank the Royal Australian Air Force for allowing me to attend this valuable Workshop and most of all, I would like to thank you the audience for your precious time.
AIR DOCTRINE DEVELOPMENT IN THE PAF

Presented by Colonel Emmanuel Navarrete
Commander 1st Air Division
Philippines Air Force

INTRODUCTION

The significant trend in defence capability build up in the South-East Asian region coupled with the irreversible decline of the communist movement and the decline in internal security operations in the Philippines, dictated the need for the Armed Force of the Philippines (AFP) to shift to an external national defence mode. The Philippines Air Force (PAF) in particular, is now gearing up towards a more aggressive doctrine development program as well as reviewing, updating and validating these concepts.

The re-activation of the Office of Special Studies (OSS) which is considered the strategy and doctrine centre of the PAF was the first step towards the gigantic task of developing, revising and updating air power doctrine and PAF strategies so that the vision of the AFP for the year 2000 can be realised.

ORGANISATIONAL STRUCTURE

The doctrine organisational set-up establishes links between the various components of the PAF doctrine process. These components are the PAF Doctrines Board, the PAF Doctrines Study Group, and the PAF Chain of Command.

The inherent function of the Command carries with it higher level of responsibilities in doctrine formulation and development. Hence, the doctrine body of the PAF is composed, at the highest practical level, by experienced members in the PAF Command.

PAF DOCTRINES BOARD

To provide impetus to the dynamic development of doctrine, the PAF Doctrines Board was created. The Board composition is shown in Table 1.
<table>
<thead>
<tr>
<th>APPOINTMENT</th>
<th>POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vice Commander PAF</td>
<td>Chairman</td>
</tr>
<tr>
<td>Chief of Air Staff</td>
<td>Vice Chairman</td>
</tr>
<tr>
<td>ACoFAS for Pers A-1</td>
<td>Member</td>
</tr>
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<td>ACoFAS for Intel A-2</td>
<td>Member</td>
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<td>ACoFAS for Log A-4</td>
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</tr>
<tr>
<td>ACoFAS for Plans and Prog A-5</td>
<td>Member</td>
</tr>
<tr>
<td>ACoFAS for Ed and Trng A-8</td>
<td>Member</td>
</tr>
<tr>
<td>Director, Office of Special Studies</td>
<td>Member</td>
</tr>
</tbody>
</table>

Table 1 - Composition of the PAF Doctrines Board

The PAF Doctrines Board has the following duties and responsibilities:

- to approve PAF doctrines;
- to review the status of PAF doctrines for its validity and relevance;
- recommend to the CG, PAF approved doctrines for signature;
- through the Vice Commander, refer rejected proposals back to the PAF Doctrines Study Group for further action; and
- initiate the implementation of endorsed doctrines through the chain of command.

PAF DOCTRINES STUDY GROUP

To ensure orderly staffing and coordination of doctrinal review and other proposals, the PAF Doctrines Study Group with the Office of Special Studies as its secretariat, was created. The Group composition is shown in Table 2.
<table>
<thead>
<tr>
<th>APPOINTMENT</th>
<th>POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director, OSS</td>
<td>Chairman</td>
</tr>
<tr>
<td>Ex-O, A-3</td>
<td>Vice Chairman</td>
</tr>
<tr>
<td>Ex-O, A-1</td>
<td>Member</td>
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<td>Member</td>
</tr>
<tr>
<td>Ex-O, A-8</td>
<td>Member</td>
</tr>
<tr>
<td>Assistant Director, OSS</td>
<td>Member/Secretary</td>
</tr>
</tbody>
</table>

Table 2 - Composition of PAF Doctrines Study Group

The Group has the following duties and responsibilities:

- to represent the different units, staffs and other agencies of the PAF in reviewing doctrinal changes;

- review proposed doctrine changes referred to the Study Group for further disposition;

- submit reviewed and evaluated doctrinal changes to the PDB;

- recommend to the PDB the progression or termination of doctrinal proposals;

- through the Director OSS, task project teams and appoint team heads for the review and evaluation of assigned doctrinal projects; and

- act as a consultative group on doctrinal matters for the PAF and the other major Services.

The PAF Chain of Command provides the required links for initiating, processing and the staffing of doctrinal changes. The chain provides a two-way communication link in the processing of proposed doctrinal revisions from initiation to implementation. The built-in check and balance in the PAF Command chain provides the basis for the orderly control of doctrine development and review. The chain of command will
therefore be fully harnessed to achieve relevant and quality doctrinal output.

The formal Doctrine process is depicted in Figure 1.

![Flowchart of the Doctrine Process]

**Figure 1 - The Doctrine Process**

**THE DOCTRINES DEVELOPMENT SYSTEM**

The PAF Doctrines Development System sets the direction and procedures for developing and revising PAF doctrine to its final written form. Moreover, the system identifies the authorities and responsibilities in the development of doctrine in the PAF to ensure a smooth and systematic approach. The system integrates PAF air power concepts, strategies and doctrines using the PAF Doctrines process.

**FORMULATION**

Each member of the PAF has the responsibility to contribute to doctrinal development. Hence, an individual member or group may initiate formally or informally the development of new or revised doctrine.
In addition, the PAF adopts the project team approach in developing and revising doctrine. The team is composed of experts and specialists in their respective fields. It is this group that writes and presents the proposed doctrine to the Doctrine Study Group, which in turn reviews and then presents the final document to the Doctrine Board for approval.

**REVIEW/TESTING/EVALUATION**

PAF field units are tasked to test and evaluate proposed tactical doctrines relevant to their organisation. Likewise, review and evaluation of functional doctrine is the province of respective staff family. The PAF Doctrine and Study Group is also accorded the responsibility of reviewing proposed doctrinal changes referred to the working group for further disposition. Testing and evaluation of joint doctrine will be a coordinative effort among the concerned major Services.

**PUBLICATION AND DISSEMINATION**

The OSS has the authority to publish doctrinal manuals and disseminate them by:

- providing lectures to BAFOC, SOC, and AFCSC;
- providing lectures to Philippines military academies/schools;
- providing lectures to universities and interested community groups within the Philippines;
- contributing articles to defence journals and periodicals; and
- circulating developed doctrine manuals to appropriate units and other organisations within the AFP.

Moreover, it is an inherent responsibility of the PAF Chain of Command to ensure dissemination to the grassroots level of the PAF hierarchy.

**VALIDATION**

Three levels of validation occur in the doctrine development system. The first level involves the validation by unit/staff to which the doctrine is applicable. The PDSG serves as the intermediate validating group before the doctrine is passed on the PDB for final validation.
THE DOCTRINE DEVELOPMENT PROGRAM

The doctrine development program of the Air Force involves the developing, revising and updating of air power concepts, PAF strategies and doctrines that are consistent with the AFP strategy towards the end of the century. Such development is designed to fit into the AFP modernisation program.

The PAF will embark on three major projects to develop and integrate PAF air power concepts, strategies and doctrines. These are the Air Power Manual, Doctrines Development and Doctrines Updating Program.

The Air Power Manual

The development of an Air power Manual is envisioned to encapsulate the historical development of air power in the Philippines, the generally accepted concepts of the application of air power and the numerous air power roles for offence, defence and support to combat forces.

This Air Power Manual will be a permanent document that would serve as the basic guide in understanding the importance of air power in the defence of the Philippines.

To realise this project, two PAF officers were attached to the RAAF Air Power Studies Centre in Canberra, Australia from April to July 1995 to develop the PAF Air Power Manual.

The Doctrine Updating Program

This program will be a continuing process which cold run through the AFP Modernisation Plan period. The majority of existing doctrines of the PAF need updating to conform with present developments in technology in terms of airframes, engines, avionics and weapons systems. These technological advances have exerted considerable influence on the conduct of war in the air, hence, there is a need to redefine and reclassify roles, tasks and operational missions of the PAF.

With the PAF doctrine process in place, an intensive updating of doctrines has started and will be pursued. Appropriate project teams will be created to simultaneously revise all doctrinal manuals that may need review, modification and validation.

Colonels Vic Bunuan and Paul Durano were attached to APSC from 19 April to 20 July 1995.
Priority for updating PAF tactical doctrines relate to the day-to-day operational environments of deployed/operating tactical forces. Updating of existing joint doctrines will be in cooperation with other major Services.

Doctrine Development

The development of new doctrine will be in anticipation of the acquisition of new capabilities. Priority for development is operational doctrine which has significant bearing on the application of air power. Again, this will not only contain the traditional concepts and application of air power, but would ideally, consider modernisation triggered by technology, the requirement to support Government socio-economic programs and the civil-military joint user concept. Development of joint doctrine will be in cooperation with other major Services.

RECENT DOCTRINAL DEVELOPMENTS

Development of Higher Level Doctrine

The PAF will continue to concentrate on the development of doctrines at the operational and tactical level. Contributions to the formulation of higher level doctrine are given to PAF personnel participating in national defence strategy workshops and membership of the AFP Strategic Planning Committee the output of which (Philippine Defence Doctrine) has been defended and approved in Senate Committee hearings.

The PAF has actively participated in setting the strategic framework on the role of the AFP in support of non-traditional military roles such as socio-economic development which are now exemplified in the national defence policies outlined in Philippines Defence 2000.

Campaign Planning

The exposure of the PAF to campaign planning are derived from two sources. These are the Lambat Bitag Campaign Plan and the Republic of the Philippines-United States Balikatan Exercise.

The Lambat Bitag Campaign Plan is an AFP counterinsurgency (COIN) campaign plan which integrates and employs mainly assets of the Philippine Army and Air Force. Though limited in scope and scale, this campaign plan has provided the PAF valuable inputs to the formulation of doctrines on the local application of air power in joint operations.
The Balikatan Exercise is an AFP-United States Armed Forces Joint/Combined Exercise being conducted in the Philippines every year. This exercise provides a venue for the PAF to participate in and learn about air campaign planning from the more experienced US counterparts. The exercise provides inputs to and planning factors for pursuing a workable campaign involving the sophisticated and highly technical United States system and the less sophisticated AFP forces.

CONCLUSION

PAF doctrine development in the past has evolved at a very slow pace. Hence, most if not all of the published PAF doctrines were overtaken by events and rapid changes in technology. The organisation of the OSS in 1993 has started an upswing in doctrine development and consciousness across the broad organisational structure of the PAF.

Focus on doctrine development is the Air Force’s present thrust of a shift from internal security operations to the national defence concept, force modernisation, civil-military joint-user concept and support for the Government’s socio-economic development program.

We in the PAF hope to succeed in this endeavour, realising that the key to a successful doctrine development program is the collective and cooperative effort among the different levels of the PAF command.
DOCTRINE DEVELOPMENT IN THE RBAF

Presented by Major Napiah
Royal Brunei Air Force

INTRODUCTION

The Royal Brunei Air Force (RBAF) was established in 1965 amidst the growing requirement of providing medical and health services for the interior population not easily accessible at that time by surface transportation. With the initial batch of two Sikorsky S-55 helicopters operated by civilian personnel contracted from the World Wide Helicopter Company, the Air Force has grown up steadily over the years into a more capable and more committed fighting force as required by the nation’s defence policy.

Over the years, our roles have not changed tremendously due to our limited air assets and capabilities. Presently, the Air Force maintains its dual function of providing air support for the security forces as well as supporting the development of the nation. However, at the moment, the Air Force in line with the nation’s defence policy which is not yet fully established, is not adequately structured for large scale operations as would be required in a high level conflict situation due to the limitations of the nation’s defence capacity.

THE THREAT PERCEPTION

The major shift in world politics and, in particular the emergence of economic and national powers in our region notably within and surrounding the South China Sea, have altered the strategic circumstances and strategic interests of the nations concerned. Interests in the South China Sea region have grown tremendously to the extent where on several occasions it just fell ‘short’ of military conflict in the supposedly Zone of Peace, Friendship and Neutrality (ZOPFAN). These shifts in policies and occurrences taking place in an area just short of our Exclusive Economic Zone will, more than likely, have great impact on Brunei Darussalam’s national strategies and defence policy.

Unlike countries such as Australia and New Zealand where military threats from external powers are considered remote due to their geographic location, the same cannot be applied to Brunei Darussalam. The development taking place to the north of our country is of great concern not only to us but to our neighbouring countries. Any spill over from conflict will have a significant effect on Brunei Darussalam’s offshore
resources and this will have direct implications on the national security issues. With this in mind, it is anticipated that the Royal Brunei Armed Forces’ future roles will be even wider and more challenging.

It is the objective of all independent and sovereign nations like ours to maintain their status quo by remaining free from any aggression and achieve relative security. It appears true that in this modern high technological era, achieving absolute security is merely an illusion. Thus, no nation state is absolutely free from real or hypothetical threat. While we envisage there are presently no immediate threats to Brunei Darussalam, our general threat perception has always been based on the following worst case scenarios:

- an external attack, presumably aimed at taking control of the nation’s oil wells;
- insurgent or guerilla activity aimed at overthrowing the Government and backed by external power;
- terrorist activity involving seizure of aircraft or other vital installations like oil rigs or other soft objectives as a political gesture; and
- mass refugee influx from any neighbouring conflict causing internal unrest.

**THE PRESENT ROLES**

As mentioned by our representatives during the last Regional Air Power Workshop in Darwin\(^9\), the roles of air power in Brunei Darussalam are still at an early conceptual stage. These roles can only be fully established once our acquisition of new aircraft is completed. Presently, the Royal Brunei Air Force has the following roles to perform:

- To act as a deterrent in conjunction with other services, to any outside power intending to intervene directly or indirectly in the state, and to any subversive elements, actual or potential, operating within the state.
- To be prepared to support other services to undertake operations to counter aggression, terrorism, or insurgency.

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\(^9\) Major Zainal Hj Harun, RBAF presented a paper entitled Regional Air Power Cooperation - A Brunei Perspective in Waters & Lax (eds), *Regional Air Power Workshop, Darwin 23 to 25 August, 1994*, Air Power Studies Centre, Canberra, 1994, pp 123-125. Major Zainal was accompanied by Major Mohd Rashid bin Asut, RBAF.
• To support the Royal Brunei Police Force and civil power in maintaining public order.

• To support Government Ministries in the development of Brunei Darussalam such as the protection of the nation’s economic resources.

• To patrol the air and sea areas of Brunei Darussalam for signs of activities such as illegal immigrants, illegal logging, illegal fishing, and smuggling of contraband.

• To conduct National search and rescue operations.

• To carry out training and exercises, whether individually or collectively to enable us to perform the above roles more effectively.

THE AIR DOCTRINE - PAST AND PRESENT

Since its formation, the Royal Brunei Air Force has not perceived a need for an air doctrine policy, therefore, a recognised, more accepted and fully recorded air doctrine is needed on which a common framework could be based for the planning and employment of its air assets. The lack of air assets and air capabilities along with our limited roles are cited as the main reasons for the absence of the air doctrine policy.

Although British servicemen have been stationed in Brunei Darussalam for quite some time, the ‘partial’ usage of their air doctrine, (apart from joint exercises involving the Royal Air Force (RAF) air assets) has never been considered or tried with our own assets. When the British Government was still involved in the nation’s defence prior to our full independence, it was anticipated that should a requirement arise, the employment of RAF air assets to counter any threats would have to be based upon the RAF air doctrine policy. When Brunei Darussalam assumed full responsibility of the nation’s external affairs in 1984, the RAF air doctrine was never again considered for our use due to its unsuitability. We could not use the RAF concepts of air power as we do not have the same capability. The standard operating procedure booklet which has been in use since the formation of the Air Force is the only document available to us which is close to an air doctrine. However, the standard operating procedure is merely a guideline on the procedure for the conduct of our tasks, and therefore, is updated from time to time to suit our requirements. These procedures are more biased towards operating techniques rather than tactics.
FUTURE AIR DOCTRINE

Although the strategic location of Brunei Darussalam, not to mention its size, will still dictate the need for alliances with other nations, the need to enhance our combat capabilities is still a major priority. The requirement to establish our own air doctrine specifically tailored to our needs is becoming more apparent. The impending acquisition of fighter aircraft, maritime patrol and transport aircraft and medium-heavy lift helicopters will make it even more essential. The air doctrine policy though merely a guide, will provide a focus for strategy and planning for the conduct of our air operations, and it will form a baseline that enhances understanding not only for Royal Brunei Air Force personnel, but for the Royal Brunei Armed Forces as a whole.

The doctrine will also provide the basis for commanders at all levels to determine how the Air Force's limited air power can be best applied in the defence of the nation, or in the achievement of national objectives. The experience that we have gained in almost thirty years of existence should provide us with the enduring foundation required of an air doctrine policy, and creative innovations by commanders at all levels should provide us with the dynamic directions required when establishing an air doctrine concept.

Although the Royal Brunei Armed Forces are more attuned to joint military operations, the Air Force still postulates a separate doctrine. As in any joint operation, the Air Force must exploit its own combat power in order to carry out the specialised roles and tasks unique to its own operating environment. Different Services within the Armed Forces also have separate force structures, different skills and tactical thinking. Therefore, the development of an Air Force doctrine is necessary to the development of a joint doctrine. The Air Force doctrine will provide a strong foundation from which a joint doctrine may be derived. When developing a joint doctrine, it must never be forgotten that the use of air power is not restricted purely to joint actions in achieving joint objectives. People must be made to understand that air power may be employed independently of other combat resources.

The Royal Brunei Air Force must re-examine its present function and roles, reorganise its force structure, and reassess its threat perception as these, together with the nation's defence policy, will be influential and determinant factors when establishing the air doctrine policy. To start with, a proposed air doctrine can be derived from a 'borrowed' doctrine, and suitably modified to suit our operating requirements so that our limited resources and capability can be best applied in specialised roles such as air defence, either independently or in support of other combat powers. This way, the Air Force will be receiving the best return for the heavy investment it is going to make towards a complete and more credible air power capability.
Future functions and roles of the Air Force would also need to be established, especially on how the Maritime Patrol Aircraft (MPA) and fast jets are going to be employed during peace time. All this must be achieved without arousing the suspicions of our neighbouring countries, which could eventually lead to further diplomatic turmoil in the already turbulent South China Sea. Therefore, it is essential that the air doctrine policy should cover employment of our air assets both in peacetime and in a conflict.

In any major conflict involving air assets, we have to admit that the Air Force will be lacking in its capability to have total control of the air, be it the ability to counter air threats at source or on the approaches to Brunei Darussalam. The presence of RBAF aircraft, complemented by the Air Force Regiment’s Rapier surface-to-air missile system could act as a deterrent, thus minimising any possible air threats directed towards our nation. The fast jet aircraft air bombardment roles may also be limited by our choice of aircraft. Nonetheless, such aircraft are still considered quite effective against ‘local’ targets. It would be in the air support role of other combat forces that our air assets would be most effective and the air doctrine will have to cover this area with clarity and detail.

The RBAF’s present main priority is to get the infrastructure in place prior to the arrival of the new fighter and MPA. These assets will need to be protected against air and ground attack, and the defence of the operating infrastructure must also be well documented in the air doctrine policy as these in time of conflict would become prime targets in any level of warfare. The arrival of these aircraft in particular the MPA will provide the much needed platforms for aerial surveillance and intelligence gathering which the Air force is presently lacking. Our northern sea approaches demand a surveillance system which can continuously scan and swiftly identify any target it detects. The MPA will have the main task of exercising control over the coastal waters and to provide aerial surveillance over the entire continental shelf within and beyond the 200 nautical miles Exclusive Economic Zone. With these capabilities, timely information can be obtained on military and illegal activities that could threaten both the economic and security state of Brunei Darussalam. They will also be a great asset in helping to provide a realistic assessment of the nature of regional military activities and potentialities. Therefore, the employment of this very valuable asset will certainly dominate the contents of the air doctrine policy.

Importantly, air doctrine will have to be based upon joint operations, be it in support of the Land Forces or the Navy. After all, air power, like sea power and land power cannot win the war alone. Any joint operations with the Land Forces are most likely to be in the form of counter insurgency, guerilla warfare and counter terrorism. This is where the helicopter squadrons can be employed either independently as a unit or as a task organised group that is augmented with ground or other forces.
In such operations, the air force's helicopters, due to their mobility, could rapidly reposition troops, supplies and equipment. The employment of armed attack helicopters for close air support of land operations is another area where this air doctrine should also be focused. It is expected that close air support operations will be less successful against small fleeting targets under the jungle canopy where they are difficult to identify and even more difficult to hit. Close air support operations are more likely to be successful against static or slow moving targets such as ammunition dumps or vehicles in open terrain. However, in an open ground battlefield situation, close air support operations are considered highly dangerous where the attrition level could be high, especially when the enemy is equipped with shoulder fired surface-to-air missiles systems. Perhaps a sound policy within the air doctrine concept could provide the understanding necessary for commanders to act upon.

CONCLUSION

As a small nation state, security vulnerabilities remain high on our agenda. Based on our present threat perception, whether real or hypothetical, there is a growing requirement to enhance our air capabilities. With an increase in our air capabilities, the RBAF will need to produce its own air doctrine policy to provide commanders at all levels with a guideline on the employment of our air assets. The derived tactical air doctrine should be based on our limited capability and should be more defensive in nature in line with the nation's non-aggressive and non-hostile defence policy, but could be used offensively when the security of the nation is threatened. The effectiveness of air doctrine can then be tested during training directives whether individually or joint with other Services. At its earlier stages of development, although considered authoritative, the doctrine will require judgement in its application and will require continual refinement and reappraisal. This will ensure that the doctrine would remain complete, balanced and valid in changing circumstances.

For a host of reasons such as our small size in terms of population and forces, the proposed air doctrine should cover our operational requirements in low level conflicts such as internal security problems. Any counter measures on regional threats are expected to exhaust our air assets, and therefore, the best solution for the nation's survivability would be to seize the initiative from the would be aggressor, not through military action but through diplomatic means. In peacetime, the gap in the nation's security vulnerabilities can be narrowed through the adoption of 'confidence building' measures such as visits and seminars, as well as training and exercises with the Armed Forces in this region, thus achieving the nation's first line of defence through friendship and cultural links.
We have to realise that the RBAF still has a long way to go before it can produce its very own air doctrine policy. We still believe that, no matter how small our Air Force, we still need to produce our own air doctrine concept to educate not only members of the Armed Forces, but also members of the public on what war and air power is all about. It will also give them the opportunity to comment on the contents and hopefully assist in improving it. Plenty of effort will be required to produce such a document, and we believe by attending seminars and workshops such as this, it will give us a head start and a sound foundation in the development of that doctrine.
DOCTRINE DEVELOPMENT IN THE RMAF

Presented by Lieutenant Kolonel Akhtar Zainudin
Royal Malaysian Air Force

INTRODUCTION

The first doctrine of the Royal Malaysian Air Force (RMAF) was promulgated in January 1986, some 27 years after the RMAF was formed. This document entitled 'Basic Doctrine of the RMAF', comprises five chapters stipulating doctrinal principals in the areas of:

- national power and the military,
- RMAF objectives and roles,
- air warfare system,
- organisational structure, and
- training and education in the RMAF.

Various lessons were derived from developing this first 'Basic Doctrine' of the RMAF. Firstly, it is evident that doctrinal work calls for years of experience, hence it took us more than two decades to come up with one; and secondly, doctrinal work requires formal participation from within the chain of command, hence requiring an institutional structure dedicated to the study of doctrinal work.

ACCOMMODATING CHANGE

Having said this, however, it is obvious to everyone here that in the last decade, the concept and conduct of air warfare has undergone a revolutionary change. Principles of warfare have been re-defined by most air forces. In Malaysia, the merging of National Industries with the Military have become a more prominent feature in the formulation of national strategies and goals. The organisational structure of the RMAF has changed to accommodate the latest acquisitions and management of hi-tech equipment. The RMAF's role in 1986 was as a supporting arm for ground forces in Counter Insurgency Warfare (CIW). This has now changed into a conventional role as an air power.
Needless to say, the concept of training and education of RMAF personnel must also be reviewed to accommodate this change in paradigm of the RMAF.

In 1994, the RMAF, with the support of the Government of Malaysia and the corporate sector, initiated an 'Air Power Conference' which was held in Kuala Lumpur. This was to be the first such conference to be organised in the region. In this three day forum, the Malaysian version of the 'The Ingredients of Air Power' was discussed before an international array of participants, concluding with a dialogue session with the Honourable Prime Minister of Malaysia, Dr Mahatir.

**THE RMAF'S AIR POWER MANUAL**

The Air Power Conference set the stage for a new doctrinal study in the RMAF. The RMAF soon formulated an Operations Doctrine Cell in the Air Headquarters, and in August 1995, the RMAF formalised its first 'Air Power Manual'. The fact remains, however, that expertise and experience are key factors in the further development of doctrine.

Having said this, the RMAF is now developing its expertise and experience in operating newly acquired assets and systems. Hence, our newly published Air Power Manual is far from a terminal venture. It formulates a guide in which operational and training doctrines will be further developed and formalised with time.

Contents of the RMAF's Air Power Manual cover the following topics:

- national power and the military,
- aerospace power,
- aerospace warfare system,
- employment of forces,
- organisation of forces,
- human resource development,
- research and development, and
- equipping and sustaining.
CONCLUSION

In essence, the RMAF recognises the significance of doctrinal development in a modern day air force. Positive steps have been taken recently to accommodate a paradigm shift in the concept and perspective of air power in the RMAF. Since the first 'Basic RMAF Doctrine' published in 1986, the RMAF has established an Operations Doctrine Cell in its organisation and has subsequently produced the 'RMAF's Air Power Manual' in August 1995. Further development of operational and training doctrine will evolve with increased expertise and experience in operating newly acquired systems.
DOCTRINE DEVELOPMENTS IN THE RNZAF

Presented by Group Captain Kelvin Crofskey
Assistant Air Commander Operations
RNZAF Air Command

INTRODUCTION

This presentation aims to provoke some thoughts on a structure, or model, for doctrine development. In doing so I hope to illustrate just what air power doctrine development means in a small air force such as the Royal New Zealand Air Force (RNZAF).

At the outset I need to situate the RNZAF. Its mission statement asserts the requirement to maintain a well equipped, professional and effective air force that is capable of conducting air operations, contributing forces sufficient to deal with small contingencies affecting New Zealand, and contributing to collective efforts where our wider interests are involved.

However, first may I thank the Royal Australian Air Force and the Air Power Studies Centre for their invitation to attend this workshop. As I will explain later, such workshops feature on my model as a valuable part of doctrine development.

The skeleton holding my presentation together is the analogy of medical science. I will refer to this throughout.

I will build a doctrine development model by first discussing theory and its part in doctrine development. I will then discuss research and development. Then I will look at information dissemination and training. And to close the discussion of the model I will discuss the application of doctrine by managers and practitioners, and post application analysis by practitioners and academics. All along, I will discuss the RNZAF’s part in this, and will inject points from an analogy to illustrate my views. I will then finish with some observations on possible deceptions for air power practitioners with a concluding reference to the RNZAF.

THE DOCTRINE DEVELOPMENT LOOP

For a start, lets establish my doctrine development model. I define doctrine as a set of principles taught within a discipline as the accepted way of doing something. The model requires a continuous
structure that advances those principles and ensures that they will be applied and continuously developed. The structure comprises a number of steps that I believe are necessary for the substantiation of doctrine. Figure 1 illustrates my model, which I portray as a circle to show its unbroken and sequential nature.

![Diagram of Doctrine Development Loop]

**THE DOCTRINE DEVELOPMENT LOOP**

**THEORY**

The first step on the model is theory. I have used the word theory as a catch-all for the world of learning, within which are bodies of knowledge known as science. The world of learning includes universities and colleges where people pursue a scholastic life at different degrees of knowledge. Some are learning from the text books of others, some are writing the text books of tomorrow, and some are evolving theories and concepts not yet understood.

This is true of medical science where, for example, creative minds attempt to unravel the workings of the human brain. In doing this scientists use the existing body of knowledge and experience as their start point. The knowledge which is repeatedly corroborated by further
studies and experience become the maxims or the basis of the science. These maxims must be studied so that we can best understand that knowledge and how to apply it. The maxims, including the philosophy, guidance, and applications become the doctrine of text books; be they medical or air power.

However, if the science of medicine produced scholars who merely interpreted the existing maxims, mankind will never know the human mind or the mind of the Creator and the universe. What is needed is creative and innovative ideas that seek out new knowledge and new applications of this knowledge. Within medicine, knowledge and practice have become inextricably linked to technology. Medical doctrine cannot stand still, because the combined influence of new knowledge, new technology and innovative ideas refine the maxims. The influence of technology also has a far-reaching effect in air power doctrine.

A well known example of this is the shift in USAF thinking on strategic bombing: from the 1950s - where strategic air power and Strategic Air Command was seen only in terms of nuclear weapons; to today - where precision guided weapons and stealth technology allows strategic air power to be again thought of in terms of conventional weapons.

This didn’t come about just during DESERT STORM, but was the result of innovative minds in Washington or the Nevada Desert putting together new knowledge and new technology to create new applications of combat power and thereby refining the old maxims of air power doctrine.

Within the world of learning, we need people who push the frontiers of knowledge and apply that knowledge within their sciences to update doctrine to new capabilities. Most armed forces have developed links with universities in areas like strategic studies. This may be through Service Academies, Staff Colleges or Study Centres like the RAADF Air Power Studies Centre. A fraternity pursuing a common goal is synergistic in evolving a body of knowledge. Any individual’s study and theories are nurtured by mentors in a quality academic environment.

So where does theory stand in doctrine developments in the RNZAF?

First, the nation does not have the economic strength or will to undertake pure research as the basis for military capability; or for air power. Likewise, the RNZAF is very sensitive to the cost of conventional air power platforms, and we don’t apply any resources to the blending of knowledge and technology to pioneer new air power theory. At best, we develop imported technology to achieve qualitative advantage at the tactical level. Frontier knowledge is the realm of the super economies.
Second, however, the New Zealand Defence Force (NZDF) does support strategic studies through the sponsorship of the Strategic Studies Centre at Victoria University of Wellington, which amongst other things is currently studying the complementarity of regional air forces. The RNZAF does support air power thinking through its own Command and Staff College. Similarly, selected senior officers study at foreign military colleges. These studies include air power and individuals may write papers on the subject. Not to be forgotten is our yearly position at the RAAF Air Power Studies Centre where in 1993 Squadron Leader Stu MacKenzie wrote a paper titled Strategic Air Power for Small Air Forces. Also our Air Staff recently produced an Air Power Doctrine Statement for force development purposes.

In summary, the RNZAF does not develop new air power theory. We study air power maxims for the purpose of professional development, understanding and application. Our conclusions do not necessarily differ from others, but being the smallest of players, our conclusions have little impact on air power theory.

**RESEARCH AND DEVELOPMENT (CONTROLLED TESTS)**

I will now return to my model and the second activity: research and development. Returning also to my analogy of the medical profession, I move from the pure theoretical research to the applied research of medical schools and pharmaceutical companies. The schools and companies are attracted by some new theory and develop it for general use. This step takes a theory from its nebular form and focuses it by research into measurable results; and then develops the process and results into a distinct and useable form. This laboratory research may be on animals and unproven on humans but unlocks the way to general knowledge and general use.

The same step applies to the development of air power doctrine. The secret testing of precision weapons and stealth technology came before any public change in strategic bombing doctrine. The ADF has long recognised research and development. The Australian Defence Science and Technology Organisation (DSTO) establishments at Salisbury are examples of applied research and development.

The NZDF maintains a Defence Scientific Establishment (DSE) to contribute to defence research in various international forums. The RNZAF contributes to international forums such as the Air Standardisation Coordinating Committee (ASCC), the Combined Communications and Electronics Board (CCEB) and The Technical Cooperation Programme (TTCP). The importance of contributing to research and development or trials is well recognised by the RNZAF,
and we have recently agreed in principle to assist in a trial to evaluate an advanced laser warning receiver by providing the airborne trial platform.

In summary, the RNZAF contributes, within it resource limitations, to international research and development thereby adding to the collective knowledge and experience that transforms theory into a practical form.

**INFORMATION DISSEMINATION AND COLLECTION**

Once again turning to my model, I again pick up my medical analogy to illustrate the importance of my third step: information dissemination and collection. In New Zealand, University Medical Schools have an association with the local hospital and by a system of senior lecturers, registrars and training wards, medical research is disseminated into guidance, instructions and procedures depending at which level the training takes place.

For hospitals not directly associated with the university; lecture tours, specialist training and medical bulletins disseminate new doctrine and guidance for its use. As knowledge and experience is gained by senior specialists, more specific instructions are issued for wider use, until as tried and practised methods the information is found in procedures for general application.

On the receiving end, practitioners must be open to this information and ensure that they are knowledgeable regarding new doctrine and techniques. I think we could all relate stories of the local doctor who never learnt of advances in medicine since his or her graduation from medical school.

The same dissemination and collection of information is essential for all of our Services' knowledge of air power. As mentioned earlier, the RNZAF values its membership of international forums and places priority on attendance at meetings to contribute and learn. As part of this information sharing, the RNZAF values this Regional Air Power Workshop, and welcomes the Air Power Studies Centre's upcoming visit to New Zealand.

Another important part of information dissemination is the general practitioner. Officers in our headquarters need to have an air power orientation. In the absence of a common understanding of air power, capabilities vital for combat effectiveness may be allowed to degrade. This danger is especially acute if many of the skills and capabilities required by war are not required in day-to-day peacetime operations. Reorganisation for peacetime efficiencies can be particularly dangerous.
for air power practitioners. On 1 May 1995, RNZAF Air Command was established, and 11 Planning and Logistics Staff have within their directives the requirement to advise on doctrine pertaining to their areas of responsibility.

In summary, the RNZAF disseminates and collects air power information through international forums, workshops and visits. Within the RNZAF, operational level headquarters staff have clear direction to practice an air power orientation in their staff duties.

**TRAINING**

The fourth activity on my model is training. Any TV viewer in New Zealand is familiar with the North American system of University Hospitals through the popular hospital programme 'ER'. In the TV example, medical students are assigned to departments to learn the practice of medicine based on their earlier study of theory. For TV drama this means emergency room, hands on training for doctors; but the same practical medical training equally applies for nurses and other health professionals.

For air power, the same professional development and understanding of all who apply it is required. For the RNZAF this is our aircrew and officer corps. Professional training is directed at different levels of an officer's career: from single Service training and joint Service training at the tactical level, joint training at the operational level, and national security training at the strategic level.

Air power training starts with basic officer training. *Ab initio* officers are taught the air power maxims, and then in their specialist aircrew, logistics or administrative training they are taught the procedures that embody the principles. These procedures include directions for the joint use of air assets. This is particularly relevant given the size of the New Zealand Defence Force where the RNZAF is responsible for maintaining helicopter and patrol aircraft that larger Defence Forces place with the land and maritime forces. Our size also means that we envisage operations alongside larger allies. Therefore, the RNZAF trains for interoperability, and given our location in the world it should be no surprise that we use ADF joint procedures. Training includes courses at and by the Australian Warfare Centre. Joint training is essential for the airman to learn basic land and maritime doctrine, and for the soldier and sailor to learn basic air doctrine. The RNZAF has recently produced a manual of training for tactical agency staff, which fills a gap in our tactical level professional education.

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50 An American TV hospital drama representing the 'Emergency Room' or 'ER'.
In preparation for operational level duties, selected officers receive training at the RNZAF Command and Staff College, and overseas training at foreign staff colleges including the ADF Joint Services Staff College and the USAF Air War College. Similarly, in preparation for strategic level duties, selected senior officers attend the United Kingdom’s Royal College of Defence Studies and the Australian College of Defence and Strategic Studies.

Air power studies are offered in different forms at the different levels of training. Interpretations of doctrine are provided for the strategic level as guidance, the operational level as instructions, and tactical level as procedures. Officers at the senior colleges study how the strategic security aims of a country are to be achieved and access others’ interpretations as guidance. At the intermediate colleges, officers study how simultaneous operations are best applied to produce favourable outcomes and examine others’ campaigns to understand the instructions required. At the junior level, officers learn the tried and practised methods to gain tactical objectives; that is the procedures to apply the doctrine.

As illustrated by my university hospital analogy, training includes as much realistic practical training as possible to apply the earlier theory. In the military this generally means exercises. Exercises need to test the strategic, operational and tactical levels of war. They need to be as realistic as possible and test current offensive and defensive practices, and vital command, support and operational elements.

The RNZAF recognises this and provides a full in-country and overseas exercise programme for its tactical force elements. Furthermore, we practise procedures for engaging in combat that have been developed in-house to maximise the capabilities of equipment and weapons in our inventory. The RNZAF would like to take part in more complete air power packages, and more time on calibrated or fully instrumented ranges would be helpful to exercise air power theory.

In summary, the RNZAF obtains practical in-house and overseas training through visits and conferences, training courses, short term exchanges, postings, and a comprehensive exercise programme.

APPLICATION

My fifth activity is application. This establishes the validity of the doctrine. I use validity rather than truth, because truth is too absolute. Returning to my medical analogy, a surgical operation or medical procedure that contains my model’s steps of theory, research and development, information dissemination, and training, may be a success but the patient may die. That is, the doctrine is valid but may
not be absolute in its application. Of course if many patients die in its application, the validity of the previous steps in the development loop would need to be critically examined.

The recent 50th Anniversaries of the end of World War II reminds us of the relative peace the world has enjoyed. However, the application of air power from the post-war Berlin Airlift to Bosnia today provide ample illustrations. Over these years, New Zealand’s contribution has been as a statement of political will during extended deployments of combat and, or transport aircraft to 'emergencies' in the Near and Middle East, Africa, and South and South-East Asia. Other than humanitarian examples, the instances have been in concert with larger forces, and illustrates once again the need for the RNZAF to comply with allied doctrine to permit ready interoperability.

Internally, however, the RNZAF is accustomed to using air power doctrine. This occurs during force development and provides the rigour to quantify and prioritise capability requirements and equipment enhancements. It is here that our views become of interest to others. The RNZAF’s responsibility for helicopters and maritime patrol aircraft also compels our sister Services to test their related doctrine.

**POST APPLICATION ANALYSIS**

To complete my doctrine development loop, post application analysis is essential to modify doctrine by applying the lessons learnt. Doctrine may need changing to allow for new technology, for different conditions, or for refined objectives. New applications and results might marginalise or revitalise old concepts. In medicine, new drugs may render some surgery unnecessary or a new surgical procedure may be preferable to unpredictable drugs.

The RNZAF has not been committed to combat for many years. Therefore, post application analysis of recent conflicts over the Falklands, the Gulf and Bosnia provide the lessons for modifying RNZAF air power doctrine guidance, instructions and procedures.

**DECEPTIONS**

Finally, I suggest some ways that we can be deceived in developing doctrine.

The first deception I raise is the failure to use the whole doctrine development loop. For example, too much attention may be paid to
the ivory tower of academia, when the real need is at another point on the circle. In the medical profession, this may be research on the treatment of an obscure disease at the laboratory level rather than the treatment of common ailments at the general practitioner level.

The second deception may be the apparent need to develop new doctrine, when work on existing doctrine may find new applications. Medically, the search for new patented drugs is relentless, whereas research on old drugs may provide more worthwhile results. For example, the use of aspirin has been continually extended, and is now widely used to treat toxaemia in pregnancy.

The third deception is the acceptance of results in certain conditions as universal. The results in laboratory tests may differ from the uncontrolled conditions found at large. Similarly, the results from the air power laboratory of the Gulf War differ from the conditions in Bosnia.

My final deception is failure to distinguish major changes. Decision makers must move with major changes or risk an unsubstantial capability that does not constitute air power. In New Zealand, the managers of the State Health Enterprises are restricted in the use of some expensive drugs. Cost is significant in technology based sciences like medicine and aviation, but careful risk management is necessary to ensure minimum credible capability.

CONCLUSION

In conclusion, the RNZAF’s mission statement clearly requires the RNZAF to conduct air operations within the NZDF or collectively. Therefore, development of air power is vital to the RNZAF. I presented an air power doctrine development model that illustrates that the RNZAF is serious about air power doctrine and contributes through limited research and development, information dissemination, training, application and analysis. Being the smallest of players our conclusions have little impact on others but neither do they differ greatly. As a small air force we must be efficient to afford the cost of technology that advances air power doctrine. We must maintain our professional standards to deliver an effective and credible air force. Thank-you for the opportunity to participate in this Workshop.
41 WING AND THE DOCTRINE PROCESS

Presented by Group Captain Kerry Clarke
Officer Commanding No 41 Wing
Royal Australian Air Force

INTRODUCTION

The RAAF has undergone a multitude of changes over the past few years. Change has regularly been implemented without thorough analysis of the advantages and disadvantages and often introduced without due consideration of those required to effect the process. At No 41 Wing, we are also undergoing change - positive change. In effecting that change, we are constantly trying to avoid the Gaius Petronius quotation from AD66:

We trained hard. But, it seemed that every time we were beginning to form up into teams, we would be reorganised. I was to learn later in life that we tend to meet any new situation by reorganising. And a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralisation.

No 41 Wing is one of the few organisations in the ADF that is expanding, with some $4.0b being spent on new hardware over the next five to seven years. Those significant projects are in Table 1.

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>DESCRIPTION</th>
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<tr>
<td>Air 5077</td>
<td>Airborne Early Warning and Control Aircraft</td>
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<tr>
<td>Air 5186</td>
<td>Replacement of Air Traffic Control Radars</td>
</tr>
<tr>
<td>Air 5218</td>
<td>Command and Control at SADOC &amp; NADOC</td>
</tr>
<tr>
<td>Air 5333</td>
<td>Control Displays and Internal Communications</td>
</tr>
<tr>
<td>Air 5375</td>
<td>Replacement of TPS-43 Radars</td>
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<tr>
<td>Air 5397</td>
<td>Air Ground Air Communications</td>
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<tr>
<td>JP 2025</td>
<td>Jindalee Over the Horizon Radar Network, and</td>
</tr>
<tr>
<td>Land 117</td>
<td>Rapier SAM Replacement</td>
</tr>
</tbody>
</table>

Table 1 - No 41 Wing Projects
OBJECTIVE

The role of No 41 Wing is:

To conduct effective airspace surveillance, airspace control activities, air defence operations and to develop and maintain Australia's Air Defence Command and Control infrastructure.

This paper will focus on the airspace management component of the role with special emphasis on the need for airspace management over the battlefield.

THE AIRSPACE DILEMMA

In low level conflict, there is a dilemma in apportioning airspace between the needs of normal civil commerce and the defending military. Because of the unpredictable nature of enemy air and the low rates of activity, the typical methodology of annexing large volumes of airspace for exclusive military activity cannot be justified. While on the one hand the military need to protect civil commerce from interference by the enemy, necessitates full freedom to manoeuvre across the entire airspace if necessary, on the other hand, interference in civil air routes increases costs and reduces profit. For the vast majority of time the airspace should be left to the civil community for normal activity.

If you add to that scenario the conflict between users of low level airspace over an area where enemy ground activity has justified the use of ground based weapons, we have a recipe for general dissatisfaction with the airspace control authority.

TYPES OF MILITARY ACTIVITY

There are a number of types of military activity that the airspace control authority needs to consider when determining the policy for airspace allocation. Some of these are:

- air defence (counter air),
- battlefield support (anti-surface), and
- power projection (strike and interdiction).
In addition, the following are some of the ground based users of airspace and who require equal consideration:

- tactical transport,
- artillery and naval gunfire support, and
- point defence weapons.

The airspace control authority now has to integrate the needs of all these users as well as the civil air activity; activity that encompasses both regular public transport and light aviation users.

**TRADITIONAL SOLUTIONS**

The traditional methods of controlling airspace are largely procedural. That is, the controlling agency generally allocates volumes of airspace for each user. These airspace blocks are limited in geographic size and height and in duration. A single piece of airspace may have multiple users over a time period. This procedural approach is flawed in that it is based on inadequacies of the airspace management system. A more holistic approach that guarantees separation of the users and also guarantees use of airspace when each user desires is based on positive control. That is, the airspace management authority maintains control at the highest level and facilitates usage by individual agencies by knowing what is happening in all of the airspace all of the time.

However, 'positive control' requires the following before it can be exercised:

- perfect sensor coverage to generate the perfect air picture, and
- perfect communications with all users to allow them to advise their needs and for the airspace manager to effect those needs.

**REQUIREMENTS OF SMALL FORCES**

Small forces need to apply firepower in a fully coordinated way to achieve maximum effect. The traditional procedural approach is hampering the coordinated use of airspace by only allowing a single user in the volume of air at one time. The positive control mechanisms are limited by a paucity of sensor coverage and communications. However, there needs to be a solution developed to minimise the impact on small forces and maximise the coordinated use of airspace.
The solution needs to maximise the freedom of all users while at the same
time facilitating use of the air by civil commerce and protecting them by
use of air defence assets. A 'perfect' solution would also ensure that
fratricide did not occur either on the ground or in the air.

CONCLUSION

In developing the doctrine to manage change in the airspace management
arena, the definition of new equipment needs to focus on the combined
users with a clear aim of facilitating airspace use by all. The move
towards a 'perfect' solution either requires a 'perfect' sensor coverage or
some as yet undiscovered solution. Maintaining the existing procedures
in the face of the changing needs of the users and the proven doctrine
requiring maximum effectiveness of air power would be tantamount to
admitting the enemy has succeeded before the battle has begun.
NO 81 WING AND THE DOCTRINE PROCESS

Presented by Group Captain John Kindler
Officer Commanding No 81 Wing
Royal Australian Air Force

INTRODUCTION

Before I discuss No 81 Wing and the doctrine process, I offer you some variations on the theme. Rather than the ADF Publications definition of doctrine, I would like you to consider the Macquarie Dictionary's alternate versions thus:

doctrine, n. 1. a particular principle taught or advocated. 2. that which is taught; teachings collectively. 3. a body or system of teachings related to a particular subject. [ME, from F, from L doctrina teaching, learning].

I will adopt each of these for my presentation.

As I see it, there are three types of doctrine affecting No 81 Wing. These are:

- **Military Doctrine** - the fundamental philosophy concerning the employment of a defence force - eg DA94, Operational Concepts and Contingency Plans.

- **Joint/Combined Doctrine** - eg ADFP1 (essentially agreed instructions and procedures).

- **Single Service Doctrine** - the basis for joint doctrine - The Air Power Manual.

NO 81 WING IN AIR COMMAND

81 Wing Resources

No 81 Wing is the RAAF's Air Defence/Fighter Wing which comprises:

- 976 men and women (constrained establishment);

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• six flying squadrons in three states of Australia (plus other deployments);
• two F/A-18 Hornet operational flight trainers;
• 69 F/A-18 Hornet aircraft (plus a further two attached to Aircraft Research and Development Unit);
• 25 Macchi aircraft (our current lead-in fighter);
• three PC-9A aircraft (for Forward Air Control training); and
• an allocation of about 19,000 flying hours per year, which equates to about 20 percent of the total RAAF flying hours allocation!

As you can see, this is quite a large organisation and a huge responsibility for No 81 Wing staff.

Factors Affecting 81 Wing Doctrine

As outlined earlier, there are many factors that can affect No 81 Wing Doctrine. Primary among them remain Australia's national circumstances and the force structure. National strategic circumstances are relatively stable, I mean the political, economic, geographic and social factors that combine to make us what we are. Force structure determinants on the other hand are invariably changing and dynamic. These include factors such as constraints on the size of the force (manpower and structure), the composition and roles (the aircraft types) and capability (a function of systems and weapons).

Air Campaigns and No 81 Wing

Doctrine within No 81 Wing has been relatively static over the last 30 years. The ideas that applied to the Mirage have essentially been transferred to the Hornet. The theory of employment was initially seen as identical. But our ideas are changing. The Hornet is a true multi-role aircraft as demonstrated here in training and overseas in operations, essentially the aircraft is capable of the three air campaigns; control of the air, air strike and air support. Technological advances have increased the effectiveness of No 81 Wing but not changed the fundamental doctrine of employment.
HORNET AIR ROLES

The Hornet is capable of a variety of air roles. Obviously, our main concern is the Control of the Air campaign. Within this guise, we can conduct:

- **Offensive Counter Air (OCA)** - where we seek to gain the initiative. This comprises the following:
  - OCA attack.
  - Offensive Sweep.
  - Suppression of Enemy Air Defences - which includes fighter escort.

- **Defensive Counter Air (DCA)** - where we seek to reduce the enemy's effectiveness. This is essentially the 'classic' air defence role.

The Hornet is also a very capable strike platform. The Wing can thus also undertake the full range of strike and interdiction missions:

- land strike,
- maritime strike, and
- interdiction.

And finally, we regularly get involved in anti-surface forces activities, specifically:

- Anti-Surface Warfare (ASuW),
- Close Air Support (CAIRS), and
- Battlefield Air Interdiction (BAI).

**No 81 Wing and Force Enhancement**

Force enhancement capabilities are essential to the conduct of No 81 Wing's mission. Thus an Air Force such as the RAAF must have balance and be capable of conducting concurrent air operations. No 81 Wing relies on numerous inputs from these enhancement forces. Typical are:

- airlift - C-130, B-707;
- reconnaissance - RF-111C, Jindalee and others;
- electronic warfare - Delamere Range, EW projects;
- air-to-air refuelling - B-707, perhaps a tactical C-130J one day; and
- AEW&C - for survivability and effectiveness in conducting both OCA and DCA operations in the future.
No 81 Wing and Support Functions

As well as relying on enhancement forces, a large support infrastructure is also required. Critical to our operations remain the following capabilities:

- C3I - to organise us for joint operations;
- logistics - to sustain those operations;
- ground defence - to protect the generation of those operations;
- base infrastructure - for basing and communications support; and
- personnel and training - effective operations through multi-skilling, commercialisation and simulation.

NO 81 WING AND THE DOCTRINE PROCESS

Well how does the doctrine process interact with No 81 Wing? There are two key areas of interaction, specifically through an education process and through documentation.

Our education process is essentially a fixed cycle. This cycle should not be new to anyone as it applies to most learning processes. I have illustrated it in Figure 1.

![Figure 1 - The Doctrine Education Process.](image)

To achieve the aims of the education process we have a number of activities. These include:

- running courses;
- applying training and categorisation schemes;
- attending exercises, seminars and lectures;
- conducting discussions and debriefs in single Service, con-joint, joint and combined forums; and then
- influencing the force development process.
The second area of influence is through the wide variety of documentation, both classified and unclassified. Such documents include Standard Operating Procedures, Tactical Procedures (TACPROCs), papers and of course, input to any formal AAP 1000 Air Power Manual re-writes which occur from time-to-time.

CONCLUSION

Within our working environment, Australia's national military doctrine is relatively stable. Consequently, RAAF Doctrine (the what to do), I believe, is also relatively stable. Joint doctrine on the other hand needs to be further developed. We are continually developing a sound force structure (the how to do) taking into account tactics, procedures and the overall cost effectiveness of the operation.
No 82 WING AND THE DOCTRINE PROCESS

Presented by Group Captain Peter Growder
Officer Commanding No 82 Wing
Royal Australian Air Force

When looking at the doctrine process, we must start with an understanding of what actually is doctrine. To the more esoteric minded, doctrine is the holy writ.....that which is written in stone, immutable, cannot be changed. I believe that approach more reflects inflexibility or a dogmatic view and really has little place in modern day air operations. I would have to admit that in some instances you begin to believe doctrine is the purview of such august organisations as the ADF Warfare Centre, the Australian National University Strategic and Defence Studies Centre or our own Air Power Studies Centre. However, as one of the end users of this type of information I believe the development of doctrine springs closer to home than just those areas.

Doctrine, as we are aware, is what is taught or, what is contained in a body of instructions. More importantly though for military people, doctrine gives us the basis for what we should do in hostilities and why. In the RAAF today we have wide ranging coverage of both the educational aspects and documents containing instructions. We, the senior officers in our field, have to be careful that we do not load the warriors and the war fighters, who are usually the more junior officers, with too much of these teachings and instructions as we attempt to ensure all operational avenues are covered, all bureaucratic processes are in place, and all legal aspects have been addressed. In the modern world this is not an easy task as the commander is being held responsible for more subordinate activities. However, in the Air Force we must be sure that we provide the aircrew with the right information and preparation to go to war. For most of us when that aircraft disappears over the hill our direct control is minimal from then on, and we have to be confident that that crew has received good instruction, will operate by the rules and can be relied on to use commonsense when there is no guidance to cover a particular event.

I believe the doctrine process actually starts in the training organisation. In my view if the new aircrew are not instructed correctly from the first day, then each successive commander, and other crew members, will have a problem with these individuals. Having an approach which allows all to be instructed on aircraft operations the same way, also ensures a common understanding and standardisation across the wing.

Within No 82 Wing we have the normal list of local publications. The two pre-eminent publications for the aircrew are the Standard Operating Procedures (SOPs) and the Strike Reconnaissance Tactical Instructions (SRTIs). The former provides all aircrew with specific guidance on flying
aspects of our operations, while the latter document is really the Bible for how we plan and conduct the tactical part of our operations. The development of this publication took a number of years and went through a number of iterations. As a minimum, it is reviewed annually. Also we sometimes find that after a major exercise there may be a need, or scope, to rewrite some part of this document as improvements in procedures are found.

Development of the individual aircrew is through an aircrew categorisation scheme. Also, the crewing arrangements ensure the inexperienced fly with the experienced so that progression is based on fact not folklore. This is particularly important as most of the F-111 operations are single aircraft sorties. The crew members must maintain a certain standard in a range of activities before progression to the next level is approved. This approach ensures they are capable of operating the aircraft, in all roles, in all conditions.

As the aircrew progress, they commence the doctrinal education process further afield. In No 82 Wing, we regularly participate in joint Service training because the F-111 is extensively in demand by the Army and the Navy. Being involved in such training not only allows all the aircrew to understand the other Services' method of operation but provides an avenue for valuable discussion at a junior level. This type of interaction is sometimes more forthright and memorable than at the senior levels which is usually quite restrained.

The F-111 is no different from most RAAF aircraft in the arena of being multi-role. The aircraft has roles encompassing the land, maritime and air environments. The crews have to understand the procedures used by the Navy for maritime strike, the Army for battlefield operations and the air defence commander for air operations. We also work with the P-3C Orion and F/A-18 Hornets. Active participation in the associated training exercises incurs a significant resource cost and thus doctrinal publications are obviously important reading for all aircrew to ensure the correct application of air power, first time.

In recent times No 82 Wing personnel have assisted in reviews of the ADF Warfare Centre's publication on strike operations. I also believe that as a result of EXERCISE TASMAN LINK earlier this year and EXERCISE KANGAROO 95 it is timely for a review of airspace control over the battlefield. As one of the major users of this airspace, No 82 Wing will be an active participant. The results of such a review could have an impact on the three Services.

The flying hours available to support exercises has an important relationship with the retention of doctrinal understanding. I believe that aircrew who have been disrupted from their normal pattern of activity by participating in a new exercise or had their belief in how another service operates challenged, will make the time to investigate the applicable rules
and procedures. This investigation will help that individual, and possibly the squadron, gain a deeper understanding of the relevant procedures during the planning process or, probably more-so, during the follow-up if all did not proceed well during that particular phase of the exercise.

 Doctrine also has an effect on our international exercise participation. We are aware that the Integrated Air Defence System series of exercises in Malaysia and Singapore are increasing in complexity next year which should make for an interesting exercise. Overseas, we participate in tactical level land and maritime exercises in the United States and reconnaissance exercises in the United States and New Zealand. The experience gained in all these forums helps to overcome a narrow view of our own operations and constructively contribute to the development of Wing and ADF doctrine.

I have concentrated on the flying side of operations so far. Other areas worthy of note are operational level planning and logistics support. The small size of the ADF means that most operations will be joint in nature. Therefore, the development of the air, land, or maritime campaigns and the support for a force in the area of operations is not going to be the sole domain of a single Service. The doctrinal aspects of planning and logistics have a significant impact on the Wing’s capability and success in the conduct of air operations. Now that we have recent experience in EXERCISE KANGAROO 95 in both of these aspects, it perhaps is timely to review the applicable areas.

At the start of this Workshop, the Director of the Air Power Studies Centre indicated that he thought the spread of air power doctrine in the RAAF was not as successful as it should have been. I would offer a differing opinion because in my own Wing I have found the junior officers quoting the manual as a reference in reports more so than I would have believed previously.

I mentioned earlier the challenges facing today’s commanders. Tomorrow’s commanders will be in a more difficult position with weapons that can be delivered from a significant stand-off distance while the laws of armed conflict will demand more accuracy and better target confirmation. Gone are the days when you released a weapon when you saw the enemy eye-to-eye. Doctrine will have to keep pace as technology changes and weapons become more sophisticated.

From an operator’s perspective one of the more significant changes in the RAAF in recent times has been the requirement for technical and support personnel to be part of the team which protects the base. This is a major change which will have ramifications in a number of areas and still requires the doctrinal aspects to be clearly articulated.

We were also discussing lower level short term exchanges earlier in the Workshop. Such programmes need to be mutually beneficial, have
definite aims and objectives and ensure that information can be released. Notwithstanding this note of caution, I believe the idea has merit but needs to be carefully considered.

When considering doctrine, we must ensure we have a process in place to test this doctrine. Exercises can provide one source but the test must be clearly identified as an exercise objective and not just result as a by-product of the event.

In the RAAF we are regularly exposed to declining experience levels. The production of sensible and practical doctrine will provide the much needed corporate memory which is often found to be wanting when there is a predominance of inexperienced personnel. Logical doctrine will also assist in stopping the regular 're-invention of the wheel'.

The development of procedures and guidance at a wing level is directed to activities which directly assist the aircrew to successfully complete the mission. You may question whether this really is doctrine.... If you view it from the higher levels the answer is probably no. However, if we return to the RAAF Air Power Manual description of doctrine, 'it details what military forces should do in war', then it could be argued perhaps that the development of the wing procedures and instructions is where some of the important doctrine in the RAAF must be produced.
NO 86 WING AND THE DOCTRINE PROCESS

Presented By Group Captain Angus Houston
Officer Commanding No 86 Wing
Royal Australian Air Force

For the benefit of unfamiliar readers, I need to establish where No 86 Wing (86WG) is placed in the RAAF. The Wing is part of Air Lift Group and Air Command and is situated at Richmond near Sydney in New South Wales. It comprises the following units:

- **33SQN** 5 x B-707 - strategic transport and air-to-air refuelling
- **36SQN** 12 x C-130H - tactical and strategic transport
- **37SQN** 12 x C-130E - strategic and tactical transport
- **486SQN** - operational level maintenance
- **AMTDU** - Air Movements Training and Development Unit

The mission of 86WG is to prepare for and provide safe and effective military airlift and combat air support for the Australian Defence Force.

I wish now to discuss the relevance of the AAP 1000 - The Air Power Manual to 86WG and its validity for 86WG operations. I will concentrate on the practical aspects and application of Air Power doctrine.

I concur with the ADF Publication (ADFP) 1 definition of doctrine. I consider doctrine to be the fundamental and enduring principles which underpin the way we conduct operations in the RAAF. In the development of Edition 1 of the Air Power Manual I was fortunate to have a substantial input to the tactical transport operations section. I recall vividly that two of the Air Power Manual authors "Bushy" Kavanagh and Gary Waters travelled widely to consult with the operational practitioners in the field. I believe that this process of consultation with the operational groups, wings and squadrons was fundamental to the development of RAAF air power doctrine and ensured the production of a high quality air power manual. By contrast I was not aware of a similar level of consultation before the production of Edition 2 of the Air Power Manual. I would strongly encourage continuous consultation with the operators in the development and revision of air power doctrine in the future.
Air power doctrine enunciated in the Air Power Manual provides the basis for many of the tactics and procedures that we employ at the tactical level of operations. I do not consider these 86WG procedures and tactics to be doctrine in the purest sense because they often change and are anything but enduring principles. Nevertheless, where changes in doctrine, tactics or procedures are required, they are highlighted in post operation and post exercise reports. Where changes to the doctrine are recommended they would be forwarded from 86WG to the Air Power Studies Centre through the chain of command. I hasten to add that I cannot recall a single instance in my term of command where there has been a need to change or amend the Air Power Manual although there have a number of changes to the Australian Defence Force Publications which reflect more detailed joint doctrine.

The airlift characteristics in the Air Power Manual are speed, reach, manoeuvre, flexibility and self sufficiency. These characteristics typify 86WG strategic transport operations with the B-707 and C-130 aircraft. In the Australian environment the characteristics are particularly relevant as 86WG aircraft are required to operate strategically over long lines of communication from the well developed infrastructure of south east Australia to the more remote, isolated and less well-developed centres in northern Australia. With sea transport taking about 10 days and land transport on average seven days to complete the journey to northern Australia, 86WG provides the ADF with a high level of strategic air mobility. The 86WG B-707 and C-130 aircraft can deliver loads to Tindal or Darwin from south-east Australia in four and six hours respectively. Indeed, these aircraft can complete the round trip to the area of operations and back in less than a day, thereby enabling ADF commanders to deploy the lighter elements of military forces to northern Australia at short notice quickly and effectively.

Centres in northern Australia are widely dispersed and separated by considerable distance. The characteristics of airlift are therefore also applicable to tactical intra theatre transport operations. Indeed, to operate effectively in northern Australia, ADF commanders need a high level of tactical air mobility which will be provided, in part, by 86WG.

The limitations of airlift are particularly significant in the Australian context. Fixed wing tactical airlift aircraft need airfields and infrastructure to operate effectively. In northern Australia, in an area the size of Europe, there are only 733 airfields and only 210 of these are C-130 capable. Importantly, in the wet weather that is prevalent in the northern summer only a handful of these may have runway surfaces that can sustain continuous use by C-130 aircraft. The procurement of a Light Tactical Transport aircraft which is capable of operating on many of these rain affected airstrips is therefore an important operational requirement. Similarly, nearly all these airfields are devoid of infrastructure and fuel resupply facilities are few and far between. Indeed, fuel resupply is a
major consideration in the conduct of all military operations in northern Australia.

Use of civil aircraft is highlighted in Air Power Manual and some see it as the answer to many of our transportation problems; however, we need to be cautious in the application of this doctrine for the following reasons:

- Unlike the US Civil Reserve Aircraft Fleet (CRAF), Australian civil aircraft have not been modified to carry cargo. Cargo capabilities are therefore limited to the smaller, lighter loads.

- Loading and unloading of cargo requires special handling equipment which will only be available at the principal airfields in the AO or if pre-deployed.

- Civil aircraft require more extensive infrastructure support.

- Experience in 1990/91 during the Gulf crisis suggests that where operations involve an element of risk civil airlines may not be prepared to fly to the desired locations. Indeed, on Operation MISFIT/OZONE the contingency plan for the evacuation of Australians from the Middle East, in August 1990 QANTAS was not prepared to operate beyond Karachi. Later when the Government confirmed indemnification arrangements they were prepared to go to Seeb in Oman but were not prepared to go any further.

Military airlift will therefore be a continuing requirement.

In accordance with the Air Power Manual ‘total system’ doctrine, the Commander Air Lift Group (CDRALG) is in the process of creating an RAAF Air Transport Operations Centre (ATOC) to handle all 84WG and 86WG operations planning, tasking and load (passengers and cargo) coordination. The ATOC should be fully operational by the end of October 1995. Air Movements Sections are also an important part of the airlift system and although commanded by the Air Base Wing Commanders are under the Operational Control of CDRALG. To ensure the required standards are met, a new Performance Measurement Process will be introduced later this month. AMTDU also conduct annual training and evaluation visits.

The force multiplication air-to-air refuelling (AAR) doctrine in the Air Power Manual has been validated by 86WG AAR experience since the introduction to service of the B-707 tanker. Deployment exercises with 81WG have demonstrated the increased range of fighters, the potential for rapid response and the elimination of the need for staging bases. Similarly, 33SQN AAR support during exercises has shown the potential for more effective employment of combat air patrols and increased flexibility and options for supported strike aircraft.
The 86WG C-130 and B-707 assets are capable of employment in a wide variety of roles and tasks. The aircraft can be employed tactically or strategically and there will always be a heavy tasking demand. Peacetime experience would suggest that demand will always exceed supply so it is vitally important that command and control arrangements for 86WG enable effective utilisation, prevent over-commitment, and avoid under-utilisation and misuse. Availability must be guaranteed for the highest priority tasks in the required numbers. For example, we should not be seduced by the concept of allocating a few aircraft to each commander in ‘penny packets’. Rather we should have flexible arrangements that allow all necessary assets to be allocated to one commander when his need is the greatest as would be the case with, say, a major airborne operation.

In my opinion the doctrine in the Air Power Manual is instructive and would support my view that command of 86WG assets should be centralised at ACAUST or Air Component Commander (ACC) level to ensure the most effective utilisation of highly capable assets. I hasten to add that I have absolutely no difficulty with ACAUST or ACC allocating all or some elements of 86WG under the operational control of another commander where circumstances require this approach. Indeed, during Kangaroo 95 the ACC allocated 10 C-130 aircraft to Commander 3 Brigade under operational control for the largest airborne exercise ever conducted in Australia. Almost 500 Australian and Indonesian paratroopers were flown almost 2000 nautical miles from Richmond for a first light airdrop in north western Australia. Operational control of the Airborne Force was absolutely essential in these circumstances.

Many of these command and control issues arose during EXERCISE KANGAROO 95. There were isolated instances of over-commitment, under-utilisation and misuse. Generally, however, the command and control arrangements worked well. After the airborne exercises on KANGAROO 95 there is probably a need to make some minor changes to the joint doctrine in ADFP 14 ‘Air Transport’ and ADFP 39 ‘Airborne Operations’. By contrast 86WG experience on the exercise confirmed the validity of the Air Power Manual and the enduring nature of the major principles of airlift doctrine.
No 92 WING AND THE DOCTRINE PROCESS

Presented by Group Captain Allan Crowe
Officer Commanding No 92 Wing
Royal Australian Air Force

INTRODUCTION

I have great difficulty in identifying 'doctrine' in No 92 Wing. There are a great many procedures and Standard Operating Procedures (SOPs) but these flow from other documents and they are influenced by many factors external to No 92 Wing.

DOCTRINE

What is doctrine? I would describe doctrine as that which provides an organisation with an understanding of its objectives. The characteristics of doctrine should be that it is:

- enduring,
- easily understood, and
- flexible.

No 92 WING TACTICAL DOCTRINE

If we have doctrine within No 92 Wing, I would suggest it is limited to the following:

- We would expect to fight as a Wing, deploying forward in detachments tailored for the task, rather than individual squadrons.
- All crews would be multi-role.

These considerations determine the structure of our organisation and the way we train. If they were to change, there would be a fundamental change to No 92 Wing.
• No 92 Wing would provide operational, administrative and engineering support to deployed elements from RAAF Base Edinburgh, South Australia.

• Given the possible multiple detachments and varied tasking, C³I arrangements would have to be very flexible.

PROCEDURES

The remainder of No 92 Wing operations are largely controlled by procedures and tactics. These are based on USN/RAF/RAN tactics, mainly for interoperability reasons and convenience.

Each is extensively documented and has remained largely unchanged in the last ten years.

WEAKNESSES

Maritime operations, particularly Anti-Submarine Warfare (ASW), require considerable support. For operations in the north, ground transport of ASW stores may not be an option. If so, air transport support will be required. Much of the stores would require special handling (dangerous and explosive cargo).

For deployed operations, communications must be robust enough to allow rapid changes to tasking and to controlling authorities.

CONCLUSION

No 92 Wing is about to introduce significant new capabilities. The unit will develop tactics and possibly identify potential for new roles. The arrangements for evaluating those new possibilities and the impact that they may have on doctrine and on concepts, are ill defined. We have much hard work ahead.
OPERATIONAL SUPPORT GROUP AND
THE DOCTRINE PROCESS

Presented by Group Captain Rick Jones
Commander Operational Support Group
Royal Australian Air Force

The Role Of Operational Support Group (OSG)

A detailed paper on the roles and activities undertaken by OSG was presented to the 1994 Regional Air Power Workshop\(^2\). In summary, OSG provides all air base services which includes:

- catering,
  - logistics,
    - warehousing,
    - air movements,
- internal security,
- fire services,
- air traffic,
- administration,
- medical,
  communications,
    - internal,
    - external, and
- ground defence.

OSG also has the responsibility for mobilising (forming into a cohesive unit) personnel for operations. We therefore have a considerable interest in the preparedness of personnel prior to their mobilisation as their individual training levels will impact on the time required for the mobilisation process.

Furthermore, OSG has a number of groups and organisations that it supports:

- RAAF
  - all force element groups at bare bases, and
  - at Point of Entry (POE) airfields, ALG covering C-130 ops and 84WG with DHC-4 and HS-748.

• Army
  - 3 Brigade,
  - other regular Brigades, and
  - Reserve Brigades that relieve in place.

I mention the roles of OSG and the other groups with whom we work so that you can get some idea of the large cross section of RAAF and Army with whom we have contact.

**OSG and the Doctrine Process**

Perhaps a good example to use and one that best draws out lessons applicable to the doctrine process is in the area of ground defence. The doctrinal approach to ground defence has implications for RAAF and how we will conduct operations with Army.

Over the past couple of years there has been added emphasis on preparedness training for operations within our Area of Operations (AO) which has focussed on ground defence and the contribution we, Air Force, will make to the self-defence of our airfields, particularly in the north. These airfields could be the established bases of Darwin and Tindal, our bare bases, Learmonth and Curtin, or POE airfields such as Weipa or Cohen. No matter what type or function of the base, the RAAF and Army have accepted a joint approach and responsibility for their ground defence.

This agreement struck between RAAF and Army has serious implications for RAAF. Under the new doctrine a RAAF Base Commander (BCDR) will be responsible to the area commander, most likely a Brigade Commander, for the ground defence of his base. Normally this responsibility will include a Tactical Area of Responsibility (TAOR) overlaid across the base and the assignment of up to a Battalion strength for ground defence. The TAOR could extend well beyond base boundaries. To meet this responsibility RAAF has increased training in ground defence preparedness. It is within this area of ground defence preparedness and responsibilities that I wish to focus your attention.

At the tactical level of war there seems to be an absence, for want of a better phrase, of a doctrinal watch body, that is capable of providing guidance on the correct and approved procedural approach that should be adopted. That must seem an odd leap from doctrine, but I believe that doctrine exists at the strategic level and from it procedures can be developed for the operational and tactical levels of war that in turn reflect the doctrinal position.

OSG has found during the last two years that it has had to become the watch dog, enforcer, of ground defence doctrine to not only cooperating Army units but also to attached RAAF personnel and units. What
percentage of time will be spent on primary duties and what time will be dedicated to ground defence? Will visiting Army units be assigned under operational control of the BCQR for ground defence? Surprisingly it does not really matter if it's RAAF or Army, the doctrine and procedures, if you have worked with the personnel before, will work again. If however management has changed we all seem to have to go back and start again - this should not be the case. We found for example with 3 Brigade Commander and Brigade Major changed over then RAAF and Army interoperability would have suffered. As I said before, if we are to be a part of the one Defence Force, we need a doctrinal enforcer at the tactical level of war.

Perhaps we need to communicate during the planning process what the joint approach will be. Perhaps the job is already being done by ADF Warfare Centre and they have simply not got around to any exercises that OSG have been apart of. What I am saying is that one of the tactical level players should not be the doctrinal policeman.
AIR CAMPAIGN PLANNING

Presented by Group Captain Geoff Roberts
Air Headquarters
Royal Australian Air Force

I have been asked to provide a brief on air campaign planning and as such I will describe a process of planning to achieve an objective in a joint force theatre level campaign using air power. I have based the content on APSC, USAF, and Air Commander Australia produced documentation.

I will discuss operational air campaign planning, using as a starting point the concept of component command where under a Joint Force Commander (JFC) there is an air component, land component and maritime component commander. Under United States doctrine the Air Component Commander (ACC) is termed the Joint Force Air Component Commander (JFACC) and I will use that terminology throughout the presentation. The presentation on air campaign planning will thus, be generic in nature.

Historical experience shows that unity of effort through the centralised control of theatre air assets is the most effective way to employ air power.

Only centralised control permits multi-role assets or limited resources to be tasked for the optimum concentration of force and economy of effort, with weapon systems (aircraft, weapons and crews) being directed to the targets of greatest priority, in the right numbers, as operational demands change. Knowledge of the big picture makes possible the high degree of coordination that allows these principles of war to be achieved and optimised.

Centralised control can successfully be applied to the three air campaigns: control of the air, air strike, and air support.

The United States military re-emphasised these conclusions as a lesson from the 1991 Gulf War. As a result of being successfully employed by Horner and Schwarzkopf. (As did Kenney and MacArthur in the South-West Pacific).

The geographical collocation of the air, land and maritime component commanders with the joint force commander is important as it permits the close cooperation and coordination that is essential for successful joint operations. However the C^2 system must be robust to operate in situations where collocation is unachievable.

What are the doctrinal responsibilities of the JFACC? These are to:
• Keep the JFC informed of the planning and conduct of air operations.

• Plan, coordinate, allocate, task and execute in accordance with JFC guidance.

• Develop the JFC's air operations plan based on the JFC's campaign objectives and other broad guidelines in relation to the air component commander's roles, functions, tasks and responsibilities.

• Recommend priorities and apportionment of resource decisions to the JFC. These will be based on the air operations plan. (Apportionment is the determination and assignment of the total expected effort by percentage and/or priority to be devoted to various air operations and/or geographic areas for a given period of time. Allocation is to translate apportionment into total numbers of sorties by aircraft type available for each task).

• Organise the JFACC staff to derive maximum benefit from the assistance from army and navy personnel and maximise the effectiveness of the air effort.

• Act as the airspace control authority and area air defence commander (when assigned by the JFC).

I will expand on the last responsibility.

Airspace Control Authority

The Airspace Control Authority (ACA) develops broad policies and procedures for airspace control and coordination of all effort within the area of operations. The airspace control system must:

• be responsive to needs of JFC,

• provide integration of the airspace control system with that of other nations where applicable, and

• coordinate all user requirements.

Based around these requirements the ACA should develop an air control plan, approved by the JFC. The plan is implemented through an Airspace Control Order (ACO). While the ACA must have centralised coordination over any air asset in the control area, he does not necessarily need operational control.
Area Air Defence Commander

The Area Air Defence Commander (AADC) holds responsibility to secure the area of operations airspace for friendly operations and coordinate resources to prevent or neutralise enemy air incursions into the area of operations. Air defence operations must be coordinated with other air operations as well as those on land and at sea. The responsibilities of ACA and AADC are closely interrelated and both responsibilities would normally be appointed to a single position.

The JFACC would be planning an air campaign for air operations related to strategic objectives; these strategic objectives would be defined in the campaign plan produced by the joint force commander.

The Campaign Plan

The JFC's campaign plan is the instrument that he uses to achieve strategic aims. Through the use of campaign plans the commander sets the operational tempo and direction for the conduct of battles, and the coordinated logistical means to achieve success. The campaign plan provides broad concepts of operations and sustainment to achieve strategic objectives. The five key tenets of the campaign plan are as follows:

- To provide an orderly scheme of military operations; conveys the commanders' vision and intent. It clearly defines what constitutes success.

- To orientate on an enemy's centres of gravity (eg, leadership, national will, infrastructure, military).

- To Phases a series of related major operations, which may overlap and need not be consecutive.

- To provide operational direction and tasks to subordinates.

- To Synchronise air, land, and sea efforts into a cohesive and synergistic whole.

The Air Campaign Plan

The JFACC has the responsibility 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 units will conduct. He does this by first defining the strategic setting and secondly by deriving his own appreciation.

The strategic assessment would be developed from strategic guidance provided by the JFC but tailored by JFACC staff to take account of the requirements unique to air operations. The JFACC must understand the external influences, national values and alliances - both friendly and enemy. The strategic setting sets the bounds for what is and is not achievable.

Intelligence collection and assessment are essential in providing the foundation of any strategic assessment.

Additionally the JFACC will need to know:

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

**The JFACC's Appreciation.**

After having understood the strategic assessment and JFC guidance, the JFACC will make a personal appreciation of the situation to help form the air campaign.

The appreciation should state all objectives including political, theatre and specific air objectives. There must be a clear link between air, joint and political objectives, especially in identifying enemy and friendly centres of gravity.

An assessment must be made of the relative combat strengths of friendly and enemy forces. The JFACC appreciation should include the following:

- the strength, availability, composition and disposition of any air, ground and sea forces which could affect the air situation;
- the effect of any recent operations on combat strength and efficiency;
- aircrew proficiency and familiarity with the operating environment;
support from other services and allies;

- the operating capacity of airfields;

- weather forecasts and the likely effect on operations;

- logistics, the capacity for resupply, replacement and reinforcement; and

- the performance and characteristics of the available weapon systems.

**AIR CAMPAIGNS**

In the air power context a campaign is a series of related military operations aimed at attaining common objectives normally in a finite period of time, and which can achieve strategic results. Theatre objectives may require varying combinations and participation levels of air, land and sea forces. The air campaign plan must be tailored to the desired objectives and should describe centres of gravity, phasing of air operations, and resources required.

The air campaign plan bridges the gap between assigned strategic objectives and the execution of air operations to accomplish those objectives.

The three components of the campaign plan are:

- **A concept of Air Operations** - to meet the objectives set by the JFC.

- **The Master Attack Plan (MAP)** - which nominates specific military objectives and targets. The master attack plan is the end product of the centre of gravity analysis, target selection and current intelligence. The formulation and maintenance of the MAP is a dynamic process that must take account of the progress of the war. The MAP is implemented through the issue of air task orders.

- **The Air Task Order (ATO)** - allocates specific targets to specific units. These orders are usually produced to define all air operations over a defined time, and comprehensively direct the activities of the air assets under command or control.

The final stage in the planning process is the ATO. The ATO is issued daily and covers in complete detail all aspects of air operations for the coming 24 hours. In essence, the ATO allocates tasks to units to execute the MAP.
The ATO is produced by the combined efforts of specialist staff of the JFACC. Included are target assignments, ordnance loads and over-target times. Close coordination with other component headquarters is necessary during the compilation and execution of the ATO. The ATO planning process must have a timeline. The timeline can be very short in instances of when the enemy is coming over the hill, but in most cases air power will be applied to meet strategic objectives. The core concept is that the ATO planning cycle is a continuous process. The outputs and outcomes from one ATO will affect the inputs of subsequent ATOs.

Not every operation will require phasing, but phasing is a useful tool to communicate the JFACC’s concept of operations. Phasing provides an orderly schedule of military decisions and indicates pre-planned shifts in priorities and intent. Phasing can be undertaken by region, objectives or force limitations. Phase guidance should identify phase objectives, tasks, and priorities.

The air campaign will usually be conducted in two phases:

- control of the air; and
- other operations such as close air support and interdiction.

The JFC will normally seek to gain air superiority early in the conduct of operations. In general control of the air is a prerequisite to pursuing other objectives effectively and affordably. Once air superiority has been achieved air operations can focus on neutralising the enemy’s centres of gravity through strategic strike, air interdiction, or close support.

Often these two phases will be conducted in parallel and there will be a need to prioritise. If the available air assets are insufficient to achieve air superiority, then as soon as the desired degree of control of the air has been achieved, the air campaign would be directed to other objectives. In the case of limited air assets the JFACC would be looking at achieving local air control which is the ability to control the air at a place and time of our choosing.

The Air Campaign Plan is a dynamic document which will have to be amended in response to changes imposed by enemy action.

The Air Campaign Plan harmonises air control, force application, force support roles and integrates the efforts of other Services and components.

Planning considerations in developing an air campaign plan include:

- **The nature of the enemy** - which is a critical factor in any analysis. The enemy’s strengths and weaknesses, resources, and likely response to a range of contingencies.
• **Ways of seizing the initiative** in the campaign - this aspect is vital in that the side which wrests the initiative from their opponent through offensive action will have the advantage.

• **Centres of gravity** - which when correctly identified ensure that attacks will have the most telling effect in relation to the achievements of the objectives of the air campaign. Strategic priorities will determine which courses of action are acceptable, while operational priorities will establish which are feasible.

• **The size of own air force** - while it may be desirable to cover all targets at one time, the reality of the size of the defence forces will usually dictate that some sequencing will be required. There may have to be short-term changes of priority between targets such as strategic strike attacks on the enemy’s centre’s of gravity and close air support.

• **Logistics** - Air operations require substantial levels of resources and special attention needs to be paid to logistic factors to ensure that they place the least possible constraint on the prosecution of the air campaign. Logisticians are normally included within battle planning staffs.

**Centres of Gravity Analysis**

Key features of a centre of gravity include its importance to the enemy’s:

• ability to wage war,

• motivation and willingness to wage war, and

• political body, population and armed forces.

Attacks on centres of gravity are designed to achieve political objectives, and the likely effect on the enemy nations ruling elite must be taken into account.

Centres of gravity may be strengths or weaknesses and a commander must decide whether to neutralise a strength or exploit a weakness.

The key to exploiting the centre of gravity concept is to have an understanding of the enemy and what is important to those who will have an effect on the conduct of war.
The JFACC must also analyse his own force so that critical areas can be defended. The centre of gravity analysis is all about vulnerabilities, effort, effects and probability of success.

**Joint Target Coordination Board**

Following on from centre of gravity analysis is a concept that is related and needs mentioning, that of a Joint Target Coordination Board or JTCB. The JFACC will normally participate in the selection of targets with the other component commanders and JFC staff. It may be that a JTCB needs to be created to provide coherent target identification and prioritisation at the JFC level. I would suggest that this would be required in the majority of situations.

**Targeting cycle**

The doctrine for managing air power was tested in the Gulf War and has been implemented in several exercises since. It revolves around the targeting cycle as shown in Figure 1:

![Figure 1 - The Targeting/ATO Planning Cycle](image-url)
The JFACC's aim is to be able to have his planning cycle within that of the enemy's. Factors that can affect his ability to achieve this are:

- **Command and Control Support Systems.** Computer based planning systems can provide greater access to data and to speed up the planning process to the issue of the ATO.

- **Communications** - to get the required information out in the field for mission execution and feedback of results.

- **Logistics support** - including ordnance, fuel, and resupply etc.

- **Aircraft availability** - turnaround times, serviceability.

- **Intelligence** - in terms of accuracy and availability.

- **Battle Damage Assessment (BDA).**

**THE AUSTRALIAN CONTEXT**

In the Australian context, we are progressively implementing and refining methods and doctrine at the operational level. The relationship between Land Maritime and Air Commanders and the Commander Joint Forces Australia (in his absence HQADF or an appointed lead Joint Force Commander) is quite similar to the USAF 'JFC - JFACC' system, where strategic guidance is progressively expanded to provided instructions and orders for specific combat units. The organisational structure closely matches the strategic-operational-tactical levels of war. Education in the application of operations at the three levels is ongoing as is refining the responsibilities at each of the levels without one level delving into areas which are the responsibilities of another level. In order to focus on what should be the function at each level it can be simply put that strategic is related to guidance, operational to instructions and tactical to procedures.

**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 priority 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 aircrews who fly the missions have been developed logically from JFC’s campaign plan, the strategic setting,
the commander's estimate, the air campaign plan and the master attack plan.
CLOSURE

Presented by Group Captain John Harvey
Director RAAF Air Power Studies Centre
Royal Australian Air Force

It falls upon me to conclude this Workshop. The Workshop was successful in providing a range of views and generating discussion - both in the meetings and outside. To use one of our Indonesian guests expression, hopefully we will achieve unity through diversity.

While the theme of the Workshop was doctrine, and very useful discussion came in that area, I think it was equally useful as a vehicle for creating greater understanding.

We started the Workshop with a presentation by Mr Peter Jennings from International Policy Division who gave an overview of the recent defence White Paper - Defending Australia 1994 (DA94). He pointed out the key thrusts of DA94 as self reliance, maintaining the US alliance and regional cooperation. Regional cooperation is very much in Australia's own interests and activities it conducts will be based on those interests.

My presentation of doctrine developments in the RAAF pointed out we are currently well served by our doctrine and the development process and that no formal changes will be made for at least the next 12 months. While no changes are planned, the requirements of developing effective joint doctrine and what some have seen as a revolution in military affairs mean there are influences at work that must be considered.

Captain Jack McCaffrie then discussed doctrine developments within the RAN. While there has been considerable reluctance to document its doctrine there is now significant pressure on the RAN to 'follow suit' with the other Services, particularly as the RAN is committed to developing their single Service supplement to joint doctrine at the operational level.

Colonel Adam Fritsch discussed the state of play in the Australian Army. While doctrine development is well in place, there is a fundamental difference between Army and Air Force in terms of what constitutes doctrine. While Army considers doctrine extending down to what we in the Air Force would consider tactics and procedures, perhaps we should not put too much emphasis on what labels we apply. And while there are different views between the Services we at least seemed to be able to agree on a definition!

Group Captain Steve Gray gave a RAAF policy perspective on the process of defence cooperation. He pointed out that the aim was for mutual benefit and that there was scope to improve the effectiveness of activities
conducted. And while the RAAF’s technical edge is disappearing in the region, as air forces come closer together in terms of technology there is scope for a more equal exchange of information.

Lieutenant Colonel Jimmy Tan outlined the status and process of doctrine development in the Republic of Singapore Air Force. Singapore’s small geographic size places unique requirements on its armed forces and its Air Force’s doctrine is a response to those requirements.

Kolonel Ariyanto Saleh then summarised Indonesian Air Force doctrine. While in terms of specific roles of aircraft we may all have much in common, the socio-political role of the Indonesian Armed Forces significantly expands their responsibilities.

Group Captain Pongpan Tepsuporn of Thailand reviewed the status of doctrine in the Royal Thai Air Force. The starting point for their doctrine was that of the USAF but it has been extensively modified for their own requirements. RTAF doctrine recognises a clear distinction between strategic and tactical campaigns.

Colonel Navarrete then discussed how the Philippines Air Force was handling the process of evolution from concentrating on internal security issues to external security concerns. They are concentrating on getting the doctrine right before they make major changes to force structure and they have a well developed process in place for doctrine development.

Major Napiah from the Royal Brunei Air Force showed how even a small Air Force has recognised the need to have well developed doctrine in developing its air power capabilities.

Kolonel Akhtar from the Royal Malaysian Air Force discussed how they have embraced a paradigm shift in the way they operate based on the rapid introduction of new capabilities.

Group Captain Kel Crofskey from the Royal New Zealand Air Force explained what he called the 'Doctrine Development Loop'. He explained how his small air force had acquired platforms and technology from other countries but adapted the way they are used to achieve a qualitative edge at the tactical level.

The subsequent round table discussion concentrated on the large degree of commonality of thought on air power doctrine in the region, but the more complex issue may be in developing sound joint doctrine.

We then moved on to the view from the tactical level where there is, logically, a concentration on the 'how' rather than the 'why'. The respective Commanders of the RAAF’s Operational Wings presented their views and much further discussion ensued.
In conclusion, on behalf of the Chief of the Air Staff, Air Marshal Fisher, I would like to thank each and every one of you, the participants, for giving of your time and experience in what I believe was again, a most successful Workshop.
In August 1993, the RAAF convened a milestone conference in Darwin with the object of discussing air power from the perspective of cooperation for the preservation of security for the Asia-Pacific region. Conducted under the title of the 'Regional Air Power Workshop', the forum included participants from senior levels of the regional air forces, the ADF and Department of Defence. It provided a forum not only for intellectual exchange, but also improved communication on the professional and personal levels. This workshop was an important step in encouraging further development in regional cooperation.

The 1993 Workshop focussed on the way the RAAF conducts its business. The second Workshop, in 1994, looked at regional cooperation and possible cooperative ventures and the CAS invited each of the regional Air Forces to express their views. In addition, the Royal Australian Navy, the Australian Army and International Policy Division (Department of Defence) perspectives were also presented.

Building upon the success of these two workshops this, the third 'Regional Air Power Workshop', was convened in Townsville to discuss air power doctrine and doctrine development of regional Air Forces. Again, contributions from seven regional countries as well as the Australian delegates were well received.

This publication is an account of the proceedings of the 1995 Workshop. It is intended as a record for participants, a basis for similar future forums, and more generally, a contribution toward greater regional defence cooperation.