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# Information and documentation – Bibliographic reference model and serialization

THE CALENDARING AND SCHEDULING CONSORTIUM

TC VCARD

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## **CALCONNECT STANDARD**

### **WORKING DRAFT**

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## FOREWORD

The Calendaring and Scheduling Consortium ("CalConnect") is a global non-profit organization with the aim to facilitate interoperability of collaborative technologies and tools through open standards.

CalConnect works closely with international and regional partners, of which the full list is available on our website (<https://www.calconnect.org/about/liaisons-and-relationships>).

The procedures used to develop this document and those intended for its further maintenance are described in the CalConnect Directives.

In particular the different approval criteria needed for the different types of CalConnect documents should be noted. This document was drafted in accordance with the editorial rules of the CalConnect Directives.

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This document was prepared by Technical Committee *VCARD*.

## INTRODUCTION

ISO 690 has been in place for over 30 years as of this writing, as the ISO model of bibliographical referencing and citation (being one of several such standards). Over that period, a multitude of electronic referencing tools and conventions has evolved, and any of them can be used to encode at least a subset of the bibliographic information captured in ISO 690. However, there is no authoritative reference model on how to represent the guidelines of ISO 690 electronically. As a result, existing electronic referencing tools cannot be surveyed rigorously, to determine the extent to which they comply with the requirements of ISO 690, either with regard to content coverage or with the base rendering requirements of the specification. Nor is there a fallback model of ISO 690 in place, to draw on where existing electronic referencing tools do not fully cover the requirements of the specification.

In addition, a rigorous logical model of ISO 690 would help identify any gaps, inconsistencies, or areas open for interpretation in the conceptual model proposed in the specification, and in the rendering model described there. (The latter is more liable to need ambiguities fixed than the former, since these will become apparent in any attempts to render references in a way compliant with ISO 690.)

This document proposes a reference model and serialisation for ISO 690. The serialisation can be used to represent references compliant to ISO 690; being formalised and complete, it can also be used to evaluate existing bibliographic tools for coverage of the standard, and to identify any issues they may have. The BibTeX tool [1] has been used as a representative bibliographic tool in Appendix C to illustrate comparison against a reference model, because of its popularity and relative completeness.

A separate document is intended to propose an example rendering stylesheet for the serialisation of this model, which aligns with the examples used in ISO 690. ISO 690 prescribes some aspects of rendering (e.g. sequence, use of “in:” and “at:”), and leaves others to implementation (e.g. use of italics, use of punctuation). The stylesheet allows the container model and the rendering model of ISO 690 to be differentiated, and the rendering items prescribed by ISO 690 to be identified clearly.

## 1. SCOPE

This document provides a reference model and serialisation for [ISO 690](#).

## 2. NORMATIVE REFERENCES

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- ISO 639, *Code for the representation of names of languages*
- ISO 690, *Information and documentation – Guidelines for bibliographic references and citations to information resources*
- ISO 8601, *Data elements and interchange formats – Information interchange – Representation of dates and times*
- ISO 15924, *Information and documentation – Codes for the representation of names of scripts*



### 3. TERMS AND DEFINITIONS

For the purposes of this document, the terms and definitions given in [ISO 690](#) and the following apply.

#### 3.1. bibliographer

entity responsible for creating a reference

## 4. REFERENCE MODEL

This document provides a number of data models that collectively provide the necessary data elements for the ISO 690 citation style.

In this document, the model is discussed with reference to [ISO 690](#), with the rendered bibliographic references of each clause in [ISO 690](#) serialised according to [Appendix A](#).

Each aspect of the model is given with a cross-reference to [ISO 690](#); a listing of the relevant model components; and a listing of the corresponding components of [\[1\]](#).

5. DATA TYPES

Common data types used within this document are provided below.

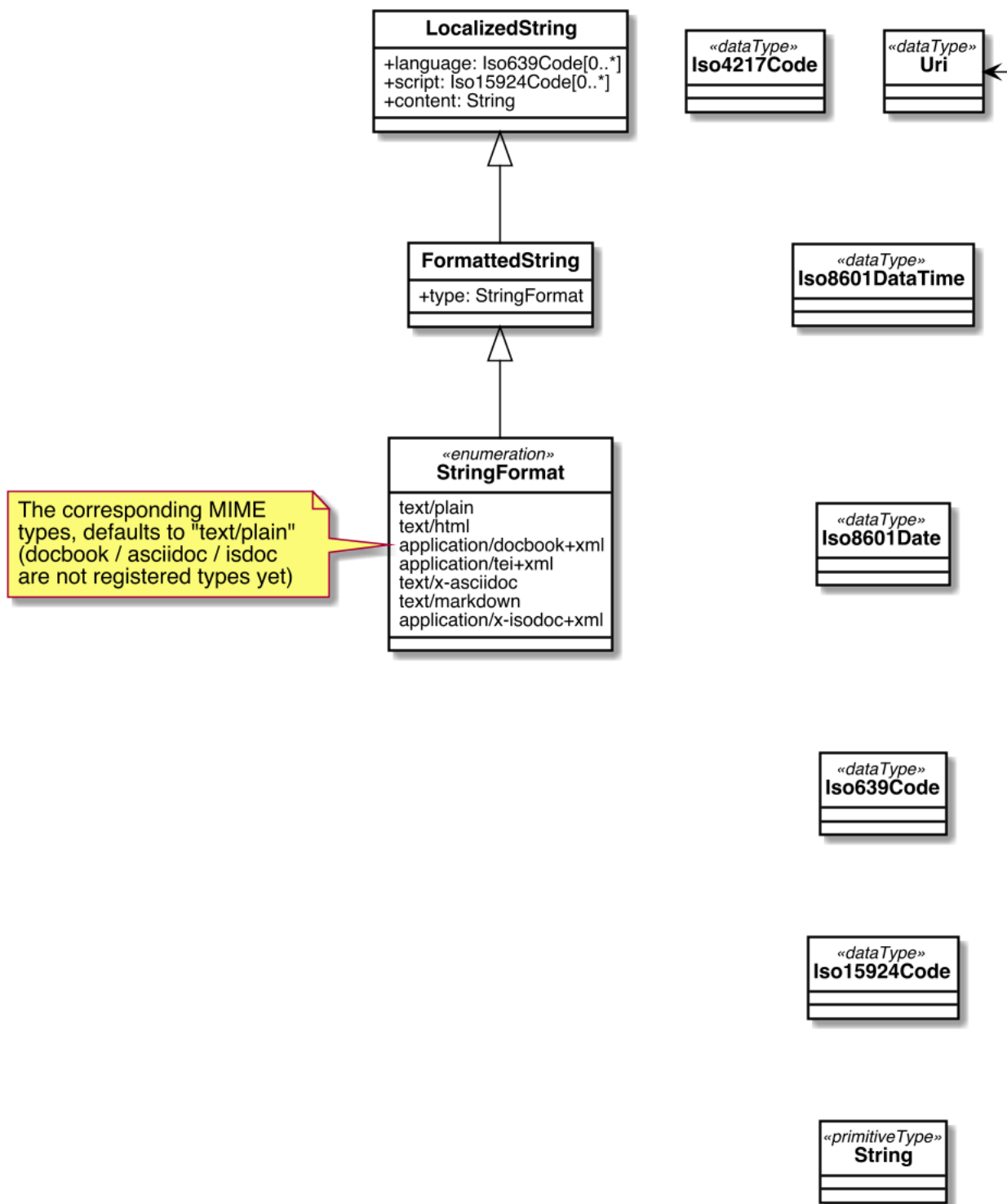


Figure 1

Uri	Container for URIs, as defined by <a href="#">RFC 3986</a> .
Iso8601Date	Gregorian date, as specified in <a href="#">ISO 8601</a> .
Iso8601DateTime	Gregorian date and time, as specified in <a href="#">ISO 8601</a> .
Iso639Code	Code for language or language family, as specified in <a href="#">ISO 639</a> . The specification is open as to whether the two-letter code or the three-letter code for languages is used.

ISO15924Code	Code for scripts (writing scripts), as specified in <a href="#">ISO 15924</a> .
DateTime	Type which allows date and time to be specified as either a Gregorian date and time, as specified in <a href="#">ISO 8601</a> , as text, or as both.
TypedUri	URI associated with a type. The types of URI are open-ended, but include the IANA link relations specified in <a href="#">RFC 8288</a> .
FormattedString	String which is formatted according to conventions specified in a named MIME type ( <a href="#">RFC 2046</a> ).
LocalizedString	FormattedString which optionally specifies its language and/or script.

6. BIBLIOGRAPHIC ITEM MODEL

The following is a UML model intended to capture the structures represented in ISO 690, and is intended as a reference model for ISO 690. The various elements of the model are discussed below, with illustrations using the sample serialisation (Appendix A).

The reference model for citations is provided in Appendix B.

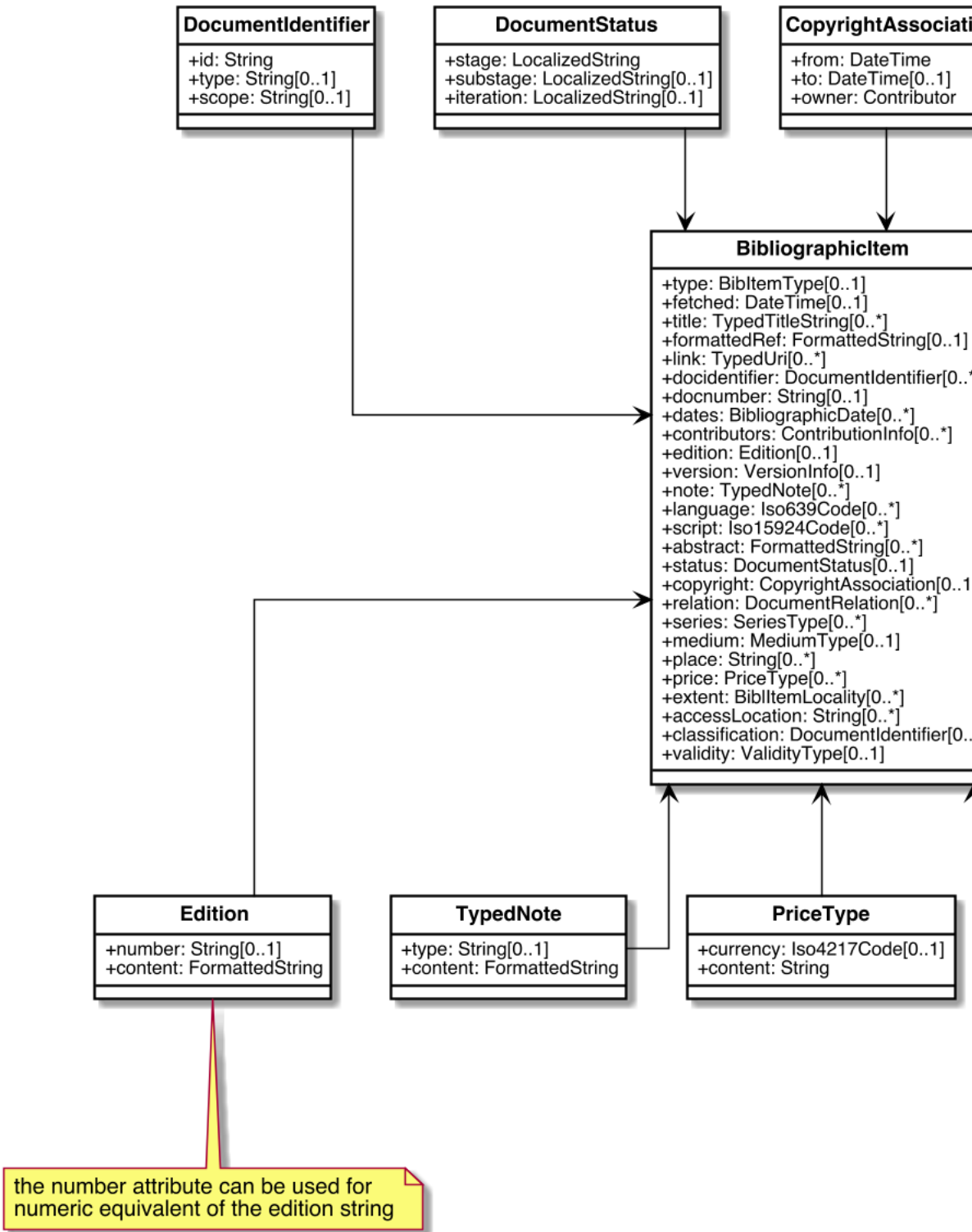


Figure 2-1

BibliographicItem/type	The type of the bibliographic item.
BibliographicItem/fetched	The date at which the bibliographic item was last updated.
BibliographicItem/title	The title(s) of the bibliographic item.
BibliographicItem/title/type	The type for the given title of the bibliographic item.
BibliographicItem/uri	The URI(s) associated with the bibliographic item.
BibliographicItem/docIdentifier	The identifier(s) of the bibliographic item in an international standard scheme.
BibliographicItem/docIdentifier/type	The scheme of the identifier
BibliographicItem/docIdentifier/scope	The scope of the identifier (in case the identifier is not for the document but for a superset or subset of entities; or in case the identifier is for a particular instance of the document, e.g. for a particular format or edition of the document)
BibliographicItem/docIdentifier/id	The identifier itself within the international standard scheme.
BibliographicItem/date	One or more date-times associated with the production of or access to the bibliographic item.
BibliographicItem/contributor	A contributor the production of the bibliographic item.
BibliographicItem/edition	The edition of the bibliographic item.
BibliographicItem/edition/number	A numeric equivalent to the edition, if the edition is given as discursive text.
BibliographicItem/version	The version of the bibliographic item (within an edition).
BibliographicItem/version/revision-date	The date at which the current version of the bibliographic item was produced.
BibliographicItem/version/draft	The identifier for the current draft of the bibliographic item.
BibliographicItem/note	Note(s) associated with the bibliographic item.
BibliographicItem/note/type	The class of the note associated with the bibliographic item.
BibliographicItem/language	The language(s) in which the bibliographic item is expressed.
BibliographicItem/script	The script(s) in which the bibliographic item is written.
BibliographicItem/formattedRef	A pre-formatted version of the bibliographic item reference, used to sidestep the rendering of the reference out of its component parts.
BibliographicItem/abstract	The abstract of the bibliographic item.
BibliographicItem/status	The publication or preparation status of the bibliographic item.
BibliographicItem/status/stage	The stage of the document status (mandatory component).
BibliographicItem/status/substage	The substage of the document status (optional component).
BibliographicItem/status/iteration	The iteration of the given status that the document is currently in (e.g. 3 for a third draft).
BibliographicItem/copyright	The copyright status of the bibliographic item.
BibliographicItem/copyright/from	The copyright date of the bibliographic item.
BibliographicItem/copyright/to	The date when the copyright of the bibliographic item expires.
BibliographicItem/copyright/owner	The copyright owner for the bibliographic item.
BibliographicItem/relation	The relation of the bibliographic item to another bibliographic item.
BibliographicItem/series	The series of the bibliographic item.
BibliographicItem/medium	Information about the medium and transmission of the bibliographic item.
BibliographicItem/medium/content	The content type of the bibliographic item, reflecting the form of communication with it is expressed and perceived.
BibliographicItem/medium/form	The media type of the bibliographic item, used to access the content of the item, including file format for electronic media.
BibliographicItem/medium/carrier	The storage medium of the physical medium of the bibliographic item.
BibliographicItem/medium/size	The size of the physical medium of the bibliographic item.

BibliographicItem/medium/scale	The scale of the cartographic material in the bibliographic item.
BibliographicItem/place	The geographic location associated with the production of the bibliographic item.
BibliographicItem/extent	The extent of the bibliographic item. Repeats for different levels of granularity (e.g. volume number, page number), or for discontinuous ranges (e.g. multiple page ranges)
BibliographicItem/extent/type	The type of extent (e.g. section, clause, page)
BibliographicItem/extent/referenceFrom	The starting value of the extent
BibliographicItem/extent/referenceTo	The end value of the extent as a range, if applicable
BibliographicItem/accessLocation	The location where the bibliographic item may be accessed.
BibliographicItem/license	A license under which the bibliographic item has been issued. Preferably a URI or short identifier, rather than descriptive text.
BibliographicItem/classification	The classification of the bibliographic item according to a standard classification scheme.
BibliographicItem/keyword	A keyword for the bibliographic item.
BibliographicItem/keyword/vocabid	An item in a controlled vocabulary corresponding to the keyword
BibliographicItem/keyword/vocabid/type	A label for the controlled vocabulary.
BibliographicItem/keyword/vocabid/uri	A URI for the controlled vocabulary item.
BibliographicItem/keyword/vocabid/code	The code for the controlled vocabulary item.
BibliographicItem/keyword/vocabid/term	The term itself for the controlled vocabulary item.
BibliographicItem/keyword/taxon	A sequence of taxa presenting a keyword in a hierarchical context.
BibliographicItem/validity	Information about how long the current description of the bibliographic item is valid for.

The foregoing elements map to the overall structure of [ISO 690](#) as follows:

- BibliographicItem/contributor: 4.1 Creator
- BibliographicItem/title: 4.2 Title
- BibliographicItem/extent: 4.3 Component parts
- BibliographicItem/medium: 4.4 Medium designation
- BibliographicItem/edition: 4.5 Edition and version
- BibliographicItem/version: 4.5 Edition and version
- BibliographicItem/status: 4.5 Edition and version
- BibliographicItem/date: 4.6 Production
- BibliographicItem/place: 4.6 Production
- BibliographicItem/contributor: 4.6 Production
- BibliographicItem/extent: 4.7 Numeration and pagination
- BibliographicItem/series: 4.8 Series title and identifier
- BibliographicItem/docIdentifier: 4.9 Identifier
- BibliographicItem/accessLocation: 4.10 Location
- BibliographicItem/uri: 4.10 Location
- BibliographicItem/note: 4.11 Other elements
- BibliographicItem/language: 4.11 Other elements
- BibliographicItem/script: 4.11 Other elements
- BibliographicItem/abstract: 4.11 Other elements
- BibliographicItem/copyright: 4.11 Other elements

- BibliographicItem/license: 4.11 Other elements
- BibliographicItem/classification: 4.11 Other elements
- BibliographicItem/keyword: 4.11 Other elements
- BibliographicItem/type: 5. Resource Types
- BibliographicItem/relation: 5. Resource types
- BibliographicItem/formattedRef: (presentation)
- BibliographicItem/fetched: (record metadata)
- BibliographicItem/validity: (record metadata)

## 6.1. Validity

The representation of a bibliographic item can optionally include information on the time interval where this bibliographic item is determined valid, and the revision number (represented as a date). Each of such is represented as a `Iso8601DateTime` object.

ValidityInfo/validityBegins      the date and time when this object becomes valid. The value type is `Iso8601DateTime`.

ValidityInfo/validityEnds      the date and time when this object becomes invalid. The value type is `Iso8601DateTime`.

ValidityInfo/revision      issuance date/time of this object. The value type is `Iso8601DateTime`.

Serialization of `ValidityInfo` is demonstrated below.

### EXAMPLE

```
<bibitem>
  <validity>
    <validityBegins type="validityBegins">2018-01-01</validityBegins>
    <validityEnds type="validityEnds">2118-01-01</validityEnds>
    <revision type="revision">2017-01-01</revision>
  </validity>
</bibitem>
```

## 6.2. Series

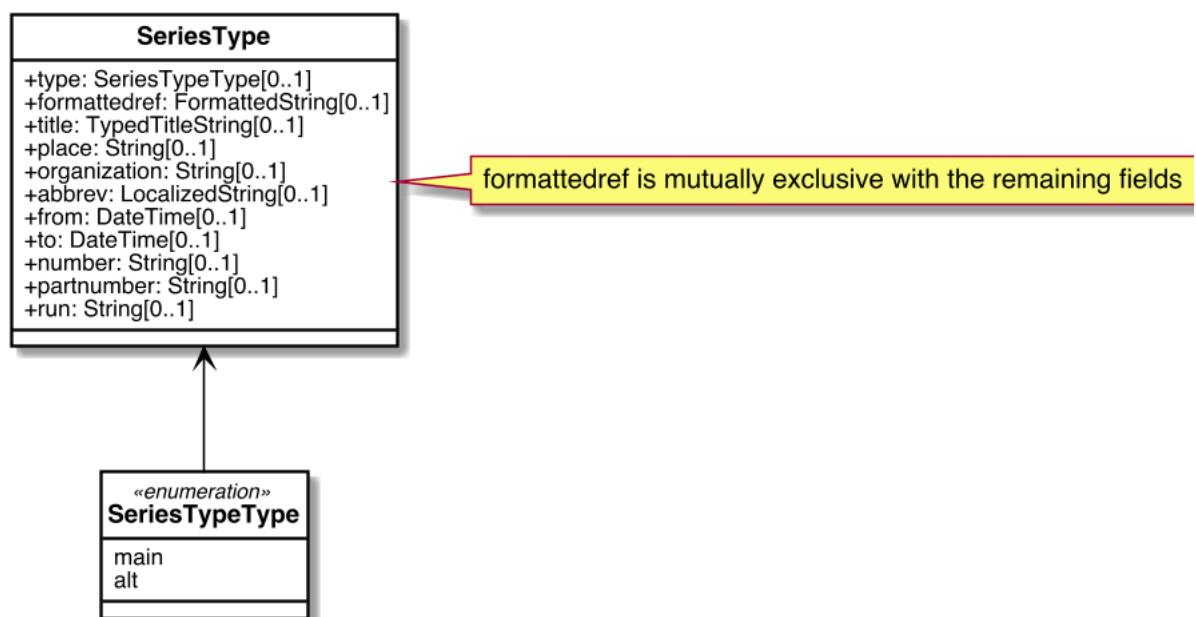


Figure 3-1



SeriesType/type	The type of series description expressed in this container. The main type (which is the default) is the current, authoritative series description; "alt" includes alternative (historical) series descriptions.
SeriesType/title	The title of the series.
SeriesType/place	The place where the series is issued; used for disambiguation.
SeriesType/organization	The organization issuing the series; used for disambiguation.
Series/formattedTitle	A pre-formatted version of the series description, incorporating all needed disambiguating information in proper format.
Series/abbrev	The abbreviation under which the series is known.
Series/dateFrom	The start of the date range when the series has been known under the given title.
Series/dateTo	The end of the date range when the series has been known under the given title.
Series/number	The number of the bibliographic item within the series.
Series/partnumber	The part-number of the bibliographic item within the series.

### 6.3. Bibliographic Dates

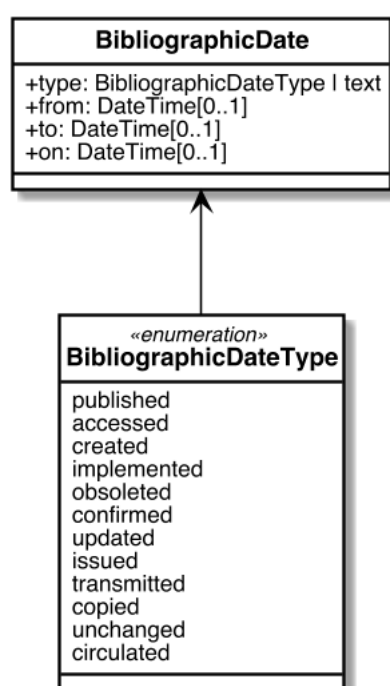


Figure 4-1

BibliographicDate	Date associated with the production of or access to a bibliographic item.
BibliographicDate/type	The phase of the production of or access to a bibliographic item.
BibliographicDate/from	The start of the date range described.
BibliographicDate/to	The end of the date range described.
BibliographicDate/on	The point date described (mutually exclusive with date range).

### 6.4. Bibliographic Item Types

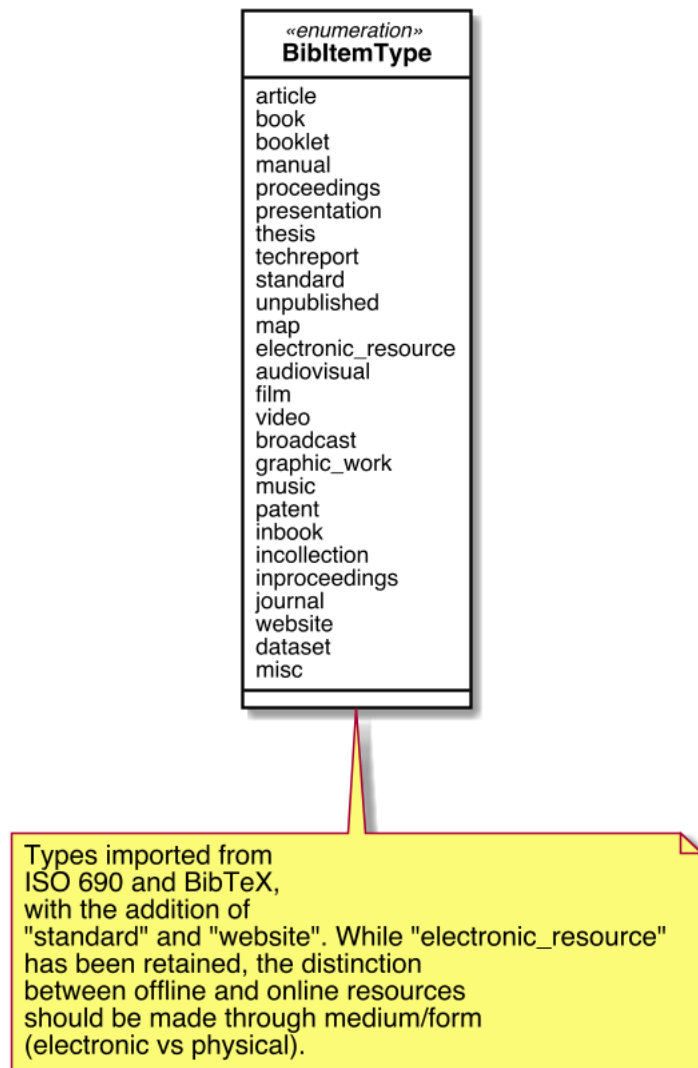


Figure 5-1

BibItem Type      The range of possible bibliographic items covered by this model. Note that legal documents are expressly outside the scope of ISO 690.

## 6.5. Keywords

Keywords may optionally be aligned to one or more items in controlled vocabularies. That alignment involves an identifier for the controlled vocabulary item, and a label or namespace for the controlled vocabulary. The item identifier may be a keyword, a code for the keyword, or a URI for the keyword; the basic Relaton model does not differentiate between these. The controlled vocabulary item may be presented in isolation, or as a hierarchy of terms (taxons).

## 7. CONTRIBUTION AND CONTRIBUTOR MODELS

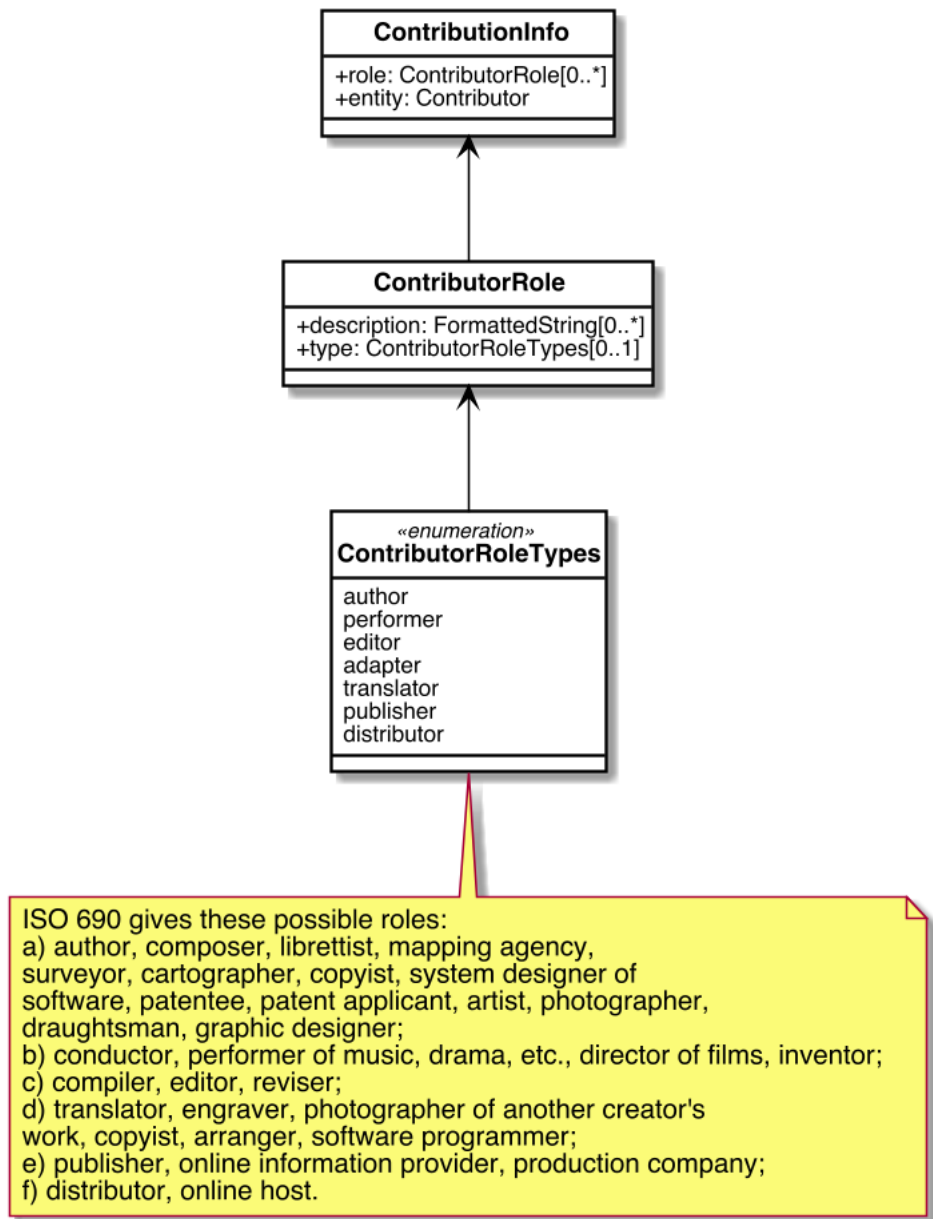


Figure 6-1

ContributionInfo/role	A description of the role of the contributor in the production of the bibliographic item.
ContributionInfo/role/type	The broad class of role of the contributor. The breakdown used in ISO 690 is recommended as such a classification: author, performer, editor, adapter, translator, publisher, distributor.
ContributionInfo/role/description	A more detailed description of the role of the contributor.
ContributionInfo/entity	The contributor involved in the production of the bibliographic item; may be either a person or an organization.

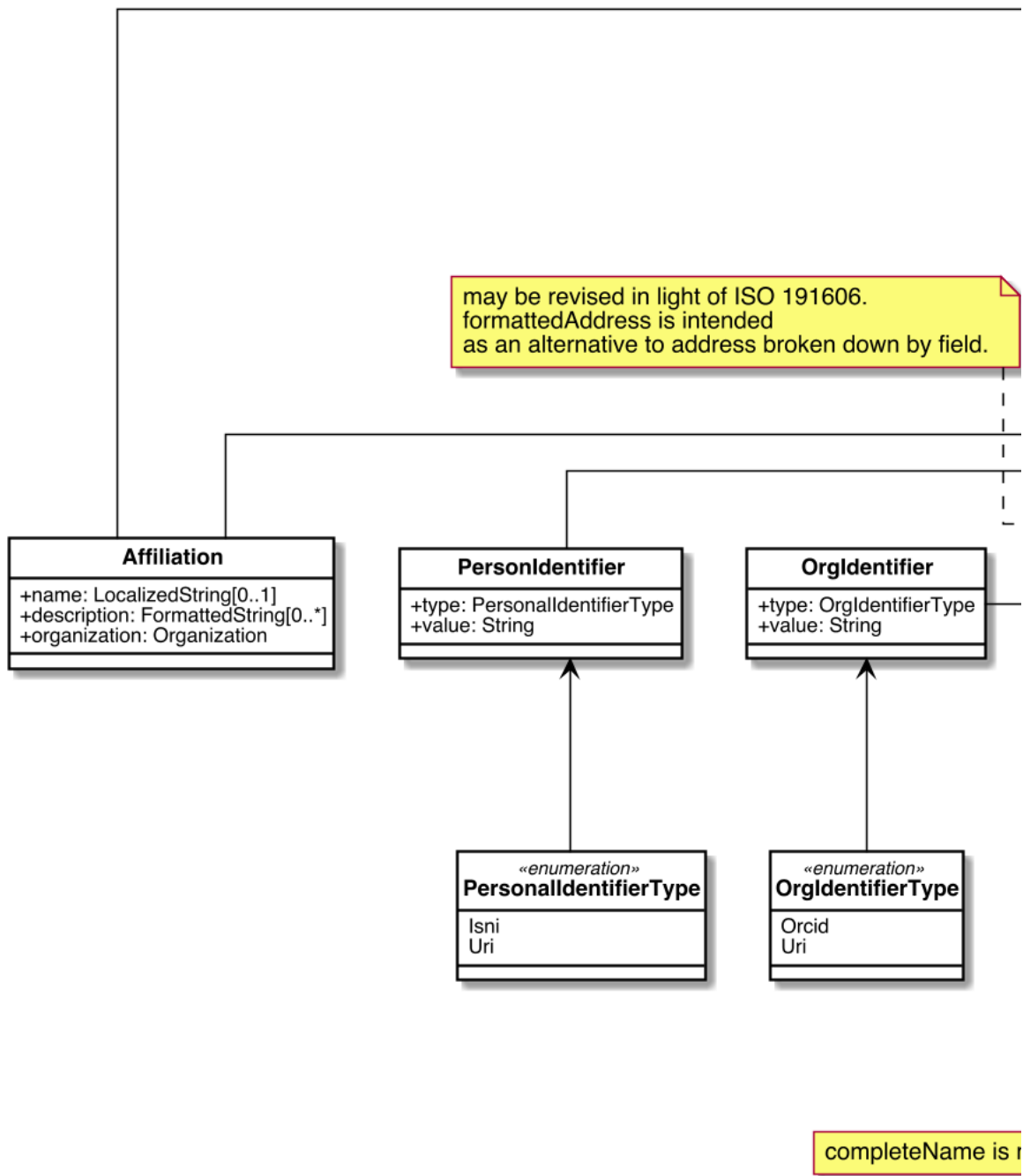


Figure 7-1

Person/name  
Person/name/forename

The name of a person.  
A forename of the person.

Person/name/initials	The initials of the person (initials of forenames and middle names).
Person/name/surname	A surname of the person.
Person/name/addition	A suffixed addition to the name of the person.
Person/name/prefix	A prefixed addition to the name of the person.
Person/name/completeName	The preformatted version of the name of the person, not broken down into its component parts.
Person/name/note	An additional note about the name of the person
Person/name/variant	A variant name
Person/name/variant/type	The type of variant of the name
Person/uri	A URI with information about the person.
Person/affiliation	The affiliation of the person within an organization.
Person/affiliation/name	The name of the affiliation of the person.
Person/affiliation/description	A more detailed description of the affiliation of the person.
Person/affiliation/organization	The organization with which the person is affiliated.
Person/identifier/value	An identifier of the person according to an international identifier scheme.
Person/identifier/type	The international identifier scheme for the identifier of the person.
Person/contact	Contact information for the person, including address, phone number, and email.
Organization/name	The name of the organization.
Organization/name/primary	The name of the organization (if it has variants).
Organization/name/variant/type	The type of variant name of the organization.
Organization/name/variant/primary	The variant name of the organization.
Organization/subdivision	The subdivision of the organization directly involved with the production of the bibliographic item.
Organization/subdivision/primary	The name of the subdivision (if it has variants).
Organization/subdivision/variant/type	The type of variant name of the subdivision.
Organization/subdivision/variant/primary	The variant name of the subdivision.
Organization/uri	A URI with information about the organization.
Organization/name/identifier/value	An identifier of the organization according to an international identifier scheme.
Organization/name/identifier/type	The international identifier scheme for the identifier of the organization.
Organization/name/contact	Contact information for the organization, including address, phone number, and email.
Organization/abbreviation	Abbreviation under which the organization is known.

8. BIBLIOGRAPHIC DOCUMENT RELATIONS

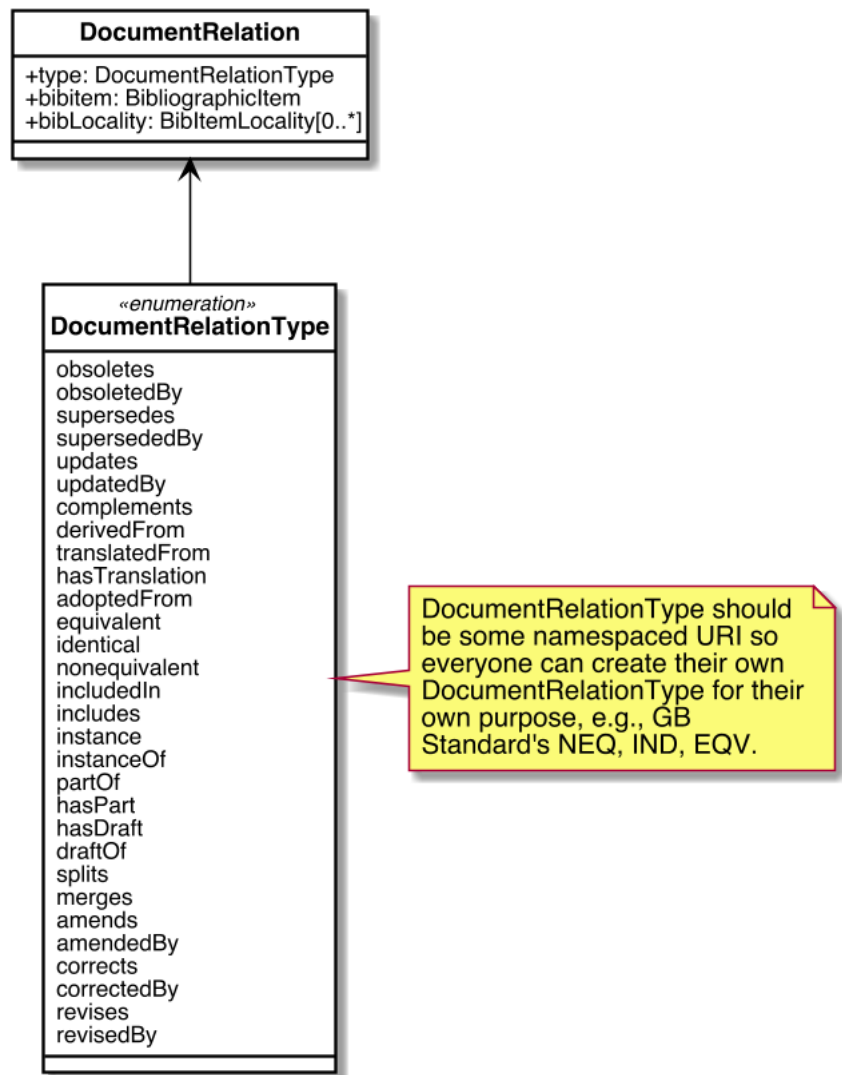


Figure 8-1

DocumentRelation/type	The type of document relation described. Different resource types have different relations between documents; but inclusion is applicable to most resource types (though there are constraints in which resource types can include which.)
DocumentRelation/bibItem	The bibliographic item to which this bibliographic item is described as related to.
DocumentRelation/bibLocality	The extent of the this bibliographic item which is related to the other bibliographic item as expressed in this instance, provided that it is not the entire bibliographic item that is so related.

## 9. PROVENANCE

Information in a reference typically comes from the publisher of a resource, and is included in the resource itself, as described in [ISO 690, Clause 4.1.2](#). [ISO 690, Clause 4.1.2](#) permits information to be supplied by other parties, and differentiated by including it in brackets. This can include both missing information (e.g. “[Untitled]”), and corrections (e.g. “1959 [i.e. 1995]”).

The party supplying emendations to reference information is identified in [ISO 690, Clause 4.1.2](#) as the citer of the reference. However, the citer should be differentiated from the bibliographer, in the case of bibliographies as consumable resources (e.g. as bibliographic databases):

- The publisher provides the primary source information about the resource, typically in the resource itself, but also as a feed of information to a bibliographer.
- The bibliographer compiles a bibliography as a list of references, and uses their judgement to supply information and to impose uniform representation and rendering of the list.
- The citer uses a bibliography within a resource, to identify cited resources, and may further adjust the bibliography they provide within the resource (e.g. for disambiguation, or to disaggregate references included in other references).

The bibliographer and the publisher in the contemporary bibliography universe are more active parties than in the traditional model, which relies exclusively on citer discretion. Bibliographers and publishers are invested in asserting that they are sources of truth about bibliographic resources; and the bibliographies covered by any model of electronic exchange include references provided by bibliographers and publishers, in bibliographic databases—as well as the references consumed and adjusted by citers from bibliographic databases.

So the original reference as obtained from a bibliographic database may need to be differentiated from any adjustments made to the reference by a citer; and the citer adjustments in some contexts may need to be overridden.

If the serialisation of bibliographic items is to reflect such adjustments to content, it will need to indicate the provenance of bibliographic information, and allow multiple versions of the same information, with differing provenance. At the simplest level there will simply be two or more different versions of the reference serialisation, some representing the publisher or bibliographer’s source of truth, and some representing the citer’s adjustments (in brackets). Adjustments made by the bibliographer would also be represented in brackets; this is long-standing routine practice in library catalogues.

A more granular approach would be to permit multiple instances of any element in the reference model, differentiated by provenance: this could be done with a child element (e.g. an XML attribute), or with a nested container. If no provenance is indicated, the information is assumed to be unchanged from the source of truth. A renderer can then choose which alternative to render depending on local requirements:

### EXAMPLE

```
<bibitem>
  <date><on>1959</on></date>
</bibitem>

<bibitem source="citer">
  <date><on>1959 [i.e. 1995]</on></date>
</bibitem>

<bibitem>
  <date><on>1959</on></date>
  <date source="citer"><on>1959 [i.e. 1995]</on></date>
</bibitem>
```

NOTE Breaking out completions and emendations into separate elements in the model (e.g. `<date><on><orig>1959</orig><corr>1995</corr></on></date>`) is not desirable, given how open-ended emendations can be (e.g. appearing anywhere in a string): they would complicate any serialisation of the model, to little real benefit.

## 10. CATEGORIES OF INFORMATION RESOURCE

- Source: [ISO 690, Clause 5](#)
- Serialisation: `bibitem@type`, `BibItemType`

While [ISO 690](#) does not prescribe a list of possible bibliographic types, there are categories specific to particular information resource categories ([ISO 690, Clause 5](#)), as well as rendering rules specific to information resource categories (e.g. [ISO 690, Clause 5.5](#): series title appears before item title for broadcasts). For that reason, bibliographic items should indicate what bibliographic type they belong to.

NOTE 1 The list of bibliographic types is a union of the types listed in [ISO 690](#) and [BibTeX](#). Master's Thesis and PhD Thesis from [BibTeX](#) are subsumed under "thesis".

The list maintains a distinction between the following resources, all of which are necessarily included in another resource:

"inbook"	A typically untitled part of a book. May be a chapter (or section, etc.) and/or a range of pages.
"incollection"	A part of a book having its own title.
"inproceedings"	An article in a conference proceedings.
"article"	An article from a journal or magazine.

NOTE 2 The above distinction aligns with [BibTeX](#) usage.

The following types have been added:

- dataset: an electronic dataset. Used to avoid the overloading of "electronic resource" as a type.
- webresource: a web resource, a single item accessible online, which is not composed of components all of which can be accessed in the same way. Used to avoid the overloading of "electronic resource" as a type. Includes blog posts, forum posts, social media posts, tweets, media files, individual web pages.
- website: a collection of web resources. Used to avoid the overloading of "electronic resource" as a type.
- software: computer executable code, not itself human-readable text (though it may generate such text).



## 11. CREATOR

### 11.1. General

- Source: ISO 690, Clause 4.1
- Serialisation: `bibitem/contributor, Person, Organization, Affiliation`

### 11.2. Selection

ISO 690, Clause 4.1 classifies the various possible roles a creator can have with regard to a resource into six broad categories in order of priority, with more refined classifications typically named for the creator. These classifications are retained in the model:

`bibitem/contributor/role@type` provides the broad category of role (author, performer, compiler, adaptor, publisher, distributor), while `bibitem/contributor/role/description` contains one or more specific descriptions of the role of the contributor.

The content of the `bibitem/contributor/role` element is optional, and contains a more specific expression of the creator role. The description can be strictly a noun, e.g. “librettist”, or it can be a phrase, corresponding to how it will be rendered in a citation (“libretto by”); the choice is at the discretion of the bibliographer, and is determined by how the citation is expected to be rendered (as rendering systems are unlikely to be sophisticated enough to convert the one into the other.)

Whether subsidiary creators should be included in a bibliographic item, and which creators should be included, is at the discretion of the bibliographer.

Exceptionally, “translator” is differentiated from the other “adaptor” roles, because it is so different to other adaptor roles such as engraver or photographer.

For derivative works, the creator and title of the original resource can be mentioned as a bibliographic note (`bibitem/note`); however best practice is to treat the original resource as a distinct related bibliographic item, related through the “derivedFrom” relation (Clause 13). Likewise, different originators of different editions should be modelled by modelling the editions as distinct related items, each with its own distinct editor as contributor. (For example, the later edition given as the main item, and the earlier edition related through a “updatedBy” relation.)

NOTE 1 Although both composer and librettist are included as authors under ISO 690, Clause 4.1, the two roles are clearly differentiated in ISO 690, Clause 5.7, with the composer given priority over the librettist.

NOTE 2 Inventor and patentee are atypical of the “performer” roles, and could arguably be regarded as author roles instead.

NOTE 3 Sponsoring organisations are conventionally included as distributors, following practice in ISO 690.

#### EXAMPLE 1

Ramsey, J. K., & McGrew, W. C. (2005). Object play in great apes: Studies in nature and captivity. In A. D. Pellegrini & P. K. Smith (Eds.), *The nature of play: Great apes and humans* (pp. 89-112). New York, NY: Guilford Press.

```
<bibitem type="incollection">
  <title>Object play in great apes: Studies in nature and captivity</title>
  <date type="published"><on>2005</on></date>
  <contributor>
    <role type="author"/>
    <person>
      <name>
        <surname>Ramsey</surname>
        <initials>J. K.</initials>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="author"/>
    <person>
      <name>
        <surname>McGrew</surname>
        <initials>W. C.</initials>
      </name>
    </person>
  </contributor>
  <relation type="includedIn">
    <bibitem>
```

```

<title>The nature of play: Great apes and humans</title>
<contributor>
  <role type="editor"/>
  <person>
    <name>
      <surname>Pellegrini</surname>
      <initials>A. D.</initials>
    </name>
  </person>
</contributor>
<contributor>
  <role type="editor"/>
  <person>
    <name>
      <surname>Smith</surname>
      <initials>P. K.</initials>
    </name>
  </person>
</contributor>
<contributor>
  <role type="publisher"/>
  <organization>
    <name>Guilford Press</name>
  </organization>
</contributor>
<place>New York, NY</place>
</bibitem>
</relation>
<extent type="page">
  <referenceFrom>89</referenceFrom>
  <referenceTo>112</referenceTo>
</extent>
</bibitem>

```

## EXAMPLE 2

Demosthenes. *Speeches 50-59*. Translated from the Greek by Victor BERS. Austin: University of Texas Press, 2003.

```

<bibitem type="book">
  <title>Speeches 50-59</title>
  <date type="published"><on>2003</on></date>
  <contributor>
    <role type="author"/>
    <person>
      <name>
        <completeName>Demosthenes</completeName>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="translator"/>
    <person>
      <name>
        <surname>Bers</surname>
        <initials>Victor</initials>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <organization>
      <name>University of Texas Press</name>
    </organization>
  </contributor>
  <language>en</language>
  <relation type="translatedFrom">
    <bibitem>
      <title>Speeches 50-59</title>
      <language>grc</language>
    </bibitem>
  </relation>
</bibitem>

```

```

</relation>
<place>Austin</place>
</bibitem>

```

### EXAMPLE 3

ROGET, Peter Mark. *Roget's Thesaurus*. Revised by Susan M. LLOYD. Burnt Mill, Harlow, Essex: Longman Group Limited, 1982 [1852].

```

<bibitem type="book">
  <title>Roget's Thesaurus</title>
  <date type="created"><on>1852</on></date>
  <date type="updated"><on>1982</on></date>
  <date type="published"><on>1982</on></date>
  <contributor>
    <role type="author"/>
    <person>
      <name>
        <surname>Roget</surname>
        <forename>Peter</forename>
        <forename>Mark</forename>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="editor">revised</role>
    <person>
      <name>
        <surname>Lloyd</surname>
        <forename>Susan</forename>
        <forename>M.</forename>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <organization>
      <name>Longman Group Limited</name>
    </organization>
  </contributor>
  <place>Burnt Mill, Harlow, Essex</place>
</bibitem>

```

### EXAMPLE 4

WINSBACHER KNABENCHOR. All' Lust und Freud'. Frankfurt: Bellaphon, 1983.

```

<bibitem type="audiovisual">
  <title>All' Lust und Freud'</title>
  <date type="published"><on>1983</on></date>
  <contributor>
    <role type="performer"/>
    <organization>
      <name>Winsbacher Knabenchor</name>
    </organization>
  </contributor>
  <contributor>
    <role type="author">composer</role>
    <person><name><completeName>Gastoldi, Giovanni Giacomo</completeName></name></person>
  </contributor>
  <contributor>
    <role type="author">composer</role>
    <person><name><completeName>Isaak, Heinrich</completeName></name></person>
  </contributor>
  <contributor>
    <role type="author">composer</role>
    <person><name><completeName>Othmayr, Caspar</completeName></name></person>
  </contributor>
  <contributor>
    <role type="author">composer</role>
    <person><name><completeName>Demantius, Christoph</completeName></name></person>
  </contributor>

```

```

</contributor>
<contributor>
  <role type="publisher"/>
  <organization>
    <name>Bellaphon</name>
  </person>
</organization>
<place>Frankfurt</place>
</bibitem>

```

### 11.3. Personal names

Names may be modelled either broken up into their constituent components (prefix, forename, initials, surname, addition), or as a complete name string. The latter is useful if (contrary to the recommendation of [ISO 690, Clause 4.1](#)) language-specific conventions for ordering of name components are to be observed; e.g. “James CLARK, John COWAN, MURATA Makoto”.

If there are multiple contributors named in a role, all contributors are expected to be represented in the bibliographic entry. This reflects practice in electronic bibliographic tools, and renderers may choose to truncate contributors with “et al.” beyond a certain cutoff point.. If this information is not available, a dummy contributor can be named with “et al.” as their `completeName`, but this is not preferred.

The `initials` component is used if all forenames are replaced by initials. If only the middle name is replaced by an initial, it is still treated as a forename.

#### EXAMPLE 1

BACH, J.S.

```

<person>
  <name>
    <surname>Bach</surname>
    <initials>J. S.</initials>
  </name>
</person>

```

#### EXAMPLE 2

PICASSO, Pablo

```

<person>
  <name>
    <surname>Picasso</surname>
    <forename>Pablo</forename>
  </name>
</person>

```

#### EXAMPLE 3

KING, Martin Luther, Jr., Rev.

```

<person>
  <name>
    <prefix>Dr.</prefix>
    <surname>King</surname>
    <forename>Martin</forename>
    <forename>Luther</forename>
    <addition>Jr.</addition>
    <addition>Rev.</addition>
  </name>
</person>

```

#### EXAMPLE 4

KING, Martin Luther, Jr.

```

<person>
  <name>
    <completeName>KING, Martin Luther, Jr.</completeName>
  </name>
</person>

```

#### EXAMPLE 5

STEWART, John H.

```
<person>
  <name>
    <surname>Stewart</surname>
    <forename>John</forename>
    <forename>H.</forename>
  </name>
</person>
```

### 11.4. Organisations

The model caters for both full names and abbreviations of organisations. Subordinate body names are modelled separately from the parent body name; the choice of whether to model parent + subordinate or a single name depends on the degree of independence of the subordinate body, as outlined in ISO 690, [Clause 4.1](#).

#### EXAMPLE 1

St. Thomas University [Florida].

```
<organization>
  <name>St. Thomas University [Florida]</name>
</organization>
```

#### EXAMPLE 2

St. Thomas University [New Brunswick].

```
<organization>
  <name>St. Thomas University [New Brunswick]</name>
</organization>
```

#### EXAMPLE 3

ACADEMY OF ATHENS. Research Centre for Modern Greek Dialects.

```
<organization>
  <name>Academy of Athens</name>
  <subdivision>Research Centre for Modern Greek Dialects</subdivision>
</organization>
```

### 11.5. Pseudonyms and Variant Names

Variant names, and assumed names, can both be modelled as notes on names. However, for greater clarity, and for modelling of the internal structure of the variant or assumed name, a variant name can be modelled, with the same level of detail as default names. The type of variant, or relation between the name and variant, needs to be made explicit in that case.

Variant names can be applied to personal names, organization names, and organization subdivision names.

#### EXAMPLE

TWAIN, Mark [pseud. of Samuel Langhorne CLEMENS]

```
<person>
  <surname>Twain</surname>
  <forename>Mark</forename>
  <note>pseud. of Samuel Langhorne CLEMENS</note>
</person>

<person>
  <surname>Twain</surname>
  <forename>Mark</forename>
  <variant type="pseudonymOf">
    <surname>Clemens</surname>
    <forename>Samuel</forename>
    <forename>Langhorne</forename>
  </variant>
  <variant type="transliteration">
    <surname language="el">Τουαίν</surname>
    <forename language="el">Μάρκ</forename>
  </variant>
</person>
```

```
</variant>
</person>
```

## 11.6. Anonymous and Varii

Descriptors of authors, such as “Anon” or “Various Authors”, should be given as `completeName` elements. The model does not standardise the designations of authors. As with pseudonyms, the real name of the creator if known can be modelled as a note, or as a name variant.

### EXAMPLE 1

Anon. *Sir Gawain and the Green Knight*. Edited by R. A. WALDRON. Evanston: Northwestern University Press, 1970.

```
<bibitem type="book">
  <title>Sir Gawain and the Green Knight</title>
  <date type="published"><on>1970</on></date>
  <contributor>
    <role type="author"/>
    <person><name><completeName>Anon</completeName></name></person>
  </contributor>
  <contributor>
    <role type="editor"/>
    <person><name><completeName>R. A. WALDRON</completeName></name></person>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <organization>
      <name>Northwestern University Press</name>
    </person>
  </organization>
  <place>Evanston</place>
</bibitem>
```

### EXAMPLE 2

Anon [Thomas Robert MALTHUS]. *An Essay on the Principle of Population*. 1st edition. London: J. Johnson, 1798.

```
<bibitem type="book">
  <title>An Essay on the Principle of Population</title>
  <date type="published"><on>1798</on></date>
  <contributor>
    <role type="author"/>
    <person><name><completeName>Anon</completeName></name></person>
    <variantname type="realname">
      <completename>Thomas Robert MALTHUS</completename>
    </variantname>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <person><name><completeName>J. Johnson</completeName></name></person>
  </contributor>
  <edition>1st edition</edition>
  <place>London</place>
</bibitem>
```

## 12. TITLE

### 12.1. General

- Source: ISO 690, Clause 4.2
- Serialisation: `bibitem/title`

### 12.2. Alternative titles

A resource can have multiple titles, including alternative titles and subtitles. Titles are classified through `title@type`; the model allows for “alternative”, “subtitle”, “unofficial” (i.e. a title that has become prevalent but has never been the official/intended title of the resource), “original” (including the source language title of a translated resource), and “main” (for the proper title or titles of the resource). If a title type is not given, it is assumed to be a main title.

“Untitled” can be treated as a main title.

#### EXAMPLE 1

Lemuel Gulliver [pseud. of Jonathan Swift]. *Travels into Several Remote Nations of the World. In Four Parts* [Gulliver’s Travels]. London: Ben. Motte, 1798.

```
<bibitem type="book">
  <title type="original">Travels into Several Remote Nations of the World. In Four Parts</title>
  <title type="unofficial">Gulliver's Travels</title>
  <date type="published"><from>1726</from><to>1727</to></date>
  <contributor>
    <role type="author"/>
    <person><name><completeName>Lemuel Gulliver</completeName></name></person>
    <note>pseud. of Jonathan Swift</note>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <person><name><completeName>Benj. Motte</completeName></name></person>
  </contributor>
  <place>London</place>
</bibitem>
```

#### EXAMPLE 2

Sun Tzu. *The Art of War* [孙子兵法]. Translated by Samuel B. Griffith. Oxford: Oxford University Press, 1963.

```
<bibitem type="book">
  <title type="original" lang="zh" script="Hant">孙子兵法</title>
  <title type="main">The Art of War</title>
  <date type="published"><on>1963</on></date>
  <contributor>
    <role type="author"/>
    <person><name><completeName>Sun Tzu</completeName></name></person>
  </contributor>
  <contributor>
    <role type="translator"/>
    <person><name><completeName>Samuel B. Griffith</completeName></name></person>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <organization><name>Oxford University Press</name></organization>
  </contributor>
  <place>Oxford</place>
</bibitem>
```

#### EXAMPLE 3

Sigur Rós. Untitled [Vaka]. In: ( ) [compact disc]. Track 1. Mosfellsbær: Sundlaugin, 2002.

```
<bibitem type="audiovisual">
  <title>Untitled</title>
  <title type="unofficial">Vaka</title>
  <date type="published"><on>2002</on></date>
  <contributor>
```

```
<role type="author">composer</role>
<organization><name>Sigur Rós</name></organization>
</contributor>
<medium>
  <form>compact disc</form>
</medium>
<relation type="includedIn">
  <bibitem>
    <title>( )</title>
    <contributor>
      <role type="author">composer</role>
      <organization><name>Sigur Rós</name></organization>
    </contributor>
    <contributor>
      <role type="publisher"/>
      <organization><name>Sundlaugin</name></organization>
    </contributor>
    <place>Mosfellsbær, Iceland</place>
  </bibitem>
  <locality type="track">
    <referenceFrom>1</referenceFrom>
  </locality>
</relation>
</bibitem>
```



## 13. DOCUMENT RELATIONS

### 13.1. General

- Source: ISO 690, Clause 4.3
- Serialisation: `bibitem/relation`

The model allows for various relations between bibliographic items, with one related item embedded within the other.

### 13.2. Relation types

The base class of relation types is taken from ISO 690, and represents generic bibliographical requirements, particularly inclusion in a host item (Clause 13.3: `includedIn`, `includes`) and translation (Clause 13.4: `translatedFrom`, `hasTranslation`). The class has been expanded substantially to deal with the requirements of standards documents:

Generic Relations:

<code>translatedFrom</code>	document A is a translation of document B
<code>hasTranslation</code>	document A has a translation as document B
<code>includedIn</code>	document A is included in document B, through a well-defined relation outlined in Clause 13.3, and with distinct metadata
<code>includes</code>	document A includes document B, through a well-defined relation outlined in Clause 13.3, and with distinct metadata
<code>hasPart</code>	document A includes document B, with no distinct metadata
<code>partOf</code>	document A is included in document B, with no distinct metadata
<code>complements</code>	document A is a complement or supplement of document B
<code>derivedFrom</code>	document A is derived from document B
<code>instance</code>	document A is an instance of document B (e.g. an edition, a format, a single copy)
<code>instanceOf</code>	document A has as an instance document B (e.g. an edition, a format, a single copy)
<code>hasDraft</code>	document A has as a draft document B
<code>draftOf</code>	document A is a draft of document B
<code>updates</code>	document A updates document B
<code>updatedBy</code>	document A is updated by document B

Standards Relations:

<code>obsoletes</code>	document A supersedes document B, and renders it obsolete
<code>obsoletedBy</code>	document A is superseded by document B, and is rendered obsolete
<code>supersedes</code>	document A supersedes document B, but is not rendered obsolete
<code>supersededBy</code>	document A is superseded by document B, but is not rendered obsolete
<code>adoptedFrom</code>	document A is adopted by a standards organisation from document B by a different organisation
<code>identical</code>	document A is adopted from document B, without any change
<code>equivalent</code>	document A is adopted from document B, without any significant textual change
<code>nonequivalent</code>	document A is adopted from document B, and has been altered textually significantly
<code>merges</code>	document A results from a merger of earlier documents B1, B2, B3...
<code>splits</code>	document A is split off from earlier document B
<code>corrects</code>	document A updates document B, and the change does not affect the intended meaning
<code>correctedBy</code>	document A is updated by document B, and the change does not affect the intended meaning
<code>amends</code>	document A updates document B, and the change is a minor change to the intended meaning
<code>amendedBy</code>	document A is updated by document B, and the change is a minor change to the intended meaning
<code>revised</code>	document A updates document B, and the change is a major change to the intended meaning

revisedBy document A is updated by document B, and the change is a major change to the intended meaning

### 13.3. Host Item

Of the bibliographic types identified in [Clause 10](#), “incollection”, “inproceedings”, and “inbook” are all inherently related to a host item. Other types also potentially involve relations with host items; for example, the relation between a record track and a record, or a broadcast segment and a broadcast show. The relation between host item and contained item is modelled through “includedIn”.

The relation between any two items optionally includes a locality element, which indicates which part of the first item is related to the second. (For example, which part of the first item is superseded by the second.) The locality in the relation element can be used with “includedIn” relations, to indicate the extent of the contained item within the host item; but for consistency, it is preferable to use the `extent` element in the contained item, which has the same meaning.

The expected relations between host and contained items are as follows:

Table 1

Host	Contained
book, booklet, manual, techreport	incollection (if has its own title—autonomous item), inbook (if it does not have its own title—e.g. numbered chapter, page span)
journal	article
proceedings, conference	inproceedings
thesis, standard, patent	inbook
map	map
electronic resource	electronic resource
broadcast	broadcast
music	music
graphic work	graphic work
film	film
video	video

In general: text-based resources have components that can be considered a different kind of resource; components of non-textual resources are considered to be of the same type as their host.

#### EXAMPLE 1

Ramsey, J. K., & McGrew, W. C. (2005). Object play in great apes: Studies in nature and captivity. In A. D. Pellegrini & P. K. Smith (Eds.), *The nature of play: Great apes and humans* (pp. 89-112). New York, NY: Guilford Press.

Dispreferred extent encoding:

```
<bibitem type="incollection">
  <title>Object play in great apes: Studies in nature and captivity</title>
  <date type="published"><on>2005</on></date>
  <contributor>
    <role type="author"/>
    <person>
      <name>
        <surname>Ramsey</surname>
        <initials>J. K.</initials>
      </name>
    </person>
  </contributor>
```

```

<contributor>
  <role type="author"/>
  <person>
    <name>
      <surname>McGrew</surname>
      <initials>W. C.</initials>
    </name>
  </person>
</contributor>
<relation type="includedIn">
  <bibitem>
    <title>The nature of play: Great apes and humans</title>
    <contributor>
      <role type="editor"/>
      <person>
        <name>
          <surname>Pellegrini</surname>
          <initials>A. D.</initials>
        </name>
      </person>
    </contributor>
    <contributor>
      <role type="editor"/>
      <person>
        <name>
          <surname>Smith</surname>
          <initials>P. K.</initials>
        </name>
      </person>
    </contributor>
    <contributor>
      <role type="publisher"/>
      <organization>
        <name>Guilford Press</name>
      </organization>
    </contributor>
    <place>New York, NY</place>
  </bibitem>
  <locality type="page">
    <referenceFrom>89</referenceFrom>
    <referenceTo>112</referenceTo>
  </locality>
</relation>
</bibitem>

```

Preferred extent encoding:

```

<bibitem type="incollection">
  <title>Object play in great apes: Studies in nature and captivity</title>
  <date type="published"><on>2005</on></date>
  <contributor>
    <role type="author"/>
    <person>
      <name>
        <surname>Ramsey</surname>
        <initials>J. K.</initials>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="author"/>
    <person>
      <name>
        <surname>McGrew</surname>
        <initials>W. C.</initials>
      </name>
    </person>
  </contributor>
  <relation type="includedIn">
    <bibitem>
      <title>The nature of play: Great apes and humans</title>

```

```

<contributor>
  <role type="editor"/>
  <person>
    <name>
      <surname>Pellegrini</surname>
      <initials>A. D.</initials>
    </name>
  </person>
</contributor>
<contributor>
  <role type="editor"/>
  <person>
    <name>
      <surname>Smith</surname>
      <initials>P. K.</initials>
    </name>
  </person>
</contributor>
<contributor>
  <role type="publisher"/>
  <organization>
    <name>Guilford Press</name>
  </organization>
</contributor>
<place>New York, NY</place>
</bibitem>
</relation>
<extent type="page">
  <referenceFrom>89</referenceFrom>
  <referenceTo>112</referenceTo>
</extent>
</bibitem>

```

## EXAMPLE 2

Sigur Rós. Untitled [Vaka]. In: ( ) [compact disc]. Track 1. Mosfellsbær: Sundlaugin, 2002.

```

<bibitem type="audiovisual">
  <title>Untitled</title>
  <title type="unofficial">Vaka</title>
  <date type="published"><on>2002</on></date>
  <contributor>
    <role type="author">composer</role>
    <organization><name>Sigur Rós</name></organization>
  </contributor>
  <medium>
    <form>compact disc</form>
  </medium>
  <relation type="includedIn">
    <bibitem>
      <title>( )</title>
      <contributor>
        <role type="author">composer</role>
        <organization><name>Sigur Rós</name></organization>
      </contributor>
      <contributor>
        <role type="publisher"/>
        <organization><name>Sundlaugin</name></organization>
      </contributor>
      <place>Mosfellsbær, Iceland</place>
    </bibitem>
    <locality type="track">
      <referenceFrom>1</referenceFrom>
    </locality>
  </relation>
</bibitem>

```

Translations are items derived from an item in a different language. Typically in bibliographies, the details of the source item are not provided for a translation, outside of the original author, and possibly the date of publication and the source language title of the original title. If the information about the source item is limited to these, no relation need be invoked in the title: the source title can be modelled as an original title variant (Clause 12.2); the author differentiated from the translator as creators (Clause 11.2); and the date of authorship differentiated from the date of translation (Clause 16.4: `date[@type = "created"]` vs `date[@type = "adapted"]`).

However, if any further details of the source item need to be provided (e.g. source language: ISO 690, Clause 4.11), they should be modelled through an overt relationship between the source item and the translation.

#### EXAMPLE 1

PRUS, Boleslaw. 1912 [1895–1896]. *La Faraono* [Faraon]. Translated by Kabe (pseud. of Kazimierz BEIN). 2nd revised edition. Paris: Hachette.

Single work representation:

```
<bibitem type="book">
  <title lang="eo">La Faraono</title>
  <title type="original" lang="pl">Faraon</title>
  <date type="created"><from>1895</from><to>1896</to></date>
  <date type="adapted"><on>1907</on></date>
  <date type="published"><on>1912</on></date>
  <contributor>
    <role type="author"/>
    <person>
      <name>
        <surname>Prus</surname>
        <forename>Bolesław</forename>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="translator"/>
    <person>
      <name>
        <completeName>Kabe</completeName>
        <note>pseud. of Kazimierz Bein</note>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <organization>
      <name>Hachette</name>
    </organization>
  </contributor>
  <edition>2nd revised edition</edition>
  <language>eo</language>
  <place>Paris</place>
</bibitem>
```

Related work representation:

[source, xml]

```
<bibitem type="book"> <title lang="eo">La Faraono</title> <date type="adapted"><on>1907</on></date> <date type="published">
<on>1912</on></date> <contributor> <role type="author"/> <person> <name> <surname>Prus</surname>
<forename>Bolesław</forename> </name> </person> </contributor> <contributor> <role type="translator"/> <person> <name>
<completeName>Kabe</completeName> <note>pseud. of Kazimierz Bein</note> </name> </person> </contributor> <contributor>
<role type="publisher"/> <organization> <name>Hachette</name> </organization> </contributor> <edition>2nd revised
edition</edition> <language>eo</language> <relation type="translatedFrom"> <title type="original" lang="pl">Faraon</title> <date
type="created"><from>1894</from><to>1895</to></date> <date type="published"><from>1895</from><to>1896</to></date>
<contributor> <role type="author"/> <person> <name> <surname>Prus</surname> <forename>Bolesław</forename> </name>
</person> </contributor> <contributor> <role type="publisher"/> <organization> <name>Tygodnik Ilustrowany</name>
</organization> </contributor> <language>pl</language> <place>Warsaw</place> </relation> <place>Paris</place> </bibitem>
```

#### EXAMPLE 2

Demosthenes. *Speeches 50-59*. Translated from the Greek by Victor BERS. Austin: University of Texas Press, 2003.

```
<bibitem type="book">
  <title>Speeches 50-59</title>
  <date type="published"><on>2003</on></date>
  <contributor>
```

```
<role type="author"/>
<person>
  <name>
    <completeName>Demosthenes</completeName>
  </name>
</person>
</contributor>
<contributor>
  <role type="translator"/>
  <person>
    <name>
      <surname>Bers</surname>
      <initials>Victor</initials>
    </name>
  </person>
</contributor>
<contributor>
  <role type="publisher"/>
  <organization>
    <name>University of Texas Press</name>
  </organization>
</contributor>
<language>en</language>
<relation type="translatedFrom">
  <bibitem>
    <title>Speeches 50-59</title>
    <language>grc</language>
  </bibitem>
</relation>
<place>Austin</place>
</bibitem>
```

## 14. MEDIUM

- Source: ISO 690, Clause 4.4, ISO 690, Clause 5.4
- Serialisation: `bibitem/medium`

ISO 690 differentiates between the content type of the item, the media type (which includes file format for electronic media), the carrier type, the size of the item (which can include duration, and electronic file size, as well as physical medium size), and for maps, the scale of the item. These are all modelled as elements of the item medium; the media type or file format is modelled as `medium/form`.

There is no fixed vocabulary modelled for any of the elements of `media` (although ISO 690 suggests closed Resource Description and Access (RDA) vocabularies for `medium/content` and `medium/carrier`, and IANA Media Type is best practice for `medium/form` for electronic resources. As ISO 690 allows, there may be instances where the medium descriptions need to be discursive.

ISO 690 suggests specifying detailed information about the type of electronic information resource (e.g. “statistical dataset”); this is modelled as a bibliographical note (`bibitem/note`), since the type of bibliographic item (`bibitem/@type`) is a closed vocabulary.

Information about alternate formats should be modelled as related bibliographic items (through the “instance” document relation), each with their own medium information.

The size and scale of the item usually contains numerical information, but is modelled as a string, given the complications of how size and scale can be described, particularly for cartographic material.

### EXAMPLE 1

Sigur Rós. Untitled [Vaka]. In: ( ) [compact disc]. Track 1. Mosfellsbær: Sundlaugin, 2002.

```
<bibitem type="audiovisual">
  <title>Untitled</title>
  <title type="unofficial">Vaka</title>
  <date type="published"><on>2002</on></date>
  <contributor>
    <role type="author">composer</role>
    <organization><name>Sigur Rós</name></organization>
  </contributor>
  <medium>
    <form>compact disc</form>
  </medium>
  <relation type="includedIn">
    <bibitem>
      <title>( )</title>
      <contributor>
        <role type="author">composer</role>
        <organization><name>Sigur Rós</name></organization>
      </contributor>
      <contributor>
        <role type="publisher"/>
        <organization><name>Sundlaugin</name></organization>
      </contributor>
      <place>Mosfellsbær, Iceland</place>
    </bibitem>
    <locality type="track">
      <referenceFrom>1</referenceFrom>
    </locality>
  </relation>
</bibitem>
```

### EXAMPLE 2

Easterbrook, Don J. *Geologic Map of Western Whatcom County, Washington*. Map. 1:62,500. col. 68 x 69 cm. fold. in envelope 30 x 24 cm. Miscellaneous Investigations Series, map 1-854-B. Reston, VA: U.S. Geological Survey, 1976.

```
<bibitem type="map">
  <title>Geologic Map of Western Whatcom County, Washington</title>
  <date type="published"><on>1976</on></date>
  <contributor>
    <role type="author">
      <person><name><completeName>Easterbrook, Don J.</completeName></name></person>
    </contributor>
    <contributor>
      <role type="publisher"/>
      <organization><name>U.S. Geological Survey</name></organization>
    </contributor>
  </contributor>
```

```
</contributor>
<medium>
  <form>map</form>
  <size>col. 68 x 69 cm. fold. in envelope 30 x 24 cm.</size>
  <scale>1:62500</scale>
</medium>
<series>
  <title>Miscellaneous Investigations Series</title>
  <number>map 1-854-B</number>
</series>
<place>Reston, VA</place>
</bibitem>
```



## 15. EDITION

- Source: ISO 690, Clause 4.5
- Serialisation: `bibitem/edition`, `bibitem/version`, `bibitem/date`

Editions are modelled as free text, given the variety of ways they can be represented. For that reason, the full word “edition” needs to appear after any ordinal. The optional `number` attribute can be used to provide a numeric equivalent.

As described in [Clause 16.4.1](#), dates when a resource was last accessed are modelled as `date[@type = "accessed"]`; dates when a resource was last updated are modelled as `date[@type = "updated"]`.

The `version` element can be used to give more detailed information about resource versions, including version numbers (drafts) and version dates (which are differentiated from `date`, since they are often used as version identifiers).

### EXAMPLE 1

Anon [Thomas Robert MALTHUS]. *An Essay on the Principle of Population*. 1st edition. London: J. Johnson, 1798.

```
<bibitem type="book">
  <title>An Essay on the Principle of Population</title>
  <date type="published"><on>1798</on></date>
  <contributor>
    <role type="author"/>
    <person><name><completeName>Anon</completeName></name></person>
    <note>Thomas Robert MALTHUS</note>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <person><name><completeName>J. Johnson</completeName></name></person>
  </contributor>
  <edition number="1">1st edition</edition>
  <place>London</place>
</bibitem>
```

### EXAMPLE 2

SKOUSEN, Mark. *The Structure of Production*. New revised edition. New York: New York University Press, 2015.

```
<bibitem type="book">
  <title>The Structure of Production</title>
  <date type="published"><on>2015</on></date>
  <contributor>
    <role type="author"/>
    <person>
      <name>
        <surname>Skousen</surname>
        <forename>Mark</forename>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <organization><name>New York University Press</name></organization>
  </contributor>
  <edition>New revised edition</edition>
  <place>New York</place>
</bibitem>
```

### EXAMPLE 3

When did the sounds of ‘w’ and ‘v’ change in High German? *Stack Exchange: Linguistics Beta*. Updated 8 May 2017 [viewed 10 May 2018]. Available from: <https://linguistics.stackexchange.com/questions/22872/when-did-the-sounds-of-w-and-v-change-in-high-german>

```
<bibitem type="website">
  <title>When did the sounds of 'w' and 'v' change in High German?</title>
  <uri>https://linguistics.stackexchange.com/questions/22872/when-did-the-sounds-of-w-and-v-change-in-high-german</uri>
  <date type="updated"><on>2017-05-08</on></date>
  <date type="accessed"><on>2018-05-10</on></date>
  <relation type="includedIn">
    <bibitem type="website">
      <title>Stack Exchange: Linguistics Beta</title>
    </bibitem>
  </relation>
</bibitem>
```

```
</bibitem>
</relation>
</bibitem>
```

#### EXAMPLE 4

MOZILLA FOUNDATION. Mozilla Firefox version 60.4.0 ESR [computer program]. Available from: <https://www.mozilla.org/>. [viewed 2019-01-11].

```
<bibitem type="electronic resource">
  <title>Mozilla Firefox</title>
  <uri>https://www.mozilla.org/</uri>
  <date type="accessed">2019-01-11</date>
  <contributor>
    <role type="author"/>
    <organization>
      <name>Mozilla Foundation</name>
    </organization>
  </contributor>
  <version>
    <draft>60.4.0 ESR</draft>
  </version>
  <medium>
    <content>computer program</content>
  </medium>
</bibitem>
```

## 16. PRODUCTION

### 16.1. General

- Source: ISO 690, Clause 4.6
- Serialisation: `bibitem/place`, `bibitem/contributor[role@type = "publisher"]`, `bibitem/date`

### 16.2. Place

Strictly speaking the place of production is an attribute of the publisher, and it can in fact be modelled as `bibitem/contributor[role@type = "publisher"]/organization/address/city`. However, it is modelled as a top-level attribute of the bibliographic item to allow the place to be extracted by consumers of the serialisation more readily, to allow multiple locations to be associated with the publisher, and to allow only one of the places of the publisher to be associated with the production of the item.

A URI in a geographical registry may optionally be given as `place/@uri`. A region within which the place is located may be given as `place/@region`, for disambiguation purposes; using a ISO 3166 code for a country or subnational region is recommended.

#### EXAMPLE 1

SANGSTER, R. B. *Roman Jakobson and beyond*. Berlin, New York & The Hague: Mouton, 1984.

```
<bibitem type="book">
  <title>Roman Jakobson and beyond</title>
  <date type="published"><on>1984</on></date>
  <contributor>
    <role type="author"/>
    <person>
      <name>
        <surname>Sangster</surname>
        <initial>R. B.</initial>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <organization>
      <name>Mouton</name>
    </organization>
  </contributor>
  <place>Berlin</place>
  <place>New York</place>
  <place>The Hague</place>
</bibitem>
```

#### EXAMPLE 2

London (Ontario)

```
<place uri="https://en.wikipedia.org/wiki/London,_Ontario" region="CA-ON">London (Ontario)</place>
```

### 16.3. Publisher

The publisher is a subclass of creator (Clause 11). ISO 690, Clause 4.1 differentiates between “publisher, online information provider, production company” and “distributor, online host”. Of the classes of creator that can be used as the publisher, “publisher or production company” and “printer or manufacturer” have `bibitem/contributor/role@type = "publisher"`; “distributor or issuing body” and “sponsoring body” have `bibitem/contributor/role@type = "distributor"`. ISO 690, Clause 4.6 allows that distributors, issuers and sponsors can be named in addition to publishers.

Any restrictions on access to a resource imposed by an online host (e.g. geographical restrictions) should be indicated in `bibitem/note`.

### 16.4. Date

For a point date, only `date/on` is populated. For a date range, `date/from` and `date/to` are populated. If the range is ongoing, the `date/to` element is left out.

The date for `date/on`, `date/from` and `date/to` is by default given as a Gregorian date/time, following the conventions of ISO 8601; in an XML serialisation, they would be expected to follow the XML Schema `xs:dateTime` representation ([7]). However bibliographic dates often contain

information that cannot be restricted to an ISO 8601 date (dates in other calendars, date corrections; other subdivisions of the year; approximate date or no date.) For that reason, the model allows dates to be expressed in text instead of as an ISO 8601 date (`date/on@text`, `date/from@text`, `date/to@text`), or as well as an ISO 8601 date if a Gregorian date is still applicable. If the textual value of a date is a date range, and ISO 8601 dates are still to be provided for the start and end of the date range, then the textual value is repeated for `date/from@text` and `date/to@text`.

Date corrections may also involve indications of provenance (Clause 9).

The date of copyright is associated expressly with the copyright holder, in `bibitem/copyright/date/from`. Unlike other bibliographic dates, the copyright date can only have a year value.

#### EXAMPLE 1

ROGET, Peter Mark. *Roget's Thesaurus*. Revised by Susan M. LLOYD. Burnt Mill, Harlow, Essex: Longman Group Limited, 1982 [1852].

```
<bibitem type="book">
  <title>Roget's Thesaurus</title>
  <date type="created"><on>1852</on></date>
  <date type="updated"><on>1982</on></date>
  <date type="published"><on>1982</on></date>
  <contributor>
    <role type="author"/>
    <person>
      <name>
        <surname>Roget</surname>
        <forename>Peter</forename>
        <forename>Mark</forename>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="editor">revised</role>
    <person>
      <name>
        <surname>Lloyd</surname>
        <forename>Susan</forename>
        <forename>M.</forename>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <organization>
      <name>Longman Group Limited</name>
    </organization>
  </contributor>
  <place>Burnt Mill, Harlow, Essex</place>
</bibitem>
```

#### EXAMPLE 2

2018-05-09, 21:33:28

```
<date type="created"> <on>2018-05-09T21:33:28</on> </date>
```

#### EXAMPLE 3

Islamic calendar 1439 [2017–2018]

```
<date type="created"> <from text="Islamic calendar 1439">2017</from> <to text="Islamic calendar 1439">2018</to> </date>
```

#### EXAMPLE 4

1959 [i.e. 1995]

```
<date type="created"> <on>1959</on> </date> <date type="created" source="supplied"> <on text="1959 [i.e. 1995]">1995</on>
</date>
```

#### EXAMPLE 5

Michaelmas term (Oxford), 2002

```
<date type="created"> <from text="Michaelmas term (Oxford), 2002">2002-10-91</from> <to text="Michaelmas term (Oxford),
2002">2002-12-17</to> </date>
```

**EXAMPLE 6**

1650?  
`<date type="created" text="1650?"> <on>1650</on> </date>`

**EXAMPLE 7**

\[no date]  
`<date type="created" text="[no date]"/>`

**EXAMPLE 8**

1951 copied 1957  
`<date type="created"> <on>1951</on> </date> <date type="copied"> <on>1957</on> </date>`

**EXAMPLE 9**

1951-  
`<date type="published"> <from>1951</from> </date>`

**EXAMPLE 10**

© ISO, 2018  
`<copyright> <from>1951</from> <owner><organization><name>ISO</name></organization></owner> </date>`

**16.4.1. Date types**

Dates are associated with specific phases of the production of a bibliographic item, and those phases are named through `date@type`. The default type used in bibliography is the date of publication (`date@type = "published"`), but the “created”, “updated”, “unchanged”, and “copied” dates in particular are often given where they differ from the date of publication. The date of transmission is used instead of the date of publication for a broadcast.

The repertoire of date types is expanded to deal with the particular requirements of standards:

Normal bibliographic dates:

created	Date a resource was created.
published	Date a resource was published.
accessed	Date a resource was last accessed by the bibliographer; routinely used for online publications. (Unlike in <i>ISO 690</i> , no distinction is made between “viewed” and “accessed” based on whether the resource is human-readable or machine-readable.)
updated	Date a resource was updated and republished. Used for new editions.
unchanged	Date a resource was reprinted, i.e. republished without any changes.
circulated	Date a draft version of a resource was circulated. (Drafts by definition are not published.)
transmitted	Date a resource was broadcast.
copied	Date a resource was physically copied, or recreated without any substantial change in content (allowing for change in medium).
adapted	Date a resource was adapted for a new purpose or audience, with some change in content (includes translation).

Standards bibliographic dates:

implemented	Date a standard takes effect.
obsoleted	Date a standard becomes no longer in effect.
confirmed	Date a standard is renewed to take effect.
issued	Date a standard is authorised for publication.

The date of publication is taken to be the date when the current version of the resource was published, unless a separate “unchanged”, “updated” or “copied” date is given; in that case, the date of publication is assumed to be the date of initial publication.

The date of creation is taken to apply to the work instantiated by the resource, rather than to a specific format or edition. The latter are represented by the date of adaptation and of update, respectively.

## 17. NUMERATION AND PAGINATION

- Source: ISO 690, Clause 4.7
- Serialisation: `bibitem/extent`

Components of an item are modelled under the `bibitem/extent` element as one or more “localities”; these consist of a locality type (`bibitem/extent@type`), a locality value (`bibitem/extent/referenceFrom`), and optionally a locality range endpoint (`bibitem/extent/referenceTo`). The `extent` gives the part of the host item being cited, if this is a contained item (Clause 13.3), such as a journal article or book chapter (e.g. “pp. 25-45”).

If the item is not a component of another item, then the `extent` gives the locality value for the entire work (e.g. page count: “[7 pp.]”). This is expressed by giving an empty `bibitem/extent/referenceFrom`, and populating only `bibitem/extent/referenceTo` (“[7 pp.]” = pp. 1-7).

If a locality is labelled conventionally with a range, but is in fact a single item (as often occurs with volumes and issues; e.g. issue 18-19 is in fact a single issue), the label should be associated with `bibitem/extent/referenceFrom` rather than being treated as a true range. However the rendering of the item will typically not be any different.

A part of a contained item may be cited, and this has posed difficulty for some citation schemes (e.g. citing a page within a journal article, which itself covers a page range: “Dedes, D. 1993. Ποιήματα του Μαυλανά Ρουμή [Poems by Mevlana Rumi]. *Ta Istorika* 10.18-19: 3-22. pp. 7-19”). However, the model copes with this by separating the extent of a citation Appendix B from the extent of a bibliographic item, and the extent of a contained item from the extent of a host item. In this instance, “pp. 7-19” would be treated normally as part of the citation, not part of the bibliographic item.

A hierarchical locality is expressed by repeating the `extent` element with the different applicable locality types; these should be given in hierarchical order. However localities in an extent may be complimentary instead (e.g. “xiii+179 pp” for prefatory and main pagination; “114pp + 3 plates” for plates outside the main page numeration).

Discontinuous ranges are modelled by repeating the `extent` element for the same locality type.

Extent includes the volume and issues of a journal, if the item is an article in the journal.

### EXAMPLE 1

Dedes, D. 1993. Ποιήματα του Μαυλανά Ρουμή [Poems by Mevlana Rumi]. *Ta Istorika* 10.18-19: 3-22.

```
<bibitem type="article">
  <title lang="en">Poems by Mevlana Rumi</title>
  <title type="original" lang="ell">Ποιήματα του Μαυλανά Ρουμή</title>
  <date type="published"><on>1993</on></date>
  <contributor>
    <role type="author"/>
    <person>
      <name>
        <surname>Dedes</surname>
        <forename>Dimitrios</forename>
      </name>
    </person>
  </contributor>
  <series>
    <title>Ta Istorika</title>
  </series>
  <extent type="volume">
    <referenceFrom>10</referenceFrom>
  </extent>
  <extent type="issue">
    <referenceFrom>18-19</referenceFrom>
  </extent>
  <extent type="page">
    <referenceFrom>3</referenceFrom>
    <referenceTo>22</referenceTo>
  </extent>
</bibitem>
```

### EXAMPLE 2

Ramsey, J. K., & McGrew, W. C. (2005). Object play in great apes: Studies in nature and captivity. In A. D. Pellegrini & P. K. Smith (Eds.), *The nature of play: Great apes and humans* (pp. 89-112). [308pp]. New York, NY: Guilford Press.

```
<bibitem type="incollection">
  <title>Object play in great apes: Studies in nature and captivity</title>
  <date type="published"><on>2005</on></date>
```

```

<contributor>
  <role type="author"/>
  <person>
    <name>
      <surname>Ramsey</surname>
      <initials>J. K.</initials>
    </name>
  </person>
</contributor>
<contributor>
  <role type="author"/>
  <person>
    <name>
      <surname>McGrew</surname>
      <initials>W. C.</initials>
    </name>
  </person>
</contributor>
<relation type="includedIn">
  <bibitem>
    <title>The nature of play: Great apes and humans</title>
    <contributor>
      <role type="editor"/>
      <person>
        <name>
          <surname>Pellegrini</surname>
          <initials>A. D.</initials>
        </name>
      </person>
    </contributor>
    <contributor>
      <role type="editor"/>
      <person>
        <name>
          <surname>Smith</surname>
          <initials>P. K.</initials>
        </name>
      </person>
    </contributor>
    <contributor>
      <role type="publisher"/>
      <organization>
        <name>Guilford Press</name>
      </organization>
    </contributor>
    <place>New York, NY</place>
    <extent type="page">
      <referenceTo>308</referenceTo>
    </extent>
  </bibitem>
</relation>
<extent type="page">
  <referenceFrom>89</referenceFrom>
  <referenceTo>112</referenceTo>
</extent>
</bibitem>

```

### EXAMPLE 3

*Pluralism in the Soviet Union: Essays in Honour of H. Gordon Skilling*. Edited by Susan Gross Solomon. New York: St. Martin's Press, 1983. xiii, 179 pp. \$27.50.

```

<bibitem type="book">
  <title>Pluralism in the Soviet Union: Essays in Honour of H. Gordon Skilling</title>
  <date type="published"><on>1983</on></date>
  <contributor>
    <role type="editor"/>
    <person>
      <name>
        <surname>Solonom</surname>

```



```

        <forename>Susan</forename>
        <forename>Gross</forename>
    </name>
</person>
</contributor>
<contributor>
    <role type="publisher"/>
    <organization>
        <name>St Martin's Press</name>
    </organization>
</contributor>
<note>$27.50</note>
<place>New York</place>
<series>
    <title>Nevada Bureau of Mines and Geology Bulletin</title>
    <number>88</number>
</series>
<extent type="page">
    <referenceFrom>xiii</referenceFrom>
</extent>
<extent type="page">
    <referenceFrom>179</referenceFrom>
</extent>
</bibitem>

```

#### EXAMPLE 4

John H. Stewart, Edwin H. McKee, and Harold K. Stager. *Geology and mineral deposits of Lander County, Nevada*. Nevada Bureau of Mines and Geology Bulletin 88. 1977. Reno: University of Nevada. [114 pp, 3 plates]

```

<bibitem type="book">
    <title>Geology and mineral deposits of Lander County, Nevada</title>
    <date type="published"><on>1977</on></date>
    <contributor>
        <role type="author"/>
        <person>
            <name>
                <surname>Stewart</surname>
                <forename>John</forename>
                <forename>H.</forename>
            </name>
        </person>
    </contributor>
    <contributor>
        <role type="author"/>
        <person>
            <name>
                <surname>McKee</surname>
                <forename>Edwin</forename>
                <forename>H.</forename>
            </name>
        </person>
    </contributor>
    <contributor>
        <role type="author"/>
        <person>
            <name>
                <surname>Stager</surname>
                <forename>Harold</forename>
                <forename>K.</forename>
            </name>
        </person>
    </contributor>
    <contributor>
        <role type="publisher"/>
        <organization>
            <name>University of Nevada</name>
        </organization>
    </contributor>
    <place>Reno</place>

```

```

<series>
  <title>Nevada Bureau of Mines and Geology Bulletin</title>
  <number>88</number>
</series>
<extent type="page">
  <referenceFrom>114</referenceFrom>
</extent>
<extent type="plate">
  <referenceFrom>3</referenceFrom>
</extent>
</bibitem>

```

#### EXAMPLE 5

Brown, P. L. (1999, September 5). Tiffany glass and other tales from the crypt. *The New York Times*, pp. 1, 5.

```

<bibitem type="article">
  <title>Tiffany glass and other tales from the crypt</title>
  <date type="published"><on>1999-09-05</on></date>
  <contributor>
    <role type="author"/>
    <person>
      <name>
        <surname>Brown</surname>
        <initials>P. L.</initials>
      </name>
    </person>
  </contributor>
  <series>
    <title>The New York Times</title>
  </series>
  <extent type="page">
    <referenceFrom>1</referenceFrom>
  </extent>
  <extent type="page">
    <referenceFrom>5</referenceFrom>
  </extent>
</bibitem>

```

## 18. SERIES TITLE AND NUMBER

### 18.1. General

- Source: ISO 690, Clause 4.8, ISO 690, Clause 5.2
- Serialisation: `bibitem/series`

### 18.2. Journals

Articles have their journal title modelled as the series title of the article item. However, the journal volume and issue should be modelled as part of the article item extent [Clause 17](#), rather than as part of the series ([ISO 690, Clause 4.7](#)).

### 18.3. Standards

Standards body identifiers for standards ([ISO 690, Clause 5.9](#)) are modelled as series numbers.

#### EXAMPLE

ISO 690, *Information and documentation – Guidelines for bibliographic references and citations to information resources*.

```
<bibitem type="standard">
  <title>Information and documentation -- Guidelines for bibliographic references and citations to informat
  <contributor>
    <role type="publisher"/>
    <organization>
      <name>International Organization for Standardization</name>
    </organization>
  </contributor>
  <series>
    <title>ISO</title>
    <number>690</number>
  </series>
</bibitem>
```

### 18.4. Archival materials

The collection or fonds of archival material is modelled as a series.

### 18.5. Qualifiers

Organization and Place of Publication can be added to series titles for disambiguation. Organization in this instance is only modelled as a strings, rather than as a detailed object (cf. [Clause 11.4](#)). The `formattedTitle` element is used to enforce the formatting of the series title and its qualifiers.

#### EXAMPLE 1

*Life*. MDPI.

*Life* (Basel). ([https://en.wikipedia.org/wiki/Life\\_\(journal\)](https://en.wikipedia.org/wiki/Life_(journal)))

```
<series>
  <title>Life</title>
  <place>Basel</place>
  <organization>MDPI</organization>
  <formattedTitle>_Life_ (Basel)</formattedTitle>
</series>
```

#### EXAMPLE 2

*Life*. (New York). ([https://en.wikipedia.org/wiki/Life\\_\(magazine\)](https://en.wikipedia.org/wiki/Life_(magazine)))

```
<series>
  <title>Life</title>
  <place>New York</place>
</series>
```

### 18.6. Earlier and later titles

The current title of a series is given with `series@type` as “main” (which is the default); alternate titles, including historical titles, are given with `series@type` as “alt”. Different time spans for historical titles are given with `series/dateFrom` and `series/dateTo`.

#### EXAMPLE

*New Scientist*. 1956-1971.

*New Scientist and Science Journal*. Jan 21, 1971-Sept 30, 1971. + *\_New Scientist*. 1971-.

```
<series type="alt">
  <title>New Scientist</title>
  <dateFrom>1956</dateFrom>
  <dateTo>1956</dateTo>
</series>
<series type="alt">
  <title>New Scientist and Science Journal</title>
  <dateFrom>1971-01-21</dateFrom>
  <dateTo>1971-09-30</dateTo>
</series>
<series type="main">
  <title>New Scientist</title>
  <dateFrom>1971-09-30</dateFrom>
</series>
```

### 18.7. Series runs

If a series restarts numbering its volumes, that is typically indicated in citations by giving an ordinal number for the series run, given after the series name: 1st series, 2nd series, 3rd series. More commonly, there are only two series runs for a series, and the second run is indicated as “new series”, or the abbreviation “n.s.”.

- *Vizantiiskii Vremmenik* (St Petersburg/Petrograd/Leningrad, 1894-1928) and *Vizantiiskii Vremmenik* (Moscow, 1947-) have the same name, and the first two volumes of the new series run were numbered 1/26 and 2/27, to continue the first series. While citations could differentiate the two by city, usual practice is to insert “n.s.” after the journal title for the second series.
- The *Journal of the Royal Anthropological Institute* was originally published as *Man*, from 1901-1965. The journal restarted numbering at 1 from 1966-1996 without changing name, and explicitly designating itself as a “new series”. Unlike *Vizantiiskii Vremmenik*, both series were published in London, so place of publication cannot differentiate between them. While the organization did change name (from “Anthropological Institute of Great Britain and Ireland” to “Royal Anthropological Institute of Great Britain and Ireland”), the series run is preferred to differentiate the two runs.

#### EXAMPLE

- a. A. Barnes. 1966. Durkheim’s Division of Labour in Society. *Man* (n.s.) 1(2): 158-175.

```
<bibitem type="article"> <title lang="en">Durkheim’s Division of Labour in Society</title> <date type="published"><on>1966</on>
</date> <contributor> <role type="author"/> <person> <name> <surname>Barnes</surname> <initials>J. A.</initials> </name>
</person> </contributor> <series> <title>Man</title> <number>1</number> <partnumber>2</partnumber> <run>new series</run>
</series> <extent type="page"> <referenceFrom>158</referenceFrom> <referenceTo>175</referenceTo> </extent> </bibitem>
```

## 19. IDENTIFIERS

- Source: [ISO 690, Clause 4.9](#)
- Serialisation: `bibitem/docidentifier`

[ISO 690, Clause 4.9](#) argues that unique international standard identifiers must be included in the bibliography. In practice, identifiers are included at the discretion of the bibliographer: they are routinely included in bibliographic databases, but seldom in references within documents.

The namespace of an identifier is indicated through its type attribute. The scope of an identifier is introduced to disambiguate the identifier referent, when it is not obvious. So it is introduced where an identifier identifies only a component of the item (e.g. a document included in the item), or a superset of the item (e.g. a series). It can also be used if the identifier identifies a specific instantiation of the document as an entity; in terms of the Functional Requirements for Bibliographic Records [3], for example, an identifier may identify a work, an expression of the work (e.g. an edition), a manifestation of the work (e.g. a format), or an item of the manifestation (e.g. a single physical copy).

Neither the type nor the scope of the identifier have an associated controlled vocabulary, and one is unlikely to be derived. Identifier type should follow established practice in the domain; most well-known identifiers have a widely used short name or abbreviation.

Invalid or cancelled identifiers should be so identified through the identifier scope: the cancellation of the identifier does not impact its namespace, but its connection to a referent.

Standards body identifiers for standards ([ISO 690, Clause 5.999999999](#)) may be modelled as series numbers or as identifiers ([Clause 18](#)). We recommend that the canonical identifier issued for a standard by a standards body be encoded as an identifier; other identifiers assigned to the same document may be better identified with a series title, as a named and numbered grouping of documents.

Identifiers can be expressed as HTTP URIs may be so expressed, without changing the identifier type. A DOI for example may be expressed as either the DOI proper, or as a doi.org URI.

### EXAMPLE 1

*International Journal of Islamic Thought*. e-ISSN 2289-6023. ISSN 2232-1314.

```
<bibitem type="journal">
  <title>International Journal of Islamic Thought</title>
  <docidentifier scope="digital" type="e-ISSN">2289-6023</docidentifier>
  <docidentifier scope="print" type="ISSN">2232-1314</docidentifier>
</bibitem>
```

### EXAMPLE 2

Ahmed al-Kindi & Anke Iman Bouzenita. 2018. The notion of *Sunna*: An eclectic reading in the Ibadhi legacy. *International Journal of Islamic Thought* 14:1-21. <https://doi.org/10.24035/ijit.14.2018.001>.

```
<bibitem type="article">
  <title>International Journal of Islamic Thought</title>
  <docidentifier scope="journal" type="doi">10.24035/ijit</docidentifier>
  <docidentifier scope="article" type="doi">https://doi.org/10.24035/ijit.14.2018.001</docidentifier>
</bibitem>
```

## 20. LOCATION

- Source: ISO 690, Clause 4.10, ISO 690, Clause 5.10
- Serialisation: `bibitem/accessLocation`, `bibitem/uri`

Unpublished items with a limited number of copies that are held at a repository should be referenced through `bibitem/accessLocation`, which gives the repository that the cited copy is held in, and the locator used by the repository. The repository and locator are not differentiated, and are treated as a single string. The `bibitem/accessLocation` element is also used for online locations of digital resources, where a single URL (`bibitem/uri`) is not sufficient, and either a navigation path, or an in-document object identifier is used.

An archival URI can be differentiated from an original URI for a resource, through using “archival” as the `uri/@type`. Alternatively, the archival copy and the original copy may be treated as related items (through an “instance” relation), although that is typically not necessary.

Persistent identifiers and other identifiers expressed as actionable URLs should still be represented as `bibitem/docidentifier` rather than `bibitem/uri`, so long as they are managed in a distinct namespace. That applies to such identifiers as DOI, ARK, Handle, ISSN, etc.

### EXAMPLE 1

P.Vind.Tand.25a = HGV P.Vindob. Tandem 25 a = Trismegistos 26540. At: P.Vindob.Gr. Inv. Nr. 12424 + 24718 + 28384.  
(Highly abbreviated format, using conventions familiar to papyrologists)

```
<bibitem type="booklet">
  <title>[Untitled]</title>
  <uri>http://papyri.info/hgv/26540</uri>
  <uri>http://aquila.zaw.uni-heidelberg.de/hgv/26540</uri>
  <uri>https://www.trismegistos.org/text/26540</uri>
  <docidentifier type="HGV">P.Vindob. Tandem 25 a</docidentifier>
  <docidentifier type="Trismegistos">26540</docidentifier>
  <accessLocation>P.Vindob.Gr. Inv. Nr. 12424 + 24718 + 28384.</accessLocation>
</bibitem>
```

(More elaborated form)

```
<bibitem type="booklet">
  <title>[Untitled]</title>
  <uri>http://papyri.info/hgv/26540</uri>
  <uri>http://aquila.zaw.uni-heidelberg.de/hgv/26540</uri>
  <uri>https://www.trismegistos.org/text/26540</uri>
  <docidentifier type="HGV">P.Vindob. Tandem 25 a</docidentifier>
  <docidentifier type="Trismegistos">26540</docidentifier>
  <relation type="includedIn">
    <bibItem>
      <title>Fünfunddreißig Wiener Papyri (P. Vindob. Tandem)</title>
      <date type="published">1976</date>
      <contributor>
        <role type="editor"/>
        <person><name><completeName>Pieter Johannes Sijpesteijn</completeName></name></person>
      </contributor>
      <contributor>
        <role type="editor"/>
        <person><name><completeName>Klaas Anthony Worp</completeName></name></person>
      </contributor>
      <contributor>
        <role type="publisher"/>
        <organization><name>Terra</name></organization>
      </contributor>
      <series>
        <title>Studia Amstelodamensia ad epigraphicam, ius antiquum et papyrologicam pertinentia</title>
        <number>6</number>
      </series>
    </bibItem>
    <bibLocality type="part">
      <referenceFrom>25a</referenceFrom>
    </bibLocality>
  </relation>
  <accessLocation>National Library of Vienna. P.Vindob.Gr. Inv. Nr. 12424 + 24718 + 28384.</accessLocation>
</bibitem>
```

### EXAMPLE 2

Australian Government Bureau of Meteorology. *Latest Weather Observations for Dumont D'Urville*. <http://www.bom.gov.au>. Path: Antarctica: Antarctic Observations: Latest observations: Dumont D'Urville: JavaScript Object Notation format (JSON) in row-major order. Viewed 2018-03-10.

```
<bibitem type="electronic resource">
  <title>Latest Weather Observations for Dumont D'Urville</title>
  <uri>http://www.bom.gov.au/fwo/IDT60803/IDT60803.89642.json</uri>
  <date type="accessed"><on>2018-03-10</on></date>
  <contributor>
    <role type="publisher"/>
    <organization>
      <name>Australian Government</name>
      <subdivision>Bureau of Meteorology</subdivision>
    </organization>
  </contributor>
  <accessLocation>http://www.bom.gov.au. Path: Antarctica: Antarctic Observations: Latest observations: Dur
</bibitem>
```

### EXAMPLE 3

British Library Web site February 1997 [online]. archive.org [distributor]. Available from: <https://web.archive.org/web/19970218190613/http://www.bl.uk/>. [archived 1997-02-18] [viewed 2019-02-28].

```
<bibitem type="website">
  <title>British Library Web site February 1997</title>
  <date type="copied">1997-02-18</date>
  <date type="accessed">2019-02-28</date>
  <uri type="original">http://www.bl.uk/</uri>
  <uri type="archival">https://web.archive.org/web/19970218190613/http://www.bl.uk/</uri>
  <contributor>
    <role type="author"/>
    <organization>
      <name>British Library</name>
    </organization>
  </contributor>
  <contributor>
    <role type="distributor"/>
    <organization>
      <name>archive.org</name>
    </organization>
  </contributor>
</bibitem>

<bibitem type="website">
  <title>British Library Web site February 1997</title>
  <uri type="original">http://www.bl.uk/</uri>
  <contributor>
    <role type="author"/>
    <organization>
      <name>British Library</name>
    </organization>
  </contributor>
  <relation type="instance">
    <bibitem type="website">
      <uri type="archival">https://web.archive.org/web/19970218190613/http://www.bl.uk/</uri>
      <date type="copied">1997-02-18</date>
      <date type="accessed">2019-02-28</date>
      <contributor>
        <role type="distributor">web archive</role>
        <organization>
          <name>archive.org</name>
        </organization>
      </contributor>
    </bibitem>
  </relation>
</bibitem>
```

## 21. ADDITIONAL GENERAL INFORMATION

### 21.1. Classification

- Source: ISO 690, Clause 4.11
- Serialisation: bibitem/classification

#### EXAMPLE

Giesler, Patricia. *Canada Remembers the Korean War*. Dewey 971.06 GIE 2003. ISBN 0662674979. Charlottetown, P.E.I.: Veterans Affairs Canada. 2003.

```
<bibitem type="book">
  <title>Canada Remembers the Korean War</title>
  <docidentifier type="ISBN">0662674979</docidentifier>
  <date type="published"><on>2003</on></date>
  <contributor>
    <role type="author"/>
    <person>
      <surname>Giesler</surname>
      <forename>Patricia</forename>
    </person>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <organization>
      <name>Veterans Affairs Canada</name>
    </organization>
  </contributor>
  <place>Charlottetown, P.E.I.</place>
  <classification type="Dewey">971.06 GIE 2003</classification>
</bibitem>
```

### 21.2. Keywords

- Source: N/A
- Serialisation: bibitem/keyword

#### EXAMPLE

```
<keyword>Homo sapiens</keyword>

<keyword>
  <vocab>Homo sapiens</vocab>
  <vocabid type="wikidata" uri="https://www.wikidata.org/wiki/Q15978631">
    <code>Q15978631</code>
    <term>Homo sapiens</term>
  </vocabid>
  <vocabid type="National Biodiversity Network">
    <code>NHMSYS00000376773</code>
  </vocabid>
</keyword>

<keyword>
  <taxon>Hominidae</taxon>
  <taxon>Homininae</taxon>
  <taxon>Hominini</taxon>
  <taxon>Hominina</taxon>
  <taxon>Homo</taxon>
  <taxon>Homo sapiens</taxon>
  <vocabid type="wikispecies"><term>Homo_sapiens</term></vocabid>
</keyword>
```

### 21.3. Price and availability

- Source: ISO 690, Clause 4.11



- Serialisation: `bibitem/price`, `bibitem/note`

Price is marked up as a distinct element, which contains the currency code, represented in ISO 4217. The price should be treated as nominal, rather than capturing all possible pricings at a given time.

Availability information for a bibliographic item is treated as a note. This also applies to the availability of an online resource, and any access limitations, but not to licensing, which is encoded separately.

#### EXAMPLE

*Pluralism in the Soviet Union: Essays in Honour of H. Gordon Skilling*. Edited by Susan Gross Solomon. New York: St. Martin's Press, 1983. xiii, 179 pp. \$27.50. Available on request to the author.

```
<bibitem type="book">
  <title>Pluralism in the Soviet Union: Essays in Honour of H. Gordon Skilling</title>
  <date type="published"><on>1983</on></date>
  <contributor>
    <role type="editor"/>
    <person>
      <name>
        <surname>Solomon</surname>
        <forename>Susan</forename>
        <forename>Gross</forename>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <organization>
      <name>St Martin's Press</name>
    </organization>
  </contributor>
  <note>Available on request to the author</note>
  <place>New York</place>
  <price currency="USD">27.50</price>
  <extent type="page">
    <referenceFrom>xiii</referenceFrom>
  </extent>
  <extent type="page">
    <referenceFrom>179</referenceFrom>
  </extent>
</bibitem>
```

## 21.4. License

- Source: ISO 690, Clause 4.11
- Serialisation: `bibitem/license`, `bibitem/copyright`.

Where available, URIs should be used as unambiguously identifying licenses. If a URI is not available, a commonly accepted abbreviation or short name of the license should be used.

Copyright is privileged with a separate element, incorporating copyright date and owner.

#### EXAMPLE

```
<license>BSD-2</license> <license>https://creativecommons.org/licenses/by/2.0/;
```

## 21.5. Provenance and Authenticity

- Source: ISO 690, Clause 4.11
- Serialisation: `bibitem/note`

Notes on bibliographical provenance, and checksums for digital resources, are both given as bibliographic notes.

## 22. SPECIFIC CATEGORIES OF INFORMATION RESOURCE

### 22.1. Electronic information resources

- Source: ISO 690, Clause 5.3

System requirements are modelled as a note, prefixed with “System requirements:”. (Note that detailed system requirements are less commonly expressed now for software than they were in the 1990s and 2000s.)

URLs should not be broken at the end of a line: that is a rendering requirement, not an information modelling requirement.

Where possible, a more specific category should be used than “electronic resource”, which is properly a description of a medium and not a resource type; monographs and journals are now routinely published online.

- The category “dataset” is applied to a collection of data that is not meant to be human-readable, and which is typically machine readable.
- The category “website” is applied to a human-readable online publication, which is not expressly presented as one of the established print categories, such as a book, a conference proceedings, a technical report, or a journal.

#### EXAMPLE

Ubisoft. *Far Cry 5* [computer game]. 2018. Viewed: 2018-05-10. System requirements: CPU: Intel Core i5-2400 | AMD FX-6300 @ 3.5 GHz or better (minimum); Intel Core i7-4770 @ 3.4 GHz | AMD Ryzen 5 1600 @ 3.2 GHz or equivalent (recommended). RAM: 8 GB. OS: Windows 7 SP1, Windows 8.1, Windows 10 (64-bit versions only). VIDEO CARD: NVIDIA GeForce GTX 670 | AMD R9 270 (2GB VRAM with Shader Model 5.0 or better) (minimum); NVIDIA GeForce GTX 970 or AMD R9 290X (4GB VRAM with Shader Model 5.0 or better) (recommended).

```
<bibitem type="electronic resource">
  <title>Far Cry 5</title>
  <date type="published"><on>2018</on></date>
  <date type="accessed"><on>2018-05-10</on></date>
  <contributor>
    <role type="author"/>
    <organization>
      <name>Ubisoft</name>
    </person>
  </organization>
  <contributor>
    <role type="publisher"/>
    <organization>
      <name>Ubisoft</name>
    </organization>
  </contributor>
  <medium>
    <form>computer game</form>
  </medium>
  <note>System requirements: CPU: Intel Core i5-2400 | AMD FX-6300 @ 3.5 GHz or better
(minimum); Intel Core i7-4770 @ 3.4 GHz | AMD Ryzen 5 1600 @ 3.2 GHz or equivalent (recommended).
RAM: 8 GB. OS: Windows 7 SP1, Windows 8.1, Windows 10 (64-bit versions only).
VIDEO CARD: NVIDIA GeForce GTX 670 | AMD R9 270 (2GB VRAM with Shader Model 5.0 or better) (minimum); NVID:
</bibitem>
```

### 22.2. Cartographic material

- Source: ISO 690, Clause 5.4

The projection, prime meridian, orientation, and reference systems (such as grids and navigational lattices) are given as notes. The spectral characteristics of the sensor, details of the satellite systems, and the amount of cloud cover are also given as notes. Details of the creator's role are given in bibitem/contributor/role.

#### EXAMPLE

Berner, L.T., P.S.A. Beck, M.M. Loranty, H.D. Alexander, M.C. Mack, and S.J. Goetz. *Siberian Boreal Forest Aboveground Biomass and Fire Scar Maps, Russia, 1969-2007*. ORNL DAAC, Oak Ridge, Tennessee, USA. 2016. <http://dx.doi.org/10.3334/ORNLDAAC/1321>

```
<bibitem type="map">
  <title>Siberian Boreal Forest Aboveground Biomass and Fire Scar Maps, Russia, 1969-2007</title>
  <date type="published"><on>2016</on></date>
  <docidentifier type="DOI">10.3334/ORNLDAAC/1321</docidentifier>
  <uri>https://daac.ornl.gov/VEGETATION/guides/Siberian_Biomass_Wildfire.html</uri>
  <contributor>
    <role type="author">
```

```

    <person><name><completeName>Berner, L.T.</completeName></name></person>
  </contributor>
  <contributor>
    <role type="author">
      <person><name><completeName>Beck, P.S.A.</completeName></name></person>
    </contributor>
    <contributor>
      <role type="author">
        <person><name><completeName>Loranty, H.D.</completeName></name></person>
      </contributor>
    <contributor>
      <role type="author">
        <person><name><completeName>Mack, M.C.</completeName></name></person>
      </contributor>
    <contributor>
      <role type="author">
        <person><name><completeName>Goetz, S.J.</completeName></name></person>
      </contributor>
    <contributor>
      <role type="publisher"/>
      <organization>
        <name>Oak Ridge National Laboratory</name>
        <subdivision>Distributed Active Archive Center</subdivision>
        <abbrev>ORNL DAAC</abbrev>
      </organization>
    </contributor>
  <medium>
    <form>map</form>
    <size>col. 68 x 69 cm. fold. in envelope 30 x 24 cm.</size>
    <scale>1:62500</scale>
  </medium>
  <note>Type: Projected
Projection: Albers_Conic_Equal_Area
Geographic Coordinate Reference: WGS 1984
Prime Meridian: Greenwich
Extent: North: 69.8980555555556 South: 64.4575 West: 155.9319444444444 East: 166.4744444444444</note>
  <note>Satellites:
Biomass Mapping: WorldView-1 (WV-1), Landsat 5 TM
Fire Scar Mapping: Landsat 7 ETM+, Landsat 5 TM, Landsat 1-3 MSS</note>
  <place>Oak Ridge, Tennessee, USA</place>
</bibitem>

```

### 22.3. Films, videos and broadcasts

— Source: ISO 690, Clause 5.5

If a single contributor is to be singled out as the creator of a resource, they are assigned the `bibitem/contributor/role` type of “author”. Otherwise, if the resource is treated as a collaborative effort, the various contributors should be listed with `bibitem/contributor/role` type of “performer”, with their contributions differentiated in the `bibitem/contributor/role`.

Programmes within a series have the series modelled as a `bibitem/series`. The title of the series is modelled as `bibitem/series/title`, and the title of the episode as `bibitem/title`. The transmitting organisation and channel are modelled as a contributor of type “distributor”.

If an audiovisual resource is a contained item, the `bibitem/extent` gives its location within the host item; this is typically a timestamp for visual material, and a timestamp or a track for audio material.

#### EXAMPLE 1

*The Death of Stalin*. Directed by Armando Iannucci. 2017.

```

<bibitem type="film">
  <title>The Death of Stalin</title>
  <date type="published"><on>2017</on></date>
  <contributor>
    <role type="performer">Directed by</role>
    <person>
      <name>
        <surname>Iannucci</surname>
        <forename>Armando</forename>

```

```

    </name>
  </person>
</contributor>
</bibitem>

```

## EXAMPLE 2

Armando Iannucci. *The Death of Stalin*. 2017.

```

<bibitem type="film">
  <title>The Death of Stalin</title>
  <date type="published"><on>2017</on></date>
  <contributor>
    <role type="author">Directed by</role>
    <person>
      <name>
        <surname>Iannucci</surname>
        <forename>Armando</forename>
      </name>
    </person>
  </contributor>
</bibitem>

```

## EXAMPLE 3

*Columbo*, Season 7, Episode 5. The Conspirators. Teleplay by Howard Berk. NBC. 1978-05-13.

```

<bibitem type="audiovisual">
  <title>The Conspirators</title>
  <date type="transmitted"><on>1978-05-13</on></date>
  <contributor>
    <role type="performer">Teleplay by</role>
    <person>
      <name>
        <surname>Berk</surname>
        <forename>Howard</forename>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="distributor"/>
    <organization>
      <name>NBC</name>
    </organization>
  </contributor>
  <series>
    <title>Columbo</title>
    <number>Season 7</number>
    <partnumber>Episode 5</partnumber>
  </series>
</bibitem>

```

## EXAMPLE 4

Sigur Rós. Untitled [Vaka]. In: ( ) [compact disc]. Track 1. Mosfellsbær: Sundlaugin, 2002.

```

<bibitem type="audiovisual">
  <title>Untitled</title>
  <date type="published"><on>2002</on></date>
  <contributor>
    <role type="author">composer</role>
    <organization><name>Sigur Rós</name></organization>
  </contributor>
  <medium>
    <form>compact disc</form>
  </medium>
  <relation type="includedIn">
    <bibitem>
      <title>( )</title>
      <contributor>
        <role type="author">composer</role>

```

```

    <organization><name>Sigur Rós</name></organization>
  </contributor>
  <contributor>
    <role type="publisher"/>
    <organization><name>Sundlaugin</name></organization>
  </contributor>
  <place>Mosfellsbær, Iceland</place>
</bibitem>
<locality type="track">
  <referenceFrom>1</referenceFrom>
</locality>
</relation>
</bibitem>

```

## 22.4. Graphic Works

— Source: ISO 690, Clause 5.6

The fuller description of a contributors role under `bibitem/contributor/role` allows for Latin role descriptions such as *pinxit* and *sculpsit*.

### EXAMPLE

[*Tent of Darius*] C. Le Brun *pinxit*. S. Gribelin *sculpsit*. [painting]. 1702. At: Musée du Louvre, Inv. 2896.

```

<bibitem type="graphical work">
  <title>[Tent of Darius]</title>
  <date type="created"><on>1702</on></date>
  <contributor>
    <role type="author">pinxit</role>
    <person><name><completeName>C. Le Brun</completeName></name></person>
  </contributor>
  <contributor>
    <role type="author">sculpsit</role>
    <person><name><completeName>S. Gribelin</completeName></name></person>
  </contributor>
  <medium>
    <form>painting</form>
  </medium>
  <accessLocation>Musée du Louvre, Inv. 2896.</accessLocation>
</bibitem>

```

## 22.5. Music

— Source: ISO 690, Clause 5.7

— Serialisation: `bibitem/contributor/role`

Librettists and composers are both contributors of role type “author”; the role of composer and librettist needs to be differentiated in the contributor role for proper rendering.

### EXAMPLE

ADAMS, John Coolidge. *Nixon in China*. Libretto by Alice GOODMAN. 1987.

```

<bibitem type="music">
  <title>Untitled</title>
  <date type="published"><on>1987</on></date>
  <contributor>
    <role type="author">composer</role>
    <person><name><completeName>John Coolidge ADAMS</completeName></name></person>
  </contributor>
  <contributor>
    <role type="author">libretto by</role>
    <person><name><completeName>Alice GOODMAN</completeName></name></person>
  </contributor>
</bibitem>

```

## 22.6. Patents

— Source: ISO 690, Clause 5.8

Patents are encoded similarly to contributions within a serial (ISO 690, Clause 5.2), with the series designation for the patent preceded by the country name or code. The date of application is encoded as a date of type “issued”.

#### EXAMPLE

Green, Martin Andrew. *Artificial amorphous semiconductors and applications to solar cells*. Australia, [Patent] application number 2005238988. Appl: 2005-04-29.

```
<bibitem type="patent">
  <title>Artificial amorphous semiconductors and applications to solar cells</title>
  <date type="issued"><on>2005-04-29</on></date>
  <contributor>
    <role type="author"/>
    <person>
      <surname>Green</surname>
      <forename>Martin</forename>
      <forename>Andrew</forename>
    </person>
  </contributor>
  <series>
    <title>Australia, [Patent] application number</title>
    <number>2005238988</number>
  </series>
</bibitem>
```

## 22.7. Archival materials

— Source: ISO 690, Clause 5.10

The fonds or collection of an archival item is modelled as a series. The box and folder number is encoded as an access location. The reference code is encoded as an identifier. The archive is encoded as a contributor of type “distributor” (since the archive makes the resource available, even if to a restricted public).

#### EXAMPLE

HICKS, H. D. *Correspondence from Henry Davies Hicks to the Annapolis County electorate*. [1956-10-24]. MS-2-511, Box 15, Folder 9. Henry Davies Hicks fonds. At: Dalhousie University Archives, Halifax, Nova Scotia, Canada.

```
<bibitem type="archival">
  <title>Correspondence from Henry Davies Hicks to the Annapolis County electorate</title>
  <docidentifier type="reference code">MS-2-511</docidentifier>
  <date type="created">1956-10-24</date>
  <contributor>
    <role type="author"/>
    <person>
      <surname>Hicks</surname>
      <initials>H. D.</initials>
    </person>
  </contributor>
  <contributor>
    <role type="distributor">archive</role>
    <organization>
      <name>Dalhousie University Archives</name>
      <address>
        <city>Halifax</city>
        <state>Nova Scotia</state>
        <country>Canada</country>
      </address>
    </organization>
  </contributor>
  <series>
    <title>Henry Davies Hicks fonds</title>
  </series>
  <accessLocation>Box 15, Folder 9</accessLocation>
</bibitem>
```

## 22.8. Datasets

— Source: ISO 690, Clause 5.11

The organisation publishing or producing the dataset is modelled as a publisher; the organisation hosting the dataset in a repository is modelled as a distributor. Data compilers, editors, investigators, and data managers are all modelled as editors. Timestamps are modelled as extents; queries wherever possible should be preented as URIs. Where that is not possible, the description of the necessary query to access the required data subset should be presented as an accessLocation.

#### EXAMPLE 1

MILBERGER, S. (2002). *Evaluation of violence against women with physical disabilities in Michigan, 2000–2001* (ICPSR version) [dataset] [data in several file formats and codebook/questionnaire in PDF]. Detroit: Wayne State University [producer]. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor]

```
<bibitem type="dataset">
  <title>Evaluation of violence against women with physical disabilities in Michigan, 2000–2001</title>
  <date type="created">2002</date>
  <contributor>
    <role type="editor"/>
    <person>
      <name>
        <surname>Milberger</surname>
        <initials>S.</initials>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="publisher">producer</role>
    <organization>
      <name>Wayne State University</name>
      <address>
        <city>Detroit</city>
      </address>
    </organization>
  </contributor>
  <contributor>
    <role type="distributor">repository</role>
    <organization>
      <name>Inter-university Consortium for Political and Social Research</name>
      <address>
        <city>Ann Arbor</city>
        <state>MI</state>
      </address>
    </organization>
  </contributor>
  <version>
    <draft>ICPSR version</draft>
  </version>
  <note>data in several file formats and codebook/questionnaire in PDF</note>
</bibitem>
```

#### EXAMPLE 2

LEUPRECHT [et al.]. tas\_CNRM-CERFACS-CNRM-CM5\_RCP4.5\_r1i1p1\_CLMcom-CCLM4-8-17, [dataset]. Version 2. [Subset used: January to June 2014]. Vienna, Austria. CCCA Data Centre [distributor], 2016. Available from: <https://hdl.handle.net/20.500.11756/93887ecf>. [accessed 2017-06-28].

```
<bibitem type="dataset">
  <title>tas_CNRM-CERFACS-CNRM-CM5_RCP4.5_r1i1p1_CLMcom-CCLM4-8-17</title>
  <docidentifier type="handle">https://hdl.handle.net/20.500.11756/93887ecf</docidentifier>
  <date type="created">2016</date>
  <date type="accessed">2017-06-28</date>
  <contributor>
    <role type="editor"/>
    <person>
      <name>
        <surname>Leuprecht</surname>
      </name>
    </person>
  </contributor>
  <contributor>
    <role type="editor"/>
```

```

<person>
  <name>
    <completename>et al.</completename>
  </name>
</person>
</contributor>
<contributor>
  <role type="distributor"/>
  <organization>
    <name>CCCA Data Centre</name>
  </organization>
</contributor>
<version><draft>Version 2</draft></version>
<place>Vienna, Austria</place>
<extent type="time">
  <referenceFrom>January 2014</referenceFrom>
  <referenceTo>June 2014</referenceTo>
</extent>
</bibitem>

```

## 22.9. Social Media

— Source: ISO 690, Clause 5.12

Social media items are typically items of `bibitem/@type="webresource"`, although they may not always have an associated exposed URI (particularly for social media accessed primarily via phone app, rather than web browser). As with [ISO 690](#), a distinction is made between items publicly available (or at least, broadcast to a defined group of people), and one-on-one text messages; the latter are conflated with voice and face-to-face communications between individuals, and are cited as personal communications.

A person's real name may be related to the online identity assumed by the author of the item, if both are known. The online identity is treated as a pseudonym of the real life identity, and is serialised in the same way ([Clause 11.5](#)).

The service name or type should be encoded as `medium/form`, since it relates to how the content is to be accessed by an intermediary app. (For example, a tweet is not just accessed by a web browser, as a web resource; it is accessed and rendered by a web browser in the context of Twitter.)



## APPENDIX A (NORMATIVE) REFERENCE MODEL XML SERIALIZATION

The following is a sample serialisation of [Clause 4](#) in XML. This is not intended to be the only possible serialisation of [Clause 4](#), whether in XML or in another format. In fact, existing reference tools such as BibTeX [\[1\]](#) are expected to be used as serialisations. The sample serialisation is intended to provide illustrations of the model, and to discuss the model succinctly by referencing its elements. (Of course, the serialisation can be used in practice as a basis for data exchange of references.)

The serialisation is provided in [\[5\]](#); refer to [\[6\]](#) for an introduction to the format.

```
grammar {  
  
  # https://www.myintervals.com/blog/2009/05/20/iso-8601-date-validation-that-doesnt-suck/  
  # Somewhat dumbed down for XSD regex:  
  ISO8601DateTime = xsd:string { pattern = "([\\+\\-]?\\d{4})([-?](\\d{1-9}|1[0-2])([-?](\\d{12}|\\d|0[1-9]|3[01]))?|W([C  
  ISO8601Date = xsd:string { pattern = "([\\+\\-]?\\d{4})([-?](\\d{1-9}|1[0-2])([-?](\\d{12}|\\d|0[1-9]|3[01]))?|W([0-4]\\d{1-2})?  
  
  status =  
    element status {  
      ( stage, substage?, iteration? )  
    }  
  
  stage = element stage { text }  
  substage = element substage { text }  
  iteration = element iteration { text }  
  
  language = element language { text }  
  ## ISO-639  
  
  script = element script { text }  
  ## ISO-15924: Latn  
  
  edition = element edition {  
    attribute number { text }?,  
    text  
  }  
  
  LocalizedString =  
    # multiple languages and scripts possible: comma delimit them if so  
    attribute language { text }?,  
    attribute script { text }?,  
    text  
  
  FormattedString =  
    attribute format { ( "text/plain" | "text/html" | "application/docbook+xml" |  
      "application/tei+xml" | "text/x-asciidoc" | "text/markdown" | "application/x-isodoc+xml" | text ) }?,  
    LocalizedStringOrXsAny  
  
  LocalizedStringOrXsAny =  
    # multiple languages and scripts possible: comma delimit them if so  
    attribute language { text }?,  
    attribute script { text }?,  
    ( text | AnyElement )+  
  
  contributor =  
    element contributor {  
      role*,  
      ContributorInfo  
    }  
  
  role =  
    element role {  
      attribute type { ( "author" | "performer" | "publisher" | "editor" | "adapter" | "translator" | "distributed" | "illustrator" | "reviewer" | "commentator" | "contributor" | "other" ) },  
      roledescription*  
    }  
  
  ContributorInfo =  
    ( person | organization )
```

```

roledescription =
  element description { FormattedString }

person =
  element person {
    fullname?, affiliation*, person-identifier*, contact*, uri*
  }

fullname =
  element name { FullNameType }

FullNameType =
  (( prefix*, forename*, initial*, surname, addition* ) | completeName ),
  biblionote*, varianname*

prefix = element prefix { LocalizedString }
initial = element initial { LocalizedString }
addition = element addition { LocalizedString }
surname = element surname { LocalizedString }
forename = element forename { LocalizedString }
completeName = element completename { LocalizedString }

varianname = element variant {
  attribute type { text },
  FullNameType
}

affiliation =
  element affiliation {
    affiliationname?, affiliationdescription*, organization
  }

affiliationname = element name { LocalizedString }

affiliationdescription = element description { FormattedString }

organization =
  element organization {
    orgname, subdivision?, abbreviation?, uri*, org-identifier*, contact*
  }

orgname = element name { LocalizedString | NameWithVariants }
subdivision = element subdivision { LocalizedString | NameWithVariants }

NameWithVariants =
  element primary { LocalizedString },
  element variant { NameWithVariants1 }*

NameWithVariants1 =
  attribute type { text },
  element primary { LocalizedString },
  element variant { NameWithVariants1 }*

abbreviation =
  element abbreviation { LocalizedString }

uri =
  element uri {
    attribute type { text }?,
    xsd:anyURI
  }

contact =
  ( address | phone | email | uri )

phone = element phone { text }
email = element email { text }

```

```

address =
  element address {
    (street+, city, state?, country, postcode? ) | formattedAddress
  }

street = element street { text }
city = element city { text }
state = element state { text }
country = element country { text }
postcode = element postcode { text }
formattedAddress = element formattedAddress { text }

person-identifier =
  element identifier {
    attribute type { ("isni" | "uri") },
    text
  }

org-identifier =
  element identifier {
    attribute type { ("orcid" | "uri") },
    text
  }

citation =
  element citation { CitationType }

CitationType =
  attribute bibitemid { xsd:IDREF },
  locality*, date?

date = element date { ISO8601Date }

locality =
  element locality { BibItemLocality }

BibItemLocality =
  attribute type { LocalityType },
  referenceFrom?, referenceTo?

LocalityType = xsd:string { pattern = "section|clause|part|paragraph|chapter|page|whole|table|annex|figure|not

referenceFrom = element referenceFrom { text }
referenceTo = element referenceTo { text }

bibitem =
  element bibitem {
    attribute id { xsd:ID },
    BibliographicItem
  }

bibitem_no_id =
  element bibitem {
    BibliographicItem
  }

relaton_collection =
  element relaton-collection {
    attribute type { text }?,
    btitle, contributor*,
    docrelation*
  }

BibItemType |=
  ( "article" | "book" | "booklet" | "manual" |
    "proceedings" | "presentation" | "thesis" | "techreport" |
    "standard" | "unpublished" | "map" | "electronic resource" |
    "audiovisual" | "film" | "video" | "broadcast" | "software" |
    "graphic_work" | "music" | "patent" | "inbook" | "incollection" |

```

```

        "inproceedings" | "journal" | "website" | "webresource" | "dataset" | "archival" | "misc" )

BibliographicItem =
    attribute type { BibItemType }?,
    fetched?,
    (btitle+ | formattedref), bsource*, docidentifier*, docnumber?, bdate*, contributor*,
    edition?, version?, biblionote*, language*, script*,
    abstract*, status?, copyright?, docrelation*, series*, medium?, bplace*, bprice*,
    extent*, accesslocation*, license*, bclassification?, bkeyword*, validity?

btitle = element title { TypedTitleString }
bsource = element uri { TypedUri }
formattedref = element formattedref { FormattedString }
license = element license { text }

fetched = element fetched { ISO8601DateTime }

validity = element validity {
    validityBegins?, validityEnds?, validityRevision?
}
validityBegins = element validityBegins { ISO8601DateTime }
validityEnds = element validityEnds { ISO8601DateTime }
validityRevision = element revision { ISO8601DateTime }

TypedTitleString =
    attribute type { TitleType }?,
    FormattedString

TitleType = ( "alternative" | "original" | "unofficial" | "subtitle" | "main" )

TypedUri =
    attribute type { text }?,
    xsd:anyURI

DateType =
    attribute text { text }?,
    ( ISO8601Date )?

BibliographicDateType =
    "published" | "accessed" | "created" | "implemented" | "obsoleted" | "confirmed" | "updated" | "issued" | "trc

bdate = element date {
    attribute type { ( BibliographicDateType | text ) },
    attribute text { text }?,
    (
    (
    element from { ISO8601Date },
    element to { ISO8601Date }?
    ) |
    element on { ISO8601Date }
    )?
}

docidentifier = element docidentifier {
    attribute type { text }?,
    attribute scope { text }?,
    text
}
docnumber = element docnumber { text }

bclassification = element classification {
    attribute type { text }?,
    text
}

bplace = element place {
    attribute uri { xsd:anyURI }?,

```

```

    attribute region { text }?,
    text
}

bprice = element price {
    attribute currency { text },
    text
}

medium = element medium {
    content?, form?, carrier?, size?, scale?
}
content = element content { text }
form = element form { text }
carrier = element carrier { text }
size = element size { text }
scale = element scale { text }
accesslocation = element accesslocation { text }

extent = element extent { BibItemLocality }

series = element series {
    attribute type { SeriesType }?,
    (formattedref |
    (btitle, bplace?, seriesorganization?,
    abbreviation?,
    seriesfrom?, seriesto?,
    seriesnumber?, seriespartnumber?, seriesrun?))
}

SeriesType = ( "main" | "alt" )

seriesorganization = element organization { text }
seriesfrom = element from { ISO8601Date }
seriesto = element to { ISO8601Date }
seriesnumber = element number { text }
seriespartnumber = element partnumber { text }
seriesrun = element run { text }

biblionote = element note {
    attribute type { text }?,
    FormattedString
}
abstract = element abstract { FormattedString }

copyright =
    element copyright {
        from, to?, owner
    }

from = element from { xsd:gYear }
to = element to { xsd:gYear }

owner =
    element owner { ContributorInfo }

DocRelationType =
    "obsoletes" |
    "obsoletedBy" |
    "supersedes" |
    "supersededBy" |
    "updates" |
    "updatedBy" |
    "complements" |
    "derivedFrom" |
    "translatedFrom" |
    "hasTranslation" |
    "adoptedFrom" |
    "equivalent" |

```

```

    "identical" |
    "nonequivalent" |
    "includedIn" |
    "includes" |
    "instance" |
    "instanceOf" |
    "partOf" |
    "hasPart" |
    "hasDraft" |
    "draftOf" |
    "merges" |
    "splits" |
    "amends" |
    "amendedBy" |
    "corrects" |
    "correctedBy" |
    "revises" |
    "revisedBy"

docrelation =
    element relation {
        attribute type { DocRelationType },
        element bibitem { BibliographicItem },
        locality*
    }

version =
    element version {
        revision-date?, draft*
    }

vedition = element edition { xsd:int }
revision-date = element revision-date { ISO8601Date }
draft = element draft { text }

bkeyword = element keyword {
    LocalizedString |
    (
        element vocab { LocalizedString },
        vocabid+
    ) |
    (
        element taxon { LocalizedString }+,
        vocabid+
    )
}

vocabid = element vocabid {
    attribute type { text },
    attribute uri { xsd:anyURI }?,
    element code { text }?,
    element term { text }?
}

AnyElement = element * { ( text | AnyElement )+ }

}

```

APPENDIX B  
(NORMATIVE)  
CITATION MODEL

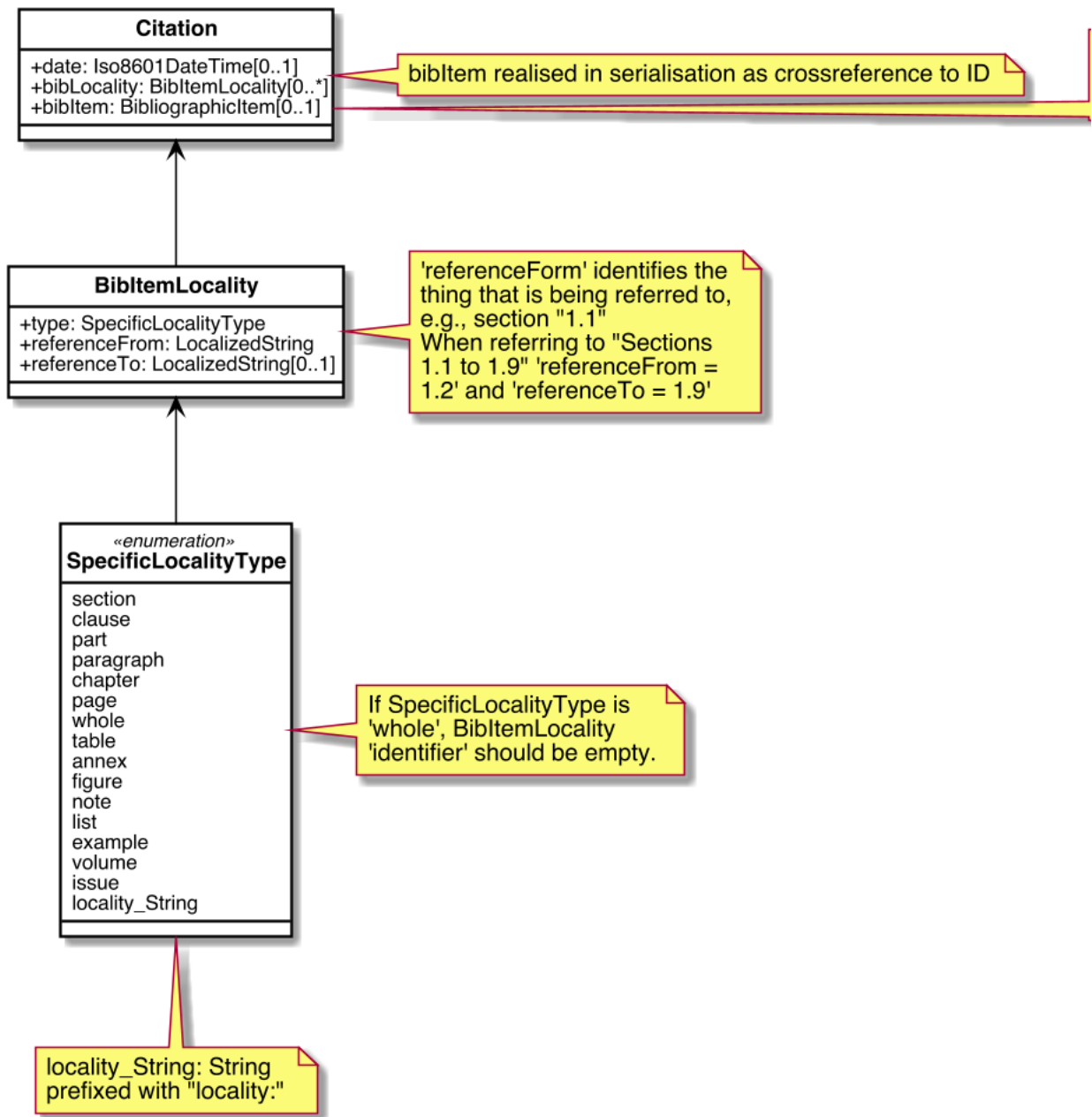


Figure B.1 – Reference Model, ISO 690 Citations

APPENDIX C  
(NORMATIVE)  
MAPPING TO BIBTEX

This listing includes the BibTeX fields presented as part of LaTeX [4], and (asterisked) the additional BibTeX fields in citavi [2].

C.1. Categories of information resource

From Clause 10.

Table C.1

BibTeX	Relaton
entry type	bibitem@type

C.2. Creator

From Clause 11.

Note that BibTeX processes names as follows:

```
author := authorName ("and" authorName)*
editor := editorName ("and" editorName)*
authorName := Surname, Forename MiddleName* | Forename MiddleName* Surname
editorName := Surname, Forename MiddleName* | Forename MiddleName* Surname
Surname := \s+ | "{" [^}]+ "}"
Forename := \s+ | "{" [^}]+ "}"
MiddleName := \s+ | "{" [^}]+ "}"
```

Table C.2

BibTeX	Relaton
authorName	bibitem/contributor[role/@type = 'author']
editorName	bibitem/contributor[role/@type = 'editor']
forename	bibitem/contributor/person/name/forename
surname	bibitem/contributor/person/name/surname
middlename	bibitem/contributor/person/name/middlename

C.3. Title

From Clause 12.

Table C.3

BibTeX	Relaton
booktitle	bibitem/relation[@type = 'includedIn']/bibitem/title
title	bibitem/title[@type = 'main']
subtitle*	bibitem/title[@type = 'subtitle']



## C.4. Document relations

From [Clause 13](#).

Table C.4

<b>BibTeX</b>	<b>Relaton</b>
none	

## C.5. Medium

From [Clause 14](#).

Table C.5

<b>BibTeX</b>	<b>Relaton</b>
none	

## C.6. Edition

From [Clause 15](#).

Table C.6

<b>BibTeX</b>	<b>Relaton</b>
edition	bibitem/edition

## C.7. Production

From [Clause 16](#).

Table C.7

<b>BibTeX</b>	<b>Relaton</b>	<b>Note</b>
address	bibitem/place	howpublished
bibitem/note	institution, school, organization	bibitem/contributor[role/@type = 'distributor' and role = 'sponsor']/organization/name
(The three never coocur in the same entry type)	month, year	bibitem/date[@type = 'published']/on, bibitem/date[@type = 'created']/on
publisher	bibitem/contributor[role/@type = 'publisher']/organization/name	urldate*

## C.8. Numeration and pagination

From [Clause 17](#).

Table C.8

<b>BibTeX</b>	<b>Relaton</b>
chapter	bibitem/extent[@type = 'chapter']/referenceFrom

## C.9. Series title and number

From Clause 18.

Table C.9

<b>BibTeX</b>	<b>Relaton</b>	<b>Note</b>
journal, series	bibitem/series/title	(The two never coocur in the same entry type)

## C.10. Identifiers

From Clause 19.

Table C.10

<b>BibTeX</b>	<b>Relaton</b>
doi*	bibitem/docidentifier[@type = 'doi']
isbn*	bibitem/docidentifier[@type = 'isbn']
lccn*	bibitem/docidentifier[@type = 'lccn']
issn*	bibitem/docidentifier[@type = 'issn']

## C.11. Location

From Clause 20.

Table C.11

<b>BibTeX</b>	<b>Relaton</b>	<b>Note</b>
number, volume	bibitem/extent[@type = 'volume']/referenceFrom	(The two do not coocur in any entry type)
pages	bibitem/extent[@type = 'page']/referenceFrom, bibitem/extent[@type = 'page']/referenceTo	file2, url

## C.12. Additional general information

From Clause 21.

Table C.12

<b>BibTeX</b>	<b>Relaton</b>
note	bibitem/note

<b>BibTeX</b>	<b>Relaton</b>
type	bibitem/classification
timestamp*	bibitem/fetched
comment*	bibitem/note[@type = 'comment']
id*	bibitem/aid
language*	bibitem/language

### C.12.1. Classification

Table C.13

<b>BibTeX</b>	<b>Relaton</b>
keywords*	bibitem/classification

### C.12.2. Price and availability

Table C.14

<b>BibTeX</b>	<b>Relaton</b>
---------------	----------------

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