

<!--Common Terminology (CT) is a bridge terminology of widely used MARC, MODS, (Q)DC and DC Terms that have very different degree of specificity and generality. Since it is a bridge terminology, it allows communities to use their own standards but it provides uniformity to search achieving interoperability between them. It shows very high conversion rates and preservation rates for various specificity and generality degree standards. It is very simple to use and describe metadata records with 12 common terms and more qualifiers. CT is very compatible and friendly with Linked Open Data.

The Common Terminology (CT) version 1.1 is updated. The updated CT version 1.1 changes or omits few unnecessary qualifiers of version 1.1. These changes are based on analyses of CT usage used in conversions from Europeana, DPLA, National Library of Korea, Harvard and MIT metadata records on January 18, 2017 by Boaz Sunyoung Jin.

06/01/14 CT 1.0 is updated into 1.1 to solve the semantic error that points the same for 'other' sub-properties of different properties in rdfs graph.

Thus, in 'format' property, sub-property 'other' has deleted. In 'date' property, 'other' sub-property has changed into 'dateOther.'

In 'description' property, 'other' has changed into 'descriptionOther.' In 'identifier' property, 'other' has changed into 'identifierOther.'

Modified by Boaz Sunyoung Jin, and supervised by Professor David Dubin and Dean Linda Smith of Graduate School of Library and Information Science at University of Illinois at Urbana-Champaign-->

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<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns="http://www.ct.iopdl.org/1.1/" targetNamespace="http://www.ct.iopdl.org/1.1/"
elementFormDefault="qualified" attributeFormDefault="unqualified">
<xs:annotation>
<xs:documentation xml:lang="en">
To solve troublesome interoperability problems by using various metadata formats,
a Common Terminology (CT) of MARC, MODS, DC and QDC is suggested.
The goal of the CT is to embrace diversity of metadata formats fulfilling needs of
many communities, and
to provide uniformity to achieve and improve interoperability minimizing loss
information and keeping accurate information.
The CT of MARC and (Q)DC is a set of 12 Common Terms:
contributor, date, description, format, identifier, language,
publisher, relation, rights, subject, title, typeGenre.
The CT has the reduced common terms than DC, and less qualifiers/attributes than
MODS.
It preserves much information from MARC and MODS.
That is, it is to achieve and improve metadata interoperability addressing existing
loss of data problems by different generality or specialty degrees, and addressing
lack of standardizations.
</xs:documentation>
</xs:annotation>
<xs:element name="CT" type="anyCT"/>
<xs:complexType name="anyCT">
<xs:choice minOccurs="0" maxOccurs="unbounded">
<xs:element name="contributor" type="contributorType" minOccurs="0"
maxOccurs="unbounded"/>
<xs:element name="date" type="dateType" minOccurs="0" maxOccurs="unbounded"/>
<xs:element name="description" type="descriptionType" minOccurs="0"
maxOccurs="unbounded"/>
<xs:element name="format" type="formatType" minOccurs="0" maxOccurs="unbounded"/>
<xs:element name="identifier" type="identifierType" minOccurs="0"
maxOccurs="unbounded"/>
<xs:element name="language" type="languageType" minOccurs="0" maxOccurs="unbounded"/>
<xs:element name="publisher" type="publisherType" minOccurs="0"
maxOccurs="unbounded"/>
<xs:element name="relation" type="relationType" minOccurs="0" maxOccurs="unbounded"/>
<xs:element name="rights" type="rightsType" minOccurs="0" maxOccurs="unbounded"/>
<xs:element name="subject" type="subjectType" minOccurs="0" maxOccurs="unbounded"/>

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<xs:element name="title" type="titleType" minOccurs="0" maxOccurs="unbounded"/>
<xs:element name="typeGenre" type="typeGenreType" minOccurs="0"
maxOccurs="unbounded"/>
</xs:choice>
</xs:complexType>
<xs:complexType name="contributorType">
  <xs:annotation>
    <xs:documentation>
      The name of a person, organization, or event (conference, meeting, etc.)
      associated in some way with the resource (MODS). An entity responsible
      for making contributions to the resource (Contributor of DC).
    </xs:documentation>
  </xs:annotation>
  <xs:simpleContent>
    <xs:extension base="valueTypes">
      <xs:attribute name="type" use="optional">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="corporate"/>
            <xs:enumeration value="meeting"/>
            <xs:enumeration value="personal"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
      <xs:attribute name="role" use="optional" type="xs:string"/>
      <xs:attribute name="authority" use="optional">
        <xs:annotation>
          <xs:documentation>
            Authorities of 'role' attribute name are in CTRelators of CTScheme:
            LC MARC relators or etc.
          </xs:documentation>
        </xs:annotation>
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="LCMARCrelators"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:complexType name="dateType">
  <xs:annotation>
    <xs:documentation>
      A point or period of time associated with an event in the lifecycle of the
      resource (DC).
    </xs:documentation>
  </xs:annotation>
  <xs:simpleContent>
    <xs:extension base="dateValue">
      <xs:attribute name="type" use="optional">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="available"/>
            <xs:enumeration value="copyright"/>
            <xs:enumeration value="dateOther"/>
            <xs:enumeration value="issued"/>
            <xs:enumeration value="modified"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:complexType name="descriptionType">
  <xs:annotation>

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<xs:documentation>
  An account of the resource (DC). A term that designates how the resource is
  issued (MODS).
</xs:documentation>
</xs:annotation>
<xs:simpleContent>
  <xs:extension base="valueTypes">
    <xs:attribute name="type" use="optional">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value="abstract"/>
          <xs:enumeration value="action"/>
          <xs:enumeration value="audience"/>
          <xs:enumeration value="bibliography"/>
          <xs:enumeration value="descriptionOther"/>
          <xs:enumeration value="edition"/>
          <xs:enumeration value="frequency"/>
          <xs:enumeration value="issuance"/>
          <xs:enumeration value="provenance"/>
          <xs:enumeration value="recordinfo"/>
          <xs:enumeration value="tableOfContents"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
    <xs:attribute name="authority" use="optional">
      <xs:annotation>
        <xs:documentation>
          Authorities of 'description' attribute name are in CTDescription of
          CTScheme:
          LC MARC frequency, or LC MARC target.
        </xs:documentation>
      </xs:annotation>
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value="LCMARCfrequency"/>
          <xs:enumeration value="LCMARCtarget"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
  </xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:complexType name="formatType">
  <xs:annotation>
    <xs:documentation>
      A designation of a particular physical presentation of a resource (form
      definition of MODS).
      The file format, physical medium, or dimensions of the resource (DC).
    </xs:documentation>
  </xs:annotation>
  <xs:simpleContent>
    <xs:extension base="valueTypes">
      <xs:attribute name="type" use="optional">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="extent"/>
            <xs:enumeration value="medium"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
      <xs:attribute name="authority" use="optional">
        <xs:annotation>
          <xs:documentation>
            Authorities of 'format' attribute name are in CTFormat of CTScheme:
            LC MARC form, LC MARC category, LC gmd, or rfc2046.
          </xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>

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</xs:annotation>
<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:enumeration value="LCgmd"/>
    <xs:enumeration value="LCMARCcategory"/>
    <xs:enumeration value="LCMARCform"/>
    <xs:enumeration value="rfc2046"/>
  </xs:restriction>
</xs:simpleType>
</xs:attribute>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:complexType name="identifierType">
  <xs:annotation>
    <xs:documentation>
      An unambiguous reference to the resource within a given context (DCMI).
      And "location" identifies the institution or repository holding the resource,
      or a remote location in the form of a URL where it is available (MODS) (LC).
      Source definition: A related resource from which the described resource is
      derived (DCMI).
      It identifies also where the described resource is from (e.g., Harvard, MIT,
      DPLA, National Library of Korea, or Europeana). It can be expandable.
    </xs:documentation>
  </xs:annotation>
  <xs:simpleContent>
    <xs:extension base="valueTypes">
      <xs:attribute name="source" use="optional">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="DPLA"/>
            <xs:enumeration value="Europeana"/>
            <xs:enumeration value="Harvard"/>
            <xs:enumeration value="MIT"/>
            <xs:enumeration
              value="NationalLibraryofKorea"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
      <xs:attribute name="type" use="optional">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="collection"/>
            <xs:enumeration value="controlNumber"/>
            <xs:enumeration value="doi"/>
            <xs:enumeration value="hdl"/>
            <xs:enumeration value="identifierOther"/>
            <xs:enumeration value="isbn"/>
            <xs:enumeration value="issn"/>
            <xs:enumeration value="issueNumber"/>
            <xs:enumeration value="lccn"/>
            <xs:enumeration value="object"/>
            <xs:enumeration value="uri"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:complexType name="languageType">
  <xs:annotation>
    <xs:documentation>
      A designation of the language in which the content of a resource is expressed.
      A language of the resource (DC).
    </xs:documentation>
  </xs:annotation>

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<xs:simpleContent>
  <xs:extension base="languageValue">
    <xs:attribute name="authority" use="optional">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value="iso639-2"/>
          <xs:enumeration value="iso639-3"/>
          <xs:enumeration value="rfc1766"/>
          <xs:enumeration value="rfc3066"/>
          <xs:enumeration value="rfc4646"/>
          <xs:enumeration value="MARCCodeListforLanguages"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:attribute>
  </xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:complexType name="publisherType">
  <xs:annotation>
    <xs:documentation>
      The name of the entity that published, printed, distributed, released, issued,
      or produced the resource (MODS).
      An entity responsible for making the resource available. It includes place
      concept of the below:
      Definition of place-Name of a place associated with the issuing, publication,
      release, distribution, manufacture,
      production, or origin of a resource (MODS).
    </xs:documentation>
  </xs:annotation>
  <xs:simpleContent>
    <xs:extension base="valueTypes">
      <xs:attribute name="type" use="optional">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="place"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
      <xs:attribute name="authority" use="optional">
        <xs:annotation>
          <xs:documentation>
            Authorities of 'publisher' attribute name are in CTSUBJECT of
            CTScheme:
            marccountry, or iso3166.
          </xs:documentation>
        </xs:annotation>
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="iso3166"/>
            <xs:enumeration value="marccountry"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:complexType name="relationType">
  <xs:annotation>
    <xs:documentation>
      Information that identifies other resources related to the one being described
      (MODS). A related resource (DC).
    </xs:documentation>
  </xs:annotation>
  <xs:simpleContent>
    <xs:extension base="valueTypes">
      <xs:attribute name="type" use="optional">

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<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:enumeration value="hasPart"/>
    <xs:enumeration value="isPartOf"/>
    <xs:enumeration value="original"/>
    <xs:enumeration value="otherFormat"/>
    <xs:enumeration value="otherVersion"/>
    <xs:enumeration value="reference"/>
    <xs:enumeration value="replacement"/>
    <xs:enumeration value="requirement"/>
  </xs:restriction>
</xs:simpleType>
</xs:attribute>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:complexType name="rightsType">
  <xs:annotation>
    <xs:documentation>
      Information about rights held in and over the resource.
    </xs:documentation>
  </xs:annotation>
  <xs:simpleContent>
    <xs:extension base="valueTypes">
      <xs:attribute name="type" use="optional">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="access"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
<xs:complexType name="subjectType">
  <xs:annotation>
    <xs:documentation>
      A term or phrase representing the primary topic(s) on which a work is focused (MODS). The topic of the resource (DC).
    </xs:documentation>
  </xs:annotation>
  <xs:simpleContent>
    <xs:extension base="valueTypes">
      <xs:attribute name="type" use="optional">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="classification"/>
            <xs:enumeration value="spatial"/>
            <xs:enumeration value="temporal"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
      <xs:attribute name="authority" use="optional">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:enumeration value="csh"/>
            <xs:enumeration value="lcsh"/>
            <xs:enumeration value="lcshac"/>
            <xs:enumeration value="mesh"/>
            <xs:enumeration value="nal"/>
            <xs:enumeration value="rvm"/>
            <xs:enumeration value="candocs"/>
            <xs:enumeration value="ddc"/>
            <xs:enumeration value="lcc"/>
            <xs:enumeration value="nlm"/>
            <xs:enumeration value="subjectOther"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
    </xs:extension>
  </xs:simpleContent>

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        <xs:enumeration value="sudocs"/>
        <xs:enumeration value="tgn"/>
        <xs:enumeration value="udc"/>
        <xs:enumeration value="iso3166"/>
    </xs:restriction>
</xs:simpleType>
</xs:attribute>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:complexType name="titleType">
    <xs:annotation>
        <xs:documentation>
            A word, phrase, character, or group of characters, normally appearing in a resource, that names it or the work contained in it (MODS). A name given to the resource (DC).
        </xs:documentation>
    </xs:annotation>
    <xs:simpleContent>
        <xs:extension base="valueTypes">
            <xs:attribute name="type" use="optional">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                        <xs:enumeration value="abbreviated"/>
                        <xs:enumeration value="alternative"/>
                        <xs:enumeration value="part"/>
                        <xs:enumeration value="subtitle"/>
                        <xs:enumeration value="translated"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:complexType name="typeGenreType">
    <xs:annotation>
        <xs:documentation>
            A term that specifies the characteristics and general type of content of the resource (MODS). The nature of the resource (DC).
        </xs:documentation>
    </xs:annotation>
    <xs:simpleContent>
        <xs:extension base="valueTypes">
            <xs:attribute name="type" use="optional">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                        <xs:enumeration value="genre"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
            <xs:attribute name="authority" use="optional">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                        <xs:enumeration value="DCMItype"/>
                        <xs:enumeration value="LCMARCgenre"/>
                        <xs:enumeration value="LCMARCtype"/>
                    </xs:restriction>
                </xs:simpleType>
            </xs:attribute>
        </xs:extension>
    </xs:simpleContent>
</xs:complexType>
<xs:simpleType name="languageValue">
    <xs:union memberTypes="xs:string xs:language"/>

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```
</xs:simpleType>
<xs:simpleType name="dateValue">
  <xs:union memberTypes="xs:date xs:dateTime xs:duration xs:gDay xs:gMonth xs:gMonthDay
    xs:gYear xs:gYearMonth xs:time xs:string"/>
</xs:simpleType>
<xs:simpleType name="valueTypes">
  <xs:union memberTypes="xs:string xs:anyURI"/>
</xs:simpleType>
</xs:schema>
```