Australian Government

Department of Defence
Chief Information Officer Group

Ms Sharon Bird MP
Chair
House Standing Committee on Infrastructure
and Communications
Parliament House
CANBERRA ACT 2600

Dear Ms Bird,

Thank you for your letter of 9 December 2010 concerning the House Standing Committee on Infrastructure and Communications Inquiry into *"The role and potential benefit of the National Broadband Network"* and inviting the Department of Defence to make a submission. Defence appreciates you permitting further time for filing its submission.

I have attached a submission detailing the extent of our current and future use of telecommunications, and outlining the potential use and benefits of the National Broadband Network for Defence.

Defence is happy to participate in any future discussions on the National Broadband Network and its potential use by the Department.

My point of contact for this matter is CDRE Roger Boyce, Director General ICT Policy and Plans, who can be contacted by phone on   or email

Yours Sincerely

Greg Earr
Chief Information Officer

10 May 2011

Department of Defence

Submission to the
House Standing Committee on Infrastructure and Communications Inquiry into *"The role and potential benefit of the National Broadband Network"*.

Executive Summary

Telecommunications and advanced digital services are critical to the Department of Defence in running its departmental business and in undertaking military operations. The importance of information and communications technology (ICT) to Defence is demonstrated at all levels.

- It underpins Australia's Defence Strategy as articulated in the 2009 White Paper;
- It is central to Australia's Network Centric Warfare military vision; and
- It is core to Defence's Strategic Reform Program which has a particular focus on increasing the efficiency and effectiveness of ICT delivery in Defence.

Defence is a major user of communications technologies, and usage is increasing and becoming more important. As such, Defence has a strong interest in initiatives such as the National Broadband Network (NBN), which seek to improve broadband communications in Australia. Defence will be encouraging companies who supply broadband services to Defence to maximise the use of the NBN wherever possible, to help deliver Defence's effectiveness and efficiency goals regarding broadband communications.

Defence is in the process of a major project to improve its strategic communications links and capabilities – JP 2047 Phase 3 – Terrestrial Communications. In accordance with Government policy, Defence is seeking to outsource the provision of this capability through a managed service offering. Defence expects that bidders for this project, and future telecommunications services contracts, will be cognisant of the benefits of the NBN, and will offer it as part of their solutions where appropriate and cost beneficial to do so.

Introduction

The purpose of this submission is to describe the importance of strategic communications (broadband and other) to Defence. To this end, the submission focuses on providing an overview of four key strategies currently underway in Defence, which have communications at their core, and thus strong relevance to the NBN:

- Australia's Defence Strategy, as articulated in the 2009 White Paper *"Defending Australia in the Asia Pacific Century: Force 2030"*;
- Defence's Network Centric Warfare (NCW) roadmap and vision;
- The Defence Strategic Reform Program that is underway; and
- Joint Project (JP) 2047 Phase 3 – Terrestrial Communications – Defence's new communications network.

The Defence White Paper 2009

The 2009 Defence White Paper outlines how the Government intends to strengthen the foundations of Australia's defence. It sets out the Government's plans for Defence in the coming years, how it will achieve them, the levels of resources that the Government is planning to invest in Defence, and what the Government, on behalf of the Australian people, expects in return from Defence. The White Paper recognises and outlines Information Superiority as a fundamental component of Australia's military strategy. Key to achieving this Information Superiority is Defence's Networked Capability, which is increasingly being

seen as a 'fighting' capability, which will be very dependent on secure high-capacity information networks.

To conduct operations successfully, Defence will increasingly need to merge information from many sources and deployed platforms. These will include submarines, Jindalee Over-the-horizon Radar Network (JORN), airborne Intelligence, Surveillance and Reconnaissance (ISR) assets, maritime patrol aircraft, long-range Unmanned Aerial Vehicles (UAVs), Airborne Early Warning and Control (AEW&C) aircraft, the Joint Strike Fighter (JSF) aircraft (which will have unprecedented ISR capabilities for a combat aircraft), the Air Warfare Destroyers (AWDs) and other surface ships, as well as signals and human intelligence, imagery and outputs from a variety of space-based intelligence and surveillance systems.

To achieve this Defence is committed to the concept of Network Centric Warfare (NCW) and to major enhancements to its information and communications systems to ensure that critical information is made available to Australian Defence Force (ADF) personnel who need it, when and where they need it.

Network Centric Warfare

The White Paper identified 'networked capability' and NCW as key attributes of Australia's military forces in 2030. This will require Defence to ensure it has in place the necessary ICT systems; command and control and battle management systems to provide a reliable battle-space network across the entire ADF, which will continue to evolve and mature over time.

The Strategic Reform Program

To achieve these objectives Defence is currently well progressed in undertaking a Strategic Reform Program (SRP) that will fundamentally overhaul the entire Defence enterprise, producing efficiencies and creating savings for reinvestment in capability. The SRP has been established to achieve deep reform in how Defence operates. In broad terms, it will:

- enhance management performance;
- ensure that productivity is increased and is able to be sustained;
- generally improve the way Defence does business; and
- help to ensure that the goals set out in the White Paper are delivered.

The ICT aspects of SRP will deliver business efficiencies and lower costs in Defence's information and communications technologies. This will be achieved through measures including the development of a single Defence desktop environment, an improved network to support higher speed connectivity (JP 2047 – Terrestrial Communications – described further below) and the consolidation of Defence's data centres.

These reforms will deliver to Defence a secure and robust ICT capability that supports war fighting and business requirements. There will be one network connecting Australia and locations where Australian forces are deployed, built on a single set of standards and approved hardware and software products, that encompass all security levels, and have the ability to determine that the right person, in the right place, at the right time, has the right authority to access Defence information and services.

Secure voice and video will be available to the desktop in most fixed and deployed locations. Commanders deployed overseas, and strategic decision makers in Australia, will have a single view of the battle-space through a single Common Operating Picture that accesses a wide range of information from many sensors and sources, whilst corporate data will be easily accessed, manipulated and aggregated by Defence staff.

A key SRP saving activity is Smart Sustainment, which seeks to eliminate waste and reduce the operating costs of the systems and platforms (eg ships and aircraft). This requires a strong enabling computer network. As such, delay or failure of the NBN to provide an adequate distribution network could impact on Defence's ability to provide to Government the savings which it has been told to achieve.

As part of the Strategic Reform Program, Defence is also moving to a shared services business model to improve the effectiveness and efficiency of the delivery of business services such as payroll and accounts processing. A key aspect of these reforms is consolidating these business services and activities into business centres, several of which are located in regional centres, and which will be reliant on good connectivity between Defence clients, service providers and these centres for more efficient processing of Defence business transactions.

There is also the demand to improve access to the self service elements of Defence's personnel system. In regional and remote areas of Australia Defence is seeking to give Defence families better access to Defence information and support services, and to other Government and community services, through improved internet access. Improved communications may also make it easier for potential recruits from regional and remote areas to access information about Defence jobs, and to subsequently apply for them.

There will be significant opportunities within the Strategic Reform Program to make use of the communications capabilities to be provided by the NBN, given that they are offered to Defence by its suppliers, and that they contribute to the provision of efficient and cost effective delivery of Defence telecommunications requirements. Investment in the NBN will contribute to the realisation of Government directed savings in Defence, given that the enabling network achieves the performance currently suggested.

JP 2047 Phase 3

Joint Project (JP) 2047 Phase 3 - Terrestrial Communications - is Defence's major project to address the deficiencies in its terrestrial communications network by building an integrated, high-capacity, reliable network which will enable Defence to improve the conduct of operations and the management of its day-to-day business operations. Improving the network will improve communications for existing requirements, for example the wide area network needed by systems such as military air traffic control, simulation systems, satellite communications ground networks, and command and control networks. It will provide the basis for Defence's future networked force, enabling the linking of sensors, command systems, battlefield systems and support systems, increasing interoperability with the networked forces of our principal ally, the United States, and with our other allies and coalition partners.

This communications network underpins, and will continue to underpin, most of Defence's major capability projects, including projects such as:
- eHealth – enabling a remote Defence employer, for example in Darwin, to access health records and appointments of service personnel, and enabling access to health records of service personnel when they are deployed overseas;
- Military messaging and military command and control systems – enabling improved communications between commanders in Defence headquarters in Australia and forces deployed overseas;
- Military satellite communications – improving global satellite coverage and transmission of data around Australia;

- New amphibious ships and destroyers – enabling communications with and through Australian networks;
- New combat aircraft – enabling communications with and through Australian networks;
- Defence's Training and Learning Environments – maximising the possibilities of remote and distance training;
- Logistics reform – improving logistics management across Defence;
- Battlespace communications;
- Modernisation of deployed Army networks and of Navy's ship-borne networks;
- Communications with Australia's allies;
- Finance and Personnel systems upgrades; and
- Online training systems and video conferencing across Australia and overseas.

Defence provides support and service to over 90,000 ADF and Defence civilian personnel located at over 330 sites around Australia. High speed connectivity will facilitate the use of Defence's management and business systems, day-to-day business interactions throughout Defence, and internet access/communication between deployed personnel and their families. It will assist Defence members and families to access family support services such as the Defence Community Organisation which provides extensive information and services over the internet.

The Garrison and Estate Management System (GEMS) is being established to provide Defence with a comprehensive information management solution to support all aspects of managing the Defence estate and garrison support services. GEMS will be used by Defence staff at bases around Australia, many in regional and remote locations. High speed connectivity to bases will be a key enabler for efficient and effective use of GEMS.

As well as specific projects, particular areas of Defence are major users of broadband communications. For example, the Defence Science and Technology Organisation (DSTO) is a major user of communications technologies, linking its major research facilities located in Melbourne and Adelaide, with additional research facilities in Sydney, Brisbane, Perth, Canberra and Scottsdale.

DSTO's staff work in critical Defence technology areas such as Air Vehicles and Air Operations; Maritime Platforms and Maritime Operations; Land Operations; Weapons Systems; Joint Operations; and Counter-Terrorism. DSTO is a major contributor to Defence's NCW plan and vision.

The NBN would be of use to the Electronic Warfare and Radar Division to support the establishment, maintenance and access to shared distributed databases, software analysis tools and modelling and simulation capabilities, that can be used from and in conjunction with any DSTO research facility. The NBN could potentially benefit Command Control Communications and Intelligence Division by providing very high speed data paths, and rapid provisioning, to assist DSTO research in linking Defence Headquarters with advanced real time high data volume systems. DSTO is actively engaged with other ICT focussed Publicly Funded Research Agencies and through these bilateral arrangements supports research and other activities pertinent to the NBN. This includes the development of applications enabled by the existence of the NBN.

Summary

Defence is potentially a very large user of the NBN, given that NBN services:

- satisfy Defence's security accreditation requirements, which include but are not limited to particular requirements such as foreign national ownership provisions;
- are competitive; and
- are integrated into the services of, and offered by, Defence's telecommunications suppliers.

Defence's expectation is that the NBN will provide the underlying carriage for the future Defence network, with the capacity to scale to the ADF's needs, and to reach Defence locations around Australia. Defence will watch as the NBN rolls out and will monitor the commercial mechanisms that would enable its use to meet the communications requirements of the Department and the ADF.