

# *Right from the Start: Developing Predescriptive Standards at the British Columbia Archives and Records Service*

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As archivists, we are confronted by a growing descriptive backlog of records generated by the large, complex and increasingly interrelated record systems of modern bureaucracies. At the same time, automated information systems offer us increasingly sophisticated tools for managing information about records. Many archivists contend that we now have both the need and the means to take a new approach to the process of archival description. Our goal should be the development of fully integrated systems covering all media of archival records and documenting each stage of the records' "life cycle," from creation to archival preservation. In such a system, information about records is only recorded once, is enhanced incrementally as it flows from stage to stage, and is accessible throughout the process. Whether this integrated systems approach to description is feasible, given the resources available to archivists, remains to be seen.<sup>1</sup> What is clear, however, is that the approach demands that our recent efforts to standardize description be extended back from the stage of formal description to at least the appraisal and accessioning stages, and then ideally back to the descriptive work done by records creators themselves.

At the British Columbia Archives and Records Service (BCARS), we believe that the integrated systems approach has the potential to meet some of the most pressing institutional needs: the need to deal with the large description backlog; the need to respond to an environment in which access to information is both a client expectation and a legal right; and, most fundamentally, the need to find a more efficient means of maintaining the archival integrity of the holdings. The backlog of descriptive work for records acquired but not documented in archival finding aids has recently been estimated at 116 person-years. A relatively recent calculation of the processing backlogs revealed that approximately 62 per cent of government textual records remained undescribed.<sup>2</sup> Moreover, due largely to the sheer volume of acquisitions, the descriptive programme for government records has usually been limited to the "cataloguing" of accession units rather than to the preparation of structured representations of the fonds and its parts based on archival levels of description. Considering the number of government records which have already been scheduled for permanent retention, we shall be able to prepare standardized, multilevel descriptions for only a small portion of these records in the

foreseeable future. The recent passage of the *Freedom of Information and Protection of Privacy Act*<sup>3</sup> in British Columbia, moreover, means that archivists no longer have the convenient option of viewing records which have been acquired but not arranged and described as “unprocessed” and therefore inaccessible.<sup>4</sup> Finally, archivists recognize that the increasing complexity of the relationship between British Columbia government agencies and the records which they create will inevitably complicate the descriptive process. Archivists will have great difficulty documenting the provenance, original order and use of records now being produced if they attempt to describe those records retrospectively, long after their original transfer, using the type of creator-supplied information that has typically accompanied records.<sup>5</sup>

We archivists have little choice but to attempt to develop a better means of establishing intellectual control over the records as they come into archival custody or, better yet, a means of continuing and enhancing the control established at the time of creation. We must broaden our view of what constitutes description and those aspects of archival work which require standardization. Canadian archivists have emphasized that description must follow arrangement, and have accordingly developed rules which “assume [that] the material [to be described] already has been examined, arranged, and the information necessary for description compiled.”<sup>6</sup> By contrast, American archivists have argued that description should be viewed as a continuum which begins at records creation and continues indefinitely.<sup>7</sup> These two views have been brought together in the International Council on Archives’ *Statement of Principles Regarding Archival Description*. These principles focus on formal, post-arrangement description but recognize “that ‘archival description’ in the widest sense of the term covers every element of information no matter at what stage of management it is *identified* or *established* [emphasis added].”<sup>8</sup> The authors of the statement expect that standards will be developed for many stages of information capture, not just formal description. Indeed, since it has been widely recognized that standardization is a vital prerequisite to automation, and since automation is essential for detailed life-cycle tracking of large volumes of complex records, the adoption of the integrated systems approach to description presupposes the development of a comprehensive set of standards.

Although the “descriptive continuum” is a highly evocative image, BCARS uses the term “documentation” to cover the entire process of capturing information about records, and reserves the term “description” for the post-arrangement stage of the process. The work which has been done in standardizing the predescriptive stages of the continuum therefore falls under the category of documentation standards. These “predescriptive” documentation standards consist of internal standards applied to the documentation of archival records in legal custody, as well as of external standards prepared for use by client ministries. Standards development activities can perhaps best be explained by means of an overview of some of the work that has actually been done, followed by an outline of some of the plans (or at least hopes) for the future.

Fostering the development of standardized, integrated descriptive systems within each government ministry and agency was, in fact, a central goal of one of the predecessor agencies, the Records Management Branch. Established in 1982, the Branch sought to expand traditional approaches to records classification and scheduling in which file classification systems and records schedules were developed as separate entities and often covered only textual records. To this end, the Branch developed an administrative records

classification system (ARCS) and operational records classification systems (ORCS) which integrated the classification and scheduling functions and were designed to cover all media, including electronic records. ARCS and ORCS together were seen as constituting a "standard for description and classification of records by creators."<sup>9</sup>

The potential utility of these standards will be examined shortly. For now, suffice it to say that ARCS, ORCS and other schedules were intended to assist archivists at the former Provincial Archives of British Columbia in the acquisition and appraisal of government records. The archival appraisals and the retention periods were included in these documents. However, the integration of the classification and scheduling process into the appraisal process was less than perfect. The rate at which appraisals and selective retention decisions were made retarded the development and implementation of schedules, while the information provided in the integrated classification and scheduling systems was at times judged inadequate for making informed appraisal decisions.

In fact, problems in the flow of information between the Records Management Branch and the Provincial Archives were an important reason for the amalgamation of the two agencies in 1989. The new institution, the British Columbia Archives and Records Service, was organized primarily on a functional basis. The classification and scheduling of government records and their appraisal for both primary and residual values was assigned to the Appraisal and Acquisition Section. The arrangement and description functions were assigned to the Historical Records Section, which also continued to perform most of the acquisition and accessioning functions for non-government records.

At first, the Historical Records Section performed its functions almost entirely within separate media units, continuing programmes developed by the Provincial Archives. Media units maintained their own systems for the acquisition, accessioning and description functions. Nevertheless, it was recognized that these would eventually need to be centralized and integrated. Archivists in the Provincial Archives had shared many of the concerns expressed in the archival literature regarding the fragmentation of archival materials along media lines, and as early as 1979 had prepared a plan for centralized accessioning.<sup>10</sup> By the late 1980s, moreover, it was clear that the multiple media descriptive standards being developed by the Bureau of Canadian Archivists would inevitably require a greater degree of centralized administration of the description process. The event which precipitated the implementation of centralized documentation for archival records, however, was the development of the Archives and Records Information System (ARIS).

ARIS is a database management system developed by BCARS with the assistance of the ministry's computer services branch. It is the primary means by which BCARS has sought to integrate its records management and archival functions and achieve the increased control and efficiencies promised by the integrated systems approach. When completed, ARIS will cover every major stage of the administration of semi-active and archival records, both government and private, in all media, from scheduling to archival description.<sup>11</sup>

ARIS is being developed in phases. Thus far, BCARS has implemented those phases covering applications to store semi-active records, the accessioning of records, the disposition of records through destruction or transfer to archival custody, and the maintenance of location control. The system allows records to be managed at virtually any level of detail. It can document an entire accession consisting of as many as 10,000

containers and any parts of that accession unit right down to the item level, should that be necessary. ARIS also includes a name authority system which now tracks the full hierarchy of all current British Columbia government agencies, and provides for the documentation of predecessor and successor bodies. Names of non-government agencies and individuals are also included in the authority. Still under development are phases covering the appraisal of records and formal description.

The development of ARIS has already had a major impact on the work of archivists. Most significant has been the replacement of decentralized accessioning systems with a single automated system, in other words, centralized accessioning. A single database record is created in ARIS for each accession. Information about any portion of the accession, termed a "management unit," is documented in management unit records linked to the accession; management units, in turn, are linked to "container" records which document the nature and location of the physical containers holding management units. The structure of accession, management unit and container records are the same for all media. The system is accessible throughout BCARS by all staff.

This degree of centralization was only achieved after hundreds of staff hours were expended on formulating documentation standards. When the institution began to develop ARIS, we had only a limited appreciation of the scope, complexity and cost of the standardization work which lay ahead. Archivists now recognize that several categories of documentation standards are required: **system standards**, prescribing the roles of the components of an information system and their relationship to each other; **data structure standards**, defining the elements contained in each component, as well as system input and output formats; **data content standards**, specifying rules for the entry of information within data elements; and **data value standards**, controlling the vocabulary or codes used.<sup>12</sup> Although it was recognized that standards for each of these types would eventually be needed in many areas of archival work, we concentrated first on formulating system standards and data structure standards relevant to specific ARIS functions, and on identifying the data content and data value standards required **by the system** in order to perform these functions. It was soon apparent that the very nature of an integrated system such as ARIS complicates the standardization process by causing the effects of a decision in one functional area to radiate through the system. It was, moreover, only after ARIS began to be used that we began to appreciate fully the importance of establishing data content and data value standards for the so-called "free form" data elements present in ARIS, as well as in any data input records feeding into it.

Development work on ARIS began in 1989 through the formation of a working group from several BCARS sections and including a computer systems analyst. The first phase dealt with the acquisition and accessioning of government records. In early 1990, as we approached the development phase covering private records, a centralized accessioning committee was established with representatives from each media unit in the Historical Records Section. The committee began the process of establishing data structure standards by compiling a list of data elements used by each unit when accessioning private records. With few exceptions, we found what archivists generally have found, that we were all capturing the same basic information.<sup>13</sup> It was a relatively simple process to develop common names and definitions for the data elements, in part because we could base some of the elements on those proposed in draft chapters of *Rules for Archival Description (RAD)*. This data element list was then compared with the elements used in identifying, scheduling and taking custody of government records. Once again, we found

many similarities among the sets of information, but this time agreeing on a common set was more problematic.

Standardizing the data elements used for accessioning private records affected only the work of BCARS staff. Some of the data elements pertaining to government records, however, were used by client agencies — in some cases as the result of years of lobbying and training on our part. Moreover, these data elements appeared in numerous printed forms used in the records management programme, making any changes to the terms costly. Ironically, the very integration which the institution was seeking was presenting difficulties for standardization. It was found necessary to retain some terms, the meaning of which was decidedly non-intuitive for archivists.<sup>14</sup> On the other hand, it was easy to agree upon the use of certain elements (such as those relating to physical description or material designation) which appeared in draft chapters of *RAD*. Since the goal was to have the information which had been captured at the accessioning stage flow through to the description stage, we found it useful to have the required descriptive elements identified in a national standard.

Once we moved beyond the identification of data elements and began to examine the desired relationship between elements and larger components of ARIS (i.e., systems standards), however, we were faced with issues that often required a seemingly endless amount of abstract analysis. The logic of a relational database management system requires that the duplication of data be eliminated. Data is entered only once and is used in different applications (i.e., for different purposes) by means of linkages among various records which bring together the data required for each application. In this way, data is made independent of the applications for which it is used; hence changes to one do not necessarily force changes to the other. The work of adding data, modifying data and maintaining the integrity of data is simplified, since any additions or modifications need only be made once.

However, the achievement of such simplicity is difficult. All potential uses of each data element must be considered before deciding where in the system to enter each element, and what types of linkages to make among elements. These decisions, along with the capabilities of the software managing the system, will determine the ways in which data can be combined and displayed. The greater the scope of a system and the more integrated its components, the greater the likelihood that a system standard required by staff responsible for one function will have consequences for staff responsible for other functions.

When the scope of ARIS was broadened to cover the accessioning of private records, we considered whether system and data structure standards based on the requirements for government records could be adapted to meet the requirements of accessioning private records. In addition, we examined the accessioning needs for the various media, since previous work had focused mainly on the control of textual records. It was not sufficient to determine that the set of data elements identified during the first phase of the development of ARIS contained all the types of information used in the various units. It was also necessary to determine that all uses of any one type of information required by a media programme could be accommodated by ARIS. A data element such as an item number which was not used for one medium might serve an important location control function for another. To complicate matters further, we needed to consider the expense of programming each desired function, and the effect of the implementation

of some functions on system response rates or storage costs. Compromises were often made in the interest of economy and general system efficiency.

The process of standards development, therefore, required broadly based participation and consensus. It was vital to have contributions from staff members who knew in detail how existing information systems operated, and could assess the impact of each proposed change to the design of ARIS. Also essential was participation from BCARS management, who could make decisions which would improve the overall operation of ARIS but which might create difficulties for specific work units.

The lesson was also learned that the need for extended, broad participation in standards development did not end when a given portion of ARIS was implemented. Even after the structure of the system's components and their relationships to each other had been defined, the task of prescribing how the system was actually to be used remained. We saw that two experienced archivists could perform the same basic function (such as creating a preliminary accession record or filling in the same data elements in ARIS), and still create documentation that one or the other could not readily interpret. The goal of enabling staff to complete each processing stage by building on information recorded by others requires detailed content standards for many ARIS data elements. Establishing rules for documenting records incrementally as they are processed by different personnel is in some respects even more difficult than setting standards for the description of processed records. The physical and intellectual hierarchy of the records themselves sometimes changes during processing; that is, the records are often physically rearranged and new relationships are identified or established. It is no simple matter to establish data content standards which will permit one archivist to accession a body of multiple media records and document its existing order, allow other archivists to store the various media components of the accession, and enable yet another archivist to describe the entire accession — all in such a manner that the work of each archivist is understood by the others and the records are accessible at each stage.<sup>15</sup>

To cite one example, when the need for container content descriptions was originally reviewed, we established data elements based on the identifiers typically used for textual records: box number, file number and item number. The goal was to be able to take identifiers used by creators for **any** type of records, enhance the identifiers — when necessary — with the control numbers or codes used in the various media programmes, and then use these identifiers in a variety of finding aids. We have therefore been faced with the task of establishing conventions which are flexible enough to enable the box, file and item number fields to document records in any medium, and yet be sufficiently rigorous to produce sets of identifiers meaningful at each processing stage.

The task of setting data content standards is further complicated by the fact that the institution must continually assess whether we simply need better content standards for the data elements already in ARIS, or whether we need to establish different data elements. The development of ARIS is an iterative process. As each successive phase is developed, we must review and sometimes modify work performed in previous phases. For instance, when the description phase is reached, we may decide that separate data elements are needed for the item numbers assigned by archivists and those used by creators. If so, then we shall need to review our current data content standards for the item number element and establish new standards for the two new types of item number elements.

It seems, moreover, that the very interconnectedness of an integrated system means that most standards decisions create the need for more decisions. In some cases, we have implemented data content standards while appreciating that they need to be monitored carefully and revised incrementally. We have seen that standards must be developed, implemented, evaluated and revised; that a wide variety of staff must participate in this work; and that their work must be coordinated and documented. Accordingly, BCARS has established the position of Documentation Standards Archivist in order to provide the required sustained attention to standards issues.<sup>16</sup>

We have also observed that it is not sufficient to set standards which merely specify how information is to be entered in various data elements. There is an additional need to provide guidelines specifying which elements should be completed at each processing stage, an indication of the amount of information to enter in some of the "free form" elements (such as the scope and content field), and a means of specifying the accuracy of the information entered. Archivists are required both legally and ethically to provide consistent and fair access service to all clients. To do this, we must provide the appropriate amount of descriptive information at each stage of the processing of all accessions. It may be possible to define documentation levels in order to ensure, for example, that at a minimum level all non-restricted transfers can be accessed by means of basic summary descriptions and file lists provided by creators; that at the next level the accession descriptions are supplemented by specified access points and scope and content information supplied by archivists; and so on. Whatever guidelines may be established for determining the amount of descriptive information to compile, we shall also need to document the quality of the information. Information can obviously be formatted correctly and still be erroneous. Since descriptive information is to be compiled and made available on an incremental basis, we must also develop some means of verifying (or specifying) the accuracy of the information in each data element.

The issue of data quality becomes crucial when the attempt is made to establish or improve documentation standards designed for use by records creators. In the same way that automation has provided a major stimulus for standards development within BCARS, so too has automation within government ministries highlighted the need for more rigorous documentation standards in other agencies. BCARS hopes to take advantage of this need and thereby improve the amount and quality of the descriptive information captured before records come into archival custody. However, as will be seen, there are probably some fairly intractable limits to what can be accomplished.

The administrative and operational records classification formats developed by BCARS have been established in government policy as a government-wide standard, which prescribes a structure for presenting specified classification and scheduling data elements and provides basic data content guidelines for these elements.<sup>17</sup> This standard has usually been applied in manual records management systems. BCARS distributes ARCS binders to ministries; the various operational records classification systems (ORCS) being developed within ministries are also produced in binder format. Ministries currently apply for disposition of their records using hard-copy application forms, and transfer records to BCARS along with hard-copy transmittal lists.

However, since the late 1980s, some ministries have been seeking to automate their records management programmes. Even before the establishment of BCARS and the creation of ARIS, analysts in the former Records Management Branch were concerned

that their attempt to develop an automated system for managing accessioning and disposition information was proceeding independently of the attempts of ministries to develop automated records management systems. Different systems were being planned to manage overlapping functions, and there was a danger that ministry data would be incompatible with Records Management Branch data.<sup>18</sup>

The staff of the Records Management Branch, and later BCARS, therefore worked with ministry records officers in order to identify common needs.<sup>19</sup> In March 1990, this consultative process resulted in the production of a report outlining basic systems standards requirements for automated records management in the British Columbia government.<sup>20</sup> The report outlined the objectives, functions and information needs of ministry records management programmes in order to identify for systems planners the required components of an automated system. It also suggested alternatives for implementing automated records management. It presented a high-level data model which ministries could use when creating independent database management systems, each adapted to the needs of a particular ministry and yet sufficiently compatible with ARIS to allow for the exchange of information and to minimize redundancy in data entry. This model, entitled Computer Assisted Records Management Activities (CARMA), identifies such components as a classification and scheduling database, modelled on the ARCS and ORCS standards; a records database, used to track records identified by ARCS and ORCS file numbers; a storage database, giving storage unit measurements; and an organization database, identifying agencies and reporting relationships.

These proposed databases include data elements which can link a ministry's CARMA-based system to ARIS. In order to obtain approval for schedules, a ministry could use its "classification and scheduling database" to provide BCARS with information such as primary and secondary [file] numbers and titles, [series] scope notes, media types, and keywords [index terms]. BCARS could then add its own scope and explanatory notes to the ministry's information, and link the ministry's information to schedule authority data in ARIS. A ministry seeking to transfer records to semi-active storage or archival custody could use its "records database" to identify the records by using various file number and date elements, tertiary titles, and keywords. The ministry could also use its "organization database" to identify the agencies responsible for the records (specifying the organizational units, organizational levels, parent organizations, commencement dates, etc.

The information flowing to BCARS from each CARMA-based system would obviously have great value, both immediate value, as a means of maintaining a level of control over records established by the records creators, and potential value, as a foundation on which to build formal archival descriptions. The ORCS developed by each ministry should establish a formal arrangement for the ministry's operational records. The ORCS primary and secondary titles, and scope notes, together with the data fields, media type elements, and storage unit measurements included in CARMA, should provide much of the core information required for archival series descriptions. CARMA's proposed "organization databases" could provide some of the information now being laboriously entered by BCARS staff in the ARIS name authority. Even some forms of direct subject access could be provided by means of the various types of keywords proposed in CARMA.

Unfortunately, no ministry has yet used the CARMA model to develop an operational system; only one has used it to establish the requirements for an automation project.



In part, the limited use of CARMA is a result of bad timing, since the development of both CARMA and ARIS occurred just as the British Columbia government instituted general budgetary restrictions. Not only has the pace of records management automation slowed in the ministries, but also work on ARIS has been retarded. Consequently, BCARS has yet to implement the ARIS phase which will allow ARIS to import classification and scheduling data from ministry systems. The continued development of ARIS and CARMA requires decision-makers to commit themselves annually to a major expenditure of scarce resources on systems development while sacrificing other programmes. Success in developing integrated records management systems will depend on the ability to have systems and standards development established as a government priority. To this end, BCARS had intended to promote CARMA as an information systems standard for government, but the agencies responsible for information technology and computer systems policy have been disbanded, and central responsibility for their functions has not yet been clearly established.

On the other hand, the recent passage of freedom of information and protection of privacy legislation is stimulating renewed effort towards the implementation of government-wide standards for managing information about records. The Information and Privacy Branch, established to assist ministries in implementing the legislation, has advised ministries that information for a published "Directory of Records" will be drawn from ARCS and any existing ORCS. The Branch has developed a standard for the identification of records in ministries which have not yet developed an ORCS. The standard is designed to allow inventories of records to be converted to the full ORCS format. The Branch intends to work with BCARS to revise the ARCS and ORCS formats in order to incorporate access and privacy information. The Branch also hopes that CARMA will be revised in order to incorporate access and privacy data.

CARMA admittedly requires more detailed data structure definitions and data content rules. The one ministry which has begun to design a CARMA-based system has identified the need for precise data element definitions. Systems planners need to know each element's size and basic content. Is it to be a numerical or a character element? Is the data to be free-form or based on a controlled vocabulary or code table? BCARS will need to define the data elements intended to link the various ministry systems to ARIS.

Our ability to promote the establishment of data content standards leading to the early capture of useful information will be subject to two general limitations. First, the standards must meet specific needs within government ministries. Our experience with ARIS indicates that the process of standards development and implementation requires extended consultation and consensus-building, as well as a broad willingness on the part of the parties affected to make some sacrifices for the good of the overall information system. Ministries, however, are unlikely to commit resources beyond those that will bring immediate benefits to their current information needs (as opposed to the long-term corporate benefits which archivists identify). It should be possible, for example, to implement standards covering the categories of information which ministries need to manage their active records and which simplify the automation process. The ARCS and ORCS standards help to make file titles and headings meaningful for ministry staff (and, later, archivists and researchers) by ensuring that the titles and headings reflect the functional activity or other subject documented in the file contents.<sup>21</sup> Government-wide system standards will be attractive to ministries if archivists can provide the standards before the ministries face the many questions posed by computer systems designers and vendors.

It should also be possible to implement standards which pose only a limited increase in the documentation work of ministries if that work results in a more efficient delivery of the services which ministries require from BCARS, or helps ministries to meet the demands of the freedom of information and privacy legislation. However, archivists are unlikely to be able to establish standards that require ministries to provide extensive, detailed information which archivists desire for appraisal and description work but which is not immediately required by the ministries themselves.

The second limitation relates to the precision or strength of the standards which archivists can develop. Standards vary in strength from **technical specifications** (which yield identical results each time they are correctly applied), to **conventions** (which assume the use of subjective judgement in their application), to **guidelines** (which permit even broader variance in their application).<sup>22</sup> Even such detailed data content standards as *RAD* and *AACR2* have only the strength of convention. Institutions control the quality of archival descriptions by ensuring that these conventions are applied by professional staff specially trained to analyse records. Similarly, the descriptive work which archivists would like records creators to perform can usually be governed only by conventions or guidelines, yet we have little control over their training or experience in the evaluation of records. Consequently, even if ministries were to adopt standards developed in conjunction with archivists, the information which they provide would inevitably vary in precision, accuracy, conciseness, clarity and all the other attributes associated with high-quality description.

Archivists should therefore expect to be able to obtain certain types of useful and necessary information from records creators if we establish realistic conventions and guidelines which serve their needs. The data elements currently in *CARMA* are largely those identified by the ministries as required to support their work. Some standards, such as formats for dates and extent measurements and tables giving broad media terms, should both simplify data entry work for ministries and provide archivists with information which can readily be integrated into the institutional system. We should also be able to improve greatly the utility of the file lists received, and perhaps simplify the compilation of these lists by developing very basic sets of guidelines stating, for example, that lists should include control numbers, dates and titles in separate columns in a word-processing document. However, archivists should not expect to receive detailed descriptions of media using standardized material designations and form terms. Nor should we expect that ministry scope and content notes will explain all the complex interrelationships among records series or identify those aspects of the series' information content which we would judge to be most significant. Archivists obviously cannot transfer the responsibility for formal archival description to records creators. We still need to examine the records, analyse the context of records creation and construct the *RAD*-based multilevel descriptions required for formal inventories or for automated exchange of archival descriptions. Nevertheless, the fundamental hope in adopting the integrated systems approach is that our efforts to help records creators supply archivists with better documentation will give us more of the information which archivists require to describe records, provide basic forms of access to records not formally described and enable us to devote more time to formal description.

Can we get it right from the start? We believe so, in the sense that archivists can capture the information required for archival description earlier and more efficiently than they have in the past. Internally, archivists at BCARS are capturing standardized

information in ARIS at the records acquisition stage. Externally, ARCS and ORCS have been accepted as standard classification and scheduling formats, and CARMA offers the potential to extend the automated information system back into the offices of records creators. Undeniably, there are years of development work ahead of us. We have yet to begin the formal archival description phase of ARIS, and we face the task of redesigning the finding aids in order to implement *RAD* and create a single system of description. It is also true that if we do not soon give ARIS the capability to import ARCS and ORCS information, and make the required enhancements to CARMA, then client ministries may proceed with the development of incompatible records management systems. Nevertheless, the difficulties faced in the current descriptive programme and the increasing expectations of our clients give us little choice but to integrate archival documentation, make whatever links are possible with external systems, and use whatever information is received.

Can we get it right from the start in the sense of using standards to ensure that the information received from external systems, or captured at the earliest stages of archival administration, is accurate and reliable? The development of predescriptive documentation standards will improve the quality of archival documentation and help us provide earlier and better access to those records which are received and accessioned. Predescriptive standards will also enable us to describe the records more efficiently.

The degree to which archivists can rely on creator-supplied information to establish administrative and intellectual control over records is harder to estimate. Much of the information received from creators will sometimes be flawed. Creators often face the same difficulties as archivists in dealing with high record volumes and inadequate resources, and will almost always give higher priority to their current programmes than to the records of those programmes. Nevertheless, archivists recognize that much of the poorest documentation received from creators is for records which have long been inactive and consequently little understood by current staff. The chances of archivists receiving useful documentation from creators will increase greatly if we can help them develop effective tools for documenting records as they are created. Moreover, archivists have limited expectations of the information sought from creators. In some cases, records will merit no additional description beyond what is provided by creators. In other cases, transmittal lists will be seen as ancillary finding aids which archivists can link to *RAD* series or fonds descriptions. In still other cases, creator-supplied information will serve as temporary, "level one" documentation to be upgraded in stages as archivists work towards full, formal description. Creator-supplied documentation will constitute only one component of an integrated archival information system.

Is this approach to description essentially any different from the descriptive work which archivists have long performed? Certainly for BCARS, the use of one system to document all records, regardless of media, and the attempt to unite documentation provided by creators with that provided by archivists, is a radical departure from the fragmented approach to description often employed in the past. In many respects, however, the development of a truly integrated system providing an unbroken flow of information from creators to archivists to researchers simply represents a logical expression of the principle of provenance.

## Notes

- \* Paper presented at the 1992 Annual Conference of the Association of Canadian Archivists, Montréal, 12 September 1992; revised and edited for publication. (N.B. Order of authors' names chosen by lot. Opinions expressed are personal and do not necessarily represent the views of the British Columbia government.)
- 1 Since the mid-1980s, archival literature has included numerous references to the potential utility of computer technology for integrating archival management processes and incorporating records management information into archival systems. See, for example, W. Theodore Durr, "Some Thoughts and Designs about Archives and Automation, 1984," *American Archivist* 47 (Summer 1984), pp. 271-89; David Bearman and Richard H. Lytle, "The Power of the Principle of Provenance," *Archivaria* 21 (Winter 1985-86), p. 26; "Report of the Working Group on Standards for Archival Description," *American Archivist* 52 (Fall 1989), p. 440; Terry Eastwood, "A Small World Expands," *Archivaria* 24 (Summer 1987), p. 132; David Bearman, "Archival Methods," *Archives & Museum Informatics Technical Report* 3 (Spring 1989), p. 33; Fredric M. Miller, *Arranging and Describing Archives and Manuscripts* (Chicago, 1990), p. 88; Michael Roper, "Information Management: Threat or Opportunity," *Journal of the Society of Archivists* 12 (Autumn 1991), pp. 110-11. The literature also includes a small number of works outlining the plans of particular institutions to develop fully integrated systems. The efforts of two American archives are presented in, United States. National Archives and Records Administration, *The MARC Format and Life Cycle Tracking at the National Archives: A Study* (Washington, 1986), and Virginia A. Newton, *Long Range Information Management System Plan: Archives and Records Management Services* (Juneau, 1990). However, the literature provides scant information on the successful implementation of integrated systems, since even the development of such systems has occurred only in the last few years. As recently as 1988 it was noted, "Archivists, by and large, have approached automation through individual archival functions rather than by developing an integrated archival automation system that would accommodate all archival functions.... Building an integrated system is a complicated and sophisticated task that most archivists have neither the money nor the staff to undertake": Lisa B. Weber, "Educating Archivists for Automation," *Library Trends* 36 (Winter 1988), p. 503.
  - 2 "Collection statistics: Manuscripts and Maps Unit, as of 21 December 1989," BCARS internal memorandum.
  - 3 *Freedom of Information and Protection of Privacy Act*. The Act was passed in June 1992 and is expected to be proclaimed in late 1993.
  - 4 Archivists in other jurisdictions have found that freedom of information legislation has the effect of blurring the traditional distinctions among active, semi-active and archival stages in the life cycle of records, since citizens can demand access to records at any stage of the life cycle: Jay Atherton, "From Life Cycle to Continuum: Some Thoughts on the Records Management-Archives Relationship," *Archivaria* 21 (Winter 1985-86), p. 47.
  - 5 David Bearman makes the perceptive observation that archivists face growing descriptive backlogs, not because we are attempting to provide over-detailed descriptions or to establish over-precise administrative control, but rather because our resources and traditional methods of description are inadequate for coping with modern records creation. He argues that there must be a "fundamental transformation of archival descriptive practices.... That is, archival description and control systems must be designed from the first to capture information from external sources either before materials are acquired or when they are accessioned, rather than to depend on information provided by archivists in the years following acquisition, through laborious analysis of the records in hand": Bearman, "Archival Methods," pp. 30, 35.
  - 6 Bureau of Canadian Archivists, *Rules for Archival Description* (Ottawa, 1990), p. 0-2.
  - 7 "Report of the Working Group on Standards," p. 442.
  - 8 International Council on Archives, "Statement of Principles Regarding Archival Description," *Archivaria* 34 (Summer 1992), p. 10.

- 9 Reuben Ware, "Paper Past — Electronic Future" (paper presented at the 1988 Annual Conference of the Association of Canadian Archivists, Windsor, Ontario, June 1988), manuscript, p. 4. [N.B. This paper will be published in a subsequent number of *Archivaria*.-Ed.]
- 10 See in particular Terry Cook, "The Tyranny of the Medium: A Comment on 'Total Archives,'" *Archivaria* 9 (Winter 1979-80), pp. 141-50; *idem*, "Media Myopia," *Archivaria* 12 (Summer 1981); and Nancy Sahli, "Finding Aids: A Multi-Media, Systems Perspective," *American Archivist* 44 (Winter 1981), pp. 15-20. The Information and Retrieval Committee of the former Provincial Archives of British Columbia was ultimately unsuccessful in its aim to institute a single centralized system of "cataloguing." One lasting legacy of the Committee's work, however, was a centralized system for name authorities. It is entertaining to speculate about the role of IRC in the development of *RAD*; four archivists who later went on to work on the development of *RAD* were members: Terry Eastwood, Kent Haworth, David Chamberlin and Derek Reimer.
- 11 The only major archival function not covered by ARIS is conservation treatment and condition reports, for which a separate database will be developed. Another database covering some aspects of the reference function may also be developed.
- 12 "Report of the Working Group on Standards," p. 454.
- 13 See Bureau of Canadian Archivists, Working Group on Archival Descriptive Standards, *Toward Descriptive Standards: Report and Recommendations of the Canadian Working Group on Archival Descriptive Standards* (Ottawa, 1985), p. 53; and Society of American Archivists, National Information Systems Task Force, *Data Elements Used in Archives, Manuscript and Records Repository Information Systems: A Dictionary of Standard Terminology* (Chicago, 1982).
- 14 For example, "client actual disposition date" is the ARIS term for what most archivists would think of as the legal custody date.
- 15 Other archivists have commented on the difficulty in trying to use as a descriptive unit an entity such as an accession, which may physically disappear during the process of archival arrangement: Hugo L.P. Stibbe, "Atlas and Automated Control: The National Map Collection, Public Archives of Canada," Peter A. Baskerville and Chad M. Gaffield, eds., *Archives, Automation & Access* (Victoria, 1986), pp. 63-64.
- 16 In many respects, BCARS is repeating the experience of the Archives of Ontario, which established the position of Descriptive Standards Officer to handle its standards implementation and maintenance programme. This programme is outlined in Heather Heywood, "Descriptive Standards: Truth and Consequences" (notes for a presentation given at the 1991 Annual Conference of the Ontario Association of Archivists), manuscript. [N.B. See article by Heather Heywood elsewhere in this issue. *Ed.*]
- 17 British Columbia, Office of the Comptroller General, *General Management Operating Policy* (rev. 1990), Section 3.5.5.
- 18 Beginning in 1987, the Records Management Branch devoted a considerable amount of energy to the development of a Records Management Information System. Much of the consequent planning was incorporated into the development of ARIS.
- 19 Most of the information regarding the development of CARMA (see below) and the work of the Information and Privacy Branch is based on an interview with Shirley Ward, Archives and Records Specialist, British Columbia Information and Privacy Branch, 9 March 1992.
- 20 "Records Management in the Government of British Columbia: Business Area Analysis" (Victoria, 1990).
- 21 The establishment of meaningful file identifiers is cited by Richard Berner as one of the key determinants of the quality of an agency's documentation system, since, for example, the ability to derive index terms from file descriptions depends on the presence of meaningful terms in the file titles: Richard C. Berner, *Archival Theory and Practice in the United States: A Historical Analysis* (n.p., 1983), pp. 98, 122.
- 22 "Report of the Working Group on Standards," pp. 452-53.