



## CSIRO Information Technology Services

Private Bag 89, Clayton South, Vic 3169 AUSTRALIA  
Ph: 03 9518 5945 Fax: 03 9518 5959 Email: philip.kent@csiro.au

10 June 2003

Tas Luttrell  
Principal Research Officer  
The Commonwealth Parliament  
Joint Committee of Public Accounts and Audit  
Parliament House  
Canberra ACT 2600

Dear Mr Luttrell,

### **INQUIRY INTO THE MANAGEMENT AND INTEGRITY OF ELECTRONIC INFORMATION IN THE COMMONWEALTH**

Thank you for your two letters of 29 April 2003 concerning CSIRO's evidence at Parliamentary Committee Hearing, Parliament House, Canberra on 1 April 2003. I apologise for my delay in responding.

Two questions on notice required further investigation and articulation. In addition two new questions were asked by way of letter. Responses on each issue follow.

#### **1. Questions on Notice**

##### ***1.1 What specific changes would the CSIRO like to see made to the Archives Act?***

There are two interrelated issues in responding to this question, as per our evidence. They are:

- Specific changes required to the Act
- Roles and responsibilities of National Archives of Australia (NAA)

The former issue is answered in response to Question 2.1 on the ALRC report. I refer to Appendix B following.

With regard to the roles and responsibilities, our Appendix A refers. Note that these constructive comments are not intended as criticisms of the National Archives of Australia.

##### ***1.2 What security risks are associated with the use of high bandwidth microwave communications?***

As with all forms of network communications (fibre optic, coaxial cable, Unshielded Twisted Pair, wireless etc.) microwaves are subject to eavesdropping (packet sniffing), interception and/or physical attack. For example it would be possible, although it may take substantial resources and knowledge, to intercept and capture communications between two microwave stations. Whether any useful information content could be distilled from this information capture would vary depending on the sensitivity of the information in transit and the amount of data captured. In accordance with recommended practice, a threat and risk assessment should be undertaken and the information classified accordingly. As with other network media and topologies, encryption using for example IPSec tunnels could be run across these links. An additional consideration is the speed of the microwave link, where it may be difficult to procure encrypters to support the throughput of the link. This again would be resolved based on the information classification and threat and risk assessment.

## 2. Issues raised in Submission

### **2.1 Your submission mentions the ALRC's report, Australia's Federal Record: A review of the Archives Act 1983.**

- **Does this review make a valuable contribution to the issue of recordkeeping?**
- **To your knowledge, how have Government agencies responded to this report?**

Appendix B following provides a commentary on the ALRC report and its implications, specifically in regard to new Archives legislation.

To answer your specific questions, we believe the review does make a valuable contribution to recordkeeping issues and endorse the recommendation for a new Archives Act.

We are uncertain if Government agencies have responded directly to the report. The foci of the ALRC recommendations are primarily at the government rather than agency level. However all agencies are grappling with issues such as e-permanence and there are differing responses. This highlights the need for a coordinated Commonwealth response.

### **2.2 Social engineering is the use of deception, influence and persuasion to overcome security measures. CSIRO holds a large amount of sensitive information.**

- **What action is being taken to guard against this potential problem?**

Social Engineering is an important information security consideration and forms a standard part of user education and awareness. Help Desk staff are specifically advised of the issues relating to social engineering. As with any other unusual or suspicious activity, local IT Security Officers are to be advised and investigations initiated as appropriate.

Finally, the Chair (Mr Bob Charles MP) asked whether the High Performance Computing and Communications Centre (HPCCC) would continue to be jointly owned by the Bureau of Meteorology and CSIRO.

CSIRO is currently negotiating the basis for continuing the HPCCC with the Bureau. Our expectation is that CSIRO will continue the HPCCC arrangement although at a smaller contribution share from CSIRO than in the past. We will also relocate our high performance computing staff to 700 Collins Street. The relocation is likely to occur in the first half of next year and the continuation of the HPCCC is likely to be for a minimum of four years.

If there are any further issues, please do not hesitate to contact me.

Yours sincerely,

Philip G. Kent  
Executive Manager  
Knowledge and Information Management

## ATTACHMENT A

### Inquiry into the Management and Integrity of Electronic Information in the Commonwealth

*This response has been prepared as a result of CSIRO's appearance before the Parliamentary Committee and relates to a question regarding CSIRO's views on the effectiveness of the National Archives of Australia (NAA) and specific changes that CSIRO would like to see made to the Archives Act.*

#### Introduction

The issue is not so much the need for additional services that CSIRO would require for the National Archives (NAA) to be more effective, but the manner in which resources are made available to agencies.

The issue can be addressed at the macro and micro levels. The former addresses the role and responsibilities of the NAA and the articulation of the NAA's strategic intent and the latter, the relationship with agencies and the processes that are required to foster effective outcomes.

#### Strategic issues

There has been a lot of emphasis on corporate governance in recent times. The development of a culture which understands its relevance is not something that will occur overnight as Don Argus, Chairman, BHP Billiton has indicated when he mentioned recently that "Restoring integrity to the corporate governance system will ultimately occur one step, one director, one audit committee, one board and one organization at a time." (*Australian Financial Review*, March 25, 2003)

A sound recordkeeping culture is an integral component of an effective governance regime. The changing environment requires a reconsideration of the way we address traditional recordkeeping and the role of the NAA in ensuring agencies develop viable, responsive mechanisms to ensure we take advantage of enhanced information and communication technologies (ICT) and preserve our corporate memory.

A key challenge for the NAA then is to acquire a recognised leadership role in the public sector information management community. Through such recognition, it would be well-placed to ensure that governance and recordkeeping systems support the changing communications and data exchange environment in which agencies operate. While the NAA enjoys a solid reputation in the Australian and international archival community, without formal articulation of its functional responsibility, it is unlikely that its strategies will effect lasting change. Within the public sector, however, it is in danger of being viewed solely as a cultural repository rather than as an important component of public sector governance.

This perception is possibly consistent with many of its functions determined by the *Archives Act* (1983). It is, however, increasingly evident that the legislation fails to support a more proactive role to influence the development of a robust recordkeeping culture. Its adoption of the *e-permanence* strategy heralded a changing emphasis in its strategic focus, but this occurred without legislative sanction. Its status remains a challenge, despite the range of impressive recent initiatives (which include an impressive array of training materials and *A Manager's Guide to the Strategic Management of Records and Information*) and the AGLS Standard. Issues related to a revision of the Act are addressed in the CSIRO submission, but from our perspective, it is important that the NAA is seen to be empowered to provide clear, strong leadership to the public sector and government on recordkeeping issues such that all aspects of information and data management are addressed as a whole-of-government imperative.

In such a scenario, it would also be positioned to focus on providing templates and practical (rather than theoretical) directions to facilitate changing agency cultures. These cultures are

increasingly determined by evolving expectations of access to and tools to acquire and manage information. They are also leading to changing collaborative practices based on formal and informal networks, within and without agency boundaries, which serve to enhance the knowledge base from which decisions are made, customers identified and alliances are built. In an increasingly networked environment, intrusive process, based on a corporate need to capture records, is anathema to officers who are largely information literate and have been given access to email and other desktop systems. The problem from a governance perspective is that such solutions are inevitably deployed without consideration of business alignment, which includes recordkeeping. Stove-piped operations cannot dictate how government addresses this challenge. Business alignment should support the accountability regime in which agencies are expected to operate and it is this issue which would need to be addressed as part of a re-statement of the responsibilities of the NAA. If achieved, the NAA will be better placed to assist agencies to ensure their systems, technology, core operations and processes are compatible with recordkeeping requirements, and that their information and data assets are secure and appropriately managed for ongoing access, retrieval, manipulation (where necessary) and preservation.

### **NAA operational arrangements**

With regard to the relationship between NAA and agencies, we are aware that over the next financial year, the NAA plans to evaluate its current approach to implementing the Designing and Implementing Recordkeeping Systems (DIRKS) initiative and the manner in which products and advice are made available. We recognise that NAA is acutely aware of the volatility of this environment and the need for it to acquire a presence in the public sector. It has developed a useful array of partnerships with related agencies: its role is readily acknowledged (see for instance the NAA's recent survey of recordkeeping in Commonwealth agencies, the Australian Public Service Commission's *State of the Service* report and the ANAO's report on *Recordkeeping*). However, at an operational level and given the concerns that have been aired in public forums, including the DIRKS User Group, it runs the risk of further alienating its core constituency if it retreats from its recent proactive approach to agency assistance.

Its decision to review DIRKS is the sort of decision which has a potentially negative impact on how agencies work with NAA as it raises the issue of how receptive the NAA will be in the interim as this assessment occurs. (Agencies are reminded that the NAA virtually closed down its agency-based operations for a year less than five years ago to ensure its staff were trained to accommodate its new strategic intent. Other agencies were forced to cope with this unilateral decision – at a critical period of rapidly changing client expectations about the management of records generated by inherently more accessible array of desktop applications and their impact on recordkeeping systems and culture.) It is unlikely that agencies will be willing to deploy scarce resources as they anticipate the development of yet another set of guidelines for addressing all issues related to the development and deployment of their recordkeeping systems.

While the NAA appears to enjoy the luxury of training its staff to respond to such issues, agencies, especially those with geographically dispersed business units across the country have struggled to have access to training in even basic principles of *e-permanence*. Indeed, the NAA's focus has been primarily on providing training in Canberra and only very infrequently in other capitals. Resourcing is a clear issue in this regard.

At an operational level, as mentioned above, the manner in which NAA resources are made available to agencies is an issue of concern. In this regard we would note the following.

#### *Guidelines/Standards*

1. It would be useful if documents on many issues were better articulated – the guidelines presently available are predominantly academic or theoretical in approach – more practical guidance would be useful. This includes risk management and guidelines on business support, including DIRKS which is perceived as having a largely inflexible approach, due largely to the rigour with which NAA staff address its implementation.

2. The web-based assistance is somewhat confusing with language being less than easily accessible. Comments from our staff include:
  - it is hard to find information
  - search is difficult and often does not produce valuable results
  - record search is not good – and is not intuitive
  - access to RDAs for all agencies would be useful – we realise this is intended, but there seem to be problems making them available.
3. Examples of good models for web pages that have been suggested include the PRO UK and Archives New Zealand sites especially the Continuum pages.
4. It would be useful if advice included a “lessons learned” component and FAQs. This would serve to develop consistent understanding of the challenges and workable solutions across government agencies.
5. Related to this is the way in which formal contacts are managed. Agencies have adopted a range of RMS to support their business. The NAA obviously works with these vendors to develop their products. Agencies, however, seldom get any insight into the learnings that arise. It would be useful if briefings could occur in which the relationship between NAA guidelines and the idiosyncrasies of the RMS products is articulated. Such forums may need to be conducted on a non-disclosure basis.

#### *Client relationship management*

1. In general, agencies interact with NAA for a number of reasons: advice on retention, consignment and transfer issues, reference enquiries and advice on deployment of an RKMS. All these interactions will inevitably result in discussions with a range of staff. It would be useful if there were Account Managers available through whom we could develop an effective working relationship – which in time would represent a kind of knowledge base which could give both parties a keener understanding of each others problems, issues, strategic intent etc. At present, we tend to depend on our network of contacts, which makes it unfair on NAA staff – already burdened with competing pressures.
2. Agencies receive inconsistent advice about recordkeeping – the quality and follow-up is very much dependent on individual staff – especially project officers – many of whom appear to struggle with managing a range of demanding clients simultaneously (which suggests the NAA may well have under-estimated the impact of its strategies and the resources needed to support its progress).
3. The inconsistency is most evident when regular contact staff are unavailable and an alternative officer is asked to provide guidance – lack of familiarity with the issue aside, there have been several instances where interpretation of NAA guidelines has been inconsistent among NAA officers. This suggests that the level of professional knowledge among client liaison staff is uneven.
4. As follow-on from this, we would suggest that another area for improvement would be to ensure that all liaison staff are trained, not only in recordkeeping issues, but client relationship management as well.
5. It would also be useful if there were more opportunities for agency and NAA staff to work in each other’s agency for short periods (say 3-6 months). Operational, rather than theoretical perspectives would develop in such an environment and would, over time, engender a much more collaborative culture as both parties would have a better idea of their operational contexts (including the paper/electronic records dichotomy).
6. We have invited NAA staff to assist with recruitment interviews for middle management positions. It would be useful if NAA occasionally involved agencies in their recruitment actions, especially in areas which will have a strong interaction with the broader public sector community.

CSIRO would be happy to provide further input if required.

*Contact Officer:* Russell McCaskie 02 6276-6010

16 April 2003

## ATTACHMENT B

### **Elaboration of Comments on the Australian Law Reform Commission (ALRC) Report 85 (1998), *Australia's Federal Record: A review of the Archives Act 1983.***

*This response has been prepared as a result of a question regarding CSIRO's views on the ALRC Report subsequent to CSIRO's submission to the Inquiry into the Management and Integrity of Electronic Information in the Commonwealth.*

The ALRC report (1998) provided a useful mechanism for focussing on the importance of recordkeeping and the role of the National Archives of Australia (NAA) in the context of the changes that had occurred in the public sector by the late nineties. This response will focus on aspects that are relevant to the CSIRO, specifically the leadership role of the NAA.

As a lead agency for recordkeeping practices in Australia, the NAA espouses a commitment to the recordkeeping continuum. Its current title suggests, however, that its focus is solely on Australia's long term archive. This perception needs to be changed to reflect its recent initiatives and changing focus on the management of records from creation to destruction and the multifarious contexts in which they may be used.

Over recent times, a raft of legislation including the *Evidence Act*, *Electronic Transactions Act* and *Commonwealth Authorities and Companies Act* and *Financial Management and Accountability Acts* has reflected the government's response to many aspects and challenges of the knowledge-based economy. In turn, they also support the development of a coherent corporate governance framework. During this time, while there have been fundamental changes in the way in which agencies operate and interact with their communities, there has been little in the way of legislative imperative to ensure that robust recordkeeping practices are adopted to demonstrate and underpin agency accountability. To ensure an adequate response to such challenges, a revised *Archives Act* is required to reinforce the responsibility and accountability expected and expressed through other requirements on government agencies, rather than relying solely on the interest or commitment of agency leadership.

A sound recordkeeping culture is an integral component of an effective governance regime. In this context, it would be useful if it assumed the role over the governance of recordkeeping arrangements within the Commonwealth jurisdiction. The changing environment requires a reconsideration of the way we address traditional recordkeeping and the role of the NAA in ensuring agencies develop viable, responsive mechanisms to ensure we take advantage of enhanced information and communication technologies (ICT) and preserve corporate memory.

A robust legislative framework is required to assist agencies to foster the development of a corporate governance culture. From the perspective of recordkeeping and its link to accountability, it is important that a leadership role for the National Archives be adequately enshrined in legislation. Such a role is identified in the Report at both the Commonwealth level (Recommendations 3 and 4) and in the context of the broader professional community (Recommendation 223).

A key challenge for the NAA then is to acquire a recognised leadership role in the public sector information management community. If such leadership exists, it will, in turn, foster a strong and viable corporate governance culture. Through such recognition, it would be well-placed to ensure that governance and recordkeeping systems support the changing communications and data exchange environment in which agencies operate. While the NAA enjoys a solid reputation in the Australian and international archival community, without formal articulation of its functional responsibility, it is unlikely that its strategies will effect lasting change. Within the public sector, however, it is in danger of being viewed solely as a cultural repository rather than as an important component of public sector governance.

This perception is possibly consistent with many of its functions determined by the *Archives Act* (1983). It is, however, increasingly evident that the legislation fails to support a more proactive role to influence the development of a robust recordkeeping culture. Its adoption of the *e-permanence* strategy heralded a changing emphasis in its strategic focus, but this occurred without legislative sanction. Its status remains a challenge, despite the range of impressive recent initiatives (which include an impressive array of training materials and *A Manager's Guide to the Strategic Management of Records and Information*) and the AGLS Standard.

When the NAA launched its set of strategies for recordkeeping at a function on 30 March 2000, subsumed under the slogan of *e-permanence*, it invited the then Secretary of the Department of Defence, Dr Allen Hawke, to comment on the significance of the initiative. In his speech to launch the strategies, Dr Hawke, noted that his Department would be committed to supporting the initiatives and urged agencies to follow this example. His speech largely focussed on the importance of establishing an information management framework for the creation and management of records which identify and support agency functions and activities, including research and decision making processes, policies, associated procedures, administration and management. He emphasised that recordkeeping is part of an agency's corporate governance responsibilities which in turn supports accountability and compliance obligations.

He outlined information which subsequently has been made available on the NAA web site. He stressed that agencies carry the primary responsibility for keeping full and accurate records of their business activities by:

- providing written recordkeeping policy and guidelines and training for agency staff in the use of agency recordkeeping systems;
- establishing clear lines of responsibility for recordkeeping from a senior level and providing adequate resourcing for recordkeeping; and
- establishing and maintaining recordkeeping systems that provide appropriate levels of evidence.

While such responsibilities are important if the Commonwealth is to have confidence in the performance of its agencies, it is currently unclear what role the Archives plays in ensuring adherence to such principles.

Dr Hawke also noted that the NAA's initiatives are part of a parcel of initiatives that have been developed by Government in reaction to the impact of technology and are a component part of a more holistic approach to the management of agency information. He emphasised that agencies cannot afford to view recordkeeping as a "basement activity" and will need to adopt a more proactive approach to the relationship between business practices and systems (either IT-based or manual) that support core functions. Many of the NAA's initiatives have emanated from recognition that changing technology (e-commerce) and the then recent legislation such as the *Electronic Transactions Act* require agencies to establish policies and business rules for the administration of an array of desktop tools as the electronic versions of documents/data/emails associated with transactions will be admissible as evidence.

Since the launch of its initiatives, the NAA has been proactive in ensuring that its strategies and guidelines have been distributed effectively. A key issue is whether agency executives are responding to these strategies. The task of ensuring that the strategies are effectively interpreted and implemented has fallen to a group of staff representing a (traditionally) relatively obscure function. A further complication is whether the efforts of this group are supported and are consistent with NAA expectations.

Another key issue is whether the amount of time that has passed is affecting the relevance of the ALRC report. It is clear that the NAA has taken initiatives that address many of the issues raised in the context of the original report such as the impact of the increasingly electronic environment. For example, Recommendation 43 on the appraisal of electronic records had the potential for agencies to become equal partners in providing mechanisms for access to



the “wonderful resource documenting its activities and a huge range of incidental matters”. (page 6 of the NAA document, *Making Choices* - 1998).

At present, under current arrangements, while the NAA provides advice to agencies on its recordkeeping, its focus is fundamentally on records of archival value (permanent retention) alone. Questions of access and custodial arrangements for the burgeoning and multifaceted electronic format are now being addressed in the form of the recent initiatives such as The National Archives' AtoR (Agency to Researcher) Digital Preservation Project . Again, this is consistent with Recommendation 75 in the ALRC report relating to the custody of electronic records, which states that:

*The NAA should have the power to require agencies to retain custody of records of archival value if, in the opinion of the NAA, this is necessary to ensure their preservation and accessibility...*

Issues related to a revision of the Act are addressed in the CSIRO submission, but from our perspective, it is important that the NAA is seen to be empowered to provide clear, strong leadership to the public sector and government on recordkeeping issues such that all aspects of information and data management are addressed as a whole-of-government imperative.

Such an approach may, however, be inconsistent with the NAA's strategic intent. In a recent comment to the RMAA listserv (30 April 2003), two senior members of the NAA staff suggested:

Our power to require agencies to utilise the DIRKS (Designing and Implementing Recordkeeping Systems) methodology to develop disposal authorities relates to the Archives Act Regulation No. 3 "Appraisal of records", which gives the Archives the power to request agencies to furnish information to facilitate appraisal. Nevertheless, although the Archives has statutory powers and responsibilities in relation to disposal authorisation, **we cannot compel agencies to do certain things in relation to wider recordkeeping issues.**

One could argue that the status quo is entirely appropriate because it means that the primary responsibility for making and keeping good records of government decisions and activities rests with the individual agencies and, in particular, the heads of those agencies. In this context we would refer everyone to the Australian Public Service Values and the Public Service Commissioner's Direction 2.6 pursuant to the Public Service Act. One of the indicators for this Direction is that an 'agency is able to demonstrate that due process has been followed in its actions and decisions, including through the existence and maintenance of good record keeping systems'. If an agency chooses to ignore these directions it is not the National Archives that will be called to account - it will be the agency that has been derelict in discharging its public responsibilities. The National Archives **plays a vital facilitative role as a source of expert advice, assistance, standards and guidelines.**

In this quote, we have highlighted two statements that seem to reflect that, publicly at least, the NAA wishes its role to be seen as an enabling, rather than compliance agent. It may be that the NAA is content with a strategic priority which is focussed on maintaining a “facilitative role” while remaining dependent on the responsiveness of “individual agencies and, in particular, the heads of those agencies”. Such a role, while perfectly valid, will not ensure that resources and commitment in agencies are allocated in more than an *ad hoc* manner, based on risk rather than recognition of accountabilities.

Perhaps this means that there are two issues which need to be considered: one the continuance of the NAA as a repository for records of long term value and relevance to Australia; the other to the establishment of another agency which, in perhaps close alignment with agencies such as ANAO and NOIE is charged to ensure that the records continuum is implicit in the design and implementation of systems which are deployed to support the manifold activities of the Commonwealth in the knowledge economy.

CSIRO would be happy to provide further input if required.

*Contact Officer:* Russell McCaskie 02 6276-6010

6 June 2003