



Submission No 6

Inquiry into Australia's Defence Relations with the United States

Organisation: Department of Defence

Contact Person: Mr Tony Corcoran
Director Statutory Reporting & Accountability

Address: Russell Offices
CANBERRA ACT 2601



Australian Government

Department of Defence
Ministerial Services and Public Affairs

SRA 6/2004

17 February 2004

Mr Stephen Boyd
Secretary
Joint Standing Committee on Foreign Affairs,
Defence and Trade
Parliament House
CANBERRA ACT 2600

Dear Mr Boyd

Thank you for inviting Defence to provide a submission to the inquiry into Australia-United States Defence Relations.

A submission approved by the Minister for Defence, Senator the Hon Robert Hill, is attached.

Yours sincerely

Original signed

Tony Corcoran
Director
Statutory Reporting and Accountability

DEPARTMENT OF DEFENCE SUBMISSION

**JOINT STANDING COMMITTEE ON FOREIGN AFFAIRS,
DEFENCE AND TRADE INQUIRY INTO AUSTRALIA-
UNITED STATES DEFENCE RELATIONS**

FEBRUARY 2004

Executive Summary

- Australia's 53 year-old formal alliance with the United States under the ANZUS Treaty has never been closer. The ANZUS Treaty gives shape, depth and weight to the Australia-US alliance and remains today the foundation of a relationship that is one of our greatest national assets. Australia and the US share many interests and values and will continue to jointly benefit from, and contribute toward, global stability and prosperity. The alliance will continue as a dynamic partnership that gives each partner high-level access in each other's capitals, providing opportunities to exchange views on a range of issues in a frank and constructive manner.
- Australia strongly supports continued US commitment to the Asia Pacific. The bilateral relationships the US maintains with regional states, including ourselves, are central to regional stability in the Asia Pacific. Our ANZUS relationship forms part of the US network of alliances through which the US sustains its engagement with the Asia Pacific region. Australia's participation in this alliance network contributes to regional security and complements our commitment to, and capacity for, an inclusive and cooperative approach.
- Australia and the US regularly consult each other on key defence and security issues through an extensive range of Ministerial, senior officer and working-level formal meetings and exchanges. These consultations allow for frank and timely discussion and joint planning at all levels and exploration of initiatives for strengthening defence and security cooperation between our two countries.
- Interoperability with US forces and the ability to contribute to multinational coalitions are central themes in Australia's defence policies, acquisition programs and training plans. Australia's effective, high-end contributions to US-led coalition operations in Afghanistan and Iraq have demonstrated the high degree of interoperability and the shared values that characterise the US-Australia relationship. Two major themes are shaping the way forward for Australia-US interoperability. The first is the experience of recent military operations, drawing on the lessons from Afghanistan and Iraq combat operations. The second theme is transformation, which is reshaping warfighting concepts and capabilities.
- Australian and US forces work especially well together. Bilateral exercises with the US provide excellent training opportunities for both the ADF and US forces in high-intensity coalition operations. Exercise participation helps establish the fundamentals of interoperability such as the connectivity of our communication and data systems, and an appreciation of our approach to issues such as rules of engagement. Importantly, our performance in major joint exercises builds confidence within the US that we are a capable coalition partner. The strong relationship built by these activities has permitted Australia to integrate effectively and efficiently with US forces in coalition operations.
- The defence intelligence sharing relationship between Australia and the US is critical to our defence and security. It enhances considerably the ability of Defence to meet the needs of Government decision-makers and operational customers. At the strategic level, as well as at the operational and tactical levels, Australia and the US have engaged in intelligence sharing activities, to mutual benefit. This has most recently been demonstrated during military operations in Afghanistan and Iraq, where intelligence sharing between Australia and the US directly contributed to the success of those operations, and during which the US provided Australia unprecedented access to intelligence and intelligence systems. The same level of

intelligence cooperation has also underpinned our shared efforts in the global war against terrorism.

- In deciding in principle to participate in the US Missile Defence program, the Government was guided by its assessment of Australia's strategic interests. It considered the security of Australia in the longer term, particularly in light of global and regional environment made less certain by the threat from the proliferation of weapons of mass destruction (WMD) and of ballistic missile capabilities. By participating in the system, Australia will contribute to global and regional security, to the security of Australia and its deployed forces, and to those of its friends and allies. The level and form of participation will be entirely at Australia's discretion.
- Australia is a major consumer of space services, but has virtually no indigenous space capabilities as the investment needed to support an indigenous capability can not be justified. As space systems are critical to civilian and military functions, Australian dependence upon foreign systems and particularly US systems is therefore inevitable.
- The US is the world's largest developer and manufacturer of high technology defence systems, making cooperation between our defence industries a matter of high importance for Australia. Industrial cooperation in the defence sector supports interoperability between Australian and US forces, industrial efficiency and innovation in the respective defence industry sectors, and the scale and leverage essential to supporting competitiveness in Australian defence industries which, in global terms, are relatively small and concentrated in specialised capabilities. The Government is vigorously pursuing initiatives that will allow industry to cooperate and compete with US defence industry.
- Australia has a strong and vibrant relationship with the US in defence research and development matters, which is maintained through a number of bilateral and multilateral arrangements. The total value that Australia derives from these arrangements is very substantial.
- In a changed strategic environment where the threats of terrorism and WMD have added a new dimension to the security challenges that we face, the importance of our alliance with the United States to our defence and security cannot be over stated. For Australia, continued engagement with the US will support our defence capabilities and play a critical role in maintaining strategic stability in the region as a whole. For the US, Australia will remain a key ally with many shared values and interests, a close partner in regional security efforts and a significant potential contributor to coalitions.

Table of Contents

EXECUTIVE SUMMARY.....	2
TABLE OF CONTENTS.....	4
INTRODUCTION.....	5
THE ANZUS TREATY AND AUSTRALIA'S DEFENCE AND SECURITY.....	5
CONTEXT AND NATURE OF THE CONTEMPORARY STRATEGIC ENVIRONMENT.....	6
US ENGAGEMENT IN THE ASIA PACIFIC REGION.....	7
INTEROPERABILITY AND CAPABILITY FOR COALITION OPERATIONS.....	7
STRATEGIC INTEROPERABILITY REVIEW.....	8
JOINT EXERCISES AND OPERATIONS.....	8
AUSTRALIA-US INTELLIGENCE SHARING AND OUR SECURITY.....	9
AUSTRALIA AND MISSILE DEFENCE.....	10
AUSTRALIAN COMMITMENT.....	10
AUSTRALIAN CONSIDERATIONS IN PARTICIPATION.....	10
ALLIED INVOLVEMENT.....	11
BALLISTIC MISSILE EARLY WARNING.....	12
POSSIBLE AREAS OF ENGAGEMENT.....	12
MISSILE DEFENCE TECHNOLOGY PROVIDES A RANGE OF CAPABILITIES.....	12
INDUSTRY OPPORTUNITIES.....	13
SPACE BASED SYSTEMS AND AUSTRALIA'S SELF-RELIANCE.....	13
AUSTRALIA-US INDUSTRY COOPERATION.....	13
INITIATIVES FOR MORE EFFECTIVE COOPERATION.....	14
R&D ARRANGEMENTS BETWEEN THE US AND AUSTRALIA.....	15
CONCLUSION.....	16
ANNEX A: AUSTRALIAN-US ENGAGEMENT ON DEFENCE AND SECURITY ISSUES.....	17
OVERVIEW OF KEY BILATERAL FORA.....	17
AUSMIN.....	17
MILITARY REPRESENTATIVES MEETING.....	17
AUSTRALIA-US STAFF LEVEL MEETING.....	17
Operational Working Group.....	17
Logistics Working Group.....	17
Command Control and Communications Systems Interoperability Forum.....	18
Information Operations Working Group.....	18
Intelligence Working Group.....	18
AUSMIN DEFENCE ACQUISITION COMMITTEE.....	18
DEFENCE POLICY TALKS.....	18
JOINT STAFF TALKS.....	18
SERVICE LEVEL ENGAGEMENT WITH THE US.....	19
Navy.....	19
Army.....	19
Air Force.....	20
INFORMATION.....	21
SECURITY.....	21
ANNEX B: MISSILE DEFENCE.....	22
WHAT IS A BALLISTIC MISSILE?.....	22
THE TECHNOLOGICAL CHALLENGE.....	22
WHAT THE BALLISTIC MISSILE DEFENCE SYSTEM MIGHT LOOK LIKE.....	22
THE ELEMENTS OF MISSILE DEFENCE SYSTEM.....	22
ANNEX C: THE JOINT STRIKE FIGHTER PROJECT.....	23
ANNEX D: THE US LITTORAL COMBAT SHIP.....	24

Introduction

1. Australia's 53 year-old formal alliance with the United States under the ANZUS Treaty has never been closer. It reflects the strong affinity of our values and strategic interests and objectives, and a broad range of shared political, economic, social and security views.
2. Australia's defence relationship with the US is a major strategic asset. It contributes directly to our own defence and security. Our alliance with the sole global superpower provides a powerful deterrence against attack, and represents a shared commitment to working together to protect our interests. The alliance adds to our strategic weight and capability edge in the Asia Pacific region, and our ability to protect our interests. The US considers the alliance with Australia as a key element of its network of bilateral alliances in the Asia Pacific region, and that Australia is playing an increasingly important security role, both regionally and globally.
3. Our defence relationship with the US is very broad and provides many other benefits to Australia such as in intelligence, access to advanced military technology, and the opportunity to exercise and train with US Forces. Cooperation with the US on areas such as space based systems, missile defence, capability acquisition, and defence industry may also provide significant opportunities and benefits for Australia's security.
4. Our relationship with the US is also important for the security of the Asia Pacific region. Australia supports a US presence in the Asia Pacific as a critical factor in the maintenance of regional stability. But we also need to be an active contributor to regional security and this has been demonstrated through this Government's strengthening of counter-terrorism cooperation with countries of South East Asia, and our strong leadership in East Timor, the Solomon Islands, and in the Bougainville Peace Process.
5. Australia is comfortable with the direction the alliance has taken over recent years, but we recognise that we face challenges in maintaining a high level of interoperability and cooperation due to the disparity in size of our two nations, and as the US implements its force transformation strategy. We are actively working with the US to shape and develop the alliance to meet the shared strategic challenges of today and tomorrow. We place very strong emphasis on interoperability with the US in the development of its weapons systems and platforms, as well as its military doctrines and strategies, in a conscious choice to remain capable of fighting alongside the US as an effective ally.

The ANZUS Treaty and Australia's Defence and Security

6. The ANZUS Treaty gives shape, depth and weight to the Australia-US alliance and remains today the foundation of a relationship that is one of our greatest national assets. The formal alliance with the US reached 50 years of age in 2001 with the anniversary of the signing of the ANZUS Treaty in September 1951. It was also the year that the ANZUS Treaty was invoked for the first time after the tragic events of September 11. In a changed strategic environment where the threats of terrorism and WMD have added a new dimension to the security challenges that we face, Australia's undertakings in the ANZUS Treaty to support the US are as important as US undertakings to support Australia.
7. The US-Australia alliance works at three closely connected levels. Firstly, at the bilateral level, the alliance provides the opportunity for practical cooperation in defence and security. This is particularly important in recognition of the US' political, economic and military influence globally. Training and exercising opportunities with the US enable our defence personnel to maintain a high level of military capability and skills. This is further reinforced with the high level of access we

have to US military technology, giving Australia a vital capability edge. This close bilateral cooperation also ensures that our defence forces are as interoperable as possible in capabilities and systems, allowing Australia to contribute effectively to coalition operations abroad. This is essential in the era of high technology warfare. Intelligence cooperation and sharing with the US also provides us with a better understanding of the world around us.

8. Secondly, at the regional level, the US makes a critical contribution to the security and stability of the Asia Pacific region. It does so through a series of alliances and close strategic relationships which are an important element of the US network of defence relationships in the region. This network of support is central to regional stability.

9. Thirdly, the Australia-US relationship is founded on a mutual undertaking to support each other in a time of need. The US reaffirmed its reliability as an alliance partner with its vital support in logistics and intelligence for INTERFET. That practical contribution, as well as diplomatic support, played an important part in ensuring regional stability during the East Timor crisis. This is only one example in a long history of mutual support that Australia and the US have demonstrated in their alliance relationship.

10. Australia and the US regularly consult each other on key defence and security issues through numerous Ministerial, senior officer and working-level formal meetings and exchanges, many of which were established under the auspices of the ANZUS Treaty (see Annex A). These consultations allow for frank and timely discussion and joint planning at all levels on key foreign policy, defence and security issues, and exploration of initiatives for strengthening defence and security cooperation..

Context and nature of the contemporary strategic environment

11. Australia undertook a substantial review of our strategic environment and defence policy settings in the Defence White Paper, *Defence 2000: Our Future Defence Force*. The White Paper confirmed that the self-reliant defence of Australia was our primary planning and capability priority, but recognised that other priorities demanded a flexible ADF, capable of meeting a range of other demands. These include: contributing to the security of the immediate neighbourhood; supporting wider interests; and conducting peacetime national tasks.

12. Two years after the release of the White Paper, and in response to the tragic events of September 11 and the Bali bombings in October 2002, the Government produced an updated strategic position review: *Australia's National Security: A Defence Update 2003*, to ensure that our strategic assumptions retained their applicability and currency. This review recognised that the strategic landscape has changed and become more uncertain. In particular, terrorism and the spread of WMD have assumed new prominence and some adverse trends in our immediate neighbourhood have continued.

13. The *Defence Update 2003* addressed these changes and highlighted a number of issues. It argued that as a consequence of globalisation, Australia's region is more exposed to world events.. The terrorist attacks in the US and Bali, and the arrest of terrorists throughout Southeast Asia, demonstrate the increased reach of terrorism and that militant extremists in Southeast Asia are no longer focused exclusively on local issues and are prepared to take up causes of the sort espoused by groups such as Al Qa'eda. The world community has also become less tolerant of rogue states' WMD ambitions, and in Southeast Asia and the South Pacific, political weakness and poor governance pose major challenges, as do issues surrounding people movement, organised crime and illegal fishing.

14. Of particular importance, the review recognised that a combination of factors including greater stability in major power relations and increased US strategic dominance made the prospect of direct military attack on Australia less likely than when the White Paper was written. Yet, paradoxically, certainty and predicability in the strategic landscape had decreased because the advantage that had previously been offered by our geography could not protect us against rogue states armed with WMD and long-range ballistic missiles, nor from terrorist actions. Like the US, the Australian Government's response to international terrorism acknowledges the threat to Australians and Australian interests overseas. The threat of terrorism is global and the problem cannot be managed by one country alone - the response has to be bilateral, multilateral, regional and global.

US Engagement in the Asia Pacific Region

15. Within the Asia Pacific region, the role of the US remains central to regional security. US relations with China and Japan are of critical importance and the US-China relationship has warmed in recent years. Issues on the Korean Peninsula and Taiwan remain of ongoing concern.

16. US relations with Japan remain crucial to US strategic engagement in Asia, particularly US troop deployments in the region. The Koizumi Government has shown strong support for the US-led anti-terrorist campaign, with Japan taking a more active security role, extending its ability to deploy armed forces overseas, including to Iraq.

17. Australia strongly supports continued US commitment to Asia. We recognise, however, that the US faces challenges in managing regional sensitivities and ensuring that its bilateral relationships are seen by regional states as serving the interests of the region as a whole. In terms of the war on terror, Australia remains particularly keen to see more US engagement in the Southeast Asian region. Australia and the US can cooperate on providing support to regional agencies to combat the terrorist threat.

18. The US recognises the stabilising role that Australia plays in the Southwest Pacific. It recognises that in Papua New Guinea, the Solomon Islands and Vanuatu, Australia does the "heavy lifting" in terms of security assistance, foreign aid, humanitarian relief and economic support.

19. The bilateral relationships the US maintains with regional states, including ourselves, are central to stability in the Asia Pacific. Our ANZUS relationship forms part of the US network of alliances, including Japan, Korea, Thailand and the Philippines, through which America sustains its engagement with the Asia Pacific region. Australia's participation in this alliance network contributes to regional security and complements our commitment to and capacity for an inclusive and cooperative approach.

Interoperability and Capability for Coalition Operations

20. Interoperability with US forces and the ability to contribute to multinational coalitions are central themes in Australia's policies, acquisition programs and training plans. Australia's effective, high-end contributions to US-led coalition operations in Afghanistan and Iraq demonstrate the high degree of interoperability and the shared values that characterise the Australia-US relationship.

21. Two major themes shape the way forward for Australia-US interoperability. The first is the experience of recent military operations, drawing on the lessons from Afghanistan and Iraq combat operations. The second theme is transformation, which is reshaping warfighting concepts and capabilities.

22. A key contributor to the military success of recent operations was the high degree of operational-level interoperability. This is not surprising given the high degree of strategic-level

interoperability that exists between the two countries and the extensive security cooperation over five decades.

23. The on-going transformation of US military forces and the concurrent modernisation of Australian military forces also require close attention. Transformation includes the development of new warfighting concepts, network-centric warfare and the rapid introduction of numerous new technologies. These changes have significant policy ramifications that will inform capability and force structure planning decisions, and which will determine whether the high degree of operational-level interoperability currently enjoyed is maintained into the future.

Strategic Interoperability Review

24. A strategic-level review of Australia-US interoperability was agreed by the Australia-US Ministerial Meeting (AUSMIN) in October 2002. Subsequently, a number of areas for improvement were identified, including: information exchange; harmonisation of some capability development; and cooperative science and technology experimentation. Defence is also establishing an Office of Interoperability which will be part of the new Defence Capability Group.

Joint Exercises and Operations

25. Australian and US forces work especially well together. Bilateral exercises with the US in, and around, Australia provide excellent training opportunities for both the ADF and US forces in high-intensity coalition operations, while exercises with other regional countries provide opportunities for enhanced military-to-military cooperation. Despite competing demands and a high operational tempo, the US and Australia conducted 19 substantive, high-end exercises in 2003.

26. Exercise participation helps establish the fundamentals of interoperability such as the connectivity of our communication and data systems, and an appreciation of our approach to issues such as rules of engagement (ROE). Importantly, our performance in major joint exercises builds confidence within the US that we are a capable coalition partner. A further benefit is the opportunity afforded by these exercises for ADF officers to fill important command positions within a large joint force conducting complex operations. Australian understanding of US training, techniques, procedures, structures and doctrine has permitted a higher level of interoperability than almost all other coalition partners.

27. In 2003, the ADF exercised with all US services. The US Marine Corps was the most visible participant among the US components, particularly in Exercise Crocodile 03 held in August. Exercise interoperability objectives focused on submarine warfare, maritime patrolling, undersea warfare, special forces operations, airborne insertion/extraction, commando parachute jumping and operations in a littoral environment.

28. Of particular note is the strength of the Special Forces relationship between Australia and the US. The value of joint Defence exercises between Australia and US Special Forces is evident through the success of recent coalition operations. This is a direct result of the relationships established and the interoperability achieved through joint exercises.

29. Similarly, RAN operations during Operations BASTILLE, FALCONER, and CATALYST and through Persian Gulf Maritime Interdiction Operations over the past decade, have provided RAN ships with an interoperability advantage over other nations currently on-station in the Northern Arabian Gulf. At US Navy (USN) request, Australia has commanded a number of Maritime Interdiction Operations.

30. US cooperation and assistance in logistics is vital in ensuring RAN ships remain on station and are fully supported – even 9000kms from Australia. USN logistics staff in Bahrain assist in planning and providing replenishment of RAN ships and ensure essential stores are delivered by the logistic helicopters from Bahrain as required. During Operation FALCONER, the US was able to provide ammunition to RAN ships that negated the requirement to transport this ammunition from Australia. In South East Asia, the US Commander of Logistics Western Pacific in Singapore also provides assistance (when required) in coordinating tankers to refuel RAN ships in the region.

31. The participation of our F/A-18s in high intensity exercises such as RED FLAG, TANDEM THRUST, and CROCODILE and the interoperability refined in these exercises was demonstrated by the fighter force's performance during the Iraq campaign. Similarly, the ability of our AP-3C maritime patrol aircraft to work with US carrier forces in the Middle East Area of Operations was increased by the experience gained in RIMPAC and other training opportunities with the USN. This was a major factor in the rapid deployment of the AP-3Cs and to their successful integration into US maritime surveillance efforts.

32. The presence of US equipment in our inventory assists with equipment interoperability. This is true across a range of capabilities – parts for ships and aircraft, ammunition replenishment, communications, fuel amongst others. This, in turn, reduces the amount of materiel the ADF needs to bring forward into an area of operations.

33. Planning for major combined operations is achieved through a robust relationship that has been established in exercises and previous operations. Australian and US staff planning processes are very similar, enabling planning to begin with minimal last-minute training.

34. Secure communications are the glue that brings together an effective, interoperable team. Australia and the US are working together to continuously improve our ability to achieve secure communications. Operational lessons and experience using secure communications have been applied to the recent Exercise Crocodile 03 and are being developed for the next major Australia-US exercise, TALISMAN SABER 2005.

35. The Theatre Battle Management Core System is being acquired for the ADF. This system will ensure the ADF is fully interoperable with the US air-tasking organisation. This not only allows rapid dissemination of tasking orders but also ensures that ADF and US air operations staff are fully interchangeable between air tasking headquarters. This was fundamental to the success of both Operations BASTILLE and FALCONER, and the ongoing success of OP CATALYST. Australian and US doctrine related to air operations centres is currently under examination to ensure that both doctrine and systems continue to improve interoperability.

Australia-US Intelligence Sharing and our Security

36. The Defence Intelligence Group (DIG), consisting of the Defence Intelligence Organisation (DIO), the Defence Signals Directorate (DSD) and the Defence Imagery and Geospatial Organisation (DIGO), is a key player in our strategic relationship with the US, and a major beneficiary of that relationship. The intelligence sharing relationship between the US intelligence community and the agencies of the DIG is critical to our defence and security. It enhances considerably the ability of the Group to meet the needs of Government and Defence decision-makers and ADF operational customers. Cooperation with counterpart agencies in the US remains a cornerstone to the intelligence support provided by the DIG.

37. At the strategic level, as well as at the operational and tactical levels, Australia and the US have engaged in defence intelligence sharing activities, to mutual benefit. This has most recently been

demonstrated during military operations in Afghanistan and Iraq, where intelligence sharing between Australia and the US directly contributed to the success of ADF operations. During these operations, the US provided Australia with unprecedented access to its intelligence and intelligence systems.

38. The same level of intelligence cooperation has underpinned our shared efforts in the global war against terrorism. Looking beyond current operations, both countries shared broad strategic assessments on trends and developments in the Asia Pacific region, and on other important security issues affecting both countries, such as the proliferation of WMD.

39. In addition to collaborating on intelligence collection and analysis, Australia also benefits from the US' preparedness to share access to information technology systems and processes.. In return, Australia collaborates by providing access to unique Australian collection systems and collaborative applied research and development, which brings to bear the particular strengths of Australia's intelligence and scientific communities.

40. Australia's commitment to working with the US on arrangements for the continued exploitation and sharing of intelligence is well appreciated by the US intelligence community. The quality of Australian intelligence is also well regarded by US intelligence consumers and, in turn, US agencies provide Australia with a wide range of intelligence material to meet Australian strategic and operational requirements.

41. The relationship is conducted in a positive atmosphere with a high degree of frankness and considerable proactivity on the part of the US. It is clear US personnel involved in the relationship understand the priority the US accords Australia, even when such personnel are not involved with Australian agencies on a day-to-day basis.

42. Australia benefits considerably from its intelligence sharing arrangement with the US, both in terms of quality and quantity of material received. Replacing this quality and quantity from our own resources would be financially and technologically impossible.

Australia and Missile Defence

Australian Commitment

43. In December 2003 the Government announced that Australia had agreed in principle to greater participation in the US Missile Defence (MD) program. At this stage, Australia has not committed to any specific activity or level of participation. Australia is working with the US to determine the most appropriate forms of Australian participation.

44. In taking this decision, the Government was guided by its assessment of Australia's strategic interests. It considered the security of Australian interests in the longer term, in a global and regional environment made less certain by the threat from the proliferation of WMD and of ballistic missile capabilities.

Australian considerations in participation

45. Australia, like many other countries, shares with the US deep concern at the destabilising impact of the proliferation of ballistic missiles and of WMD. While Australia does not face an immediate threat from ballistic missiles, the Government retains a fundamental obligation to address threats to our country which may emerge and to our deployed forces.

46. Ballistic missiles present a growing threat to Australian deployed forces. Missiles are attractive to many nations as they can be used effectively as an asymmetric counter to traditional military capabilities. Ballistic missiles have been used in several recent conflicts, including the 1991 Gulf War, the Afghan Civil War, the war in Chechnya, and the recent war in Iraq. Of particular concern, many countries with questionable commitment to non-proliferation are also developing WMD-capable missiles of increasing range and sophistication. Some of these countries are actively assisting others with such programs.

47. The threat from longer-range ballistic missiles is also growing. North Korea is of most concern at present. In 1998, North Korea tested a three stage Taepo Dong -1 missile. This was characterised as a satellite launch vehicle, but the technologies apply directly to ballistic missiles. North Korea has since observed a moratorium on flight tests of long range missiles, but has continued to develop them. If further developed, these missiles, such as the Taepo Dong-2, could potentially threaten Australia: a two stage Taepo Dong-2 could reach Northern Australia. With a third stage, it could reach all of Australia, albeit with a reduced payload.

48. The Australian Government does not believe that Missile Defence will threaten regional stability. Missile Defence is a defensive system –it does not threaten other countries. Its purpose is to negate a ballistic missile threat and thus discourage other countries from investing in ballistic missile systems.

49. Australia does not, at this stage, envisage a “missile shield” that could provide comprehensive protection against all forms of missile attack on Australian population centres. The cost of such a system would be prohibitive. But by participating in the system, Australia will contribute to global and regional security, and to the security of Australia and its deployed forces, and to those of its friends and allies. The level and form of participation will be entirely at Australia’s discretion, and remains to be determined.

Allied involvement

50. The US has emphasised that the Missile Defence program will be structured to encourage the participation of friends and allies. Cooperation is proposed at either Government to Government or Industry to Industry contracting/subcontracting levels.

51. The UK has agreed to participate in the new Missile Defence framework. On 5 February 2003, the UK announced its approval for the upgrade of RAF Fylingdales for Ballistic Missile Early Warning. The UK stated that the decision did not commit the Government to any greater participation in the US Missile Defence Program but kept open the prospect of acquiring such capabilities in the future. On 12 June 2003, the UK signed an MOU with the US on Ballistic Missile Defence. The MOU sets out the basis for industry participation.

52. As part of an effort to increase the participation of UK industry in the Missile Defence program, a Missile Defence Centre (MDC) has been established as a joint venture between the UK Government and UK Industry. The centre is co-funded by the UK Government and industry (\$A15 million each). The centre will act as a showcase for specialist expertise and equipment.

53. A number of European aerospace companies have expressed an interest in participating in the US Missile Defence program, including BAE SYSTEMS; European Aeronautic Defence and Space Co (EADS); and Alenia Spazio. These companies have signed MOUs with Boeing to explore avenues of cooperation in Missile Defence.

54. Japan already has some key elements of a Missile Defence system, including AEGIS ships and Patriot interceptors. Missile Defence, in light of the missile and nuclear threat from North Korea, is a major element in the changing Japanese defence posture, which is increasingly recognising the need for Japan to enhance its defence capabilities. The Japanese Defence Agency has sought a major commitment to Missile Defence in its future budget proposals.

Ballistic Missile Early Warning

55. Australia has a long history of cooperation with the US in Ballistic Missile Early Warning. Through the Joint Defence Facilities, (first Nurrungar and now the Relay Ground Station (RGS) at Pine Gap) Australia has had a long involvement in detecting the launch of ballistic missiles, thus providing early warning of attack. This has been a major contribution to strategic stability, and to the detection of the launch of theatre ballistic missiles (for example Iraq's use of SCUD missiles to attack Israel during the first Gulf War).

56. The RGS supports the Defence Support Program (DSP) satellites. Australian involvement in the DSP system also includes a presence at the central processing facility in the US and some research and development conducted by the Defence Science and Technology Organisation (DSTO).

57. Within a few years, the DSP satellites will be supplemented by more capable Space Based InfraRed System (SBIRS) High satellites. The RGS at Pine Gap has been designed to accept data from these satellites. By formal arrangement with the US, Australia will continue to be involved in the mission. The new satellites will provide an enhanced Ballistic Missile Early Warning capability.

58. The RGS at Pine Gap transmits ballistic missile launch early warning information to the US. This information could be used in any US Missile Defence system. This would be the continuation of a ballistic missile early warning partnership we have shared with the US for over 30 years – a partnership which makes a significant contribution to global strategic stability.

Possible areas of engagement

59. The mechanisms to progress cooperation have been discussed with the US, including the option of establishing a working group and developing an MOU. Australia is currently considering what would be appropriate forms of cooperation on Missile Defence, and is working closely with the US on this. They could include:

- expanded cooperation in Ballistic Missile Early Warning activities;
- acquisition of, or other cooperation in the fields of, ship-based and ground-based sensors;
- cooperation in the exploitation and handling of data from sensors; and
- science and technology research, development, testing and evaluation.

Missile Defence technology provides a range of capabilities

60. A Missile Defence system is much more than provision of early warning and missile interceptors. It involves warning, cueing, tracking and intercepting systems, and integrates command, control, and communication systems of a very high order.

61. Such capabilities and technologies are of considerable interest for our own applications in intelligence, surveillance, reconnaissance and defensive systems – even if these are not oriented towards defence against ballistic missiles. In particular, wide area surveillance, command and

control, technical intelligence, multi-sensor data fusion, and communications technologies could be of interest in meeting the ADF's requirements in these areas.

Industry opportunities

62. Australian participation in the Missile Defence program is expected to create some opportunities for Australian industry, from both US and Australian contracts. Australia will work to obtain maximum opportunities for Australian industry.

Space Based Systems and Australia's Self-Reliance

63. Space systems are now essential to targeting, navigation, communications, weather prediction and intelligence. They enable a much increased tempo and precision of operations, giving the US an increased asymmetrical advantage over its adversaries. The US is able to wage high-technology war with limited numbers of troops because of its space capabilities.

64. Australia is a significant user of US Government and commercial space capabilities. Space systems provide essential navigation, weapons guidance, communications, intelligence, and meteorological capabilities without which the ADF's ability to operate would be severely constrained.

65. The importance of space systems to the ADF does create dependencies: Australia is dependent upon the US for some space-based capabilities. Through Australia's hosting of the Joint Defence Facility at Pine Gap, the US also has some dependency on Australia. Australia is also dependent upon other US Government systems – including the GPS satellites – and commercial satellite operators – notably for communications provided by the Defence payload on the Singaporean-owned Optus satellite.

66. Dependence upon foreign (particularly US) systems is not unique to Defence. Any significant denial of space capabilities in general would severely constrain international communications, business and navigation systems. Systems relying on computer-controlled communications (electronic banking, for example) depend on timing signals from space.

67. Australia is a major consumer of space services, but has virtually no indigenous space capabilities. This is at the conscious decision of successive Governments that the investment needed to support an indigenous capability, or even just to own and operate its own satellites, could not be justified. Given that space systems are critical to civilian and military functions, Australian dependence upon foreign systems and particularly US systems is therefore inevitable.

68. A close alliance with the US, as the leading space power and greatest owner of military space capability, and increasing interoperability with US forces, is in Australia's interest to advance our own military capabilities; to assure our continued access to US defence space capabilities; and to ensure the US considers the interests of its allies in its development and use of space capabilities.

Australia-US Industry Cooperation

69. The US is the world's largest developer and manufacturer of high technology defence capabilities, making cooperation between the defence industries of each country a matter of high importance for Australia. In particular, industrial cooperation in the defence sector supports:

- interoperability between Australian and US forces;
- strategic sourcing for Australian and US forces;
- industrial efficiency and innovation in the respective defence industry sectors; and

- the scale and leverage essential to supporting self-reliance in Australian defence industries which, in global terms, are relatively small and concentrated in specialised capabilities.

70. The last of these is especially important for Australian defence industries, which would benefit from improved participation in the US defence market in order to access the scale and continuity of demand required to support sustainable investments in Australian industrial capability. The US market also offers important leverage into global supply and distribution chains for major weapons and support systems.

71. Australian industry has made some recent gains with participation in the multilateral Joint Strike Fighter (JSF) program, and in the bilateral programs associated with the Nulka Anti-Ship Missile Decoy, the Metal Storm electronic ballistics technology, Heavy Weight Torpedoes, the Wundurra future soldier program, and the Collins combat system. Such partnerships are likely to become increasingly common as the requirements of coalition operations and enhanced interoperability grow.

72. Some impediments stand in the way of improved Australian participation in the US defence market. Some of these are commercial and reflect the different size and structures of the respective defence sectors. The small scale of the Australian defence industries, their modest investments in R&D, and their relative inexperience in the US all add to the difficulty of participation in that market. Within its niche specialisations, Australian industry nonetheless can prove competitive and innovative in comparison with US industry, and it is in this context that institutional impediments to participation can be the more serious difficulty.

73. Australia has sought to overcome such challenges through several means. In 1995, Australia and the US signed a *Memorandum of Agreement on Reciprocal Defence Procurement (MOA)* and in 2000 a *Statement of Principles for Enhanced Cooperation in Matters of Defence Equipment and Industry*. The broad intent of these agreements is to support defence activities through enhanced integration of the two national defence industry sectors, including reciprocal access to procurement. The AUSMIN Defence Acquisition Committee (ADAC) and its subsidiary working groups also address institutional impediments to industry cooperation and facilitate harmonisation of acquisition plans and programs from concept development to purchase to through-life support and disposal (see Annex A).

Initiatives for more effective cooperation

74. Australia is now focussing on a suite of key initiatives to open the way for more effective cooperation between the defence sectors of the US and Australia. Initiatives include: streamlined technology release arrangements, a treaty level exemption from US export controls on unclassified material for Australia, and improving the effectiveness of the MOA by upgrading it to treaty level when it is renegotiated.

75. Australia has invested considerable effort in becoming a regional source of strategic support for US forces, particularly in aircraft and ship maintenance and resupply, communications and logistics, and training and education. The arrangement between the USN and West Australian industry for the repair and maintenance of Military Sealift Command ships provides an example of the support Australian industry can provide to regionally deployed US forces. This arrangement is mutually beneficial: not only does it benefit the US, but it also supports our defence objectives by enabling Australian companies to develop their technical expertise working on, and with, US technology.

76. While pursuing more effective institutional arrangements for cooperation, Australia is also driving cooperation through specific projects where the two countries have identified complementary interests and tailored arrangements to accommodate these. The project with greatest potential in this respect is the JSF project (see Annex C). In the case of JSF, Australia bought into the Systems Development and Demonstration phase of the world's largest ever military aerospace project. This has opened the way for Australian industry to compete for development and supply contracts over the life of the JSF industry program, with unprecedented opportunities for achieving large-scale production runs feeding into global supply chains. To date, seven Australian companies have won nine JSF contracts and several additional contracts should be announced shortly.

77. Similar opportunities may lie for Australian industry in the US Littoral Combat Ship (LCS) program (see Annex D). The LCS program has been identified by the US as a vehicle for Collaborative International Teaming, which opens the door for non-US firms to participate in the program. Australia offers a range of niche capabilities particularly relevant to littoral maritime operations, and the Government is supporting a 'Team Australia' initiative in marketing these capabilities for the LCS program.

78. Other projects have arisen from joint interest in developing particular technologies. The Nulka missile decoy project is now a joint production project between the two countries drawing on complementary technologies and which is also showing export potential to third countries. AEWACs collaboration is another case which is also showing export potential to third countries, as is the Wundurra Soldier of the Future project. Future collaboration in Missile Defence and the application of the AEGIS combat system to Australia's new Air Warfare Destroyers may also provide opportunities for Australian industry.

R&D Arrangements Between the US and Australia

79. Australia relies very heavily on scientific collaboration with the US to leverage resources; to access technology, including unique facilities; and to assist exploitation of scientific development. The total value that DSTO, and hence the Australian Defence Organisation, derives from these arrangements is very substantial, and is probably worth several hundred million dollars per year. Because collaboration is conducted on a reciprocal basis, the US would derive a similar return from these arrangements.

80. The main bilateral arrangement for collaboration with the US in defence R&D is the *Agreement between the Government of the United States of America and the Government of Australia concerning Co-operative and Collaborative Research, Development and Engineering* (also known as the Deutch-Ayers Agreement). There are currently 19 projects under this agreement, the most prominent of which involves Electronic Warfare self-protection equipment.

81. Australia and the US also have a *Mutual Weapons Development Data Exchange Agreement* which covers the exchange of technical information between the US and Australia. Both DSTO and the Services make extensive use of this Agreement.

82. The most significant multilateral defence scientific international arrangement that Australia belongs to is The Technical Cooperation Program (TTCP). The TTCP is an international program that involves collaboration in defence scientific and technical information exchange; program harmonisation and alignment; and shared research activities among the US, UK, Australia, Canada and New Zealand.

83. Collaboration within TTCP provides a means of acquainting member nations with each other's defence R&D programs so that each national program may be adjusted and planned in cognisance of the efforts of the other members and thereby avoiding unnecessary duplication. The TTCP promotes concerted action and joint research to identify and close important gaps in the collective technology base and provides each nation with the best technical information available for advice to their governments and military forces on all matters related to defence R&D.

84. At present, TTCP consists of 10 technological or systems groups that, collectively, cover almost all fields of defence research. In total, there are about 300 cooperative projects underway at any one time and these involve almost 1000 defence scientists around the world. Australia and the US participate in all of these cooperative projects.

85. DSTO also interacts with other agencies in the US Department of Defense via arrangements that are contractual in nature. Paramount among these agencies is the Defense Advanced Research Projects Agency (DARPA), which has contributed to the development of some defence technologies, either invented in DSTO, or by other organisations or companies in Australia.

86. DARPA, the US Office of Naval Research, and the US Air Force's Office of Scientific Research all contribute to some Australian university and Cooperative Research Centre programs. DSTO also contributes to some of these.

Conclusion

87. In a changed strategic environment where the threats of terrorism and WMD have added a new dimension to the security challenges that we face, the importance of our alliance with the United States to our defence and security cannot be over-stated. It is a major strategic asset and contributes directly to our own defence and security.

88. The vigour of the alliance is founded on enduring shared values, interests and outlook, as well as common sacrifices that extend back almost a century. It also reflects the defence and security challenges we face over the coming years and the benefits we stand to gain by cooperation.

89. For Australia, continued US engagement will support our defence capabilities and play a critical role in maintaining strategic stability in the region as a whole. For the US, Australia will remain an important ally, a key partner in regional security efforts and a significant potential contributor to coalitions. Overall, Australia and the US continue to share many interests and values and will continue to jointly benefit from, and contribute toward, global stability and prosperity.

Annex A: Australian-US engagement on defence and security issues

Overview of key bilateral fora

1. Australia and the US regularly consult each other on key defence and security issues through numerous Ministerial, senior officer and working-level formal meetings and exchanges, many of which were established under the auspices of the ANZUS Treaty. These consultations allow for frank and timely discussion and joint planning at all levels on key foreign policy, defence and security issues; and exploration of initiatives for strengthening defence and security cooperation between Australia and the US.

AUSMIN

2. The Australia-US Ministerial Meeting (AUSMIN), formerly the ANZUS Council, was established under the auspices of Article VIII of the ANZUS Treaty to further the purpose of the Treaty and to give effect to the interoperability obligations of Article II of the Treaty (Chapter 2 Annex A). The meeting is usually held annually, with each country hosting the meeting in turn. It provides the opportunity for the Australian Ministers for Defence, and Foreign Affairs to meet with the US Secretaries of Defense and State to discuss security policy related issues of contemporary significance to the bilateral relationship. The most recent AUSMIN was held in Washington in October 2002. The 2003 AUSMIN was to be held in Australia in late 2003, but was postponed by mutual agreement due to the visit to Australia by President Bush in October 2003.

Military Representatives Meeting

3. The Chief of the Defence Force (CDF) and US Commander Pacific Command (COMPACOM) are the military advisers to AUSMIN through the Australia-US Military Representatives Meeting (MILREPS), also established under the auspices of the ANZUS Treaty. MILREPS meets annually to discuss security and military issues of mutual interest. The purpose of MILREPS is to coordinate the security strategies of the ADF and PACOM in the pursuit of shared interests in the Asia Pacific region through the discussion of regional and global strategic perceptions; the coordination of national military activities; and the development of interoperability.

Australia-US Staff Level Meeting

4. The Australia-US Staff Level Meeting (SLM) was established under the auspices of the ANZUS Treaty and is the senior working level forum tasked by the MILREPS to manage the Australia-US bilateral military relationship. The SLM is responsible for the overall coordination of bilateral interoperability issues. Meetings are normally held biannually, alternately in Australia and the US, and are co-chaired by Australian and US flag-level officers. The SLM has several subordinate working groups which meet to discuss and examine operational procedures and exercises, operational logistics, and communications and command and control systems interoperability.

Operational Working Group

5. The Operational Working Group (OWG) is the primary subordinate committee of the SLM and is responsible for a wide range of issues aimed at enhancing operational interoperability. Recent issues considered by the OWG include small arms ammunition compatibility, tactical radio interoperability shortfalls, and cross certification of Forward Air Controllers.

Logistics Working Group

6. The role of the Logistics Working Group (LWG) is to improve logistics interoperability between the US and Australia in the areas of movement planning and support, reception, staging,

on-forwarding, integration processes, logistic intelligence sharing, contract management and sustainment.

Command Control and Communications Systems Interoperability Forum

7. The prime focus of the Australia-US Command Control and Communications Systems Interoperability Forum (C3SIF) is to enhance the interoperability of communications and command support systems to improve the warfighting effectiveness of operational users and to support the planning and conduct of combined operations and other activities between the ADF and USPACOM. This is achieved through the development of common standards, enhanced network connectivity and the addressing of communications incompatibilities.

Information Operations Working Group

8. The Information Operations (IO) Working Group is responsible for developing deliberate Information Operations plans for SLM and MILREPS approval, producing standard operating procedures for a bilateral IO cell, reviewing IO courses, developing IO exercise activities and examining IO classification and releasability issues between the US and Australia.

Intelligence Working Group

9. The role of the Intelligence Working Group is to develop intelligence procedures in support of combined operations and exercises, resolve intelligence and security-related issues, and enhance the working relationship between the intelligence staffs of the Defence Intelligence Organisation, Australian Defence Headquarters, Headquarters Australian Theatre, and US PACOM.

AUSMIN Defence Acquisition Committee

10. The AUSMIN Defence Acquisition Committee (ADAC) is the senior bilateral forum for discussion and cooperation on matters involving the acquisition, logistic support and research development, test and evaluation (RDT&E) of defence equipment. ADAC meets at least annually, and is co-chaired by Australia's Under Secretary Defence Materiel and the US Principal Deputy Under Secretary, Office of the Under Secretary of Defense (Acquisition, Technology and Logistics). Representatives from each country's capability development, acquisition, logistics, and science and technology organisations also participate in ADAC through the forum's four working groups – requirements harmonisation, acquisition and technology development, logistics, and special programs. Each Service also holds its own Senior National Representative/Senior Acquisition Representative forum, co-chaired at the Major General (or equivalent) level, to work on specific issues, ensure interoperability and promote cooperative development of new weapons systems.

Defence Policy Talks

11. An outcome of the October 2002 *US and Australia Strategic Level Interoperability Review* was the need to establish a regular forum for the frank exchange of views on defence and security matters and the development of our bilateral defence relationship by senior Australian and US officials. Inaugural Defence Policy Talks were held in Canberra on 15 August 2003. The US delegation was led by Principal Deputy Assistant Secretary, International Security Affairs, Mr Peter Flory and the Australian delegation by Deputy Secretary Strategic Policy, Mr Shane Carmody.

Joint Staff Talks

12. An additional outcome of the *Interoperability Review* was recognition of the need to establish national-level joint staff talks to improve strategic communication and coordination. Strategic Operations Division hosted the inaugural Joint Staff Talks with US Pentagon Joint Staff in

Canberra in August 2003. The talks provided an excellent forum to ensure that respective national interests were understood, and for counterparts in the US Joint Staff and ADHQ to meet each other. Topics covered included, Australia-US Military force structure and relationship with Government; Australia-US regional and global engagement; transformation and impacts on interoperability; experiences and lessons learnt from Operations ENDURING FREEDOM and IRAQI FREEDOM; military strategies, and concept development and joint experimentation.

Service Level Engagement with the US

13. Each of the Services maintains an extensive program of engagement with their US counterparts through bilateral exercises, personnel exchanges, information exchanges and training.

Navy

14. The Australia-US Navy to Navy relationship is based on a history of cooperation and support. The RAN provides strong support to the US Navy (USN) regional presence by permitting use of port and airfield facilities, and by hosting elements of the US armed forces in training areas as appropriate to our mutual requirements.

15. While the RAN's strongest links are with the Commander Pacific Fleet, which is the primary operational focus of the relationship, recent involvement in the war on terror and the Iraq campaign has seen closer ties being established with US Central Command (CENTCOM). Maintaining strategic and policy links with the USN in the Pentagon is also essential to the relationship.

16. Key highlights of the RAN's current engagement include:

- participation with US forces in maritime training, exercises and operations, including RIMPAC, CROCODILE, and TANDEM THRUST and the Iraq campaign;
- development of compatible operations and logistics concepts and doctrine;
- maintenance of close dialogue at Flag rank level, including Navy to Navy talks every 18 months on issues of mutual benefit and strategic interest;
- personnel exchanges, attachments and training support in locations that include mainland USA, Hawaii, the Middle East and Japan;
- ship visits, including support for the USN 'Sea Swap' initiative;
- submarine information exchange;
- exchange of information on Naval research and development, test and evaluation, and material programs through Senior National Representative Talks; and
- interoperability initiatives that influence maritime capability development through the auspices of the Air Warfare Working Group and Submarine Statement of Principles (SOP).

17. During 2003, Australia hosted 71 US ship visits, some at multiple ports, carrying approximately 62,000 sailors and marines, covering 284 port days. The USS Fletcher conducted two Sea Swap crew exchanges in Fremantle in January and December 2003. Conducting the crew exchange in Australia saves the USN the ship transit costs of fuel and time to a US port. In addition, 271 US aircraft visited Australia.

Army

18. Since the end of World War II, Army has continuously engaged in a range of training and combined exercises with the US Army and US Marine Corps as part of our commitment to the

ANZUS Alliance and the Army-to-Army relationship that has developed under the ABCA agreement.

19. Land Command trains predominantly with PACOM force elements at individual, sub-unit, headquarters and unit/formation levels, balanced across both regular and reserve forces.

20. Special Operations Command (SOCOM) training with US Special Forces ranges from individual, through to collective joint training exercises, both in Australia and overseas. SOCOM force elements also participate in combined training events that include Land Command force elements and their US counterparts. The main objective of this training is to enhance the interoperability of the two Special Forces, which has been a major contributing factor to the success achieved in recent operations. SOCOM is also able to access advanced capabilities, equipment and facilities that are not available in Australia for individual and team training.

21. Reservists, as much as their regular counterparts, benefit from combined training with the US. Both Land Command and SOCOM have significant reserve complements, which are included in exercises with the US. Like their regular counterparts, reservists are exposed to capabilities and systems that are not available to them in Australia and gain considerable benefit from a broadening in their military skills, knowledge and experience.

22. The US also benefits from our combined training events. Whenever US forces exercise in Australia they have an opportunity to conduct training events in a difficult physical environment using facilities and systems that are difficult to combine elsewhere. This has both a psychological and physical benefit to US forces, by broadening the experiences of their personnel and testing their equipment and systems. The constant multilevel engagement with the US also provides US commanders and personnel the opportunity to assess the level of both specific and broad capabilities offered by Australian forces.

Air Force

23. The RAAF has an extensive relationship with its US counterparts. Along with the Air Attaché's staff, the RAAF has personnel in the US in exchange, loan, liaison, training and project positions. These personnel work with the US Air Force, the US Navy, the US Marine Corps, the US Army and with the Joint Staff. Within these organisations, RAAF personnel are engaged in activities in the areas of space, operations, training, logistics, engineering, procurement, planning and liaison. A new initiative commenced in 2003 between the RAAF and the USAF involves the loan of RAAF aircrew to the USAF. In what is a mutually beneficial arrangement, the RAAF has placed personnel with USAF Airborne Early Warning and air-to-air refuelling squadrons. These RAAF personnel gain valuable experience while the USAF has the services of highly competent, motivated and qualified aircrew.

24. There is also significant engagement at the senior levels of the RAAF with the USAF. At the highest level, there are Chief to Chief counterpart discussions where the respective Chiefs of Air Force meet and discuss issues that affect the relationship. The Air Senior National Representatives (ASNR) meeting is co-chaired at the Deputy Chief level and involves senior personnel from both Air Forces. This meeting is where the mechanics of cooperation are discussed and agreed. There are also operational discussions held between Australia's Air Commander and his US counterparts in the Pacific Air Forces. Collectively, the US acknowledges the value of these various meetings as they 'get things done'. The positive outcomes achieved reaffirm the value and strength of the relationship.

25. The RAAF sources training from the US that is either not conducted in Australia or is not cost effective to develop. Training such as competency based courses that enable personnel to be

employed in an Air Operations Centre, or training relating to space operations are not available in Australia. Other training such as test pilot training, and operational conversions and continuation training on aircraft such as the Beech 350 or Boeing 737 Business Jet are more cost effective if obtained in the US rather than developed in Australia. RAAF personnel are very highly regarded within the US military training establishments and more often than not they excel on training courses.

Information

26. Following the establishment of the Office of the Chief Information Officer (OCIO) in December 2002, one of the key initiatives that has been successfully progressed is the establishment of a robust strategic whole-of-Defence information policy relationship with the United States Office of the Assistant Secretary for Defense for Networks and Information Integration or OASD(NII).

27. The purpose of the relationship is to ensure early engagement on significant Defence information policy developments that are relevant to both nations. While the primary driver is to ensure improved interoperability and information sharing in support of the planning and conduct of operations, Australia is also interested in shaping favourable US information security policy outcomes.

28. A draft Statement of Intent describing the intentions, objectives and associated meeting arrangements has been developed and will be signed in early 2004. It is anticipated that the first formal CIO-ASD(NII) talks will be held in the third quarter of 2004.

29. While still maturing, this initiative has already improved reciprocal understanding of the key information policy and capability development issues in the pursuit of improved Australia-US information sharing.

Security

30. Engagement between Australia and the US on defence and security issues is significantly supported by the *Agreement between the Government of Australia and the Government of the United States concerning security measures for the protection of classified information*. This agreement recognises a mutual interest in the protection of classified information.

31. Australian and US Defence security counterparts are currently working to develop, and negotiate, an Industrial Annex to the agreement, which will facilitate the mutual recognition of security measures that protect classified information released to Defence Industry.

ANNEX B: Missile Defence

What is a ballistic missile?

1. A ballistic missile is one which has a ballistic trajectory – a steep climb in which the missile accelerates; a coasting phase; and a terminal phase in which the missile falls under gravity onto its target. Long range missiles (travelling more than 5,000 kilometres) leave the atmosphere and travel through space for part of their journey. Shorter-range missiles stay within the atmosphere.

The technological challenge

2. The technological challenge of missile defence increases with the range of the missile to be intercepted. A long-range missile may be travelling at 7-8 kilometres a second as it approaches its target. Short or medium range missiles, more likely to be used against deployed forces, are not as fast – perhaps from 1 to 4 kilometres a second – but their shorter range means that they have to be intercepted within minutes of launch.

What the Ballistic Missile Defence System might look like

3. A missile defence system needs to be able to achieve several things. It needs to know when a missile has been launched, where it is going and precisely where it is at any time. And it needs to be able to hit it so that not only does the missile not reach its target, but so that its warhead poses no further danger. It needs to make all the elements doing these jobs talk to each other. And it needs to do this in the time available.

4. Hitting a missile in the different parts of its trajectory all have benefits and drawbacks. In the boost (climbing) phase, the missile is going slowly and is easier to hit. But the boost phase is early in the missile's flight. The missile would need to be detected immediately, and the intercepting system would need to be able to reach it quickly – which means it would have to be near the missile launching site.

5. In the coasting (the “mid-course”) phase, the missile's engine has stopped firing so the missile's course is predictable. The interceptor has a longer time to get to the missile, even allowing several attempts if the first ones miss. But the longer period in space lets the attacking missile deploy countermeasures such as decoys – and working out which is the real warhead and which are decoys is in itself a huge challenge. The final phase, the “terminal” phase in which the missile falls on its target, is brief. Defensive systems must be close to the target to reach the missile in time. But the target for the interceptors is clear – any decoys will have fallen behind.

6. A key US concept is “layered defence”, in which the missile defence system attempts to hit the missile at each stage in its trajectory.

The elements of Missile Defence System

7. A Missile Defence system would need to include:

- intelligence systems to detect preparations for missile launches;
- sensors to detect missile launches;
- tracking systems and sensors to discriminate decoys from warheads;
- mobile launchers for short range or boost phase interceptors;
- space, sea or land-based launchers for mid-course interceptors;
- home-based launchers for terminal interceptors;
- a range of weapons, such as explosive, kinetic (high speed) and laser weapons; and
- command and control systems.

ANNEX C: The Joint Strike Fighter Project

1. The Australian Government expects the Joint Strike Fighter (JSF) aircraft to form the backbone of Australia's future air combat capability. The Government's decision to join as a partner in the JSF System Development and Demonstration phase provides a practical demonstration of the benefits to be gained from materiel collaboration with the US, including:

- the development of a critical self-reliant defence capability; and
- the provision of opportunities for Australian defence industry to develop industrial capabilities and establish a foothold in a major international supply chain.

2. This project is a unique showcase of Defence's Team Australia approach of a close partnership between Government and industry in providing for the security of the nation. The objectives of Government's facilitation of industry engagement in the JSF project include:

- ensuring fair and equitable access by Australian companies to JSF contracts;
- proactive marketing of Australian capabilities to the JSF contractors;
- opening necessary paths through US technology export and intellectual property controls;
- consolidating critical mass around key Australian capabilities; and
- fostering Australian industry capabilities for the support of Australia's JSF fleet.

3. The key will be to work towards maximisation of Australian participation, on a commercial basis, to the JSF program over the life of the project, potentially 30 or more years. Moreover, the Government is targeting Australian participation in JSF software development; hosting of a regional support capability for the aircraft; and effective engagement, through the JSF Science and Technology Program, in design and development of next-generation technologies for upgrades to the aircraft.

4. To date, Australian companies have won an increasing number of JSF contracts.

ANNEX D: The US Littoral Combat Ship

1. The USN is embarking on a program to acquire a fleet of littoral combat ships (LCS) to provide a capability to conduct specialist maritime operations in the littoral environment. The LCS concept envisages a basic platform capable of hosting a range of interchangeable modules specifically designed for mine countermeasures (MCM), shallow water anti-submarine warfare (ASW) or prosecution of fast surface attack craft. The seaframe is to have inherent capabilities for self-defence, ship management and intelligence, surveillance and reconnaissance (ISR) functions.
2. The LCS program has been identified by the US as a vehicle for Collaborative International Teaming, which opens the door for non-US firms to participate in the program. The Australian Government is engaged with Australian industry in a joint initiative to identify and exploit opportunities for Australian industry participation in the LCS program. The Australian initiative aims to highlight and leverage off the Royal Australian Navy's extensive littoral operational experience, promote Australia's world-leading littoral technologies, promote integrated capability solutions involving a number of Australian products and demonstrate the cost, low technical risk and schedule delivery advantages of doing business with Australia. This will extend to promoting these technologies on a worldwide basis to countries planning new acquisition and modernisation of naval vessels.
3. The hull design of an Australian company is being used by one of the US primes in their bid. Two Australian companies have also been invited to bid for core systems (those that are required for any configuration of mission) to two of the three US companies undertaking preliminary designs of the LCS.
4. Mission modules for the initial build of two vessels will be sourced from the US. Australian industry will be seeking to participate in the development of mission modules for future (up to 60) vessels.