

Records Control and Disposal Using Functional Analysis

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This article describes how functional analysis may be used as the basis for a business classification scheme and thesaurus, and explores how it has been applied to records control and disposal products produced for the NSW Government, notably Keyword AAA: A Thesaurus of General Terms and the General Records Disposal Schedule for Administrative Records. The article concludes with a discussion of the benefits being drawn from functional analysis in the NSW context, including its application to archival description.

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Records control

Until recently, the records management function of classification has tended to be defined by the Archives Authority of NSW as the 'putting together of like things in a systematic and consistent way in order to make retrieval

quick and easy'.¹ It has mainly been associated with developing language controls for titling and indexing, and developing numbering systems to control records.² The controlled language which was developed as part of the now superseded *GADM Thesaurus*, for example, identified those terms which could or could not be used for titling or indexing.³ Although the *Thesaurus* was used as the basis of classification schemes, these were generally based on broad subject areas and were not closely related to the business functions and activities of the organisation.

In the Australian Standard on records management, classification is defined as

the process of devising and applying schemes based on the business activities which generate records, whereby they are categorised in systematic and consistent ways to facilitate their capture, retrieval, maintenance and disposal. Classification includes the determination of document or file naming conventions, user permissions and security restrictions on records.⁴

At the Archives Authority, classification is increasingly seen as a scheme of control based on an analysis of the business functions and activities of an organisation. Such an analysis focuses on the goals and strategies of the organisation, how these are pursued through its business functions, the activities which enable the accomplishment of the functions, and the transactions which constitute the activities.⁵ It can be presented hierarchically as in Diagram 1.

Diagram 1
Business Classification Scheme

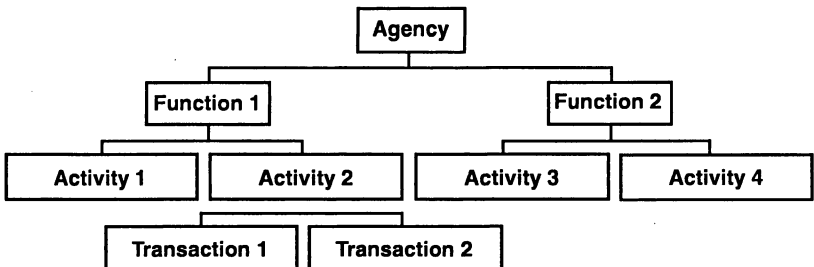
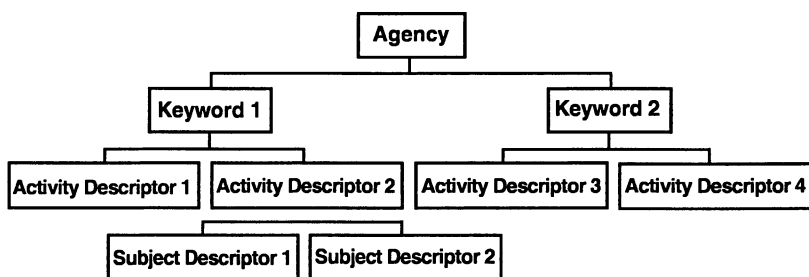


Diagram 1 shows the agency at the top of the hierarchy, the business functions which have been identified as a result of the analysis, the activities within those functions, and the transactions within the activities.

The terms used to identify functions and activities in a business classification scheme can be used as the preferred terminology for titling and classifying records, and can be the basis of a thesaurus, as illustrated in Diagram 2. The thesaurus is thus a product of the classification scheme rather than the basis for the classification scheme. This means that the thesaurus leads the user to the right classification, not just the right term to use in a file title.

Diagram 2

Thesaurus structure



Basing a thesaurus on a business classification scheme enables records to be directly linked to the business function and activity which created them. Linkages can be drawn between individual records so as to provide a continuous record of business activity.

A controlled language can be applied to titling and indexing, and there is also the opportunity to use the record's classification to help determine:

- how long the record should be kept
- how it should be handled and stored, and
- who should have access to it.

Using activity descriptors in *Keyword AAA*, such as SECURITY, POLICY, COMPLIANCE, or FREEDOM OF INFORMATION, identifies a record as having particular qualities which require specific handling regimes. For example, if the activity documented on the file is POLICY, then its likely retention would be long term and the use of permanent paper to create the records contained within this file would be advisable. Another example would be a file documenting SECURITY activities. This term is defined in its scope note as to do with 'the activities associated with measures taken to protect people, premises, equipment or information from accidental or intentional damage or from unauthorised access'.⁶ The use of this activity descriptor would alert a recordkeeper to the need for this record to be subject to a particular type of access regime that, for instance, a DRAFTING file would not have.

Structured file titling systems have also been used to control the vocabulary used in titling and indexing. These systems, while useful for controlling vocabulary, have not generally been based on a business classification scheme and therefore only provide an illusion of classification. For example, the file title ACTS - BILLS - NSW is a structured title, moving from a broad concept to a specific one using terminology which is part of a controlled vocabulary. However, the terminology used does not identify the record in activity-based terms, or assist in assigning a disposal status. As the terminology used has not been derived from a business classification scheme, it does not provide any basis for understanding the function and activity documented on the file or for making decisions about its disposal.

What is *Keyword AAA*?

Keyword AAA is a thesaurus of general terms designed for use in classifying, titling and indexing records. It covers terminology common to business functions and activities in most organisations, and is normally used in conjunction with a *Thesaurus of Functional Terms* relating to an organisation's specific functions, thus providing comprehensive controlled vocabulary coverage.

Keyword AAA is based on the *Keyword Classification System* developed by the Records Management Office, a unit of the Archives Authority. Using the

Keyword Classification System, which uses a business functional analysis approach, records are classified, that is labelled, first by a keyword and then by one or more descriptors. The *Keyword Classification System* allows for the use of keywords to define specific concepts and establish terminological control by eliminating synonymous terms and ambiguities arising from the use of homographs. It not only provides control and consistency over the vocabulary used for titling and indexing records, it also enables recordkeeping practitioners to make other management decisions about the record as a result of its classification.

Development of *Keyword AAA*

Keyword AAA is a logical progression in thesaurus products developed by the Records Management Office over the last 20 years. In 1978 a *Thesaurus of General Administrative Terms*, or the *GADM* as it has been better known, was released. The *GADM Thesaurus* became Australia's most popular and successful records management thesaurus and in 1995 was being used by more than 140 public sector organisations at all three levels of government around Australia.

The *GADM Thesaurus* was regularly revised and *Keyword AAA* is the product of the 1994/1995 revision. The different name is reflective of the fact that our revision had involved a fundamental rethinking of the general thesaurus concept and had resulted in a new product, rather than just a new version of the same. *Keyword AAA* was released in November 1995.

When work commenced on revising the *GADM Thesaurus* a number of developments were taking place within the recordkeeping profession, specifically renewed attention to the use of functional analysis and the drafting of the Australian Standard on records management. Our revision process was definitely coloured by these developments, although we were constrained by the need to meet the requirements of our thesaurus licensees and to plot a migration path for *GADM* users to the new product, and from subject based classification strategies to classification schemes based on functions and activities.

Our first steps in producing a thesaurus based on functional classification

were aimed at establishing what administrative functions and activities were performed across the NSW Government, deriving a hierarchical representation of those functions and activities, and then establishing a classification scheme based on such analysis. We set out to shift the basis of the *GADM Thesaurus* from a subject orientation to a more functional emphasis.

We used the three-tiered hierarchy of business function, activity and transaction referred to above as our model for the revised thesaurus. To establish the 'function' or first level, we attempted to describe the keywords in functional terms. All scope notes of keywords in the *GADM Thesaurus* were amended to commence with the standard phrase 'The function of ...' This was the beginning of the change in the mindset! We also began calling keywords 'functional descriptors'. Additional functional flavour was built into the thesaurus by then looking at the next level as the 'activities' performed within each function. Scope notes for this level were also altered to reflect the fact that an activity or series of activities was being carried out. Thus the standard phrase for this level was 'The activities involved in ...' To ensure that we remained consistent with the business classification scheme, we needed a third level to reflect the 'transactions' resulting from the activities. In our work we found that the transaction was generally documented at individual record level, whereas the thesaurus was intended to be used to classify whole files. As a consequence the classification scheme is only used to control vocabulary that describes functions and activities, not transactions. We found that terms used at the transaction level, which we call our subject descriptors, accurately reflect Schellenberg's notion that the third level of classification relates to persons, corporate bodies, places and topics – facts, events, ideas etc.⁷ Subject descriptors in *Keyword AAA* define the subject content of the activity and the terms offered at this level do not form a comprehensive list. They are there to be used as a guide only. We suggest to users that they may also wish to use this level to include free text, that is words not derived from the thesaurus, such as the name of an organisation, an individual or a project.

The next major change to the *GADM Thesaurus* was to enforce a hierarchy between the functional descriptors and activities within those functions. Previously *GADM Thesaurus* users could nominate the order in which the descriptors following the keyword would appear. The enforced hierarchy in *Keyword AAA* means that the user selects a functional keyword and then

is offered a choice between activity descriptors which are linked to that keyword. This ensures that the classification scheme remains true to the hierarchy of business functions and the activities which constitute the function. Diagram 3 provides an extract from the Classification Guide in *Keyword AAA*. It illustrates how activities are linked to the keyword, and subject descriptors are linked to activities. The Classification Guide is a concrete reflection of the hierarchy within the thesaurus and of the principle of hierarchy on which the *Keyword Classification System* is based. The hierarchy within *Keyword AAA* also adds to the thesaurus' compliance with the international standard on thesaurus construction, ISO 2788.⁸

Diagram 3

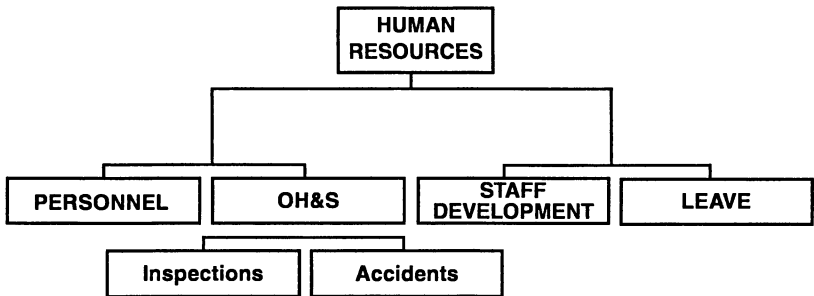
| KEYWORD | ACTIVITY DESCRIPTORS | Subject Descriptors |
|--|--|--|
| <p>FLEET MANAGEMENT</p> <p><i>The function of acquiring, managing, maintaining, repairing and disposing of vehicles. Vehicles are any means of conveyance owned or used by the organisation to transport people or items.</i></p> | <p>ACCIDENTS</p> <p>ACQUISITION</p> <p>ALLOWANCES</p> <p>AUTHORISATION</p> <p>BOOKINGS</p> <p>CONTRACTING-OUT</p> <p>DISPOSAL</p> <p>INFRINGEMENTS</p> <p>INSURANCE</p> | <p>Accident Report Forms</p> <p>Address Lists</p> <p>Advances</p> <p>Auctions</p> <p>Bonds (agreements)</p> <p>Exchanges</p> <p>Expressions of Interest</p> <p>Fuel</p> <p>add type of vehicle (eg. cars, caravans, motor bikes etc.)</p> <p>add type of tax (eg. fringe benefit, full vehicle etc.)</p> |

Level of functions

Our intention had always been that each keyword would represent a broad administrative function. However there was a need to settle on a relatively

low level for functional keywords so as to be able to create meaningful file titles. If, for example, we had used a broad term like Human Resources as a functional descriptor, the associated activities would have been establishing positions, development of staff, approval and processing of leave, Occupational Health and Safety matters, industrial relations, etc. To apply this in a hierarchical fashion would have meant that Human Resources, a term describing a reasonably big function in any organisation, would be on the first level of the hierarchy, Occupational Health and Safety on the second and the inspection of premises for workplace hazards would appear on the last level as in Diagram 4.

Diagram 4



A file title using this hierarchy would appear as HUMAN RESOURCES - OH&S - INSPECTIONS. This is a rather clumsy title and the activity taking place, the inspection of the workplace, is classified at the subject level rather than at the activity level. Consequently we opted not to use the first level term HUMAN RESOURCES, but rather to go to the next level for the Function/Keyword, so the terms PERSONNEL, OCCUPATIONAL HEALTH & SAFETY, STAFF DEVELOPMENT etc. appear as the functional keywords in *Keyword AAA*. That is, to make the thesaurus terms sufficiently specific for practical titling, we often pitched the first level descriptor – the keyword – at a level lower than the broadest general administrative function. We have labelled the functions identified at this lower level business functions. As a result of this decision we have 22 keywords rather than perhaps six keywords.

The *GADM Thesaurus* was a product of its time and was designed for paper-based filing systems. In direct contrast *Keyword AAA* has been designed to

be used with records in any form, including electronic recordkeeping systems and document management systems. At the Authority we have adopted *Keyword AAA* for use in our own directory structures on the Authority's PC network.⁹

Identifying agency business functions

Agencies which use *Keyword AAA* are encouraged to develop functional thesauri for their unique business functions. These can be merged with *Keyword AAA* to achieve full coverage of their records by a classification scheme and a thesaurus. Through a training course conducted by the Authority's staff we are able to train agency staff to analyse their agency's unique business functions and activities, establish a classification scheme and thus compile a thesaurus.

The methodology we use for the analysis is based on that contained in Part 3, *Strategies*, of the Australian Standard on Records Management AS 4390. This methodology for designing and implementing recordkeeping systems, DIRKS, features eight stages:

1. Preliminary investigation
2. Analysis of business activity
3. Identify recordkeeping requirements
4. Analyse existing systems
5. Identify strategies
6. Design recordkeeping system
7. Implement recordkeeping system
8. Post implementation review.

The DIRKS methodology is central to much of the work of the Archives Authority and is currently being incorporated into a manual which will be a practical guide for NSW Government agencies seeking to design or re-design recordkeeping systems, irrespective of format. The manual aims to provide guidance and consolidates a number of sources of information and tools that facilitate implementation of the methodology. While devised for

designing and implementing recordkeeping systems, the methodology also has relevance for establishing business classification schemes which may be used for a number of purposes.

The first part of the methodology, the *preliminary investigation*, requires the collection of documentary sources and information gathered through interviews for documenting:

- the organisation's role and purpose
- structure
- the organisation's environment (legal, regulatory, business and political)
- critical factors affecting recordkeeping
- critical weaknesses associated with recordkeeping.¹⁰

The second part, the *analysis of business activity*, requires the identification of business functions, activities and transactions. These then need to be placed in a hierarchy or business classification scheme. We emphasise to participants in our training course that the analysis undertaken at this point in the methodology may be used in many ways. It is a situation of 'do it once but enjoy many benefits'. The business classification scheme derived from this analysis can be used for intellectual control, for example a thesaurus such as *Keyword AAA*, appraising and sentencing records, and establishing what records need to be created and captured.

To assist participants in identifying their agency's unique business functions (as opposed to the administrative business functions which are covered by *Keyword AAA*) we work through two of the participant's documentary sources, typically the annual report and the corporate plan, to identify functions and activities which can be melded into a business classification scheme. Participants are reminded that these are not the only documentary sources available to them, but make a good starting point. Prior to the training course we ask participants to prepare themselves by examining both sources and gaining an overview of the work of their agency. Effectively participants are doing much of the preliminary investigation stage of the methodology before they arrive to do the training course.

Once participants have identified functions and activities (they are unlikely to get to transactions during the training course), these are then arranged into a hierarchy. We are able to use the terminology identifying the different levels as the basis of the thesaurus terminology. We stress during the course that participants can expect to identify and develop one business function and thus one keyword with all its relationships. It is very labour intensive and this is a reasonable expectation for a two day course. We are also involved during the course in changing mindsets as many of our participants have used or compiled thesauri using subject based classification. While participants may find the analysis of documentary sources challenging, it does reinforce the need to develop a classification scheme of the business functions, activities and transactions undertaken by the agency to meet its goals, and then to use this as the basis for compiling terminology for a thesaurus.

Disposal

The Archives Authority has produced *General Records Disposal Schedules* for administrative, personnel and financial records since 1978 with regular revisions occurring in 1985, 1992, 1994 and 1996. These general disposal authorities cover records common to all NSW Government agencies and eliminate the necessity of agencies preparing their own schedules on records for common administrative and housekeeping functions. Agencies are encouraged to develop *functional records disposal schedules* which cover records relating to the unique functions of the agency.

The 1985 edition of the *General Records Disposal Schedule* was broken into three main sections – Administrative, Accounting, and Personnel – and the Administrative Records section in particular was linked strongly to the *GADM Thesaurus*. Agency staff familiar with the thesaurus and agencies using the thesaurus to title and index their records would be able to easily locate the correct entry in the disposal authority and sentence common administrative records at the point of creation. Scope notes for *GADM* keywords were provided to assist users in selecting the correct category, and a comprehensive index by subjects was provided as further assistance.

The link established between these two records management tools has been very strong within the NSW Public Sector and it was thus important

that any revision to the *GADM Thesaurus* was incorporated into the *General Records Disposal Schedules*. As the Personnel and Accounting sections of the 1985 edition were revised and published separately in 1992 and 1994 respectively, some links to the *GADM Thesaurus* still remain. The *General Records Disposal Schedule - Personnel Records* is due to be revised in 1997/98 and it will be closely linked to *Keyword AAA* to assist NSW Government agencies.¹¹ The revision of *GADM Thesaurus* and the *General Records Disposal Schedule - Administrative Records* were coordinated as much as possible during 1994 and 1995 as each was reliant on the other.

The revised *General Records Disposal Schedule - Administrative Records* was released in 1996 and covers 'all general administrative records common to all or most State Government agencies created and maintained in any format, excluding those relating to personnel and accounting matters'.¹² The new edition is hierarchical in comparison to the earlier edition and is structured around functions and activities which were identified in *Keyword AAA*. Like *Keyword AAA*, functional flavour has been built into the schedule as well as ways to assist schedule users make the transition from subject based systems to systems based on functional analysis.

The schedule is designed to be applicable to all general administrative records regardless of titling conventions. A very comprehensive index has been provided so records titled using the *GADM Thesaurus* or *Keyword AAA* or systems where titling has been uncontrolled present no difficulties in relation to finding the correct entry within the schedule. It must be noted that, while *General Records Disposal Schedules* are standards which operate as mandatory formal disposal authorities for NSW Government agencies, there has not been the same requirement upon agencies to use the *GADM Thesaurus* nor *Keyword AAA*. Therefore the *General Records Disposal Schedules* have had to cater for all titling and indexing regimes.

The layout of the new schedule also reflects the more functional approach which has been taken. Each entry commences with the related business function and its *Keyword AAA* scope note, and then the activity identified within *Keyword AAA*. The different types of records created as a result of these activities are then described and sentenced. To help users understand the appraisal decision given, a requirements/remarks section was added to the schedule to incorporate recordkeeping requirements which had been

identified as part of the revision process.

It should also be noted that common terms within *Keyword AAA* can and are being used in describing unique agency business functions. This has major implications for the use of common tools in agencies and the appraisal of business functions and activities. An example would be the policy files created by the Department of Corrective Services pertaining to the parole of offenders. Policy is a common activity which has been identified in *Keyword AAA* and linked to every common administrative function. It is also feasible that it will be linked to most unique agency functions. Policy as it is defined in *Keyword AAA* could be quite different to the scope of the term when used in a Department's functional thesaurus. Likewise it will be defined in one way in the *General Records Disposal Schedules* and another in the Department's functional disposal authority.

Developing agency functional records disposal schedules

Agencies are encouraged to develop *functional records disposal schedules*, disposal authorities which relate to the agency's primary duties and responsibilities. Through an analysis of their unique business functions and activities, and the preparation of a business classification scheme for the development of a functional thesaurus, agencies will have completed much of the work required for the development of a functional records disposal authority.

The DIRKS methodology outlined earlier is also relevant for the appraisal of records. Appraisal is defined in the Australian Standard on records management as

the process of evaluating business activities to determine which records need to be captured and how long the records need to be kept, to meet business needs, the requirements of organisational accountability and community expectations.¹³

The third part of the methodology outlined above, the *identification of recordkeeping requirements*, will assist recordkeeping practitioners to identify and apply recordkeeping requirements to the business classification scheme

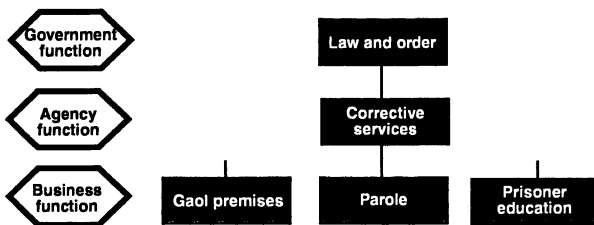
to inform the appraisal process. A new appraisal and disposal manual which will complement the *DIRKS Manual* is currently on the drawing board and due for release for comment in 1998.

Benefits from functional analysis

What benefits will result from using functional analysis for records control and disposal in the NSW Public Sector? Firstly, by analysing and documenting agency business functions and activities through business classification schemes we hope to establish better control and disposal of agency records thereby improving the quality of Government recordkeeping. However there are larger benefits to be gained from this work.

At the Authority we have developed a three level model of functions to be documented across the NSW Government. The first level in this model comprise 'government functions', ambient functions such as law and order, health, and education. At the second level, 'agency functions' represent how these high level functions are broken down and pursued at organisational level, for example the government function of law and order is carried out through the agency functions of corrective services, law enforcement, courts administration etc. At the third level are the 'business functions' conducted within agencies in the pursuit of the goals and strategies of the organisation. As explained above, the functions being documented through *Keyword AAA* and the compilation of agency functional thesauri are located at what we refer to as the business functions level. Diagram 5 shows the three levels in our model.

Diagram 5



At present the first two levels of functions are being documented primarily for the purposes of archival description. However we are in fact building a bigger perspective of functions and activities being conducted across NSW Government which can in future be used for other purposes. It is our intention that the government functions, agency functions and business functions will neatly dovetail into each other, providing us with better understanding and control of records.

Diagram 6

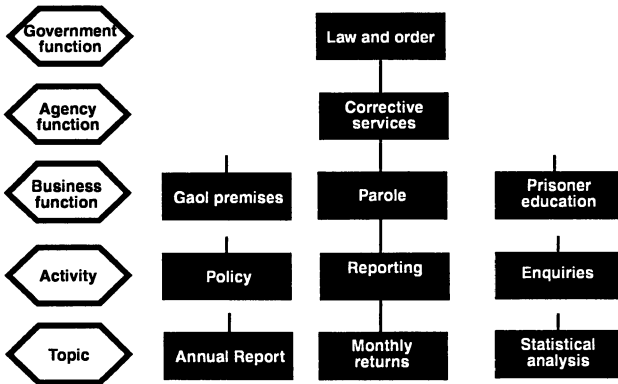


Diagram 6 demonstrates that the work initially being carried out for archival description purposes establishes the first two levels of this hierarchy. The development of business classification schemes by agencies, using the Australian Standard on records management and with our guidance, along with the associated terminology in *Keyword AAA*, establishes the last three levels.

Primarily the end result or benefit of our functional analysis work will be the establishment of business classification schemes within agencies across the NSW Government that can be placed within the broader context of government functions and agency functions. This will assist us in:

- identifying common functions within agencies
- appraising and disposing of records of those common functions
- identifying unique functions and the records of those functions

- making appraisal decisions at a macro level for those functions.

It will also enable us to make more strategic appraisal decisions across our jurisdiction. This has not yet been done but it is part of our plan. The end result of agencies establishing business classification schemes for their functions and activities will also be better archival understanding and control of records.

I would like to acknowledge David Roberts's valuable assistance with preparing this paper. A number of the diagrams used in this paper were prepared by David for the 'Understanding Functional Analysis' Seminar at the Archives Authority of NSW on 9 April 1997.

Endnotes

- ¹ Archives Authority of New South Wales, *File Creation*, 1994, p.26
- ² *File Creation*, p.19
- ³ In records management, controlled vocabulary and language brings consistency to the terms used for titling and indexing, while speeding up retrieval by limiting the number of terms required for a successful search.
- ⁴ Australian Standard AS 4390, *Records Management*, Part 1 *Definitions*, Clause 4.8, 1996
- ⁵ AS 4390, Part 4 *Control*, Clause 7.2, 1996
- ⁶ Archives Authority of New South Wales, *Keyword AAA: A Thesaurus of General Terms*, 1995
- ⁷ T.R. Schellenberg, *Modern Archives: Principles and Techniques*, University of Chicago Press, 1956, p.54
- ⁸ International Standard ISO 2788 *Documentation - Guidelines for the Establishment and Development of Monolingual Thesauri*, Clause 8.3, 1986
- ⁹ For further information on the use of business classification schemes, thesauri and directory structures, see Archives Authority of New South Wales' publication, *Desktop Management: Guidelines for Managing Electronic Documents and Directories*, 1997
- ¹⁰ AS 4390 Part 3, *Strategies*, Clause 6.2.2, 1996
- ¹¹ It should be noted that the 1985 *General Records Disposal Schedule* is no longer available and has been superseded by the 1992 *General Records Disposal Schedule for Personnel Records*, the 1994 *General Records Disposal Schedule for Accounting Records*, and the 1996 *General Records Disposal Schedule for Administrative Records*. The 1985 edition no longer constitutes an authority to dispose of NSW public records.
- ¹² Archives Authority of New South Wales, *General Records Disposal Schedule: Administrative Records*, June 1996, p.v
- ¹³ AS 4390 Part 1 *General*, Clause, 4.3