

Data, Systems, Management and Standardisation

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The author revisits his 1990 contribution to this journal on the subject of standardisation. He refines his earlier examination of the issue and introduces new issues for consideration in the standardisation debate and explores the possible advantages of cooperative action to develop common software applications. In the second half, Australian participation in recent developments towards an international standard (ISAD) is chronicled and an account is given of the development of an Australian Common Practice Manual (ACPM).

THIS ARTICLE FALLS INTO TWO PARTS, the common thread of which justifies its presentation as a single piece. In the first part, I update my 1990 views on standardisation in Australia. The second part provides an account of work I have since undertaken on behalf of the Australian Society of Archivists (ASA) to respond to a draft international standard being developed by the International Council on Archives (ICA).

It will be necessary, at the outset, to define two terms. By **archival data** I mean information about records and their context of which an archives is (in part) the source (traditionally in the form of archival guides and finding aids) and, in the environment created for us by electronic records, possibly the manager. By **electronic records** I mean so much of the data on a system (being a system satisfying functional requirements for recordkeeping) which is used for recordkeeping purposes.

In the second part of this article, I will describe the very high level of support given by the ASA and a select number of archives institutions to —

- development of an Australian response to international initiatives for the standardisation of archival data, and
- a project to identify and articulate descriptive norms in Australia: the *Australian Common Practice Manual (ACPM)*.

There appears, nevertheless, to be a view that standardisation is somehow removed from the immediate, daily, 'practical' concerns of archival life—a worthy, 'theoretical' goal to be pursued when we get past the more urgent demands of getting on with the job—that it is something which involves 'extra' (optional) work which cannot always be justified in the press of daily chores. Such a view mistakes the urgent for the important.

The heart and soul of any organisation (not just an archives, but any organisation) is its data system. Standardisation is not just (!) about improving our data systems. Still less is it about modelling some desirable, but impractical, unattainable, or optional enhancements. Electronic records and standardisation are widely perceived to be the outstanding theoretical problems of our profession. In the case of the former, the 'practicality' of trying to find a solution is well understood. Perhaps the latter does not receive the same attention because it is felt that we have descriptive solutions already, that the only question is whether we need to make them a bit better, and that it can wait upon more 'urgent' priorities.

It is already clear that, whatever successful strategy is developed for dealing with electronic records, possession of an adequate documentation strategy is a key to that solution. The two great problems (electronic records and standardisation) are not, in fact, two problems at all—they are twin aspects of the same problem. Electronic records cannot be dealt with effectively apart from an adequate documentation strategy. The current preoccupation of the profession here with electronic records needs to be extended to standards for archival data. If the pundits are correct, preservation of (and access to) electronic records will not (indeed, cannot) be achieved custodially. Access to records via networking makes it unlikely that an archivist will be needed to access or interpret electronic records. Networks provide their own navigation systems and the interpretation of data is a function of the end user's system rather than the formats and protocols devised by the generator of the record. On this view, the archivist of the future will be neither a custodian, a navigator, nor a gatekeeper.

In the custodial model, if our archival data was poor, we could (however inefficiently) overcome this in the search room by providing expert knowledge of holdings or remedial reference services. The opportunity to make good inadequacies in documentation came with the necessity for users to present themselves if they wanted to use the records. Archives are segregated for preservation and, consequently, used in ways dictated by the need to preserve their qualities as records. Users must accommodate themselves to access protocols peculiar to archives because that is a function of the need to preserve.

With electronic records, this safety net will be removed in two ways —

- It will no longer be possible, if it ever was, to view 'users' of archival data simply as researchers accessing other peoples' records. Records-makers (system and data managers) and, arguably, organisations at large will also be 'users' of archival data. They will require a quality data product.
- Researchers will access electronic records directly, via a network without going through archivists. What use they make of archival data will depend upon its being available, reliable and relevant. These are qualities conferred by adherence to standards when the data is generated.

In neither case will there be any opportunity to make good deficiencies by using well-honed search room skills.

What then, that archivists now do, will still need to be done? This question is at the heart of the electronic records issue. A part of the answer must surely lie, as Bearman and Lytle have argued, in the need to document the context of electronic records (as we do now for all records) as a path to their interpretation and use and as an important part of managing current information in large organisations —

The task of managing information in organizations is becoming more challenging as the organizations become larger and more complex, and as information technologies and general societal developments increase the volume and sophistication of available information. This task can best be met by the careful study of how these organizations create, use, and discard information ... Will archivists bring their knowledge of how organizations create and use information to bear on modern information management problems? Will the archival profession consequently make a transition to the modern information culture, or will it remain behind as a keeper of paper and electronic relics?

The key to the archivists' contribution to information management lies in their unique perspective provided by the principle of provenance as it concerns organizational activity ...¹

Users accessing electronic records via the network will not need archivists to hold, locate, or interpret the data. We will be needed, if at all, to help construct systems in which archival data (knowledge of context and recordkeeping) is available to users when needed. Archivists are not alone, of course, in undertaking organisational analysis and documentation. What we bring to the task is a unique experience in representing and preserving information ('archival data') about changes in systems and to the contextual framework. It follows that at least some part of the answer to the question, 'What must archivists do with electronic records?', involves discovering how archival data can best be used in the generation, management, and use of electronic recordkeeping systems. That, ultimately, is what standardisation is all about.

Standardisation 1987, Revisited

In the May 1990 number of this journal,² in an article outlining arguments in favour of standardisation which drew upon a Report prepared in 1987 for the ACA, I took no account whatsoever of such arguments. I gave several meanings (at p. 64) for standardisation. They were —

- (a) uniform technology[sic³]—trying to use the same word to apply to similar things;
- (b) common descriptive practices—expressing things like dates, quantities, series titles and so on in a consistent way;
- (c) common descriptive formats—common practices determining what data elements should be used to describe similar things in different systems (e.g. describing record series in terms of title, date range, quantity, reference/citation, etc.
- (d) common or uniform systems—standardised methods or systems for arranging (recording, processing and displaying) data about archives; and
- (e) reducing data about archives for sharing, exchanging, or merging — e.g. the proposed National Register; networking; shared databases.

I also gave four reasons (at p. 65) why I thought standardisation was important. I shall try the patience of the Editor by repeating these also —

First. It provides a platform for cooperative endeavour to improve professional standards in arrangement and description. Each archives, in developing its descriptive system, has to solve similar descriptive problems. Working in relative isolation, they will be forever rediscovering the wheel or making do with inadequate solutions to problems for which someone else has found a better way. It is the aggregation of our expertise, based on a necessary minimum of conformity, which will produce the best results for everyone.

Second. It is helpful to our users. When they have mastered the guides and finding aids in one archives, the disparity is now so great that they often cannot apply the knowledge gained in learning one system in the next archives they visit. Standardisation, even of something basic like presentation, assists users by helping them transfer the skills developed in one archives to another. This in turn promotes and reinforces the public image of archives in place of the eclecticism and diversity which is presently our image.

Third. It assists us in the transition to and continued development of automated systems. The move to computerisation compels archives to modify their systems and standardise internally. Even assuming, as I do, that no single computerised system can meet the needs of all archives, it is likely that many archives will be able to borrow and adapt both format and system design concepts and even specific computer applications from others rather than follow the whole painful path of system development afresh and that growing use of common formats/systems will be part of this.

Fourth. It facilitates merging of data about archives. The development of the proposed National Register requires merging of data in compatible formats in some way or another. Compatibility implies some degree of standardisation.

I did then make one suggestion that, with hindsight, seems more than ever relevant. As part of any national endeavour to standardise archival data, I proposed that attention should be given to establishing a common contextual framework for the documentation of the country's archives (both public and private) which was 'above' the level of documentation normally undertaken by any one program and which no one program could provide for itself. The conception behind this proposal was that all archival data needed to be linked conceptually to a universal statement of context which would ultimately be needed to interpret and understand the archival data generated by each program. Nothing which has occurred or been said since has changed my mind on this point and, if speculation about the way we need to go in dealing with electronic records is correct, it seems to me more relevant than ever.

Standards of archival description by and large appear as rule-books or manuals itemising the kind of data used when describing records and their context and, by extension, specifying what is being described and how the data should be organised. David Bearman has identified four types of standard⁴ and warned against confusing them —

- *Information System Standards*: How packages of data elements or fields are organised and interrelated;
- *Data Structure Standards*: How data belonging to one data category is related or brought together with data from other categories (e.g. a specification for formatting data elements or fields);
- *Data Contents Standards*: What categories or fields of data should be used (e.g. a dictionary of data fields); and
- *Data Value Standards*: What terms should be used within each data category or field (e.g. a controlled vocabulary).

The assumption of some archivists has been that, if we can define data contents and adopt an agreed structure, improve control over vocabulary, and refine our ideas about access points, then standardisation of archival data will have been achieved because it will be formatted to look the same (at least when it appears as output) and be more easily retrievable. Archival data which conforms to the standard could then be effectively exchanged, merged, and used. It is assumed that any system would recognise and be able to handle archival data from another system because it conforms to standards for structure and contents (at least to the extent that output from the system conforms to those standards⁵). The purpose of standardisation, based on these assumptions, would be the production of archival data from a variety of sources which could be accessed from a single point, in other words, a data exchange format.

The Impact of Networking

Any future consideration of standards for the express purpose of data exchange or merging (whether at the national or the international level) must, however, take account of current trends in the information environment. There are two critical issues —

- The continuing increase in storage capacity, in even modest local applications, makes the delivery of on-line retrieval a much more achievable (and likely) feature of archival systems than I believed would be the case when I wrote my 1987 report for ACA.
- A rapid improvement in and growth of information networking reduces the relative priority I gave in 1990 to reasons for standardisation, suggests new reasons and other priorities, and takes us along different paths towards meeting our needs.

One clear implication of the networking model is that archival data will most likely be made widely available from local systems which are connected on the network and not merged in a central data repository. Data will be distributed across the network and accessed using client-server protocols which allow data generated in one application to be interpreted on the local system.

The logical consequence appears to be that, in a networking environment, the existence of a standard of the kind foreshadowed in my 1990 article (designed to ensure uniformity in the kind of descriptive data employed, in the way it is used, and in its formulation into a standardised representation) has a lower priority (at least, for data exchange purposes). The really important questions will be how distributed data is accessed through the network and how it must be formatted so that it can be 'interpreted' by the user's system. This will involve conformance with protocols which have very little to do with what data is made available and how it is formulated into descriptive entities, but rather with the transmission and interpretation of data of any kind (i.e. metadata). The implications appear to be that we, as archivists, must

- be more aware of (and be readier to use) information management and retrieval tools developed in other disciplines or for interdisciplinary use, and
- find ways of participating in the development and management of information networks—locally, nationally, and internationally.

The politics of standardisation (to which I alluded in my 1990 piece) are thus changed. It is no longer just a debate amongst ourselves. In the larger world of networking, archivists will be minor players. On this model, for example, the concept of a National Register of Archives (which in 1987 and 1990 I thought central to the debate) — being a Register which takes the form of a consolidation of data held elsewhere or made available through a

dedicated network—becomes almost irrelevant. The only certain purpose of a National Register would be to capture data **not** available on the network from distributed sources. A secondary purpose might be to provide a focus (to act as a directory service) for networked data but even this need may disappear if (?when) adequate means are developed for 'navigating' the network.

It must not be supposed, of course, that all we have to do now is load up our data onto existing or soon to be available networks. Our data has some way to go before it is ready and the networking future to which I refer⁶ is not yet here. Already, however, users of the Internet and similar facilities are becoming accustomed to 'tapping in' to data with which they are immediately unfamiliar. The networking solution is not to make data from different sources the same, but to ensure that it can be transmitted and interpreted by a user at the other end of the network in whatever format the end-user's system prefers.

The second of the four reasons I gave in 1990 (user familiarity with the way that data is presented to them) is unlikely to be compelling. The benefits of networking—the amount of data which can be accessed and the capacity to cross boundaries between disciplines—will sweep aside any twinge of regret for familiarity with output formats. The likelihood is that user interface systems will make data accessed via the network more meaningful at the user's end (for the user) than anything we could have devised for general utility.

Of the four reasons I gave in favour of standardisation in 1990, therefore, I think only the first (it is a platform for improved professional practice in arrangement and description) and the third (it assists in the transition to and continued development of automated systems) survive as being persuasive now.

I will now expand upon the role I think standardisation might have in relation to system development in a networked environment. It is possible that this may prove more important—not because it is necessarily more significant in itself, but because it appeals to the most basic and insular view of the matter imaginable and may, in consequence, be more persuasive amongst those who have thus far taken little interest.

Standards and Archival Systems in a Networked Environment

Hitherto, I have said that standardisation is desirable because it gives us a better, more practical, more useful result. It has been implicit that a good, practical, useful result could nevertheless be achieved without it. I now think there is reason to doubt that. I would now add, therefore, another reason to my catalogue:

Fifth. It may be the only viable way of ensuring the sustained system development which is necessary if our long-lived data is to be preserved for as long as it is needed.

Every automated system lives or dies according to its ability to maintain

- the quality of the **data** it contains;
- the effectiveness of the **system** design; and
- the adequacy of the **management** of both.

A failure to maintain any one of the three compromises the integrity of the system in ways which can not be remedied by success in meeting the other two.

The standardisation debate (at least as I developed it in my 1990 article) has been largely about the first and the third of these requirements. I now believe that the second is significant also. It was my explicit conclusion in the 1990 piece that standardisation of system applications would not (and need not) be tight and that

- the archives community here would probably divide into something like three 'levels' (viz. small, medium, and large—Australian Archives being our only example of the last level);
- 'many of the small and medium size archives will end up borrowing or buying technology from each other'; and
- 'at each of the two levels [small and medium], two or three (maybe half-a-dozen) applications will eventually become more or less standard'.

Implicit in this view was the assumption that no single software package would be used (or needed to be used) and that no commercial package would be developed and applied universally. I felt that the large and medium archives (the State archives and one or two others) would develop their own in-house systems as (at that time) Australian Archives and the Public Record Office of

Victoria had already done. This prediction has turned out to be partly true, though as I suspected (I would now say feared) there has been 'greater diversity in computer applications than I anticipate[ed]'.⁷

While there is good evidence that computerisation has led, as predicted, to greater systemisation by archives and extensive borrowing of ideas and approaches from each other, most are developing in-house software (usually, a domestic application of a proprietary package). Each archives, therefore, is becoming wholly responsible for its own system design and development, system management, and for the quality and management of its own data.

System management and data quality control are an unavoidable part of computerisation in archives. The extent to which an archives undertakes system design and development, however, depends upon the availability of and the extent to which it utilises software packages designed and developed by someone else. The point is simply made: designing and developing your own system is like writing your own word-processing package instead of buying a proprietary package. No-one does it with WP because it is much more cost-effective to buy one off the shelf and spend time on other things.

Archives system needs are not catered for in this way—partly because, in the pre-computer era, we allowed our manual systems to develop in an unstandardised way and partly because the market we provide is much too small to attract serious commercial interest. Even now, one could not confidently articulate the design specifications for an archives system which would be likely to enjoy widespread support even within the tiny market we make up collectively.

It may be questioned whether standardisation on common software is, in any case, desirable—especially in view of the implications of networking to which I have already alluded. I can attest to the exhilaration which comes from designing your own in-house system, implementing it, and then developing it further. In the early, heady days it goes hand-in-hand with the 'systematisation' of old, manual procedures and is a useful platform for staff training and development. There are fresh insights into one's data, one sees ways of improving it and new ways of dealing with it and presenting it. Once the system comes on-line, the priorities should move to data management and system management. It is a characteristic of the systems environment, however, that systems design does not stop (it cannot stop, technology sees to that). Post-implementation systems design (systems development) proceeds at a pace not much slower than before.

Systems design and development requires technical, non-archival skills. They can be developed in-house or purchased by using a consultancy. The cliché that archivists are really systems people has a germ of truth in it, but any archivist who acts upon it will be taking a short-cut to disaster. Archives systems are sufficiently complex and different to require design skills of a high order which few archives (except possibly the very largest) will be able to sustain in-house. Whether systems skills are in-house or external, they represent an investment and resources are always in short supply.

The temptation (for all practical purposes, the unavoidable necessity) for small organisations developing complex systems in-house is to trade off system documentation for development. Lack of system documentation is the most common fatal flaw of in-house systems (everywhere, not just in archives). Under great pressure first to design and then to continue to develop a system, it seems, at first, the lesser of two evils to 'postpone' documentation until there is a breathing space in which to do it. There never is such a breathing space. The consequences are not immediately serious. The organisation is small, everyone involved knows the system, at this stage they do not need documentation to refer to. It may be possible even to pass on to the first or second upgrade in this state, but sooner or later the lack of full documentation creates enormous problems for any system which proceeds in this way.

Consider the consequences:

- archives are small: organisational system knowledge will be held by one or two people, it is therefore fragile;
- archives are poor: the temptation to spend scant resources on system design and development at the cost of system documentation will be overpowering; and
- archives need to maintain their data for a long, long time: compromising data migration (which is the long term deficit of poor documentation) will therefore be fatal.

One solution lies in finding common software applications for archives based on agreed *Information System Standards* and *Data Structure Standards*. In one sense, this is directly contrary to my 1990 conclusion when I was somewhat unkind about those 'who may still foresee the eventual adoption of a common system as the vehicle for standardisation',⁸ but, of course, my present argument is that standardisation could be the vehicle for a common system—not the other way round. Another possible solution is that generation of archival data will no longer occur on separate archives systems at all and will

be integrated with data management procedures in a variety of system environments.

Either way archives are relieved of the need to design and develop systems and freed to concentrate on system management and data quality. While networking lessens the need for standards in order to achieve data exchange amongst archives, it also means that (for reasons outlined above) their adoption no longer impedes users of the network from accessing archival data freely. The emphasis of the argument in favour of such standards has shifted then from their value to users of the system to the advantages for providers of archival data.

As we have seen, the archivist's primary role in a networked environment is likely to be as a provider of archival data rather than a custodian of electronic records. In this role, our value to users (arguably, our survival as a profession) will depend upon satisfactorily determining **what** data we should offer to the network and its **quality**—hardly at all on how we deliver it. That is to say, the survival skills of the archivist will be entirely bound up with system management and data quality, not with system design and development. It follows that any move towards common systems (to relieve us of the non-essential part of the task) should be welcomed.

This being so, the leisure which in 1990 I believed we had to gradually grow together no longer exists for us. Early agreement on standards is necessary as the basis for developing common systems and as the vehicle for redefining and improving what kind of archival data we will offer. If, as I suppose, our most important data products will be based on contextual data rather than on the contents and whereabouts of 'holdings', it is clear that there is a considerable divide which still has to be bridged between existing practice and the desired standards and that this task will have to be substantially completed before we can progress to common system design.

A network is like a pipe which carries information between two points. A variety of things (fresh water, sewage, industrial waste, storm water) can be put into one end of the pipe and can be used in a variety of ways at the other end (to drink, to sprinkle on the lawn, to pump into a sewage farm and produce fertiliser, to nourish the ocean off swimming beaches). The limitations of the pipe impose some restrictions on what is carried and how it is used, but by and large producers and end users need not be concerned about its design and engineering—they can take the pipe more or less for granted. Their task (the archivist's task) is bound up with the design and use of appropriate product.

It will be a grave mistake just to load up old product for delivery and use in new ways—to focus on ways and means and not upon product. The secret of the network for archivists lies in developing appropriate new product for documenting context and for documenting recordkeeping as an integral part of processes for managing and preserving records in a networked environment. This is the link between the evolving roles of the archivist and records manager—both of whom are thinking their way (or ought to be) into the new environment. For both (if indeed they remain separate disciplines), the possession and use of archival data will be central to the management of electronic records (as distinct from other kinds of electronic data). Archival data generated to provide researchers with information about provenance and holdings (and for no other purpose) will fail to meet this need. The real question posed by these developments is whether or not archival work will in future be done by archivists. If not, some of our successors (whether or not they continue to call themselves archivists) will be mere custodians and purveyors of information while the others (whether or not they recognise the evolutionary link) will undertake truly archival work: viz. the generation, management, and use of archival data.

MAD, RAD, and Dangerous to Know

In November 1990, the ASA received for comment (along with professional associations around the world) a draft copy of a document embodying the work of an Ad Hoc Commission on Descriptive Standards set up by ICA — *Statement of Principles Regarding Archival Description*. In 1992, a revised *Statement ...* was distributed along with a second document — *General International Standard Archival Description: ISAD(G)*. A revised *ISAD(G)* is being published, and a third document — *International Standard Archival Description for Authority Records: ISAD(AR)* is currently being drafted by the Commission. The ASA, and the Australian archival community at large, has provided such vigorous input into this process that we were invited to join the Commission for its 1993 meeting in Stockholm and I have been a member of it since then. At each stage, in responding to the ICA Commission, the ASA has sought comment from its own Branches, Special Interest Groups and from archives institutions.

The flavour of the Australian response to ISAD can be gleaned from the following extracts from our comments on draft ISAD(G):

It is our view that the draft *Principles* confuse the theoretical basis for description with a statement of a particular application of those principles which results in a theoretical statement which is not flexible enough to admit alternative (equally legitimate) applications of those same principles in a variety of ways which:-

- can be encountered in archival practice at present, and
- we believe, will be necessary to accommodate changing circumstances in future.

.....

... we now enumerate three issues which we believe would need to be considered if *ISAD(G)* were to be adapted to better serve Australian practice:-

- (1) Descriptions of Records must not be limited by custodial considerations...
- (2) Allowance must be made for Description of Context and Provenance to be developed independently of the description of records...
- (3) Allowance must be made for more than one records-creator when attributing a 'unit of description' - i.e. for multiple-provenance attribution at the series level ...⁹

At its Stockholm meeting, the ICA Commission agreed to revisions of *ISAD* which go some way to accommodating these three points. The ASA has not sought to impose the Australian **series system** on the rest of the world; it has sought alterations to the proposed international standard to accommodate the series approach as a valid alternative within international precept and practice.

It is intended by the ICA Commission that *ISAD* operate as an international standard for data exchange. The Commission envisaged that national documentation standards (not inconsistent with *ISAD*) should be developed. Other English-language 'standards' — *RAD*, *MAD*, and *APPM*¹⁰ — did not, it was felt by the ASA Council, adequately serve Australian needs. In 1992, a questionnaire was circulated to archival institutions seeking to obtain a picture of data usage. The results were then circulated to respondent institutions in 1993 and they were asked to participate in a further project to gather and systematise information on the use of descriptive data. This Project (*ACPM*) was initiated by the ASA Council in March 1993 in the following terms:

It was agreed that an Australian manual of archival description was essential in order to maintain the Australian position on descriptive standards. The manual should be descriptive rather than prescriptive. Responses to the questionnaire could be used to develop information on descriptive standards.¹¹

Ten institutions agreed and their descriptive practice is currently being analysed and correlated in a work which we have titled — *Australian Common Practice Manual: ACPM*.

ACPM identifies four kinds of descriptive entity and is divided into four corresponding parts:

- **Ambience:** representing high level ideas about context; not directly concerned with records-creation (e.g. Organisations, Families, Functions, Groupings of records-creators) — *ACPM for Ambience*.
- **Provenance:** representing low level ideas about context; directly concerned with corporations and persons which create, manage, own, control, or dispose of records — *ACPM for Provenance*.
- **Records:** representing high-level ideas about recordkeeping; the organisation and maintenance of the whole of the records of a corporation or person (e.g. recordkeeping system; *fonds*, series) — *ACPM for Records*.
- **Contents:** representing low-level ideas about recordkeeping; the actual component parts of a recordkeeping system or series, physical management, informational content — *ACPM for Contents*.

Within each part (each part representing a different kind of descriptive entity), data is divided into three categories: Identity, Description and Relationships. Each category of data comprises a number of data types. The result is an analytical matrix within which all descriptive data is tabulated and correlated thus:

	Ambience	Provenance	Records	Contents
Identity	Reference No.; Title; Dates; 'Control Data'	Reference No.; Title; Dates; 'Control Data'	Reference No.; Title; Dates; 'Control Data'	Reference No.; Title; Dates; 'Control Data'
Description	Data specific to ambient entities	Data specific to provenance	Data specific to records entities	Data specific to contents entities
Relationships	Relationships data with other entities	Relationships data with other entities	Relationships data with other entities	Relationships data with other entities

The type of data found in the Identity category is the same at every level: reference number or code, title or name, dates, and 'control data' — because the task of identifying a descriptive entity is essentially the same at all levels. In the Description category, however, the types of data differ at every level: e.g. quantity, access, and location for records and history, function, address for provenance—because the description of different kinds of entities involves identifying attributes which are peculiar to each. Relationships data shows connections between

- entities of the same kind (e.g. previous, subsequent, superior, subordinate), and
- across the interface between kinds of entities (e.g. which provenance entity created which records entity).

An examination is being made of sample documentation submitted by each participating archives. This is being supplemented by at least one visit. Where they exist, in-house manuals and procedures are being summarised. What results is a statement of descriptive practice which is particular to each archives and which also (because it is given within the conceptual framework of ACPM) correlates the use of data by one archives with the practice of other participants. This points up similarities and differences.

Each in-house rule is allocated to

- (1) an appropriate part of ACPM (e.g. this is data about records, it belongs in *ACPM for Records*);
- (2) an appropriate data category and type (e.g. this is data about dating, it belongs in the Identity category and is of the Dates type, not a code, a name, or control data);
- (3) a predetermined 'area' within each data type (e.g. this is data about when the records were made, it belongs in the 'Records Accumulation' area, not the 'Contents' area); and
- (4) a common practice rule which formulates the practice of several archives into a single statement (e.g. this is data about dates of records extant, it belongs with the rule about dating records which have survived, not with rules about dating of records creation or holdings).

ASA-ACPM-DER-994-01 (Records)

R 2.0.0	IDENTITY cont'd	CATEGORY OF DATA
R 2.3.0	: Dates	Type of Data
<i>Citations -</i>		
	<i>ISAD(G) - Stockholm Draft</i>	: 3.1.3 and 3.2.3
	<i>CRS Manual Vol.2 - Series</i>	: 3.2; 5.9 and 5.10
	<i>PROV Manual - Series</i>	: 4.3.0 and 13.1.0
	<i>Keeping Archives 2</i>	: field 4
<i>Dating adds to the user's knowledge of the records by indicating chronological limits.</i>		

R 2.3.1	RECORDS (ACCUMULATION)	AREA
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R.2.3.1a	Say when the records were made	Common Practice Rule
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(i) Show the dates of the record-making process

:AAA; ISD; KA2; NSY; VSA

The dates of accumulation or compilation show the beginning and end of the recordkeeping process used by the record-maker to organise the records being described. Where the process is continuing, an open date range is shown.

Examples:

(1924-1956) (1924-) or (1924-ct)

*etc**etc**etc*

R 2.3.1c	Say what dates you hold (in custody)	Common Practice Rule
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(i) Show the dates for records in custody

: ISD; NSY; NUS; NUT; VSA

etc, etc, etc

Figure One

The common practice rule is thus derived from an examination of the descriptive practice of the participating archives, but it is fitted into a conceptual framework which is developed independently of them. Each *ACPM* 'rule' which is attributed to an archives should make sense in terms of the in-house practice of that archives, but its meaning is expounded to others in terms of the common framework of understanding provided by the structure of *ACPM* itself.

A code is assigned to each participating archives (AAA for Australian Archives, ANL for the National Library of Australia, and so on). Where necessary, any variations from the common practice rule are shown. The whole matrix is set out in **Figure One**. Examples are given of documentation from participating archives, indicating which *ACPM* rules apply, appear as **Figure Two**.

RECORDS: KA2: Series																								
R3.14.2 Description: Associations (Prov.)	1. Provenance: Benlith Potteries Pty Ltd	2. Series Number: 56	SR2.1.1 Identity: Code (local)																					
R2.2.1 Identity: Title	3. Series Title: General Manager - Copies of Letters Sent																							
R2.3.1 Identity: Dates	4. Date Range May 1901-Mar.1958	5. Shelf Quantity: 5m	R3.1.1 Description Quantity																					
R3.14.4 Description: Associations (with	12. Shelf List: <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Container No.</th> <th style="text-align: left;">Brief Contents Note</th> <th style="text-align: left;">Location</th> </tr> </thead> <tbody> <tr> <td>56/1</td> <td>May 1901-Dec 1902</td> <td>Shelf 1</td> </tr> <tr> <td>56/2</td> <td>Jan 1903 - Dec 1904</td> <td>Shelf 1</td> </tr> <tr> <td>56/3</td> <td>Jan 1905 - Dec 1906</td> <td>Shelf 1</td> </tr> <tr> <td>56/4</td> <td>Jan 1907 - Dec 1908</td> <td>Shelf 2</td> </tr> <tr> <td>65/5</td> <td>Jan 1909 - Dec 1910</td> <td>Shelf 2</td> </tr> <tr> <td colspan="3">(series continues on additional sheets)</td> </tr> </tbody> </table>		Container No.	Brief Contents Note	Location	56/1	May 1901-Dec 1902	Shelf 1	56/2	Jan 1903 - Dec 1904	Shelf 1	56/3	Jan 1905 - Dec 1906	Shelf 1	56/4	Jan 1907 - Dec 1908	Shelf 2	65/5	Jan 1909 - Dec 1910	Shelf 2	(series continues on additional sheets)			
Container No.	Brief Contents Note	Location																						
56/1	May 1901-Dec 1902	Shelf 1																						
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56/4	Jan 1907 - Dec 1908	Shelf 2																						
65/5	Jan 1909 - Dec 1910	Shelf 2																						
(series continues on additional sheets)																								
R2.4.0 Identity: Control Date	13. Prepared by: P. Foster	14. Date Completed; 19 Nov. 1968																						
MANUALS.07\ACPM\ DEX994-01A			Page 1 of 1 pages																					

Figure Two

ACPM is not itself a standard. In 1990, I urged that steps be taken

to compare and precisely correlate similar and/or identical data elements in different systems as well as the overall structure of different systems. Such a tool, I believe, is *essential* to the development of standardisation.¹²

The *Manual* is, therefore, a stepping stone towards standardisation. As it develops, it will provide information on data usage and (to a lesser extent) on structure and systems, knowledge of which will be essential when the real work of standardisation (developing rules and systems for common use) is undertaken.

Moreover, the focus of the *Manual* is on the area appropriate to development of *Data Contents Standards* with some application to *Data Structure* which Bearman has argued is the wrong place to start:

all of these levels of standards involve very different politics and implementation issues. These four levels of standardization [system, structure, content, and data value] can operate independently of each other; ideally, we should find standardization progressing from information system downward to data value.¹³

Since *ACPM* is, in part, a response to *ISAD* (which is itself essentially a *Data Contents Standard*) this was unavoidable. Indeed, both *ACPM* and *ISAD* ostensibly adopt a neutral stance on *Information System* and *Data Structure* — at least to the extent that both seek to describe what elements of information will be used as part of archival description in all types (rather than a given type) of archival description. This stance allows both to masquerade as being neutral on questions about what system will be used.

It is not possible, though, to be neutral. However much they may be disguised by such an approach, assumptions must be made about the underlying *Information System* and this has been at the core of our difficulties with *ISAD*. In the case of *ACPM*, this question arises most acutely when comparing data from archives using the 'series system' with data from those which do not. Although *ACPM* is descriptive, not prescriptive, in its approach, it is by no means neutral in its conceptual framework which, by using separate descriptive entities for context and recordkeeping data, is firmly based on the 'series system' technique.

It would, of course, be confusing to simply pretend that differences in information systems do not make corresponding differences to the structure and content of data from incompatible systems. In *ACPM*, this problem exists primarily at the intersection of data about recordkeeping (records and contents) and context (ambience and provenance):

- In the series approach, context and recordkeeping entities are separately documented and then related to each other to demonstrate various and changing configurations.

- In alternative approaches emanating from the cataloguing tradition, context and recordkeeping data is combined into a single logical record representative of a perceived object.

The problem then is how to represent the connection made in different systems between context and recordkeeping data. The solution is to recognise that, while the data itself is similar, it must be treated differently so long as the system *Standard* is different. This is done in *ACPM* by differentiating between data which is connected using a cataloguing-based approach ('associated data' within a single descriptive entity) and similar data which is connected using a series-based approach ('related data' within two or more descriptive entities).

The methodology can be illustrated quite simply by applying it to the chapter in *Keeping Archives* (2nd edition) on 'Arrangement and Description' (Ch. 8):

The organic nature of archives means that a description of each separate series alone will not adequately convey the full meaning and context of the records. Each collection needs to be seen as a whole with each of its constituent series placed in context. Thus is often done by means of an administrative history or biographical note. In addition, agency descriptions may also be completed (see Chapter 9).¹⁴

The hallmark of the 'series system' being the separation of data on context from data on recordkeeping, it follows that unless 'agency descriptions [are] also completed' it is a cataloguing approach which is being used. If agency descriptions are **not** also completed, data on provenance is associated as part and parcel of the description of records. If agency descriptions are completed, a relationship must be shown. An association is how *ACPM* represents data which would be a relationship if it were bound into a separate descriptive entity. As we express it in the latest edition of *ACPM for Records*, an 'association would be a relationship if it could, but it can't, so it isn't'.¹⁵ It is on this analysis that we can describe *fonds* (even though it contains contextual data) as a records entity.

It will be seen then that, although the distinctive differences of alternative approaches are respected, readers of the *Manual* are invited (indeed, compelled) to view the data from a 'series system' point of view. This has proved to be much easier than might have been supposed because of the relative lack of sophistication in the way archivists use data once they get beyond the context/recordkeeping intersection. Ideas about high level context (ambience) and contents (information handling within series) turn out on close examination to be fairly crude or, in many cases when dealing with ambience, non-existent.

This is (temporarily) an advantage because it means we can develop *ACPM*, away from the context/recordkeeping intersection, on what is practically virgin territory. The cooperative endeavour undertaken to develop a standard in the areas of ambience and (to a lesser extent) contents can lead and guide practice rather than merely describe it. That assumes, of course, that archivists will perceive the need to extend and improve their documentation activity in those areas—especially the former. A conviction that, to survive, they must and that, with encouragement, they will prompts me to write this.

Conclusions

Developments in networking suggest that standardisation of information exchange protocols common to many other areas will be of more significance for accessing archival data than standardisation of the way archivists arrange and present it. This makes our participation in the politics of emerging information networks (in which we are necessarily minor players) of paramount importance and requires that we move rapidly to a familiarity with the technology involved.

This participation will take place in a post-custodial environment where archivists can no longer expect to operate primarily as custodians, navigators, or gatekeepers in relation to those who make, manage, seek, and access electronic records available on the networks. They may have a role in purveying and deploying their skills and knowledge in the management and use of archival data—viz. knowledge of recordkeeping, context and changing relationships through time.

Although the pressure seems to be 'off' so far as standardising for purposes of exchanging or merging data about records 'holdings', we need to make sure that archival data is of a high quality so that it has continuing value in this new environment. Systems must be designed and developed to deal with high quality archival data. Archival skills are needed particularly to maintain data quality and to manage these systems. In-house system design and development is not a necessary part of the process and involves unacceptable risks for small programs which could compromise data quality.

The archival community needs to support the development of software applications so that archivists can concentrate on the essential tasks of system management and quality control. No progress can be made until archivists articulate their system specifications. So long as each archives pursues its own path to system design and development, we risk consigning valuable data to unsustainable systems and distracting ourselves from the primary task. The *Australian Common Practice Manual* represents a stepping stone

towards agreement on system specification for common application as well as an opportunity to debate the kind of high quality archival data which we should be developing.

Endnotes

- 1 David A. Bearman and Richard H. Lytle, 'The power of the principle of provenance', *Archivaria*, no. 21, Winter 1985–86, p. 14.
- 2 C. Hurley, 'Standardisation 1987: a Recapitulation', *Archives and Manuscripts*, vol. 18, no. 1, May 1990, pp. 63–73.
- 3 This was a typographical error. I suspect there weren't many readers of that article, but the alert amongst them would have realised that the word should have been 'terminology'. It turns out, however, for reasons outlined below, to have been a Freudian typo.
- 4 David Bearman, 'Strategy for the development and implementation of archival description standards' in *Toward International Descriptive Standards for archives: Papers presented at the ICA invitational meeting of experts on descriptive standards, ... Ottawa 4–7 October 1988*, Munchen, Saur, pp. 162–163.
- 5 It is envisaged, in other words, that, even where the in-house system does not follow the standards for structure and contents, it would be capable of producing output which conformed to those standards for interchange with other systems.
- 6 I am indebted to David Bearman for an advance look at a forthcoming paper of his on *cultural heritage information standards in a networked world* which will be delivered later this year.
- 7 C. Hurley, 'Standardisation 1987 ...', p. 67.
- 8 C. Hurley, 'Standardisation 1987 ...', p. 69.
- 9 Australian Society of Archivists, *Comment on: ICA Statement of Principles Regarding Archival Description First Version Revised*, 12 October 1992.
- 10 For the most recently accessible summary of work overseas, refer to *Archivaria*.
- 11 ASA Council, *Minutes* (Adelaide, 26–27 March, 1993).
- 12 C. Hurley, 'Standardisation 1987...', p. 67.
- 13 David Bearman, 'Strategy for the development and implementation of archival description standards', p. 162.
- 14 Judith Ellis (ed.), *Keeping Archives*, 2nd ed., D. W. Thorpe, Port Melbourne, 1993, p. 235.
- 15 Australian Society of Archivists, *ACPM: Australian Common Practice Manual: ASA-ACPM-DER-994-01: Documentation (Description of Records) version 30 May 1994*, p. 24.