
Recordkeeping Metadata Standard Scoping Paper

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The success of any standard depends upon broad community participation in its development, followed by widespread recognition of the standard's utility. Standards are the products of communities, not of individuals working in splendid isolation, and the development process is as much a political exercise as it is an intellectual and technical undertaking. Thus, to be successful, [a standard] must reflect and further the shared interests of the archival community and of agencies and institutions that support it.¹

1. Introduction

Development of a Recordkeeping Metadata Standard is one of the projects in the 2003 / 04 work plan for Archives New Zealand's Government Recordkeeping Group. This scoping paper recommends the scope and proposed approach for the development of a Recordkeeping Metadata Standard. Together with the project plan, this constitutes the first stage in development of the Standard.

The scoping paper outlines the purpose of a Recordkeeping Metadata Standard, its background and legislative context, and presents key issues for the scope of the Standard. It also recommends a development process for the Standard, which is described in more detail in the project plan.

2. Purpose

The Recordkeeping Metadata Standard will specify the metadata elements that support recordkeeping within the context of the New Zealand Public sector. The Standard will establish a benchmark against which the quality of recordkeeping systems and their records, especially those in electronic formats, can be assessed. It will also facilitate the interoperability of recordkeeping systems and their records across different domains.

The Standard will not provide detailed guidance on its implementation. Further tools and products will be developed after the Standard is approved and will be published as part of the Continuum Resource Kit.

The Recordkeeping Metadata Standard supports Archives New Zealand's Outcomes surrounding the creation and management of records of government activities and the provision of access to government archives,² the principles of its Recordkeeping Framework³, and its Electronic Records Vision and Policy.⁴

¹ Daniel V. Pitti, 'Encoded Archival Description: The Development of an Encoding Standard for Archival Finding Aids', *American Archivist*, vol. 60, no. 3 (Summer 1997), p279.

² Archives New Zealand. 2003. *Archives New Zealand Statement of Intent 2003-04*. Wellington, New Zealand: Author.

³ Archives New Zealand. 2000. *Recordkeeping Framework*. Wellington, New Zealand: Author.

3. Definition

In its most literal sense metadata is simply ‘data about data’. Recordkeeping metadata has a highly specific meaning and is used throughout this paper to mean:

“Structured or semi-structured information which enables the creation, management, and use of records through time and within and across domains in which they are created. Recordkeeping metadata can be used to identify, authenticate, and contextualize records; and the people, processes and systems that create, manage, and maintain and use them.”⁵

This definition has been adopted by the ISO Working Group developing a recordkeeping metadata standard to support the international standard for records management (ISO 15489).⁶

4. Background

In recent years a range of communities have developed metadata standards for specific purposes such as information resource discovery and data description. Some metadata standards have national or international scope, being formally mandated by standards bodies or else are simply recognised as best practice by community members. Others are specific to individual communities such as the New Zealand Government Locator Service (NZGLS). Metadata standards have also been developed for internal use by individual organisations.

The genesis of the Standard can be traced to Archives New Zealand’s 2002 Electronic Records Vision and Policy which recognises that since effective recordkeeping requires recordkeeping analysis during system design, Archives New Zealand’s role should include the provision of “...tools to assist government agencies in identifying the necessary sets of metadata that need to be captured and maintained with electronic records to ensure their long term management or management across system boundaries.”⁷ The route map bundled with the Electronic Records Vision and Policy specifically identifies the development of a recordkeeping metadata standard as one of several actions to be completed by the end of 2004 as a way to integrate electronic recordkeeping within the Government Recordkeeping programme.⁸

An Archives New Zealand recordkeeping standard is “a document that defines and sets out the minimum and/or desirable requirements of a recordkeeping process, practice or product.”⁹ The Recordkeeping Metadata Standard will add to Archives New Zealand’s existing suite of four recordkeeping standards:

⁴ Archives New Zealand. 2002. *Electronic Records: A Vision and Policy for the New Zealand Government Sector*. Wellington, New Zealand: Author.

⁵ Archiving Metadata Forum. 2000. ‘Recordkeeping Metadata’ Workshop. *Proceedings of the Archiving Metadata Forum June 5-8, 2000, The Netherlands*, p4. www.archiefschool.nl [Accessed 7 May 2003].

⁶ International Organisation for Standardisation (TC 46/SC 11/WG 1). 2002. *International standard on metadata – draft structure*.

⁷ Archives New Zealand. 2002. Op. Cit., p7.

⁸ Archives New Zealand. 2002. Op. Cit., p8.

⁹ Hoyle, M. 1999. *Standards and Recordkeeping in the New Zealand State Sector*. www.archives.govt.nz [Accessed 19 December 2000].

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- » Appraisal Standard (issued September 1998)
 - » Transfer Standard (June 1999)
 - » Storage Standard (February 2000)
 - » Access Standard (November 2001)

5. Legislative Mandate

The Recordkeeping Metadata Standard will be issued by the Chief Archivist to support implementation of provisions in archives legislation relating to the management of public records and public archives. The *Archives Act 1957* states:

s12(1) Public records and archives not in the National Archives

The Chief Archivist shall be entitled from time to time to inspect any public records or public archives that are for the time being in the possession or under the control of any Government office and give such instructions as to their safe preservation and such advice as to their efficient and economical administration and management as he considers necessary.

s23B(1) Provision of records management services

For the purposes of this section, the term "records management service" shall include storage services for, and training, assistance, and advice on, the management of records and archives, whether public records and public archives or not.

Archives New Zealand is developing new archives legislation to replace the existing *Archives Act 1957*. It is envisaged that the new legislation will require a full and accurate record of the business activities of public offices to be created and maintained, and that these will be managed in accordance with mandatory standards set by the Chief Archivist. A programme of agency audits is proposed to ensure compliance with mandatory standards. Although the Recordkeeping Metadata Standard will be developed to support the provisions of current archives legislation, close contact with the development of the new legislation project will be maintained.

The Standard will also support the wider range of legislation and government policies such as the Electronic Government Interoperability Framework (e-GIF).¹⁰ Further discussion on the e-GIF can be found in section 7.5.

6. Standards Development Process

The Chief Archivist endorsed principles and a process for development of Archives New Zealand Standards in 1999.¹¹ This process was used to develop the Storage and Access Standards. The Government Recordkeeping Group recommends that a similar process be followed for development of the Recordkeeping Metadata Standard. This process is outlined in detail in the project plan.

A consultative process is fundamental to successful standard setting. Consultation is incorporated into the development of the Recordkeeping Metadata Standard through the establishment of a working party to advise the Government Recordkeeping Group and Chief Archivist, and through creation of opportunities for written and verbal input on the draft Standard from a range of interest groups.

¹⁰ State Services Commission. 2002a. *New Zealand E-government Interoperability Framework (NZ e-GIF) Version 1.0*. www.e-government.govt.nz [Accessed 7 May 2003].

¹¹ Hoyle, M. Op. Cit.

In most instances, a standard is an articulation of commonly recognised best practice, rather than an inventor of new principles. The Recordkeeping Metadata Standard must incorporate international best practice yet be specific to the New Zealand regulatory framework. Existing standards and research relating to recordkeeping metadata will inform the development of the Recordkeeping Metadata Standard. No existing recordkeeping metadata standard from other jurisdictions has been identified as suitable for endorsement for use in the New Zealand Public sector context, though adaptation of an existing standard is an option which will be explored further.

The Government Recordkeeping Group will research overseas standards and professional recordkeeping literature, and provide a resource kit of relevant documentation to the working party to inform the development of the Standard. An initial list of potential sources is included in this paper.

7. Key Issues for Recordkeeping Metadata Standard

This section identifies a number of key issues for the scope of the Recordkeeping Metadata Standard. Further identification of issues will take place in subsequent phases of development of the Standard.

7.1 Defining recordkeeping metadata

In its most generic sense metadata is usually understood to be structured data about the characteristics of digital and non-digital resources, which facilitate their use in a variety of contexts.¹² The term has been in vogue with information technologists since at least the 1960s to denote a variety of meanings.¹³ The World Wide Web consortium's use of the term to denote "...machine understandable information for the web" is illustrative of the typically specialised interpretation of the term by information technologists.¹⁴ Its more general meaning among information technologists is "...files or databases with information about another's attributes, structure, processing or changes of data."¹⁵ In contrast, cultural heritage professions (libraries, archives, museums) regard metadata much more broadly as "...any kind of standardised descriptive information about resources, including non digital ones."¹⁶

In recent years, various metadata communities have developed a number of standardised sets of metadata (schemas), each fulfilling a specific purpose.¹⁷ Arguably the most widely known schema among the cultural heritage professions is the Dublin Core metadata element set, commonly referred to as the Dublin Core.¹⁸ Developed by the Dublin Core Metadata Initiative, the Dublin Core is a minimalist standard for the description and subsequent discovery of resources.¹⁹ The importance

¹² Day, M. 2001. *Metadata in a Nutshell*. www.ukoln.ac.uk [Accessed 5 May 2003].

¹³ Hamel, D. 2001. *What exactly is Metadata? And is it valuable?* <http://searchdatabase.techtarget.com/> [Accessed 5 May 2003].

¹⁴ World Wide Web Consortium. 2001. *Metadata and Resource Description*. www.w3.org [5 May 2003].

¹⁵ Hamel, D. 2001. Op. Cit.

¹⁶ Day, M. 2001. Op. Cit.

¹⁷ International Federation of Library Associations. 2003. *Digital Libraries: Metadata Resources*. www.ifla.org/ [Accessed 8 May 2003]. Some of these purposes include: bibliographic and archival description, description of data structure, geo-spatial, image, and moving picture), object identification and retrieval, preservation management, recordkeeping, resource discovery, and text encoding.

¹⁸ Day, M. 2001. Op. Cit..

¹⁹ Dublin Core Metadata Initiative. 2003. *Dublin Core Metadata Overview*. <http://au.dublincore.org/> [9 May 2003].

of the Dublin Core can be seen by its adaptation and extension by governments world-wide as a tool for describing resources provided by government agencies within particular jurisdictions. The New Zealand Government Locator Service (NZGLS) and the Australian Government Locator Service (AGLS) schemas are examples of this.

The international standard on records management (ISO 15489) defines metadata in a recordkeeping environment as “data describing context, content and structure of records and their management through time.”²⁰ A more comprehensive definition of recordkeeping metadata, adapted from State Records New South Wales’ metadata standard, was developed by the Archiving Metadata Forum:

“Structured or semi-structured information which enables the creation, management, and use of records through time and within and across domains in which they are created. Recordkeeping metadata can be used to identify, authenticate, and contextualize records; and the people, processes and systems that create, manage, and maintain and use them.”²¹

This definition was subsequently adopted by the working group developing an international standard for recordkeeping metadata to support ISO 15489.²² It has also been included in Archives New Zealand’s Glossary of Archives and Recordkeeping Terms.²³

Underpinning this definition is an assumption that recordkeeping metadata supports both records management and archival processes across a single continuum of responsibility. The continuum view regards records as “...active participants in business processes and technologies, dynamic objects which need to be associated throughout their life span with ever broader and richer layers of contextual metadata...”²⁴ Archives New Zealand’s Statement of Intent for 2003 / 04 contains two outcomes supporting creation, maintenance, and continued access to records of government activity thus implicitly stating its adoption of the notion of a single continuum of responsibility. This theme is also present in Archives New Zealand’s 2002 Electronic Records Vision and Policy.

The continuum view is in sharp contrast to the life-cycle view of records in which static objects are retrospectively described after transfer into an archive. The life-cycle view is implicit in many of the key descriptive metadata schemas developed by the archival community such as ISAD(G), ISAAR (CPF) and EAD.

²⁰ International Standards Organisation. 2001. *Information and documentation – Records management – Part 1: Geneva. 15489-1:2001(E)*. Geneva, Switzerland: Author.

²¹ Archiving Metadata Forum. Op. Cit., p4.

²² International Organisation for Standardisation (TC 46/SC 11/WG 1). Op. Cit.

²³ Archives New Zealand. 2003. *Glossary of Archives and Recordkeeping Terms*. Wellington, New Zealand: Author.

²⁴ McKemmish, S. et al. 1999. ‘Describing Records in Context in the Continuum: The Australian Recordkeeping Metadata Schema’ *Archivaria* No. 48 (Fall 1999): 3-43, p4.

Recommendations

- » The Standard will clearly define the term 'recordkeeping metadata' and the purposes it supports, particularly with regard to resource discovery.
- » The Standard will apply to both records management and archival processes (i.e. continuum management).
- » The Archiving Metadata Forum's definition of recordkeeping metadata will be used as a reference point for developing the Standard.

7.2 Identifying the purposes of recordkeeping metadata

The SPIRT Recordkeeping Metadata Research Project investigated an extensive range of international and national standards, statements of best practice, and academic research to identify the recordkeeping requirements for metadata.²⁵ One output of this research was the Australian Recordkeeping Metadata Schema, a conceptual model or framework consisting of generic recordkeeping metadata elements, which can be used to develop recordkeeping metadata standards for specific purposes.²⁶ The Schema is based on the Records Continuum Model which espouses a single continuum of responsibility. The various purposes identified by the project team which recordkeeping metadata supports include:²⁷

- » administration of terms and conditions of access
- » authentication of records
- » discovery
- » interoperability of records across different domains
- » persistence of records content, context and structure
- » retrieval and delivery to authorised users
- » unique identification of records
- » use and disposal

Recommendation

- » The Australian Recordkeeping Metadata Schema's identification of purposes will be used as a reference point for developing the Standard.

7.3 Selecting a conceptual model of recordkeeping

Criticism of the National Archives of Australia's Recordkeeping Metadata Standard for Commonwealth Agencies²⁸ noted that it was record-centric, neglecting to document the richer agency and business contexts of records.²⁹ The metadata standard issued by the United Kingdom Public Record Office exhibits this same weakness.³⁰

²⁵ Records Continuum Research Group. 2000. *Recordkeeping Metadata Project*. www.sims.monash.edu.au/research/rcrg/ [20 May 2003]

²⁶ McKemmish, S. et al. Op. Cit, p38-43.

²⁷ McKemmish, S. et al. Op. Cit, p11.

²⁸ National Archives of Australia. 1999. *Recordkeeping Metadata Standard for Commonwealth Agencies*. www.naa.gov.au [Accessed 8 May 2003].

²⁹ Reed, B. 2001. *Metadata Standards*. Email to RMAA-list (29 August 2001).

³⁰ Public Record Office. 2002. *Requirements for Electronic Records Management Systems. Part 2: Metadata Standard*. www.pro.gov.uk [Accessed 20 May 2003].

By contrast, the Australian Recordkeeping Metadata Schema and the New South Wales Standard³¹ are underpinned by a conceptual model of recordkeeping, itself based on the Records Continuum Model, which ensures that the agency and business contexts as well as records and recordkeeping systems are thoroughly documented at multiple levels of aggregation.³² This multi-context and multi-layered thinking is also present in Archives New Zealand's descriptive model.

Recommendation

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| » The Standard will include elements enabling description of records, agents (people, organisations) and business contexts (functions) at multiple levels of aggregation. |
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7.4 Ensuring interoperability with other metadata standards

The Recordkeeping Metadata Standard should ideally be interoperable with the metadata standards which have and are being developed within the New Zealand Public sector.³³ Examples of these standards include but are not limited to:

- » ESA Core Data Specification (geo-spatial data)³⁴
- » GAIMS (archival description)³⁵
- » National Library of NZ preservation metadata schema (preservation)³⁶
- » NZGLS (resource discovery)³⁷

The experience of developing NZGLS, an indirect adaptation of the Dublin Core, suggests that there is a degree of duplication between the metadata elements used for discovery and recordkeeping purposes. This re-purposing of metadata highlights the need to ensure interoperability between the metadata standards, which have, and will be in future, developed by various communities.³⁸ Developers of recordkeeping metadata standards in Australia have expressed a similar notion.

Recommendation

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| » The Standard should, as far as possible, be interoperable with other metadata standards within the New Zealand Public sector. |
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³¹ State Records New South Wales. 2001. *NSW Recordkeeping Metadata Standard*. www.records.nsw.gov.au [Accessed 8 May 2003].

³² McKemmish, S. et al. Op. Cit., p14.

³³ Miller, P. 2000. *Interoperability. What is it and Why should I want it?* www.ariadne.ac.uk [Accessed 19 May 2003]. Interoperability is used here to mean both technical interoperability (ensuring that data can be shared between electronic systems) and semantic interoperability (ensuring the meaning of data can be shared between systems).

³⁴ Officials Committee for Geospatial Information. 2002. *ESA Core Data Specification*. www.linz.govt.nz [Accessed 7 May 2003]. ESA stands for Emergency Services and Government Administration.

³⁵ National Archives of New Zealand. 1987. *Government Archives Integrated Management System*. Wellington, New Zealand: Author.

³⁶ National Library of New Zealand. 2002. *Metadata Standards Framework - Preservation metadata*. www.natlib.govt.nz [accessed 5 May 2003].

³⁷ State Services Commission. 2001. *The New Zealand Government Locator Service (NZGLS) Metadata Standard and Reference Manual Version 2.0*. www.e-government.govt.nz [Accessed 23 June 2003].

³⁸ Roberts, J. 2001. 'Between a Rock and a Hard Place: Dealing with NZGLS' in *DC-2001: Proceedings of the International Conference on Dublin Core and Metadata Applications 2001*. <http://www.nii.ac.jp/> [Accessed 7 May 2003].

7.5 Relationship to the e-Government Interoperability Framework

Following the example of other jurisdictions the New Zealand Government developed an e-Government Interoperability Framework (e-GIF), a collection of policies, standards and guidelines that supports information and service sharing between government agencies and provides easy electronic access to information and services for individuals and businesses.³⁹ The e-GIF standards include information technology standards such as XML, XSL, PDF in addition to metadata standards relating to resource discovery (NZGLS)⁴⁰ and geo-spatial data (ESA Core Data Specification).⁴¹

The Australian Federal and New South Wales recordkeeping metadata standards are not part of a broader interoperability framework. However, the recordkeeping metadata standard developed by the Public Records Office (UK) is part of the United Kingdom Government e-GIF.⁴²

<i>Recommendation</i>

» Incorporation of the Standard into the e-GIF will be explored.
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7.6 Identifying audiences

Many of the recordkeeping metadata standards developed by archival institutions target a range of audiences, typically agency records managers, information technology staff and software vendors.⁴³ None of the standards considered in this paper target archivists.

<i>Recommendation</i>

» The Standard's intended audience includes agency records and information managers, agency information technology staff, software vendors, and archivists.

7.7 Implementation

Archival institutions are often content to articulate conceptual models that, although theoretically sound, are not immediately implementable. Those models that are intended to be implemented have been criticised for being technologically difficult or too expensive to implement.⁴⁴ For example, the standard developed by the National Archives of Australia has been criticised for its limited implementation by information technology vendors.⁴⁵ In the New Zealand context, Archives New Zealand's experience with the development of NZGLS demonstrates that a range of supporting tools, such as metadata authoring tools, must be developed to ensure its implementation by New Zealand Public sector agencies.⁴⁶

³⁹ State Services Commission. 2002a. Op. Cit.

⁴⁰ State Services Commission. 2002a. Op Cit., p20.

⁴¹ Officials Committee for Geospatial Information. 2002. Op. Cit.

⁴² Public Record Office. Op. Cit., p1.

⁴³ National Archives of Australia. 1999. *Recordkeeping Metadata Standard for Commonwealth Agencies*. www.naa.gov.au [Accessed 8 May 2003]. See also State Records New South Wales. 2001. *NSW Recordkeeping Metadata Standard*. www.records.nsw.gov.au [Accessed 8 May 2003].

⁴⁴ Hedstrom, M. 1997. 'Building Record-Keeping Systems: Archivists Are Not Alone on the Wild Frontier' *Archivaria* 44 (Fall 1997): 44-71, p57.

⁴⁵ Reed, B. 2001. Op. Cit.

⁴⁶ Archives New Zealand. 2003. *The Beginners Guide to NZGLS (A30977)*.

<i>Recommendation</i>

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|---|
| » The Working Party will identify the tools and products necessary to support the Standard, although their development is not within scope. |
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8. Recommendations

Establishing a benchmark for the consistent use of recordkeeping metadata within recordkeeping systems is an important component of Archives New Zealand's work to ensure that a full and accurate record of the business activities of the New Zealand Public sector are created and maintained.

This paper has outlined the purpose of the Recordkeeping Metadata Standard, its background and legislative context, recommended a development process, and presented key issues to be addressed by the Standard. The recommendations surrounding the key issues are:

- » The Standard will clearly define the term 'recordkeeping metadata' and the purposes it supports, particularly with regard to resource discovery.
- » The Standard will apply to both records management and archival processes (i.e. continuum management).
- » The Archiving Metadata Forum's definition of recordkeeping metadata will be used as a reference point for developing the Standard.
- » The Australian Recordkeeping Metadata Schema's identification of purposes will be used as a reference point for developing the Standard.
- » The Standard will include elements enabling description of records, agents (people, organisations) and business contexts (functions) at multiple levels of aggregation.
- » The Standard should, as far as possible, be interoperable with other metadata standards within the New Zealand Public sector.
- » Incorporation of the Standard into the e-GIF will be explored.
- » The Standard's intended audience includes agency records and information managers, agency information technology staff, software vendors, and archivists.
- » The Working Party will identify the tools and products necessary to support the Standard, although their development is not within scope of the Standard.

The Government Recordkeeping Group recommends that the Chief Archivist endorse the development principles and process presented by this paper and the accompanying project plan, and direct the Government Recordkeeping Group to proceed with the development of the Recordkeeping Metadata Standard in accordance with this plan.

9. Potential external sources of information

9.1 International

International Standards Organisation. 2003. *Information and documentation – The Dublin Core metadata element set. 15836:2001(E)*. Geneva, Switzerland: Author.

International Standards Organisation. 2001. *Information and documentation – Records management – Part 1: General. 15489-1:2001(E)*. Geneva, Switzerland: Author.

International Standards Organisation. 2001. *Information and documentation – Records management – Part 2: Guidelines. 15489-2:2001(E)*. Geneva, Switzerland: Author.

9.2 United Kingdom

Public Record Office. 2002. *Requirements for Electronic Records Management Systems. Part 2: Metadata Standard*. www.pro.gov.uk [Accessed 20 May 2003].

9.3 Australia

McKemmish, S. et al. 1999. 'Describing Records in Context in the Continuum: The Australian Recordkeeping Metadata Schema' *Archivaria* No. 48 (Fall 1999): 3-43, p4.

National Archives of Australia. 1999. *Recordkeeping Metadata Standard for Commonwealth Agencies*. www.naa.gov.au [Accessed 8 May 2003].

Records Continuum Research Group. 2000. *Recordkeeping Metadata Project*. www.sims.monash.edu.au/research/rcrg [20 May 2003]

State Records New South Wales. 2001. *NSW Recordkeeping Metadata Standard*. www.records.nsw.gov.au [Accessed 8 May 2003].

9.4 New Zealand

State Services Commission. 2002. *New Zealand E-government Interoperability Framework (NZ e-GIF) Version 1.0*. www.e-government.govt.nz [Accessed 7 May 2003].

State Services Commission. 2001. *The New Zealand Government Locator Service (NZGLS) Metadata Standard and Reference Manual Version 2.0*. www.e-government.govt.nz [Accessed 28 May 2003].

Officials Committee for Geospatial Information. 2002. *ESA Core Data Specification*. www.linz.govt.nz [Accessed 7 May 2003].