Grounding Archival Description in the Functional Requirements for Evidence

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Introduction

This brief article outlines the convergence of two approaches to archival description, developed over the course of the past fifteen years, and their application to the emerging issues in the creation, documentation, and management of electronic records.

A decade ago, David Bearman argued that "archival information systems are information systems about information systems" or what we would today call metadata systems (data about data). The issue, then as now, was how to decide what metadata was required in the content of such descriptions (what fields in the record as we would have said then), and the degree of detail or level of granularity and specificity required for each data value. As Director of the Society of American Archivists (SAA) National Information Systems Task Force (NISTF) in 1981, Bearman argued that the content of archival descriptive records must reflect the work they are intended to perform, and described numerous scenarios for different national archival information systems, each of which carried different kinds of descriptive data. When NISTF decided to use a standard interchange format both to enable construction of union databases of finding aid surrogates for researchers and, simultaneously, to provide archivists with data about collections processing, he designed the MARC AMC format with an emphasis on archival control. As it happened, MARC AMC was not much used to support inter-organizational business processes in the way that archival control data interchange would have supported. Instead, the major functional requirement was support for information retrieval; but over the past decade few studies have been conducted to determine its success in providing researchers with access to archival Holdings. Indeed, we know little about its appropriateness as a content definition.

During the 1980s, Bearman continued to try to reach professional agreement on archival business processes and their data requirements through the Archival Information Systems Architecture project (in which Wendy Duff was one participant) and suggested ways to study retrieval requirements as well. Since the mid-1980s he has explored the role of context in archival documentation. In consequence, we have recently specified the requirements of a third nexus of data needed in content
designations (in addition to that required to support business processes and information retrieval): requirements derived from support for capturing and preserving evidence. Indeed, the capture and preservation of evidence has become quintessential to the definition of a record-keeping system. Today we would say that “archival information systems are information systems about record-keeping systems; the data content of archival information systems should be determined from their functional requirements, as should the data content of interchange formats.”

Wendy Duff has been involved in archival description as a member of the Planning Committee on Descriptive Standards of the Bureau of Canadian Archivists and a member of the International Council on Archives' Ad Hoc Committee on Descriptive Standards. The work of these committees has focused archival attention on the importance of levels of description and has once again brought the concept of the fonds (context of creation) into international prominence. During the past two years, Wendy Duff's work on electronic records has led her to examine the metadata requirements for control over records at the record level and to construct a rigorous framework of literary warrant for evidence as project coordinator of a research project at the University of Pittsburgh on Functional Requirements for Evidence in Recordkeeping.

In this article we relate the recently adopted General International Standard Archival Description (ISAD/G) to the University of Pittsburgh specification of the metadata required for evidence. In so doing, we are trying to validate an abstract reference model for archival data interchange (ISAD/G) by mapping the concrete requirements of evidence to it. We believe that, ultimately, any proposed standard must demonstrate that it can ensure evidence as well as support archival management and information retrieval. The source of each set of functional requirements for record-keeping is discrete, although they may require some of the same metadata. Requirements related to ensuring evidence are grounded in the social and legal definition of evidence documented in law, professional best practices, and standards. Those related to archival management reflect business activities of archives and specific business processes. The requirements of information retrieval are related to the point-of-view of potential researchers and their methods of formulating queries. In this article, we limit ourselves to “proving” the value of the ISAD framework by demonstrating that it can hold all the metadata required for evidence. Where the ISAD framework calls for data beyond what has been defined as crucial to ensuring evidence, we believe we can identify how that data relates either to perceived needs of retrieval or the requirements for archival management of records according to current business practices. We leave the question of how well any given metadata content supports those requirements to others.

The Pittsburgh project's metadata specification identifies the metadata needed for records to serve as evidence. It does not address what data is required to support retrieval based on needs of future users, but, as Jane Turner points out, records that satisfy the requirements of evidence also serve the historian in her/his quest for historical truth. Traditional archival description attempts to preserve the evidential value of records by documenting the context of their creation and accumulation through administrative or biographical sketches as well as custodial histories and arrangement notes. Paper-based finding aids strongly favour a multilevel approach to documenting the context of creation, which locates this information at the highest level of
aggregation (and by convention this context is then “inherited” by lower level aggregates). Similarly, paper-based finding tools will describe the original order of records within a series level description. The electronic generation of metadata at the time of conducting a business transaction, on the other hand, provides an alternative method of capturing and representing this contextual information, and thereby preserving evidence. With this article, we hope to demonstrate that the needs of the user can be equally well or better satisfied with metadata captured at the moment of the transaction, by mapping the metadata to ISAD(G).

The Concept of Description or Documentation

The variety of physical and intellectual forms archival records take, and their immense quantity, have traditionally made browsing through records of the past an unsatisfactory, if not impossible, method of research. The primary method of providing access, therefore, has been for archivists to create surrogates or representations of individual records or collectivities to enable users to search a smaller number of more structured surrogates, rather than the original records. As with any surrogates, the issue of what attributes to document (data content standards) and what and how information should be recorded about each attribute (data value standards), has been a matter of ongoing debate for the past fifteen years.

When the Bureau of Canadian Archivists undertook the development of Rules for Archival Description (RAD) a decade ago, they hoped to develop a standard based upon archival principles and consistent with bibliographic models. Therefore, like the SAA, they found themselves drawn to creating surrogates of paper-based and special media records instead of designing descriptive content and values to support archival control, retrieval, or the requirements of evidence. Furthermore, despite the differences in philosophy, especially around the question of the importance of the fonds and “levels” in archival description, the descriptive records Canadians produced using RAD look similar to MARC AMC records and are used in similar ways. Specifically, they address collectivities of records from a single provenance and carry descriptions created by the archivist after the records have been transferred, in aggregates, to archival control.

Documentation of Electronic Records and ISAD(G)

Electronic records are created, maintained, and used under very different circumstances than paper records, as is acknowledged by draft Chapter Nine of RAD. Each record must contain some structural information about itself in order to be opened and read (by software) or to be managed over time, because, unlike paper records, the structure and content of records are not necessarily bound together. Records are the result of business transactions and serve as evidence of those transactions. Because they are usually stored randomly, electronic records must also carry contextual information concerning the circumstances of their creation and receipt. Electronic records are made available to users electronically, so they require information concerning the terms and conditions for access to them. And since electronic records are easily manipulated, the environment must ensure that they are inviolate and new records must, of course, be created when their use transforms the original.
The Pittsburgh specifications for evidence in record-keeping dictate the creation of metadata to satisfy these and other documentation requirements. The specifications require that this observable metadata be linked inextricably to each record. As such, the metadata "describes" the content and context of the records, while ensuring the preservation of information essential to future decoding of the records’ structure.

The RAD standard, along with the Manual of Archival Description and Archives, Personal Papers, and Manuscripts, was exceptionally influential in framing the ISAD(G) work, which in many respects is a close cousin. As in RAD, there are no special rules for documentation of electronic records under ISAD(G). However, when we examined the metadata required of evidence and compared it with the recently adopted ISAD(G) standard, we found that all these elements of metadata, including those only important to electronic records, fit somewhere within the standard (see the record structure proposed below).

Not surprisingly, some ISAD(G) elements could have been better described to accommodate the special requirements of records in electronic form. For example, the "physical condition" element now needs to be interpreted to serve as the content location for metadata on hardware and software dependencies, but, if we understand the concept of "condition" as relating to long-term preservation, the appropriateness of locating dependency metadata in this category is clear. In some other cases ISAD(G) lacks specific guidance on documenting a concept; for example there is no specific place to document the record-keeping system. We believe some structural metadata is vital for the preservation of evidence whether in electronic formats or traditional formats and ISAD(G) does not acknowledge the distinction between a record (a logical thing or aggregate relating to a single business transaction) and an item (a physical thing reflecting the properties of matter).

On the other hand, we also found that some data suggested by ISAD(G) was not found in the functional requirements for evidence in record-keeping. In these cases we were able to establish to our satisfaction that the data expected by ISAD(G) was not required for evidence. Typically it was part of the surrogate record for reasons relating to either archival control or information retrieval (the two other major sources of requirements in record-keeping). For example, the finding aid note is supplied to inform the user about the existence of other information that describes the archival material and has no analogue in the metadata required for evidence.

Importantly, although ISAD(G) and the metadata required for evidence overlap, the data values expected to be recorded in each category diverge. We have described the notable discrepancies and the reasons for them below:

1. Data that forms a separate element in ISAD(G) is sometimes only part of a metadata element specification. For example, the date of creation makes up part of the record identifier. In these cases, the requirements for greater granularity should prevail.

2. 3.1.4 Level of Description. Because the metadata model envisions data linked to each individual record, the level of description is always at the record level, a level missing in ISAD(G). The aggregate level of descriptions in the metadata model is provided by contextual metadata links.
3. **3.2.1 Name of Creator.** *ISAD(G)* provides rules for describing records made or received in the conduct of business and it is based on the assumption that the creator of the archival material is the organization or person that created the unit of description (i.e., creator of the fonds, series, file, etc.). In contrast, the metadata model delineates specifications for ensuring that records preserve evidence of specific transactions; therefore, both the name of the initiator and the recipient of the transaction are required in the metadata specifications.

4. **3.2.2 Administrative/Biographical History.** The purpose of this element, according to *ISAD(G)*, is to provide information "to place the material in context and make it better understood." To this end, because *ISAD(G)* envisions that archivists will describe records that have been created and/or accumulated and used over a period of time, it instructs the archivist to provide information concerning the history of the organization, for example, dates of existence, enabling legislation, functions, purpose and development of the body, hierarchy, etc. The metadata model also requires the capturing of contextual information, but, given the item level description, this contextual information is relevant to the particular transaction, for example, the business transaction type, business rules governing this type of transaction, other records that are part of the same business activity, and the reporting relationship of the particular office at the time of record creation.

5. **3.2.4 Custodial History.** The purpose of the custodial history, according to *ISAD(G)*, is to provide information that is significant for its authenticity, integrity, and interpretation. For non-electronic records at an aggregate level of description, knowledge concerning the care and custody of the records has historically provided a means to ensure the authenticity and integrity of the records. Electronic systems, however, can track any, or even all, uses of a particular record, providing a history of use with far greater granularity than is possible in a manual system. Therefore, the use history is substituted for the custodial history, and it supports the history of classification, redaction and release, and uses previously only guessed at through finding records in series far removed from their original operational use.

6. **3.3.1 Scope and Content.** In *ISAD(G)* this element provides a summary of subject content of the unit of description, while in the metadata model the value of the data in this category is the actual content of the records. "Scope" metadata also provides information on any user views that the record might have had and data that affects the content and its functionality.

7. **3.3.3 Accruals.** While *ISAD(G)* assumes that this category references additions to a fonds within a repository, the item level metadata specified for this element documents records that form part of the complete business activity of which the transaction is a part.

8. **3.3.4 Systems of Arrangement.** The purpose of this element, according to *ISAD(G)*, is to provide information on the arrangement of the unit of description. Therefore, we have used this element to record information on the structure of the data which comprises the record within an electronic record-keeping system.
3.4.5 Physical Characteristics. In ISAD(G), this element is used to record "important physical details that limit use of the unit of description." We have used this element to present information concerning software and hardware dependencies, file encoding, compression, etc., because these factors can limit the use of the unit of description and make it illegible in a way similar to faded ink. We view these limitations as physical, in contrast to intellectual limitations that should be recorded as access conditions.

10. We have recorded information concerning the systems accountability in the note area because ISAD(G) did not have a relevant area to hold the information.

The following mapping of data is not intended to be definitive. Nevertheless, it provides an indication of the way in which electronic records metadata might be correlated with current archival description practices. It envisions records accompanied with appropriate context (provenance) and structural data (documentation) required for their use. It also identifies the data elements provided in traditional archival description that are present in the metadata specifications.

In the following, the twenty-six elements of ISAD(G) with their purpose, rules, and examples as they appear in ISAD(G) include a list of the relevant metadata specifications required for evidence, where appropriate. If no metadata specifications relate to a particular data element, nothing is given. ISAD(G)’s preface, introduction, and multilevel rules are not included.

Notes

In developing ISAD, the ICA Adhoc Commission on Descriptive Standards started by reviewing RAD, Steven L. Hensen, Archives, Personal Papers, and Manuscripts: A Cataloging Manual for Archival Repositories and Historical Societies (Chicago, 1989), and Michael Cook and Margaret Procter, A Manual of Archival Description (Aldershot, 1989).

The record is, in most cases, equivalent to the file because it contains all of the data related to an individual transaction.

These can be found on the Internet at: http://www.lis.pitt.edu/~nhprc.
3. ELEMENTS OF DESCRIPTION

3.1 IDENTITY STATEMENT AREA

3.1.1 Reference code(s)

PURPOSE: To identify the repository and to provide a link between the archival material and the description that represents it.

RULE: Record the country code in accordance with the latest version of ISO 3166 Codes for the representation of names of countries, followed by the repository code in accordance with the national repository code standard followed by a local repository specific reference code, control number, or other unique identifier.

Examples:
CA NAC ANC-C2358
US LC 72-064568
MY P/AMM Z4
MY MS ANM P/PESU.H.C.O 410/1915
FR AD 53/234 J

Metadata Requirements for Evidence

Record Identification Metadata (Not Repeatable) (I.A.)
Consists of a unique identifier made up of three data elements (Record-Declaration, Transaction-Domain-Identifier, Transaction-Instance-Identifier).

Record-Declaration [Mandatory] (I.A.1.)
Identifies the data as a record. This data element consists of a bit stream asserting that what follows is a record. The presence of the record declaration can be determined without opening the record, but if the record is opened it loses this value.

Transaction-Domain-Identifier [Mandatory] (I.A.2.)
Uniquely identifies the domain from which the record originated with sufficient speci-
ficity to identify the transaction type and the organization responsible.

**Transaction-Instance-Identifier [Mandatory] (I.A.3.)**

Uniquely identifies a transaction instance with date, time, and necessary sequence identifiers.

### 3.1.2 Title

**PURPOSE:** To name the unit of description.

**RULES:** When the unit of description bears a formal title, transcribe it exactly as to wording, order and spelling but not necessarily as to punctuation and capitalization.

**Examples:**
- Account of occurrences at Peace River 1832
- Hue and cry and Police Gazette 1828-1842
- Shipments of rubber for Italy and France
- Société ardoisière de l’Anjou. Exploitation de Renazé (Mayenne)
- Fonds Perret
- Fonds Hennebique

If appropriate, abridge a long formal title, but only if this can be done without loss of essential information.

*Alternatively,* compose a concise title. At the fonds level, include the name of the creator. At lower levels include, for example, the name of the creator and a term indicating the form of the material comprising the unit of description and, where appropriate, a phrase reflecting function, activity, subject, location, or theme.

Distinguish between formal and supplied titles according to national or language conventions.

**Examples:**
- Minute books of the Women’s Christian Temperance Movement
- Letters of Presbyterian missionaries serving in Manitoba
- Videotapes of Ronald Reagan’s campaign speeches
- Records of the Coast and Geodetic Survey
  *(Fonds level title)*
  - Records of the Office of the Superintendent
    *(Sub-fonds level title)*
    - Letters sent
    - Letters received
    - Drafts of Annual Reports to the Congress
  *(Series level titles)*
  - Draft of the First Report
3.1.3 Dates of creation of the material in the unit of description

PURPOSE: To identify and record the date(s) of creation of the material in the unit of description.

RULES: Give the dates of creation of the material in the unit of description as a single date or a range of dates as appropriate. A range of dates should always be inclusive unless the unit of description is a record-keeping system (or part thereof) in active use.

Examples:

1900-1919
(The New York State Joint Legislative Commission to investigate seditious activities operated and accumulated records from 1917 to 1919. The actual dates of the records within the series, however, are 1900-1919, reflecting the creation of the original documents collected as evidence in the commission's investigations)

(Compare approach in 3.2.3)

23 Mar 1927
circa 1930
1858
before 1850
1907-1949
1907-

Optionally, also record

(a) the predominant dates or significant gaps. Never enter predominant dates without inclusive dates.

Examples:

1703-1908 (predominant 1780-1835)
1923-1945 (lacking 1933 to 1935)

(b) date(s) for records in custody.
Examples:

Contents: 1703-1908  Contents in custody: 1703-1868
(predominant 1708-1835)

Contents: 1907- Contents in custody: 1907-1958
(predominant 1930- ) (predominant 1930-1958)

Metadata Requirements for Evidence

See the Transaction-Instance-Identifier (3.1.1) for the time of the record, the Originator-Identification (3.2.1) for the time of the transaction, and the Recipient-Identification (3.2.1) for the time of receipt.

3.1.4 Level of description

PURPOSE: To identify the level of arrangement of the unit of description.

RULE: Record the level of this unit of description.

Examples:

Fonds
Series
Sub-series
File
Item

Metadata Requirement for Evidence

See the Record-Declaration (3.1.1)

3.1.5 Extent of the unit of description (quantity, bulk, or size)

PURPOSE: To identify and record

a. the physical extent and
b. the type of material of the unit of description.

RULES: Record the extent of the unit of description by giving the number of physical units in arabic numerals and the specific unit designation appropriate for the broad class of material to which the unit of description belongs.

Examples:

2 film rolls
128 photographs
19 folders
25 volumes
20 enclosures
20 m (548 articles)

Alternatively, give the linear shelf space or cubic storage space of the unit of description.

Example:
300 boxes (30 m)

If the statement of extent for a unit of description is given in linear terms and additional information is desirable, add the additional information in parentheses.

Example:
4 m (ca. 10 200 items)

Optionally, where the unit of description is a record-keeping system (or part thereof) in active use, show

the known extent at a given date; and/or

the extent in custody.

Example:
128 photographs (at 6 Feb. 1990) In custody: 58 photographs

Metadata Requirement for Evidence

See File-ID (3.3.1) for the number of files that make up the record

3.2 CONTEXT AREA

3.2.1 Name of creator

PURPOSE: To identify the creator (or creators) of the unit of description.

RULE: Name the organization (or organizations) or the individual (or individuals) responsible for the creation of the unit of description provided this information does not appear in the title.

Metadata Requirement for Evidence

Originator-Identification [Mandatory] (IV.A.1.)

Identifies the organization/person/system that initiated the transaction and the time of the transaction.

Recipient-Identification [Mandatory] (IV.A.2.)

Identifies the office/person/system that received the transaction and the time of receipt.
Authorization [Optional, good practice] (IV.B.2.)

Identifies the source of authorization for specific office(s)/position(s)/individual(s) to engage in the identified transaction.

3.2.2 Administrative/Biographical history

PURPOSE: To provide an administrative history of, or biographical details on, the creator (or creators) of the unit of description to place the material in context and make it better understood.

RULES: Record concisely any significant information on the origin, progress, development and work of the organization (or organizations) or on the life and work of the individual (or individuals) responsible for the creation of the unit of description. If additional information is available in a published source, cite the source.

For persons or families record information such as full names and titles, dates of birth and death, place of birth, successive places of domicile, activities, occupation or offices, original and any other names, significant accomplishments, and place of death.

Example:

Louis Hémon was a French writer born at Brest, France in 1880. He died in Canada at Chapleau (Ont.) in 1913. He studied law at La Sorbonne in Paris. He spent eight years in England before going to Canada in 1911, where he lived in Montréal and on a farm at Péribonka (Lac Saint-Jean). In his short career, he wrote several books and articles. Hémon is famous for: Maria Chapdelaine: récit du Canada français, published for the first time in 1916

For corporate bodies record information such as the official name, the dates of existence, enabling legislation, functions, purpose and development of the body, its administrative hierarchy, and earlier, variant or successive names.

Examples:

The Freedmen's Bureau was established in the War Department 3 Mar. 1865, to supervise all activities relating to refugees and freedmen and to assume custody of all abandoned or confiscated lands or property. Abolished 10 June 1872, and remaining functions transferred to the Freedmen's Branch, Office of Adjutant General and after 1879, to the Colored Division of the Office of Adjutant General

The Kingston Steam Trawling Company was incorporated in 1891. Hellyer Bros acquired a majority shareholding in 19[?], and the company was absorbed into Associated Fisheries when Hellyer Bros merged with that company in 1961. It ceased trading in 1965 and was dissolved in 1972

La société ardoisière de l'Anjou a été constituée le 16 juillet 1894 par quatre actionnaires dans le but d'acquérir et d'exploiter plusieurs carrières en Maine-et-Loire (Trelaze et Noyant-la-Gravoyère) et dans la Mayenne. L'acquisition des ardoisières de Renazé s'est étalée sur quatre ans: propriétaire de la carrière d'Ensuzières et actionnaire majoritaire de la Société de Laubinière (1894); propriétaire des ardoisières de la Touche et du Fresne (1895); propriétaire de Laubinière (1897). Victime de la concurrence espagnole vers 1960, la société ardoisière de l'Anjou a fermé son dernier puits à Renazé le 31 décembre 1975
Metadata Requirement for Evidence

Business-Transaction-Type [Optional] (IV.A.4.)
Identifies the type of transaction (its business functional context).

Business-Transaction Procedure Reference [Optional] (IV.A.5.)
Identifies the originating organization's specific policy/policies and/or procedure(s) (i.e., business rules) governing this type of transaction. May consist of citations or of the actual policy/policies and/or procedure(s). In either case it should note the relevant version, effective dates, etc.

Linked-Prior Transaction [Mandatory, if applicable] (IV.A.6.)
Identifies the Record-Identifier(s) for transactions that are part of the same business activity.

Originating-Organization [Mandatory] (IV.B.1.)
Identifies the organizational unit engaged in the recorded transaction—from the legal entity down to the specific office of origin.

Set-Relationships [Mandatory, if other set members exist] (III.E.8.)
Identifies the record as belonging, for business purposes, to an overall set of records. Can consist of the classification of that set, or the Record-Identifier(s) of other records.

Dynamic-Relationships [Mandatory, if higher/lower exists] (III.E.9.)
Identifies what data is required from other records/files in order to populate other values. This is active in set relationships where a record cannot be opened unless the contents of other records are available.

3.2.3 Dates of accumulation of the unit of description

PURPOSE: To supply date(s) of accumulation of the unit of description (e.g., series, file) by its creator.

RULE: Give the date(s) of accumulation of the unit of description by the creator (or creators) as a single date or a range of dates. The date or dates recorded here refer to the record keeping actions of the creator (or creators) and may not antedate the date of establishment of the creating corporate body (or earliest creating corporate body) or the date of birth of the creating individual (or earliest creating individual). These dates may differ from the dates recorded at 3.1.3 Dates of creation of the material in the unit of description in cases where the unit of description resulted from an activity involving accumulation of documents created prior to filing by the creator (or earliest creator), such as documents accumulated from a variety of sources during an investigation or legal action.
Examples:

1917-1919

(The New York State Joint Legislative Commission to investigate seditious activities operated and accumulated records from 1917 to 1919. The actual dates of the records within the series, however, are 1900-1919, reflecting the creation of the original documents collected as evidence in the commission's investigations.)

(See also approach in 3.1.3)


Metadata Requirements for Evidence

All uses of records are transactions. In an electronic system, when a transaction uses previously existing records a new record is created. The date of the record is the date of the transaction which is recorded in the Instance-Identifier. In an electronic record-keeping system there is no difference between the date of creation of a record and the date of accumulation of the record.

3.2.4 Custodial history

PURPOSE: To provide information on changes of ownership and custody of the unit of description that is significant for its authenticity, integrity and interpretation.

RULES: Record the successive transfers of ownership and/or custody of the unit of description, along with the dates thereof, insofar as they can be ascertained. If the custodial history is unknown, record that information.

Optionally, when the unit of description is acquired directly from the creator, do not record a custodial history but rather, record this information as the Immediate source of acquisition.

(See 3.2.5)

Examples:

The Ocean Falls Corporation records remained in the custody of Pacific Mills Ltd., and its successor companies, until the mill and townsite were taken over by the British Columbia provincial government in 1973. In 1976 the records were transferred to the Ocean Falls Public Library, which began the rearrangement of the records in their current form...

Originally collected by George Madison and arranged by his nephew, John Ferris, after Madison's death. Purchased by Henry Kapper in 1878 who added to the collection with materials purchased at auctions in Philadelphia and Paris, 1878-1893

Records inherited by Houghton Urban District Council in 1937 and later deposited at Durham Record Office. Transferred to Tyne and Wear Archives Service on 28 July 1976

Le fonds de l'exploitation de Renazé comprend, probablement depuis les années 1895-1897, deux fonds d'entreprises absorbés: ceux de la société ardoisière de Laubinière et de l'ardoisière de la Touche, établissement Bourdais et Cie
Metadata Requirements for Evidence

Use History Metadata (Repeatable) (VI.A.)
Identifies the history of use of the record—the type of use, when it was used, and by whom. Also indicates any redactions of the data.

Use-Type [Mandatory] (VI.A.1.)
Identifies how the data was used: viewed, copied, edited, filed, indexed, classified, sent, disposed, etc. This involves identifying the various types of use permitted by the system.

Use-Instance-Time [Mandatory] (VI.A.3.)
Identifies when the data was used—i.e., the date and time.

Use-Instance-User [Mandatory] (VI.A.4.)
Identifies who or what used the data on a given date at a given time.

Use-Evidential Consequences [Mandatory if redacted on release] (VI.A.5.)
Identifies the impact of a particular use (for example, may identify the part of the record released, the terms used in indexing, the importance of a specific view, and what part of the record was viewed).

3.2.5 Immediate source of acquisition

PURPOSE: To record circumstances of the immediate source of acquisition.

RULE: Record the donor or source from which the unit of description was acquired and the date and/or method of acquisition if any or all of this information is not confidential. If the source or donor is unknown, record that information. Optionally, add accession numbers or codes.

Examples:
Transferred from Department of Geography, 16 June 1977

Donated by the sisters of Peter Neve Cotton, Mrs Mary Small of Saltspring Island and Mrs Patricia Jarvis of Bellevue, Washington, March 1983

Purchased at Sotheby's auction, 29 Mar 1977

The orderly books were transferred from Pension Office, 1909; the letter books were transferred from the State Department, 1915

Received from: Euroc AB, Malmö. Date of acquisition: 1978-10-27

Transferred from the Selangor Secretariat, Sultan Abdul Samad Building, Kuala Lumpur, 1967

Don de la Société ardoisière de l’Anjou (exploitation de Renazé) aux Archives départementales de la Mayenne, 1969

A history of the custodianship of records helps to ensure their authenticity and integrity. An electronic record-keeping system can capture the entire history of use of a record, providing far greater information on its authenticity and integrity.
3.3 CONTENT AND STRUCTURE AREA

3.3.1 Scope and content / Abstract

PURPOSE: To identify the subject matter and the form of the unit of description to enable users to judge its potential relevance.

RULE: Give a brief summary of the subject content (including time period) of the unit of description. Include information on form as appropriate for the particular level of description. Do not repeat here information already given elsewhere in the description.

Examples:

General policy files and registers of the Ministry of Health and the Ministry of Housing and Local Government relating to extinguishment of tithe rent charges. The files contain information about grants to local authorities, rates and rate refunds, and evidence submitted to the Royal Commission on Tithe Rent-charge in 1934. The registers contain records of payments of grants to various authorities from 1938 to 1955 under the Tithe Act 1936.

High Commissioner’s Office file relating to shipments of rubber for Italy and France. The file contains correspondence between the Secretary to F.M.S. and the Secretary to the High Commissioner’s Office for the Malay States regarding rubber exports. This includes the name of the vessel, nationality, date of sailing, description of the item, quantity, destination, exporter, and the consignee.


Metadata Requirement for Evidence

Content-Created [Optional*](V.A.1.)
Contains the content created by the transaction.

Content-Incorporated [Optional*](V.A.2.)
Contains identifiers of records incorporated into the content or the actual data contained in these records.

Note: Although it is possible to conduct a transaction that adds no new data content to existing records (e.g., only forwards pre-existing material, without so much as a cover note), and it is possible to have transactions which do not incorporate previously existing records, it is not possible to have a transaction without any content. Thus the “Record” cluster is mandatory, although the metadata items in it are both optional. The “Content” level is therefore also mandatory.

Recipient-Identification [Mandatory] (IV.A.2.)
Identifies the office/person/system that received the transaction and the time of receipt.
Copy-Identification [Mandatory] (IV.A.3.)
Identifies whether the copy encapsulated by the metadata is the sender's or the recipient's copy.

File Identification Metadata (Repeatable for each file) (III.A.)
Enables the identification of individual files that comprise the record and the verification of their authenticity.

File-ID [Mandatory] (III.A.1.)
Identifies each file that makes up the record. This enables the system to bring together all of the parts to form the whole.

Content-Description-Standard [Optional, except in cases of privacy act-defined content] (I.B.1.)
Identifies standards governing content-descriptors. Privacy-controlled content must be identified according to privacy act standards.

Content-Descriptor [Optional] (I.B.2.)
Provides terms used by the office of origin/receipt to describe or index the record.

Data-Source [Mandatory] (III.F.1.)
Identifies the source that created the record; e.g., the business transaction.

Data-Source-System-Documentation [Optional] (III.F.2.)
Identifies or consists of the documentation that outlines the conditions needed to create the record; contains information on the data processing function.

Data Capture-Instrument-Type [Mandatory, if instrument captured source data] (III.F.3.)
Identifies the type of instrument used to capture the data (i.e., light recording, sound recording, temperature recording, location recording, etc.) and the specific instrument used (manufacturer, model number, etc.).

Data Capture-Instrument-Settings [Mandatory, if instrument captured source data] (III.F.4.)
Identifies the settings, calibration, etc., that were in effect when the data was captured.

Source Data-Quality [Optional, good practice] (III.F.6.)
Identifies the degree of reliability of the data generated by the source.

Data View-at Creation [Mandatory, if partial view] (III.E.6.)
Identifies how the application viewed the record at the time of the record's creation. This is the redaction subset of the data dictionary.
3.3.2 Appraisal, destruction and scheduling information

PURPOSE: To provide information on any appraisal, destruction and scheduling action taken.

RULES: Record any appraisal actions taken on the unit of description if that action affects the interpretation of the material. Where appropriate, record the authority by which the action has been taken.

Examples:
Files of every tenth year have been retained
All files are kept permanently under the National Archives of Malaysia ruling: "Permanent retention of records dated before 31.12.1948"
Très peu d'éliminations ont été effectuées au cours du classement de ce fonds: seuls les brouillons informes ou illisibles, les formulaires vierges ou en exemplaires multiples en ont fait l'objet. Globalement, ces éliminations n'ont pas dépassé la valeur d'une liasse

Metadata Requirements for Evidence

Disposition Requirements Metadata (Not Repeatable) (II.D.)
Identifies the conditions regarding retention and disposition of the records according to policy.

Removal-Authority [Mandatory] (II.D.1.)
Identifies under whose/what authority a record (whole or in part) may be purged from the system. The identification of this authority resides with the record and is established at the time of the record's creation.

Retention-Policy-Citation [Mandatory] (II.D.2.)
Comprised of textual information identifying the organization's internal policy/policies for record retention--indicates the specific policy governing retention and links to authority issuance.

Retention-Authority Issuance [Optional; unless retention-period-end-time is unspecified] (II.D.3.)
Comprised of textual information regarding the legislative or governmental law(s)/regulation(s) governing record retention (e.g., Code of Federal Regulations), indicating the specific legal/regulatory policy number, version, date issued, date effective, etc.

Retention-External-Authority [Optional; unless retention-period-end-time is unspecified] (II.D.4.)
Comprised of textual information identifying the issuing organization that has jurisdiction over the law(s)/regulation(s) governing records retention.
Retention-Period-End-Time [Mandatory] (II.D.5.)
Indicates scheduled retention period end date (mmddyyyy) for the record. This information is determined at the time of the record’s creation. If unspecified (frequently indicated as 99999999), the record must contain citations to policy, regulation, and authority (II.D.2-4).

Disposition-Instruction-Code [Optional] (II.D.6.)
Identifies the methods that apply to the ultimate disposition of the record.

3.3.3 Accruals
PURPOSE: To inform the user of possible changes in the extent of the unit of description.
RULE: Indicate if future accruals, additional transfers, or deposits are expected. Where appropriate, give an estimate of their quantity and frequency.

*Examples:*
Records from the Office of the Ceremonials Assistant are transferred to the archives five years following the academic year to which the records relate. On average, 40 cm of records are transferred to the archives annually on Aug. 1
Accruals are expected

Metadata Requirements for Evidence

Action-Requested [Optional, good practice] (IV.A.7.)
Identifies if an action was requested as a result of the transaction. Could enable links to past transactions if they occurred.

3.3.4 System of arrangement
PURPOSE: To provide information on the arrangement of the unit of description.
RULE: Give information on the arrangement of the unit of description. Specify the principal characteristics of the internal structure, the order of the material and, if appropriate, how these have been treated by the archivist.

*Examples:*
Records are maintained according to their original provenance, the direct result of organizational activity of the organizing body: the High Commissioner’s Office
Files arranged alphabetically by file title. A subseries of 17 files (numbered 163/1-17) depend on file 163, dealing with the purchase of the Seaford Dock
Chronological/enclosure number within file
Le plan de classement adopté est le suivant : administration, comptabilité et finances, personnel, fonctionnement, matériel d’exploitation et outillage, propriétés immobilières, entreprises absorbées
Metadata Requirements for Evidence

Record Rendering Metadata (III.D.)

Applicable to the record as a whole, once files have been correctly rendered according to their own rule.


Identifies the rules or standards required to enable the necessary linkages between files that make up the record. Contains textual information regarding the actual rules or standards applied.

File-Interchange-Standard: Version [Mandatory] (III.D.2.)

Identifies the standard(s) (including identifying the appropriate version) employed by the record to enable file interchange.

Content Structure Metadata (III.E.)

Defines the structure of the contents of the record.

Content-Structure [Mandatory] (III.E.1.)

Indicates whether the content of the record is structured or unstructured.

Content-Data Set [Optional] (III.E.2.)

If the content is identified as being structured, this cites the data set that indicates how it is structured. Consists of the actual name of the data set definition. If a data set definition is neither registered nor a well-known registered identity, then it will need to be registered.

Application-Dictionary [Mandatory, if structured and no content data set] (III.E.3.)

Identifies the data dictionary for the entire database. This consists of the actual data dictionary itself, or it could take the form of a set of referential integrity controls.

Delimiters/Labels [Optional, good practice] (III.E.4.)

Consists of the actual delimiters/labels used throughout the data and their usage rules.

Data Value-Lookup Tables [Mandatory, where present - Repeatable] (III.E.5.)

Consists of the authority file containing the values of the codes used throughout the record and their usage rules.

Data View-at Creation [Mandatory, if partial view] (III.E.6.)

Identifies how the application viewed the record at the time of the record’s creation. This is the redaction subset of the data dictionary.
3.4 CONDITIONS OF ACCESS AND USE AREA

3.4.1 Legal status

PURPOSE: To provide information on the legal status of the unit of description.

RULE: Record information on the legal status of the unit of description.

*Examples:*
- Public records transferred under section 4(1) of the Public Records Act 1958
- Transferred under the National Archives Act, No. 44/1966
- Archives publiques consécutivement au don

3.4.2 Access conditions

PURPOSE: To identify any conditions that restrict or affect access to the unit of description.

RULE: Give information on conditions that restrict or affect access to the unit of description. Indicate the extent of the period of closure and the date at which the material will open.

*Examples:*
- No access may be given to the material without the written permission of the director of the firm
- Family correspondence closed until 2010
- All records subject to Access to Information and Privacy Act
- No access until microfilmed
- Accessible to all registered researchers
  - La majorité des documents contenus dans ce fonds est librement consultable.
  - Néanmoins, la communication de certains dossiers relatifs au personnel est soumise à des conditions ou à des délais de consultation particuliers

*Metadata Requirements for Evidence*

**Access-Rights-Status [Mandatory] (II.A.1.)**

Defines if there are access restrictions which must be resolved.

**Access Conditions Metadata (Repeatable) (II.B.)**

Identifies the conditions for access to the record and how to satisfy them.

**Access-Conditions-Resolver [Mandatory for records with access restrictions] (II.B.1.)**

Identifies any resolvers that must be satisfied, i.e., conditions regarding payments, permissions, proof of identity, or other restrictions on access.

**Resolver-Terms [Mandatory for records with access restrictions] (II.B.2)**

Defines terms for access in a way that is recognized by the resolver.
Redacted-Record-Rule [Mandatory if content view must be restricted] (II.C.2.b.)
Identifies views that are permitted to different users. It may be executed algorithmically or may require human intervention to produce a releasable view.

License-Terms [Mandatory for Licensed Data] (II.C.2.c.)
If the data is licensed, this data enables the proper resolution of use of the record according to the guidelines set by the license.

3.4.3 Copyright / Conditions governing reproduction

PURPOSE: To identify any restrictions on the use or reproduction of the unit of description.

RULE: Give information about conditions governing the use or the reproduction of the unit of description after access has been provided. If conditions governing use, reproduction or publication in respect to the unit of description are unknown or if there are no conditions, no statement is necessary.

Examples:
Rights held by CHYZ-TV
No reproduction without permission of the president of the company
Photographs may be copied for reference purposes only. Use of photographs in a publication cannot be made without written permission of Kenneth McAllister
Malaysia Copyright Act of 1987 records in public domain, reproduction with permission of the National Archives of Malaysia

Metadata Requirements for Evidence

Use-Rights-Status [Mandatory] (II.A.2.)
Defines if there are use restrictions which must be resolved.

Use Conditions Metadata (Repeatable) (II.C.)
Identifies the conditions for use of the record and how to satisfy them.

Use-Conditions-Resolver [Mandatory for records with use restrictions] (II.C.1.)
Identifies the resolvers that must be satisfied. The user meets conditions imposed on use and the record-keeping system is notified how to impose such restrictions.

Use-Terms [Mandatory for records with use restrictions] (II.C.2)
Use-Citation [Optional] (II.C.2.a.)
Consists of textual information supplied by the creator or owner of the record detailing limitations on use.
3.4.4 Language of material

PURPOSE: To identify the language(s), scripts and symbol systems employed in the unit of description.

RULE: Record the predominant language(s) of the materials comprising the unit of description. Note any distinctive alphabets, scripts, symbol systems or abbreviations employed.

Examples:
- In Portuguese
  Main text in Latin; endorsements in Norman French
- In English
  Français

Metadata Requirements for Evidence

Record-Natural-Language [Optional] (I.B.3)
Identifies the natural language of the record (e.g., English, French, Portuguese).

3.4.5 Physical characteristics

PURPOSE: To provide information about any important physical characteristics that affect use of the unit of description.

RULE: Indicate any important physical details and/or the permanent physical condition of the material that limits use of the unit of description.

Examples:
- Images faded
- Legible under ultraviolet light only

Metadata Requirements for Evidence

File Encoding Metadata (Repeatable for each file) (II.B.)
Identifies the encoding pertinent to the individual files that comprise the record.

File-Modality [Mandatory] (II.B.1.)
Identifies the file modality (i.e., text, numeric, graphic, geographic, image, sound, video, multimedia, etc.).

File-Data-Representation [Mandatory] (II.B.2.)
Identifies the data encoding standards used by the file (i.e., ASCII, EBCDIC, or UNICODE character data, ASN.1, CCITT Group III raster, etc.).
Data-Codes [Mandatory if non-standard methods of representation are used] (II.B.3.)
Indicates specifically how the data is encoded when registered methods are not being used. For example, for vector data, whether it is topological, spaghetti, chain-node, etc., for raster data, the number of dots per inch and their bit density, for sampled data, the number of samples per second, etc.

Compression-Method [Mandatory] (II.B.4.)
Identifies the method of compression, if any, that was used (i.e., None, JPEG, MPEG, Quicktime, LZW, etc.). If the method complies with a specific standard, this may consist of only the identification of that standard (name, version, etc.), otherwise the method may need to be defined in technical detail.

Encryption-Method [Mandatory] (II.B.5.)
Identifies the algorithms used by the record originator to encrypt the record's content. All records are stored in the de-encrypted form in which they would have to be read by recipients.

File-Rendering Metadata (Repeatable for each file) III.C.
Identifies how the record appeared in order to recreate it as it would have been viewed at the time of receipt.

Indicates which applications, if any, the record is dependent upon. If there are dependencies, the name of one application, the version, and registration information is recorded in each occurrence of the field at the time of record creation. This information is intended to serve as a pointer to a registered library maintained by the creating organization or a public entity such as the Copyright Office or Patent Office.

Indicates what software, including operating systems and API's, if any, the record is dependent upon. If there is a dependency, the name of the software package(s), the version, registration information, and display information (such as font sets or other software dependent attributes) is recorded at the time of record creation.

Hardware-Dependency [Mandatory - Repeatable] (II.C.3.)
Indicates what hardware, if any, the record is dependent upon. If there is a dependency, the hardware needed, model number, configuration, and output information (such as printers or viewers required or other hardware dependent attributes) are recorded at the time of record creation.

Rendering-Rules [Mandatory - Repeatable] (II.C.4.)
Identifies the procedures necessary to enable the record to be displayed, printed, or otherwise represented as it had been at the time of creation (macros, dimension, spatial reference data, etc.); may operate at different levels.

Representation-Standard/De Facto Standard [Mandatory - Repeatable] (II.C.5.)
Identifies any standard(s) applied to the file that affects how the file is rendered (ex: SGML, Postscript, TIFF, etc.) and which version of the standard is used.
3.4.6 Finding aids

PURPOSE: To identify any finding aids to the unit of description.

RULE: Give information about any finding aids that the repository or records creator may have that provide information relating to the contents of the unit of description. If appropriate, include information on where to obtain a copy.

Examples:
- Box list
- Detailed finding aid available; file level control
  Finding aid: Records of Parks Canada (RG84) / Gabrielle Blais. — (General inventory series / Federal Archives Division). — Ottawa: Public Archives of Canada, 1985
- Geographical index
- Correspondence index to 1880
- Descriptive Lists, High Commissioner’s Office Records

3.5 ALLIED MATERIALS AREA

3.5.1 Location of originals

PURPOSE: To identify the repository, corporate body or individual which holds the originals if the unit of description is a reproduction.

RULE: If the unit of description is a reproduction, and another repository, corporate body or individual holds the originals, record their name if the information is not confidential. Give also any identifying numbers and other information that may help in locating the original material. If the originals are known to be no longer extant, give that information.

Examples:
- Original in National Archives of Canada, C2358
- Originals destroyed after microfilming, 1981
  Originals retained by the Society of Friends, Newcastle upon Tyne (access by permission from the Secretary)
- Originals in Headquarters, National Archives of Malaysia

3.5.2 Existence of copies

PURPOSE: To indicate the existence and availability of copies of the unit of description.
RULE: If the unit of description is available (either in the institution or elsewhere) in another format, record the formats, together with any significant control numbers and the location where they may be consulted.

Examples:
Diaries and correspondence also available on microfilm
Films also available on videocassette

Metadata Requirements for Evidence

Version-Relationships [Mandatory, if prior version exists] (III.E.7.)
Consists of any Record-Identifiers of previous versions of the record.

3.5.3 Related units of description
PURPOSE: To identify related units of description in the same repository.
RULE: If the unit of description consists of material that has a direct and significant connection to another unit of description, indicate the relationship. Use appropriate introductory wording. If the related unit of description is a finding aid, use the Finding aids element of description (3.4.6) to make the reference to it.

Examples:
These include many stray medieval accounts similar to material in E101 and SC6
For further documents concerning the Queen’s Jointure see LR5
Related series: In-letters from the Office of the General Manager
Files related to trades, rubber exports, etc., e.g., Export of rubber - S of S 116/15; Export of rubber to Italy and France - H.C.O. 288/15; Shipment of rubber approved by Rubber Export Committee - S of S 388/15; Agriculture Bulletin - Misc. 390/15; Exportation of rubber to Canada - S of S 402/15; Rubber shipment: 7 ton from Harrison and Crossfield to Alcan & Co., Paris, in June - S of S 938/15; Shipment of rubber to New York per SS Indrawadi on 6.9.1915 - H.C.O. 1981/15
Sources complémentaires mentionnées dans l’instrument de recherche imprimé

Metadata Requirements for Evidence

Linked-Prior Transaction [Mandatory, if applicable] (IV.A.6.)
Identifies the Record-Identifier(s) for transactions that are part of the same business activity.

Set-Relationships [Mandatory, if other set members exist] (III.E.8.)
Identifies the record as belonging, for business purposes, to an overall set of records. Can consist of the classification of that set, or the Record-Identifier(s) of other records.
3.5.4 Associated material

PURPOSE: To indicate the existence in other repositories of material associated by provenance to the unit of description.

RULE: If material in another repository has a relationship by provenance to the unit of description, provide information about the associated material and the repository.

Example:
Ernest Buckler fonds held by the Public Archives of Nova Scotia
Files relating to trades, customs and excise, rubber exports, estimates, annual reports, etc. at the National Archives of Malaysia Branch Offices
Sources complémentaires mentionnées dans l’instrument de recherche imprimé

3.5.5 Publication note

PURPOSE: To identify any publications that are based on the use, study, or analysis of the unit of description.

RULE: Record a citation to, and/or information about, a publication that is based on the use, study, or analysis of the unit of description.

Examples:
Bibliographie dans l’instrument de recherche

3.6 NOTE AREA

3.6.1 Note

PURPOSE: To provide specialized information and information that cannot be accommodated in any of the other areas.

RULE: Record specialized or other important information not accommodated by any of the defined elements of description.

Metadata Requirement for Evidence

System Accountability Metadata (IV.C)
Certifies the procedures and systems logs of the system during the period of operation.

System Audit-Responsible [Mandatory] (IV.C.1)
Citation to most recent system and procedure audit transactions which contain evidence of the system being responsible.
System Audit-Implemented [Mandatory] (IV.C.1)
Citation to most recent system and procedure audit transactions which contain evidence of the system being implemented.

System Audit-Consistent [Mandatory] (IV.C.1)
Citation to most recent system and procedure audit transactions which contain evidence of the system being consistent.