



RLG Best Practice Guidelines for Encoded Archival Description

RLG EAD Advisory Group
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INTRODUCTION

This set of guidelines, the second version promulgated by RLG, was developed between October 2001 and August 2002 by the RLG EAD Advisory Group. This group consisted of ten archivists and digital content managers experienced in creating and managing EAD-encoded finding aids at repositories in the United States and the United Kingdom (see www.rlg.org/primary/eadac.html).

The objectives of the guidelines are:

1. To facilitate interoperability of resource discovery by imposing a basic degree of uniformity on the creation of valid EAD-encoded documents and to encourage the inclusion of elements most useful for retrieval in a union index and for display in an integrated (cross-institutional) setting.
2. To offer researchers the full benefits of XML in retrieval and display by developing a set of core data elements to improve resource discovery. It is hoped that by identifying core elements and by specifying “best practice” for those elements, these guidelines will be valuable to those who create finding aids, as well as to vendors and tool builders.
3. To contribute to the evolution of the EAD standard by articulating a set of best practice guidelines suitable for interinstitutional and international use.

These guidelines can be applied to both retrospective conversion of legacy finding aids and the creation of new finding aids.

I. General Notes

Focus and Companion Documents. This document does not attempt to repeat the information in the EAD (version 2002) DTD, the *EAD Tag Library, Version 2002*, and SAA’s *EAD Application Guidelines*, nor does it attempt to recommend local administrative practice. This document focuses on general issues that cross institutional boundaries. The absence of discussion of particular elements or attributes does not imply that they are unimportant. (The SAA *Guidelines* address all EAD elements and provide advice about their use.)

Nomenclature.

“Required” means that the EAD DTD requires an element or attribute in order to produce a valid EAD instance.

“Mandatory” means we regard an element or attribute as essential to achieving the goals of powerful access to distributed information and predictable behavior in a union environment.

“Mandatory if applicable” means we regard an element or attribute as mandatory if the value is known, discernable, or appropriate for the particular situation. (Otherwise the element is not included.)

“Recommended” means that inclusion of data found in an element represents best practice when the data exists or is applicable.

“Optional” means that the repository may apply an element or attribute according to local practice. Elements and attributes deemed optional appear in these guidelines only when we believe that a comment or application guideline regarding their use is necessary. The assignment of optional status does not mean that an element or attribute represents bad practice. It suggests only that we recommend no specific application for these elements.

Status	Abbreviation	Definition
Required	Req	DTD requires for valid XML
Mandatory	M	The RLG EAD Advisory Group mandates for consistent search and display
Mandatory if applicable	MA	The RLG EAD Advisory Group mandates if the situation applies
Recommended	Rec	Recommended best practice
Optional	Opt	Optional

“Tag” refers to the markers that enclose the content of an element, such as <p>[content]</p>.

“Element” refers to the textual concept represented by a tag.

“Content” refers to data enclosed between tags.

“Attribute value” refers to attribute options.

In this document, attribute names are presented in **bold**. Bracketed text describes the content information that the repository will supply.

The ID Attribute. Throughout the EAD element structure, the ID attribute is a unique identifier used to name a specific element for linking purposes. Since repositories develop linking methods locally, no particular ID naming scheme is prescribed here.¹ See the *EAD Cookbook* (jefferson.village.virginia.edu/ead/cookbookhelp.html) for one such application of the ID attribute.

Encoding Analogs. To make the metadata² in the EAD instance as robust as possible, and to allow for crosswalks to other encoding schemes, we mandate the inclusion of the **relatedencoding** and **encodinganalog** attributes in both the <eadheader> and <archdesc> segments. <eadheader> elements describe the finding aid, itself, while the <archdesc> elements refer to the materials being described by the finding aid. <eadheader> elements will commonly map to a related encoding standard such as Dublin Core, while <archdesc> elements commonly map to content standards such as MARC 21 or

¹ For a brief discussion of the importance of naming schemes, see www.dlib.org/naming/overview.html.

² Metadata is data about data. The term refers to any data used to aid the identification, description, and location of networked electronic resources.

descriptive frameworks such as ISAD(G)v2. However, this simple distinction is not prescriptive. Possible content for **encodinganalog** attributes has been provided at all levels in the DTD, with the proviso that they may not always be applicable.

Where there is no direct correspondence between the related encoding standard and EAD, use can be made of <note> tags in <notestmt>, as in this example of encoding analogs for Dublin Core elements:

```
<notestmt>
<note encodinganalog="format"><p>text/plain charset=ISO-8859-1
size=23100 bytes</P></note>
<note encodinganalog="coverage"><p>South West</p></note>
<note encodinganalog="rights"><p>&copy; The contents of this catalogue
are the copyright of the place of deposit; Rights in the Access to
Archives database are the property of the Crown</p></note>
</notestmt>
```

While crosswalks for EAD elements to Dublin Core, MARC 21, and to the second edition of ISAD(G)v2 can be found in the *EAD Tag Library, Version 2002* and in the *EAD Application Guidelines*, this document also includes **encodinganalog**s where appropriate. This was done for convenience and to provide more options. For ISAD(G)v2 **encodinganalog**s, the content of the attribute should be expressed in numerical fashion (e.g., “3.2.1” rather than “3.2.1 Name of Creator” or “Name of Creator”).

Normalization of Dates. Normalize all dates according to the ISO 8601 standard where possible (see xml.coverpages.org/ISO-FDIS-8601.pdf). We recommend that the W3C-DTF profile of ISO 8601 be used (see www.w3.org/TR/NOTE-datetime).

Normalize approximate dates using ISO 8601 by indicating an interval that encompasses the outer bounds of the approximate date (see “Approximate dates,” below). Remember that normalized dates are not displayed. They are used to support information retrieval queries based on dates. Only the element content is displayed.

Since ISO 8601 does not express uncertain or unknown dates per se, we recommend normalizing uncertain dates as approximate dates.

Examples:

- Date spans:
 - <unitdate normal="1956-01/1956-07">Jan 1956 - July 1956</unitdate>
[use ISO 8601 date intervals]
 - <unitdate normal="1900/1950">1900-1950</unitdate>
- Broken date spans (e.g., “1924, 1956-1975”):
 - <unitdate normal=1924>1924</unitdate>, <unitdate normal="1956/1975">1956-1975</unitdate>
[encode dates in separate <unitdate> tags]

- Open date spans:
 - `<unitdate normal="1911/9999">1911-[ongoing]</unitdate>`
[use an interval and set the end date to 9999]
- Approximate dates (e.g., “ca. 1950”):
 - `<unitdate normal="1945/1955">ca. 1950</unitdate>`
[normalize as an interval to express an appropriate date range]
 - `<unitdate normal="1980/1989">1980s</unitdate>`
[use an interval to indicate every year of the decade]
 - `<unitdate normal="1801/1900">19th century</unitdate>`
- Undated material:
 - `<unitdate normal="1920/1957">undated</unitdate>`
[normalize as an interval (as with approximate dates), perhaps using the collection dates, or life of creator, etc.]
- Undated material:
 - `<unitdate normal="1935/1965">undated: ca. mid 20th century</unitdate>`
[if a document is undated this can be stated but provide an estimate if possible; normalize as an interval, perhaps using the collection dates, or life of creator, etc.]
 - `<unitdate>undated</unitdate>`
[if it is really not possible to estimate then use “undated” alone with no normalization]

Item-Level Description. This section represents a particular use of the `<dsc>` components not typically used in current archival practice. When describing linked, digitized objects at the item level, a repository should consider strategies for retrieval and usability, both in the repository’s own search interface as well as in a shared environment, if appropriate. Item-level description can be handled in many ways: in EAD, in a database, and/or as part of a digital object itself using a standard such as METS (www.loc.gov/standards/mets). There is no single correct method, so consideration should be given to understanding the pros and cons of each method.

Digital Objects and Linking Elements. Use the `<daogrp>` element exclusively for references/links to digital representations of collections being described in the finding aid. Use `<daogrp>` for links to born-digital objects if they are the focus of the finding aid. For digital objects that are included but are not part of the collections being described, use another EAD linking mechanism. Use `<daogrp>` to link to any digitally formatted direct representation of some aspect of the original item being described (e.g., transcriptions, video, or images of the original item). For indirect description (e.g., video of commentary), do not use `<daogrp>`; instead use another EAD linking mechanism, such as `<exptr>`. Technical metadata about linked digital surrogates (not born digital) should be contained in the DAO attributes, to enable machine discovery of and manipulation of the digital object.

There are a variety of cases where digitized items can be handled outside of a finding aid (via a database or other mechanisms), so we do not want to imply that `<daogrp>` is the only legitimate way to handle digitized objects or item-level description.

Rich descriptive metadata, or other metadata that may be associated with a digital object (technical, administrative, structural, etc.), cannot be easily encoded in EAD. Metadata not well dealt with by EAD might be better handled by the METS standard or stored in the digital object itself (e.g., using TIFF headers) externally from the EAD instance.

We recommend using `<daogrp>` rather than `<dao>`. `<dao>` allows for one digital representation, while `<daogrp>` allows for one or more digital representations. Using `<daogrp>` assures the ability to have multiple digital representations and to maintain consistency in using a single tag, an approach that aids union systems as well as some markup software and tool development.

System Entities. Repositories following these guidelines should refrain from relying solely on system identifiers (as opposed to public identifiers) to identify external entities. System identifiers can cause problems in shared environments, since maintenance of external addresses and resolution of the URIs are vexing issues. Repositories that expect to submit finding aids to a shared environment should give some thought to resolving entities identified via system identifiers before submitting their files. For an in-depth discussion of this topic, see the *EAD Application Guidelines*.

Punctuation and Use of White Space. Use of punctuation and white space is a matter of local practice. The main goal is consistency and documentation, so that local practice can be accommodated within a union environment.

Character Encoding. We recommend that EAD documents encoded in XML use the UTF-8 Unicode character encoding format. When using XML, characters used as markup delimiters must be replaced by character entities, as in the following table:

Character	Name	Entity
&	ampersand	&
<	left angle bracket	<
>	right angle bracket	>

No other special characters need to be replaced with character entities if an instance is saved as UTF-8. For more detailed information on XML, UTF-8, and special character encoding, see the W3C/Unicode Consortium document “Unicode in XML and other Markup Languages” (www.w3.org/TR/unicode-xml/).

Use of `<head>`, Label Attribute. Content of headers and labels are a matter of local practice. Decisions regarding when to use these tags and when to let a style sheet carry content should be recorded. The main goal is consistency and documentation, so that local practice can be accommodated within a union environment.

Overview of the EAD Structure. An EAD instance is made up of three parts:

- <eadheader> contains information describing the finding aid itself.
- <frontmatter> contains prefatory matter incorporating information useful for the display or publication of the finding aid.
- <archdesc> contains description of archival materials and associated administrative and contextual information.

II. Archival Levels

EAD uses a system of nested components to describe the hierarchical structure in which archival material is intellectually organized. The position of each component in an intellectual structure can be specified using the **level** attribute.

There is no explicit correspondence between a component number or the position of a component in a hierarchy and the intellectual level of the material being described. The intellectual level of a component number may vary within and between finding aids (e.g., <c03> may be a “subseries” in one part of a finding aid and an “item” in another).

However, there is logic to the nesting of levels. A series, for example, may contain subseries, files, or items, but not another series. For examples see:

- Possible EAD <C0x> structures for Bentley finding aids (www.umich.edu/~bhl/EAD/bhltags2.htm#examples)
- ISAD(G)v2: General International Standard Archival Description ISAD(G), Appendix A1, page 36 (www.ica.org/biblio/com/cds/isad_g_2e.pdf)

To clarify the level of each component part, we regard as mandatory the use of the **level** attribute at all component levels, whether numbered or unnumbered components are used. Standard archival units of fonds, series, file, and item are used. See:

- Statement of Principles for the CUSTARD Project, section 2.1 (www.archivists.org/news/custardproject.asp)
- ISAD(G)v2: General International Standard Archival Description ISAD(G), Appendix A1, page 36 (www.ica.org/biblio/com/cds/isad_g_2e.pdf)

The **level** attribute value can be used to define searches, to generate navigators, to insert headings, and for other processing and display purposes.

The fonds may be divided into subfonds. The series level may be divided into subseries. EAD provides for further subdivision of subfonds and subseries through setting the **level** attribute to “otherlevel” and the **otherlevel** attribute to designate a succession of “sub-sub” levels as needed. Alternately, a subfonds may be nested within another subfonds or a subseries may be nested inside another subseries. With this usage, a style sheet will have to use the component structure to distinguish one type of subseries from another.

Similarly, file-level components may be subdivided with additional levels of hierarchy before reaching the item level. This may be done through setting the **level** attribute to “otherlevel” and the **otherlevel** attribute to “subfile” or another local term. Alternatively, since there are not generally accepted terms for subdivisions of a file, a file may be nested within another file. With this usage, a style sheet will have to use the component structure to distinguish one type of file from another.

TABLE 1: <ead>, <eadheader>, and <frontmatter>

Elements and Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
<ead>	Req				
relatedencoding=	Opt	In most circumstances, relatedencoding attribute will only be set at <eadheader> and <archdesc> due to the likelihood that each will be mapped to a different descriptive encoding system. If both of those elements map to the same standard, the value could be set for <ead> instead.			
<eadheader>	Req				
langencoding=	M	Set to "iso639-2b."			
scriptencoding=	MA	Set to "iso15924."			
relatedencoding=	M	Indicate a descriptive encoding system to which the <eadheader> elements can be mapped. Since the intention of the <eadheader> elements is to provide more robust and uniform discovery metadata, Dublin Core may be the most appropriate system.			
repositoryencoding=	M	Set to "iso15511."			
countryencoding=	M	Set to "iso3166-1."			
dateencoding=	M	Set to "iso8601."			
<eadid>	Req	The content of this element, together with its attributes, must uniquely identify the EAD instance.			
countrycode=	M	Use ISO 3166-1.			
mainagencycode=	M	Use a repository code supplied by the Library of Congress, the National Library of Canada (MARC Code List for Organizations), the Historical Manuscripts Commission in the United Kingdom (ARCHON), other code assigned by OCLC, by RLG, or by a national authority. The code should be formulated according to ISO 15511. If no appropriate national authority exists, a unique identifier of the host system must be developed using ISO 15511.			
publicid=	MA	Content is defined in ISO/IEC 9070:1991, intended to be universally unique. The <eadid> should include at least one of the following: publicid, identifier, or url.			
identifier=	MA	A machine-readable unique identifier. The <eadid> should include at least one of the following: publicid, identifier, or url.			

Elements and Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
url=	MA	Should be expressed in absolute terms (e.g., http://www.loc.gov/ead/ms99999.xml). The <eadid> should include at least one of the following: publicid, identifier, or url.			
encodinganalog=	MA	Maps to URL.		856\$u	Identifier
<filedesc>	Req				
<titlestmt>	Req				
<titleproper>	Req	Use for formal title of the finding aid itself and not the title of the fonds or record group being described.			
encodinganalog=	M			245\$a	Title
<author>	MA	Record the name of the person or institution responsible for the intellectual content of the encoded finding aid.			
encodinganalog=	M			245\$c	Creator; Contributor
<publicationstmt>	M				
<publisher>	M				
encodinganalog=	M			260\$b	Publisher
<date>	M				
encodinganalog=	M			260\$c	Date
normal=	M	Use ISO 8601.			
<address>	Rec	System entities must be resolved in a union environment.			
encodinganalog=	M			260\$a	
<notestmt>	Opt	May be used, per local conventions, for a variety of textual notes, especially to enrich available discovery metadata (see example in the Introduction, page 3).			
encodinganalog=	M			500; 653	Description; Subject
<profiledesc>	M				
<creation>	M	Statement recording facts about the encoding of the finding aid.			
encodinganalog=	M			500	
<date>	Rec	Date of initial encoding into EAD.			
normal=	MA	Use ISO 8601.			
<language>	M				
<language>	M				
encodinganalog=	M			546	Language

Elements and Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
langcode=	M	Use ISO 639-2b.		041	
scriptcode=	MA	Use ISO 15924.			
<descrules>	Opt				
encodinganalog=	Rec		3.7.2 Rules or conventions		
<revisiondesc>	Rec				
<change>	Rec				
encodinganalog=	M			583	
<item>	Rec				
<date>	Rec				
normal=	MA	Use ISO 8601.			
<frontmatter>	Opt	<eadheader> is preferred as the source for title page information in union environments. <frontmatter> is reserved for local applications.			

TABLE 2: <archdesc>

Elements & Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
<archdesc>	Req				
level=	Req	Most commonly set as fonds (use collection or recordgrp as applicable). This element is considered an essential element for data exchange by ISAD(G)v2.	3.1.4		
type=	Rec				Type
relatedencoding=	M	Indicate descriptive encoding system to which the <archdesc> elements can be mapped. Since <archdesc> elements describe the archival materials, MARC 21 or ISAD(G)v2 may be the most appropriate system.			
<did>	Req				
<origination>	M	This element is considered an essential element for data exchange by ISAD(G)v2.			
<persname corpname famname name>	Rec	Use appropriate name tag to indicate the type of origination name.			
encodinganalog=	Rec		3.2.1	100 (persname or famname), 110 (corpname), 111 (meeting)	Creator
<unittitle>	M	This element is considered an essential element for data exchange by ISAD(G)v2.			
encodinganalog=	Rec		3.1.2	245\$a	Title

Elements & Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
<unitdate>	M	US repositories following APPM practice normally include <unitdate> as part of <unittitle>, whereas British and Canadian practice, following ISAD(G)v2 use <unitdate> at the same level as <unittitle>. Given the likelihood of further international standardization, separate title and date is preferred but both practices are permitted. Repeat <unitdate> if both inclusive and bulk dates are given. This element is considered an essential element for data exchange by ISAD(G)v2.			
type=	M				
normal=	M	Use ISO 8601 to normalize dates to the extent they are known (see the Introduction, page 3-4 for examples).			
encodinganalog=	Rec	Use if materials are manuscripts (MARC "u" format); MARC encodinganalog depends on whether inclusive, single, or bulk dates are appropriate.	3.1.3	245\$f (inclusive or single); 245\$g (bulk)	Coverage (Temporal); Date
encodinganalog=	Rec	Use if the materials are other than archives and personal papers collections (MARC "g" format).	3.1.3	260\$c	Coverage (Temporal); Date
datechar=	MA	Set value to indicate whether dates given are of creation or accumulation when ISAD(G)v2 encodinganalog set to 3.1.3.			
<physdesc>	M				
<extent>	M	Use multiple <extent> tags for multiple views, items, linear feet, etc. Units of measure should be expressed either as part of the content or this tag or in a unit attribute. This element is considered an essential element for data exchange by ISAD(G)v2.			
encodinganalog=	Rec		3.1.5	300	
<phystech>	Opt				

Elements & Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
encodinganalogs=	Rec		3.4.4	340 and 538	
<abstract>	Rec	Use for brief summary of collection contents at highest level, in addition to <scopecontent> for fuller discussion. At component level, use <scopecontent> rather than <abstract>.			
encodinganalogs=	Rec			520	Description
<physloc>	Opt				
encodinganalogs=	Rec			852\$, 090	
<originalsloc>	Opt				
encodinganalogs=	Rec		3.5.1	355	
<repository>	M				
encodinganalogs=	Rec			852	Publisher
<corpname name>	Rec				
<subarea>	Rec				
<address><addressline>	Rec				
<unitid>	M	This element is considered an essential element for data exchange by ISAD(G)v2.	3.1.1	050, 090, 099	Identifier
countrycode=	M	Use ISO 3166-1.			
repositorycode=	M	Use ISO 1551.			
<langmaterial>	M		3.4.3	546	Language
<language>	M				
langcode=	M	Use ISO 639-2b.		041	
<note>	Opt				
encodinganalogs=	Rec			500	
<bioghist>	M				
encodinganalogs=	Rec		3.2.2	545	
<scopecontent>	M	If organization/arrangement cannot readily be separated from the scope note, give as part of <scopecontent>. If separable, use <arrangement> and do not nest within <scopecontent>.			
encodinganalogs=	Rec		3.3.1	520	Description

Elements & Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
<arrangement>	Rec	Use to encode the filing sequence of the material (e.g., alphabetical or chronological) and/or the manner in which the collection has been ordered (e.g., organized into series).			
encodinganalog=	Rec		3.3.4	351	
<controlaccess>	Rec	Subelements are repeatable and should be used if applicable.			
<corpname>	Rec				
encodinganalog=	Rec			110, 111, 610, 611, 710, 711	
source=	Rec				
rules=	Opt				
<persname>	Rec				
encodinganalog=	Rec			100, 600, 700	
source=	Rec				
rules=	Opt				
<geogname>	Rec				
encodinganalog=	Rec			651	Coverage (Spatial)
source=	Rec				
rules=	Opt				
<famname>	Rec				
encodinganalog=	Rec			100, 600	
source=	Rec				
rules=	Opt				
<subject>	Rec				
encodinganalog=	Rec			650	Subject
source=	Rec				
rules=	Opt				
<genreform>	Rec				
encodinganalog=	Rec			655	
source=	Rec				
rules=	Opt				
<occupation>	Rec				

Elements & Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
encodinganalog=	Rec			656	
source=	Rec				
rules=	Opt				
<function>	Rec				
encodinganalog=	Rec			657	
source=	Rec				
rules=	Opt				
<title>	Rec				
encodinganalog=	Rec			130, 630, 730	
source=	Rec				
rules=	Opt				
<controlaccess>	Rec	Access terms may grouped by nesting <controlaccess> within itself.			
<corpname persname >	Rec				
encodinganalog=	Rec			see above	see above
source=	Rec				
<accessrestrict>	MA	Use for conditions governing access.			
encodinganalog=	Rec		3.4.1	506	
<accruals>	Rec				
encodinganalog=	Rec		3.3.3	584	
<acqinfo>	Rec				
encodinganalog=	Rec		3.2.4	541	
<altformavail>	Rec				
encodinganalog=	Rec		3.5.2	530	
<appraisal>	Rec				
encodinganalog=	Rec		3.3.2	583\$a	
<custodhist>	Rec				
encodinganalog=	Rec		3.2.3	561	
<prefercite>	Rec				
encodinganalog=	Rec			524	
<processinfo>	Rec				
encodinganalog=	Rec			583, 500	
<userrestrict>	MA	Use for conditions governing use.			

Elements & Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
encodinganalog=	Rec		3.4.2	540	
<relatedmaterial>	Rec				
encodinganalog=	Rec		3.5.3	544 1	
<separatedmaterial>	Rec				
encodinganalog=	Rec		3.5.3	544 0	
<otherfindaid>	Opt				
encodinganalog=	Rec		3.4.5	555	
<bibliography>	Opt				
encodinganalog=	Rec		3.5.4		
<odd>	Opt				
encodinganalog=	Rec		3.6.1	500	

TABLE 3: <dsc>

Elements & Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
<dsc>	MA	Single <dsc> model should be used with nested components in which descriptions for subfonds, series, subseries, file, and item are placed at the appropriate level in the component hierarchy.			
type=	Req	Type="combined" recommended (description and detailed listing of components combined in a single <dsc>).			
<c>/<c0x>	M	Numbered and unnumbered components are functionally equivalent. Use of the numbered components may provide a more readily intelligible view of the nested structure to the human eye and may make machine manipulation easier. Only one of the options can be used in a given <dsc>. Institutions are urged to adopt one model or the other as standard practice. Nested <c>/<c0x>s should be used as needed to reflect the intellectual structure of the archival materials. The full suite of subelements and attributes described are available at each component level.			
level="subfonds/series/file"	M	The levels of the components should be subordinate to the level set for in <archdesc> (see "Archival Levels," page 6). This element is considered an essential element for data exchange by ISAD(G)v2.			
<did>	Req				
<origination>	MA	Mandatory if creator at level being described is different than defined at the <archdesc> or in a parent level. This element is considered an essential element for data exchange by ISAD(G)v2.			
<persname corpname famname name>	Rec	Use appropriate name tag to indicate the type of origination name.			

Elements & Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
encodinganalog=	Rec		3.2.1	100 (persname or famname), 110 (corpname), 111 (meeting)	Creator
<unitid>	MA	All units of a description should be given a unique identifier. While optional, it is recommended that, if a unique identifying number or filing code is present, it should be encoded as <unitid> rather than <container> or <unittitle>. This element is considered an essential element for data exchange by ISAD(G)v2.			
encodinganalog=	Rec		3.1.1	050, 090, 099	Identifier
countrycode=	MA	The value of this attribute is considered to be inherited from the equivalent mandatory entry at the uppermost level (<archdesc>). In the unlikely circumstance that the records in a component are not held in the same country as their parent, the value should be set for the component's country using ISO 3166.			
repositorycode=	MA	The value of this attribute is considered to be inherited from the equivalent mandatory entry at the uppermost level (<archdesc>). If the records in a component are not held in the same repository as their parent, the value should be set using ISO 15511.			
<unittitle>	M	Considered the minimum for description at component levels because some description is needed for users to decide if documents are worthy of further investigation. This element is considered an essential element for data exchange by ISAD(G)v2.			
encodinganalog=	Rec		3.1.2	245\$a	Title

Elements & Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
<unitdate>	Rec	Recommended if a more specific creation date can be provided for a component than given in its parent. Such entries provide for fuller description of a unit for users and facilitate more effective searching by date. If multiple single dates or date ranges are present, each should be encoded in its own <unitdate>. Where no <unittitle> content exists, <unitdate> may be placed within <unittitle> so that there is some title-related content. This element is considered an essential element for data exchange by ISAD(G)v2.			
encodinganalog=	Rec		3.1.3	245\$f, 245\$g, 260\$c	Coverage (Temporal); Date
type=	Opt	Use to distinguish inclusive and bulk dates.			
normal=	Rec	To aid in searching by date; use ISO 8601 (see the Introduction, page 3-4, for examples).			
<physdesc>	Rec				
<extent>	Rec	If extent data is present, it should be encoded here rather than being incorporated into <unittitle> or another element. Units of measure should be expressed either as part of the content or this tag or in a unit attribute. This element is considered an essential element for data exchange by ISAD(G)v2.			
encodinganalog=	Rec		3.1.5	300	
<phystech>	Opt				
encodinganalog=	Rec		3.4.4	340 and 538	
<langmaterial>	MA	If the material being described is in a language different from that specified in the langmaterial attribute in <archdesc>, use at the component level.	3.4.3	546	Language
<language>	MA				
langcode=	MA	Use ISO 639-2.		041	

Elements & Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
<scopecontent>	Rec	At appropriate component levels (subgroup/subfonds/series), components should include scope and content information. Other levels may include scope and content notes as needed. Use of <scopecontent> is preferred over <abstract>.			
encodinganalog=	Rec		3.3.1	520	
<accessrestrict>	MA	Mandatory if particular conditions govern access.			
encodinganalog=	Rec		3.4.1	506	
<userrestrict>	MA	Mandatory if there are particular conditions, such as copyright, governing use.			
encodinganalog=	Rec		3.4.2	540	

TABLE 4: Item Level, Linking

Elements & Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
<c>/<c0x>	MA	Item-level description that links to digital archival content must uniquely identify an item using <unittitle>, <unitid>, or a combination.			
level="item"	M	All of the general guidelines for components apply to item-level <c>s and if the component links to a digital object, the following guidelines also apply.	3.1.4		
<did>	Req				
<unittitle>	MA	Required if <unitid> is not available.			
encodinganalog=			3.1.2	245\$a	Title
<unitid>	MA	Required if <unittitle> is not available.			
encodinganalog=			3.1.1	050, 090, 099	Identifier
<unitdate>	Rec				
encodinganalog=			3.1.3	245\$f, 245\$g, 260\$c	Date
type=	Rec				
normal=	Rec	ISO 8601			
<daogrp>	Req	Required for linking to digital archival objects (see "Digital Objects and Linking Elements," page 4).			
<daogrp>	Req	Required for linking to digital archival objects (see "Digital Objects and Linking Elements," page 4).			
<daoloc>	Req	Required for linking to digital archival objects (see "Digital Objects and Linking Elements," page 4).			
role=	Rec	Use to indicate the nature of the linked object (JPEG, XML, SGML, video) by MIME type.			
href=	Rec	Mandatory if entityref is not used. Use to link directly to external digital object such as larger image or METS object. Xlink and xpointer are not commonly used.			

Elements & Attributes	Status	Comments/Application Notes	Encoding Analogs		
			ISAD(G)v2	MARC 21	DC
entityref=	Rec	Mandatory if href is not used. Use to link to an entity that contains the actual link to an external digital object. Xlink and xpointer are not commonly used.			
<daodesc>	Rec	Use if human-readable description of complex digital object is required and not provided by <unittitle>.			
encodinganalog	Rec			856\$3	