MODS to RDF Mapping Recommendations

Samvera MODS to RDF Working Group

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Background and Need

In mid-2015, many Fedora adopters were either beginning or planning migrations to Fedora 4, which necessitates transitioning from XML-based metadata stored as datastreams to metadata stored as RDF properties. Many institutions are heavily invested in the use of MODS XML for descriptive metadata in their repositories, due to its richer granularity than Dublin Core and its derivation from the MARC standard, widely used in library catalogs.

When beginning the migration to RDF, metadata managers and developers are often faced with early stumbling blocks: either receiving advice to "just use Dublin Core" (losing granularity of their data) or "don't do MODS in RDF," or encountering questions regarding the status of the MODS RDF Ontology or the Library of Congress' BIBFRAME standard.[1] Adding to these challenges is the hierarchical and extensible nature of MODS XML, which does not easily translate to the RDF graph model without the use of either blank nodes (which are problematic to represent in the Samvera and Fedora stack) or minted object classes for metadata elements such as creators and subjects.

When considering major bibliographic metadata standards (such as MARC) in the context of existing digital repository systems, additional properties are often needed to describe repository concepts and use cases. RDF adopters therefore often need to examine a number of RDF vocabularies to meet their needs for descriptive metadata. The MODS to RDF Working Group was formed in 2015 by Steven Anderson (formerly of the Boston Public Library) to address these questions and create a community-designed application profile mapping MODS descriptive metadata to RDF.

Scope & Strategy for Work

The group identified its original charge and goals as:

- Discussion on MODS XML problematic mapping issues.
- Creation of a shared "unofficial standard" Application Profile that MODS XML is transformed to.

The scope of the application profile was targeted to the broader Fedora 4 repository community and not constrained to Samvera (formerly Hydra) adopters only. Early on, the group determined that it would consider a range of widely-adopted RDF namespaces, rather than pursuing a straight XML-to-RDF approach using the MODS RDF Ontology or proposing a new formal ontology.

As supplemental prototyping work, a conversion prototype application was built by Steven Anderson to assist with testing, but was not completed to address the full set of MODS elements mapped. This prototype code ingested sample MODS XML files and generated a Fedora 4 object with RDF properties that could be previewed.

[1] As of August 2018, the MODS Editorial Committee is discussing doing a MODS profile of BIBFRAME, which will provide a transformation to RDF based on BIBFRAME rather than MODS/RDF.

Methodology and Group Process

Representation

A call for representation was initiated through multiple channels including the Hydra Metadata Interest Group as well as by direct emails to known MODS/Fedora 3 users. The group's first meeting was held in July 2015, with Steven Anderson as facilitator through March 2017. After Steven's departure from the Boston Public Library, the group continued work through 2018 with rotating facilitation from Eben English and Julie Hardesty.

The group's membership included representation from the following organizations:

1. Amherst College
2. Boston College
3. Boston Public Library
4. Columbia University
5. Data Curation Experts
6. Emory University
7. Indiana University
8. New York Public Library
9. Northwestern University
10. University of Alberta Libraries
11. University of Connecticut
12. University of Maryland Libraries
13. University of North Carolina at Chapel Hill
14. University of Prince Edward Island
15. University of Tennessee
16. USDA/National Agricultural Library
17. WGBH
18. York University

Initial Strategy and Decisions

Our review of the MODS RDF Ontology found it inadequate for our needs for several reasons, including a lack of active maintenance, heavy reliance on the use of blank nodes and/or minted objects in its implementation, and perhaps most importantly a lack of adoption. As the W3C RDF Primer states: "Vocabularies get their value from reuse: the more vocabulary IRIs are reused by others, the more valuable it becomes to use the IRIs." Therefore, as an early design decision, the group opted to pursue an approach mapping MODS XML elements to RDF using a variety of vocabularies that have been extensively used in other Linked Data datasets, instead of pursuing a stricter translation of MODS.

While the use of so many different vocabularies adds complexity to the mapping guidelines, this approach can be likened to the idea of “not putting all the eggs in one basket.” While institutions must be prepared to assess the current and future stability of a number of vocabularies, should a vocabulary become no longer supported or undergo a major version change, it would only require updating a portion of these mappings, rather than the entire document.

In its early work, the group discussed established ontologies relevant to bibliographic description such as MODS RDF, BIBFRAME (which transitioned from v.1 to v.2 during the group's activity), Dublin Core Elements and Dublin Core Terms, but found gaps in all of these, either related to a lack of representation for necessary repository-oriented content concepts, or challenges in implementation in a Fedora 4 environment. The discovery of these gaps pushed the group to look into other vocabularies such as Schema.org, FOAF, SKOS, BIBO, and RDA, among others.

It should also be noted that the group’s principal focus was on *mapping data from existing MODS records into RDF for the purposes of supporting asset management in a Fedora 4-based digital repository system*, as opposed to creating a RDF-based metadata profile from the ground up. Both MODS records and digital asset management systems (especially Samvera) have certain implicit assumptions and idiosyncrasies that sometimes result in mappings that may differ slightly from established best practices for expressing descriptive metadata in RDF.

Analysis Process

The Working Group followed a consistent process for reviewing the MODS standard, working through each of the 20 top-level elements. Prior to each meeting, homework was assigned to participating organizations to identify what was essential for each MODS element:

- *If you had to migrate to RDF today, how would you map this element?*
- *What can we live without?*

Homework responses from institutions were posted to the Working Group wiki and included details such as:

- Specific institutions' use cases and local practices
- Sample MODS records
- Sub-elements and attributes needed
- Suggested namespaces
- Suggested RDF mappings/triples
- Data types and value constraints

Group review of the individual institution responses centered around issues of data fidelity, acceptable lossiness, relative merits of particular namespaces (such as adoption rates and perceived future viability), necessity of adherence to domain and range values for properties, and complexity of implementation. When consensus on a mapping was reached, documentation of preferred mappings were posted to the wiki as "Collaboration Documents," captured as spreadsheets. In some cases, both simple and complex options were identified for mappings to address a spectrum of use cases.

Occasionally no appropriate mapping could be found using widely adopted namespaces; in these instances the group agreed to propose new predicates within OpaqueNamespace, an open-source community-supported ontology framework. (A space for new properties corresponding to MODS elements in OpaqueNamespace does not yet exist, but this framework was deemed the best option available.) When consensus was not readily achieved, or more feedback was desired, periodic polls regarding specific mapping options were pushed to the broader Samvera and Fedora communities via listserv messages and Google Group posts.

Lastly, the recommendations from the Collaboration Documents were compiled into this document. A final community review of the entire application profile was also distributed for feedback across the Samvera, Fedora, and broader metadata communities in 2018.

These recommendations will be subject to periodic revision and maintenance, though no schedule or timetable has been set. Please direct questions, comments, and/or corrections to the Samvera Metadata Interest Group.

Mapping Recommendations

The mappings are divided into two overall categories: Direct Mappings (Simple Option) and Minted Object Mappings (Complex Option). Each mapped MODS element is listed in both sections, although some elements do not have a mapping for the Complex Option. (A cross-reference is provided to the Simple Option mapping if no Complex Option exists.)

Direct Mappings (Simple Option) provide mappings from MODS XML elements to RDF statements (subject, predicate, object) and do not require creating or maintaining local objects for concepts such as subjects, people, events, or places. All statements either end in a URI sourced from an external vocabulary (LCSH, for example) or in a literal value (text string). These RDF statements can be stored, maintained, and updated directly with the digital object being described. However, as the examples provided below demonstrate, while this is a simpler method for mapping, there are cases where granularity and detail from MODS records is lost because not every data point is directly mappable to an RDF property.

Minted Object Mappings (Complex Option) create a local concept object (which must be maintained by the local repository system) for that MODS element (a title object, a name object, etc.). These objects substitute for the use of blank nodes, which are problematic to manage in many data stores. The local object then has single-level RDF statements (subject, predicate, object) that provide either a URI sourced from an external vocabulary, URI for a local object, or a literal value (text string). The RDF statements stored with the digital object being described are pointers to these local concept objects.

These local objects can be re-used for describing multiple digital objects (the same name concept object or subject concept object can be used to describe many objects in a repository). Any updates to that single concept object update the descriptive information for all digital objects described using that concept object. This option also allows for all details from MODS records to be serialized as RDF for complicated MODS elements such as names and subjects.

Minted Objects increase the complexity of the data model, but descriptive bibliographic metadata is inherently complex. Many RDF predicates used in bibliographic or cultural heritage ontologies have a defined *range* (the class of acceptable values) of a URI or other RDF object type that is not a string literal. The mappings in this document strive to adhere to the defined ranges in all examples, which necessitates the need for creating local objects for concepts, titles, persons, places, collections, or organizations that are not represented by an existing URI.

In some cases within the direct or minted mappings there may be multiple ways that an element or value can be mapped, or multiple options are provided. Institutions should create and maintain a local application profile to document the approach that works best for their own data, applications, and user needs.

The RDF statements in the supplied examples use <https://example.org> as the domain for the subject URI. This is a placeholder domain meant to be used for illustrative examples in documents such as this

mapping recommendation and does not represent actual digital objects from any collection or institution.

Namespaces Utilized

The mappings utilize the following namespaces.

Vocabulary Name	Abbreviation	Vocabulary URL
BIBFRAME (v.2)	bf	http://id.loc.gov/ontologies/bibframe/
The Bibliographic Ontology	bibo	http://purl.org/ontology/bibo/
Classification Schemes	classSchemes	http://id.loc.gov/vocabulary/classSchemes
DBPedia Ontology	dbo	http://dbpedia.org/ontology/
Dublin Core Metadata Element Set, Version 1.1	dce	http://purl.org/dc/elements/1.1/
DCMI Metadata Terms	dcterms	http://purl.org/dc/terms/
DCMI Type Vocabulary	dcmitype	http://dublincore.org/documents/2000/07/11/dcmi-type-vocabulary/#
EBUCore	ebucore	https://www.ebu.ch/metadata/ontologies/ebucore/ebucore#
Europeana Data Model	edm	http://www.europeana.eu/schemas/edm/
FOAF (Friend of a Friend)	foaf	http://xmlns.com/foaf/spec/#
GeoJSON-LD	geojson	https://purl.org/geojson/vocab#
MARC Code List for Relators	relators	http://id.loc.gov/vocabulary/relators
OpaqueNamespace (used as a placeholder for predicates to be minted)	opaque	http://opaquenamespace.org/ [Namespace subject to change - see Analysis Process section above for more information.]
OWL 2	owl	https://www.w3.org/2002/07/owl#
Portland Common Data Model	pcdm	http://pcdm.org/models#
RDA Unconstrained	rdau	http://rdaregistry.info/Elements/u/#
The RDF Concepts Vocabulary (RDF)	rdf	http://www.w3.org/1999/02/22-rdf-syntax-ns#
RDF Schema 1.1	rdfs	https://www.w3.org/TR/rdf-schema/
Schema.org	schema	http://schema.org/
SKOS Simple Knowledge Organization System	skos	http://www.w3.org/2004/02/skos/core#
SKOS Simple Knowledge Organization System eXtension for Labels	skosxl	http://www.w3.org/2008/05/skos-xl
Standard Identifiers Scheme	identifiers	http://id.loc.gov/vocabulary/identifiers

Direct Mappings (Simple Option)

<mods:titleInfo>

The simplest direct mapping for <mods:titleInfo> results in less detail than is available in MODS in some cases. For example, <mods:nonSort> and <mods:subTitle> are not mapped to individual RDF predicates; these values are simply included in the string literal for the title value. (It would be incumbent on the repository application to correctly parse title values for sorting and display.) This approach for direct mapping was decided on in a working group poll from August 2015. That same poll also indicated that a minted object mapping option was desirable to more accurately reflect the MODS being mapped. For an RDF mapping that preserves this granularity, see the minted object mapping option for <mods:titleInfo>.

Predicate	Value Type	Usage Notes
dcterms:title	Literal	Use for the main title value, including leading articles and subtitles. (Non-sort articles should be handled via the application indexing logic.)
dce:title	URI	Use for a title that has an existing URI (e.g. uniform title).
dcterms:alternative	Literal	Use for translated or alternative titles.

Example 1: Title, with nonSort and subTitle

XML:

```
<mods:titleInfo usage="primary">
  <mods:nonSort>The</mods:nonSort>
  <mods:title>wintermind</mods:title>
  <mods:subTitle>William Bonk and American letters</mods:subTitle>
</mods:titleInfo>
```

RDF:

```
<https://example.org/objects/1> dcterms:title "The wintermind : William Bonk and American letters" .
```

Example 2: Supplied title

XML:

```
<mods:titleInfo usage="primary" supplied="yes">
  <mods:title>Red Cross war poster</mods:title>
</mods:titleInfo>
```

RDF:

```
<https://example.org/objects/1> dcterms:title "[Red Cross war poster]" .
```

Example 3: Parallel titles

XML:

```
<mods:titleInfo usage="primary" type="translated" lang="eng">
  <mods:title>Great fire</mods:title>
</mods:titleInfo>
<mods:titleInfo usage="primary" type="translated" lang="fre">
  <mods:title>Grand feu</mods:title>
</mods:titleInfo>
```

RDF:[2]

```
<https://example.org/objects/1> dcterms:title "Great fire"@en ;
                                dcterms:title "Grand feu"@fr .
```

Example 4: Main title in foreign language, translated into English by cataloger

XML:

```
<mods:titleInfo usage="primary" lang="fre">
  <mods:title>L'arpentage et de l'équipement agricole</mods:title>
</mods:titleInfo>
<mods:titleInfo type="translated" lang="eng">
  <mods:title>Land surveying and agriculture equipment</mods:title>
</mods:titleInfo>
```

RDF:

```
<https://example.org/objects/1> dcterms:title "L'arpentage et de l'équipement agricole"@fr ;
                                dcterms:alternative "Land surveying and agriculture
equipment"@en .
```

Example 5: Alternative title supplied by cataloger

XML:

```
<mods:titleInfo usage="primary">
  <mods:nonSort>The</mods:nonSort>
  <mods:title>fake primary title</mods:title>
</mods:titleInfo>
<mods:titleInfo type="alternative" supplied="yes">
  <mods:nonSort>The</mods:nonSort>
  <mods:title>man who thought he would be king</mods:title>
```

[2] In RDF, language codes should be drawn from the IANA Language Subtag Registry, which uses predominantly 2-letter codes. Conversion of language values from your existing MODS records may be necessary.

```
</mods:titleInfo>
```

RDF:

```
<https://example.org/objects/1> dcterms:title "The fake primary title" ;
                                dcterms:alternative "The man who thought he would be king" .
```

Example 6: Uniform title

XML:

```
<mods:titleInfo type="uniform" authority="naf"
    authorityURI="http://id.loc.gov/authorities/names"
    valueURI="http://id.loc.gov/authorities/names/n00020514" usage="primary">
  <mods:title>Bible</mods:title>
</mods:titleInfo>
```

RDF:

```
<https://example.org/objects/1> dce:title <http://id.loc.gov/authorities/names/n00020514> .
```

Example 7: Titles with multiple scripts

XML:

```
<titleInfo usage="primary" lang="heb" script="Latn">
  <title>Pinḳas ha-ḳehilah Aleksandriya</title>
</titleInfo>
<titleInfo type="alternative" lang="heb" script="Latn">
  <title>Pinḳas Aleksandriya</title>
</titleInfo>
<titleInfo lang="heb" script="Hebr">
  <title>ספר יזכור<title>
</titleInfo>
<titleInfo type="alternative" lang="heb" script="Hebr">
  <title>פנקס אלכסנדריא</title>
</titleInfo>
```

RDF:

```
<https://example.org/objects/1> dcterms:title "Pinḳas ha-ḳehilah Aleksandriya"@he-Latn ;
                                dcterms:alternative "Pinḳas Aleksandriya"@he-Latn ;
                                dcterms:alternative "ספר יזכור"@he ;
                                dcterms:alternative "פנקס אלכסנדריא"@he .
```

<mods:name>

Direct mappings for <mods:name> are possible without losing too much detail from MODS. MARC Relator terms can be used for roles when a role @authority or @authorityURI are provided. Values for MARC Relator terms can be either URIs or text. If no <mods:role> is provided, then dce:creator or dce:contributor are the recommended predicates to use. <mods:affiliation> is not mapped and <mods:namePart> is not specifically mapped (name parts are combined if the text version of the name is used). Any specific order for names provided in MODS will be lost in a simple RDF mapping. For an RDF mapping that preserves these mappings, see the minted object mapping option for <mods:name>.

It should additionally be noted that most examples using the Library of Congress Name Authority File (LCNAF) are pointing to Real World Object URIs (RWO) instead of the authorities URIs. The common practice has been to record the authorities URI for names from LCNAF but these records have been enhanced to include a real world object URI that reflects a more accurate representation of the person, family, or organization as a Person or Organization and not just an authority record.

Predicate	Value Type	Usage Notes
relators:[term]	Literal or URI	Use with a role from MARC Code List of Relators role terms. Value is either text or URI from a controlled vocabulary (like Library of Congress Name Authority File).
dce:creator	Literal or URI	Use for value when known to be creator but role is not specified.
dce:contributor	Literal or URI	Use for value when known to be contributor but role is not specified.

Example 1: Personal name from name authority file with multiple roles

XML:

```
<mods:name type="personal" authority="naf"
    authorityURI="http://id.loc.gov/rwo/agents"
    valueURI="http://id.loc.gov/rwo/agents/n50007142">
  <mods:namePart>Bellows, George</mods:namePart>
  <mods:namePart type="date">1882-1925</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/art">Artist</mods:roleTerm>
  </mods:role>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
```

```
       valueURI="http://id.loc.gov/vocabulary/relators/ltg">Lithographer</mods:roleTerm>
  </mods:role>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:art <http://id.loc.gov/rwo/agents/n50007142> ;
                                relators:ltg <http://id.loc.gov/rwo/agents/n50007142> .
```

Example 2: Corporate name from name authority file with role

XML:

```
<mods:name type="corporate" authority="naf"
    authorityURI="http://id.loc.gov/rwo/agents"
    valueURI="http://id.loc.gov/rwo/agents/n2011184651">
  <mods:namePart>United States</mods:namePart>
  <mods:namePart>Veterans Administration</mods:namePart>
  <mods:namePart>Central Office</mods:namePart>
  <mods:namePart>Office of Dentistry</mods:namePart>
  <mods:role>
      <mods:roleTerm type="text" authority="marcrelator"
          authorityURI="http://id.loc.gov/vocabulary/relators"
          valueURI="http://id.loc.gov/vocabulary/relators/spn">Sponsor</mods:roleTerm>
  </mods:role>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:spn <http://id.loc.gov/rwo/agents/n2011184651> .
```

Example 3: Conference name from name authority file with role

XML:

```
<mods:name type="conference" authority="naf"
    authorityURI="http://id.loc.gov/authorities/names"
    valueURI="http://id.loc.gov/authorities/names/n85303985">
  <mods:namePart>Southern Forest Range and Pasture Symposium (1980 : New Orleans,
La.)</mods:namePart>
  <mods:role>
      <mods:roleTerm type="text" authority="marcrelator"
          authorityURI="http://id.loc.gov/vocabulary/relators"
          valueURI="http://id.loc.gov/vocabulary/relators/spn">Sponsor</mods:roleTerm>
  </mods:role>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:spn <http://id.loc.gov/authorities/names/n85303985>
.
```

Example 4: Personal name from local authority file with role and affiliation

XML:

```
<mods:name type="personal" authority="local">
  <mods:namePart>Jones, Leslie</mods:namePart>
  <mods:namePart type="date">1886-1967</mods:namePart>
  <mods:affiliation>Print Dept., Museum of Fine Arts</mods:affiliation>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/pht">Photographer</mods:roleTerm>
  </mods:role>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:pht "Jones, Leslie, 1886-1967" .
```

Example 5: Uncontrolled name with role

XML:

```
<mods:name type="personal">
  <mods:namePart>Smith, John</mods:namePart>
  <mods:namePart type="date">1898-1945</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/cre">Creator</mods:roleTerm>
  </mods:role>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:cre "Smith, John, 1898-1945" .
```

Example 6: Corporate name from local authority file with role

XML:

```
<mods:name type="corporate" authority="local">
  <mods:namePart>Aerial Photographers of New England</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/pht">Photographer</mods:roleTerm>
  </mods:role>
```

```
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:pht "Aerial Photographers of New England" .
```

Example 7: Uncontrolled name with role

XML:

```
<mods:name type="personal">
  <mods:namePart>Smith, John</mods:namePart>
  <mods:namePart type="date">ca. 1898-1945</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/cre">Creator</mods:roleTerm>
  </mods:role>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:cre "Smith, John, ca 1898-1945" .
```

Example 8: Multiple personal names with role and specific order, some with name authority file and some without name authority file

XML:

```
<!-- first name with role and with name authority -->
<mods:name type="personal" authority="naf"
    authorityURI="http://id.loc.gov/rwo/agents"
    valueURI="http://id.loc.gov/rwo/agents/n50007142">
  <mods:namePart>Bellows, George</mods:namePart>
  <mods:namePart type="date">1882-1925</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/aut">Author</mods:roleTerm>
  </mods:role>
</mods:name>
<!-- second name with role and without name authority -->
<mods:name type="personal">
  <mods:namePart>Some, Person</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/aut">Author</mods:roleTerm>
  </mods:role>
```

```
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:aut <http://id.loc.gov/rwo/agents/n50007142> ;
                                relators:aut "Some, Person" .
```

Example 9: Name from name authority file with no role

XML:

```
<mods:name type="personal" authority="naf"
    authorityURI="http://id.loc.gov/rwo/agents"
    valueURI="http://id.loc.gov/rwo/agents/n50007142">
  <mods:namePart>Bellows, George</mods:namePart>
  <mods:namePart type="date">1882-1925</mods:namePart>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> dce:contributor <http://id.loc.gov/rwo/agents/n50007142> .
```

Example 10: Name without knowing personal or corporate

XML:

```
<mods:name>
  <mods:namePart>Anderson, Steven</mods:namePart>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> dce:contributor "Anderson, Steven" .
```

Example 11: Uncontrolled name with role

XML:

```
<mods:name type="personal">
  <mods:namePart>Harris, Roy, 1898-1979</mods:namePart>
  <mods:role>
    <mods:roleTerm authority="marcrelator" type="code">ctb</mods:roleTerm>
    <mods:roleTerm authority="marcrelator" type="text">Contributor</mods:roleTerm>
  </mods:role>
</name>
<mods:name type="personal">
  <mods:namePart>Thompson, Randall, 1899-1984</mods:namePart>
  <mods:role>
    <mods:roleTerm authority="marcrelator" type="code">ctb</mods:roleTerm>
    <mods:roleTerm authority="marcrelator" type="text">Contributor</mods:roleTerm>
  </mods:role>
```

```
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:ctb "Harris, Roy, 1898-1979" ;
                                relators:ctb "Thompson, Randall, 1899-1984" .
```

<mods:typeOfResource>

Predicate	Value Type	Usage Notes
dcterms:type	URI	Use with a type from a controlled vocabulary (such as the LoC Resource Types Scheme or DCMI Type Vocabulary).

Example 1: Type of resource

XML:

```
<mods:typeOfResource>still image</mods:typeOfResource>
```

RDF:

```
<https://example.org/objects/1> dcterms:type <http://id.loc.gov/vocabulary/resourceTypes/img>
.
```

Example 2: Multiple type of resource values

XML:

```
<mods:typeOfResource>still image</mods:typeOfResource>
<mods:typeOfResource>text</mods:typeOfResource>
```

RDF:

```
<https://example.org/objects/1> dcterms:type <http://id.loc.gov/vocabulary/resourceTypes/img>
;
                                dcterms:type <http://id.loc.gov/vocabulary/resourceTypes/txt>
.
```

Example 3: Type of resource with manuscript attribute

XML:

```
<mods:typeOfResource manuscript="yes">text</mods:typeOfResource>
```

RDF:

```
<https://example.org/objects/1> dcterms:type <http://id.loc.gov/vocabulary/resourceTypes/man>
;
                                dcterms:type <http://id.loc.gov/vocabulary/resourceTypes/txt>
.
```

<mods:genre>

Predicate	Value Type	Usage Notes
edm:hasType	URI or Literal	Use with a genre term from a controlled vocabulary, or a local term.

Example 1: Genre term from Thesaurus for Graphic Materials

XML:

```
<mods:genre authority="gmgpc" authorityURI="http://id.loc.gov/vocabulary/graphicMaterials"
    valueURI="http://id.loc.gov/vocabulary/graphicMaterials/tgm009874">
  Sound recordings
</mods:genre>
```

RDF:

```
<https://example.org/objects/1> edm:hasType
<http://id.loc.gov/vocabulary/graphicMaterials/tgm009874> .
```

Example 2: Genre term from Getty Research Institute Art & Architecture Thesaurus

XML:

```
<mods:genre authority="aat" authorityURI="http://vocab.getty.edu/aat"
    valueURI="http://vocab.getty.edu/aat/300375155">
  Science-fiction films
</mods:genre>
```

RDF:

```
<https://example.org/objects/1> edm:hasType <http://vocab.getty.edu/aat/300375155> .
```

Example 3: Genre term from MARC Genre Terms List

XML:

```
<mods:genre authority="marcgt">bibliography</genre>
<mods:genre authority="marcgt">biography</genre>
```

RDF:

```
<https://example.org/objects/1> edm:hasType <http://id.loc.gov/vocabulary/marcgt/bib> ;
                                edm:hasType <http://id.loc.gov/vocabulary/marcgt/bio> .
```

Example 4: Local genre term; no authority

XML:

```
<mods:genre>Thingamabobs</mods:genre>
```

RDF:

```
<https://example.org/objects/1> edm:hasType "Thingamabobs" .
```

<mods:originInfo>

The direct mapping described below provides a comparable level of granularity to <mods:originInfo> in most cases. However when multiple origination @eventType values are present (publication, distribution, manufacture, etc.), this mapping does not allow sufficient detail to co-relate multiple publishers or places of origin. For an RDF mapping that preserves this complexity, see the minted object mapping option for <mods:originInfo>.

Note: Mapping for <mods:issuance> is not provided, as this element was not typically used by institutions contributing to this document.

Note: For ease of use, predicates from the RDA Unconstrained vocabulary (rdau) are listed using their lexical alias; the canonical term is provided in the Usage Notes.

Predicate	**Value Type**	**Usage Notes**
bf:editionStatement	Literal	Use for edition statements typically found in <mods:edition>.
dcterms:created	Literal	Use to represent the date of creation (<mods:dateCreated>) for the object, formatted as an EDTF string.
dcterms:date	Literal	Use to represent an unspecified type of date (<mods:dateOther>) for the object, formatted as an EDTF string.
dcterms:issued	Literal	Use to represent the date of issuance (<mods:dateIssued>) for the object, formatted as an EDTF string.
dcterms:dateCopyrighted	Literal	Use to represent the date of copyright (<mods:copyrightDate>) for the object, formatted as an EDTF string.
relators:dpb	Literal or URI	"place of distribution": Use to represent the place of distribution, preferably using a controlled vocabulary such as TGN or GeoNames.
relators:dst	Literal or URI	"distributor": Use to represent the agent responsible for the manufacture of the item.
relators:mfp	Literal or URI	"place of manufacture": Use to represent the place of manufacture, preferably using a controlled vocabulary such as TGN or GeoNames.
relators:mfr	Literal or	"manufacturer": Use to represent the agent responsible for

	URI	the manufacture of the item.
relators:pbl	Literal or URI	"publisher": Use to represent the agent responsible for the publication or any other general origination event.
relators:pro	Literal or URI	"producer": Use to represent the agent responsible for the production of the item.
relators:prp	Literal or URI	"place of production": Use to represent the place of production, preferably using a controlled vocabulary such as TGN or GeoNames.
relators:pup	Literal or URI	"place of publication": Use to represent the place of publication, preferably using a controlled vocabulary such as TGN or GeoNames.
rdau:frequency.en	Literal or URI	Use to describe the frequency of publication, preferably using a controlled vocabulary such as LoC's Publication Frequencies Scheme. (Canonical: rdau:P60538.)
skos:note	Literal	Use to indicate an inferred date.

Example 1: Place of origin; simple date

XML:

```
<mods:originInfo>
  <mods:place>
    <mods:placeTerm type="text">Boston, Mass.</mods:placeTerm>
  </mods:place>
  <mods:dateCreated encoding="w3cdtf" keyDate="yes">1930</mods:dateCreated>
</mods:originInfo>
```

RDF:[3]

```
<https://example.org/objects/1> relators:pup "Boston, Mass." ;
                                dcterms:created "1930" .
```

Example 2: Place of origin; publisher; edition; questionable date

XML:

```
<mods:originInfo eventType="publication">
  <mods:place>
    <mods:placeTerm type="text">Boston, Mass.</mods:placeTerm>
  </mods:place>
  <mods:publisher>published by John P. Soule</mods:publisher>
  <mods:edition>3rd edition</mods:edition>
```

[3] These examples do not include the use of datatypes to qualify string values for dates. If datatypes are desired, best practice would be to use datatypes from the Library of Congress Extended Date/Time Format Datatypes Scheme. (Example: `"1930"^^<http://id.loc.gov/datatypes/edtf/EDTF-level0>`)

```
  <mods:dateCreated encoding="w3cdtf" keyDate="yes"
      qualifier="questionable">1930</mods:dateCreated>
</mods:originInfo>
```

RDF:

```
<https://example.org/objects/1> relators:pup <http://vocab.getty.edu/tgn/7013445> ;
                                relators:pbl "published by John P. Soule" ;
                                bf:editionStatement "3rd edition" ;
                                dcterms:created "1930?" .
```

Example 3: Multiple production events; date range; specific date

XML:

```
<mods:originInfo eventType="manufacture">
  <mods:publisher>Steven Anderson</mods:publisher>
  <mods:place>
    <mods:placeTerm type="text">[Atlanta, GA]</mods:placeTerm>
  </mods:place>
  <mods:dateCreated encoding="w3cdtf" keyDate="yes" point="start">1970</mods:dateCreated>
  <mods:dateCreated encoding="w3cdtf" point="end">1979</mods:dateCreated>
</mods:originInfo>

<mods:originInfo eventType="publication">
  <mods:place>
    <mods:placeTerm type="text">Boston, Mass.</mods:placeTerm>
  </mods:place>
  <mods:publisher>John P. Soule</mods:publisher>
  <mods:edition>3rd edition</mods:edition>
  <mods:dateIssued encoding="w3cdtf" keyDate="yes">1980-02-14</mods:dateIssued>
</mods:originInfo>
```

RDF:

```
<https://example.org/objects/1> relators:mfp "[Atlanta, GA]" ;
                                relators:mfr "Steven Anderson" ;
                                dcterms:created "1970/1979" ;
                                relators:pup <http://vocab.getty.edu/tgn/7013445> ;
                                relators:pbl <http://id.loc.gov/rwo/agents/n91108304> ;
                                bf:editionStatement "3rd edition" ;
                                dcterms:issued "1980-02-14" .
```

Example 4: Date range: known start, unknown end

XML:

```
<!-- Date pattern: 1930- -->
<mods:originInfo>
  <mods:dateCreated encoding="w3cdtf" keyDate="yes" point="start">1930</mods:dateCreated>
</mods:originInfo>
```

RDF:[4]

```
<https://example.org/objects/1> dcterms:created "1930/.." .
```

Example 5: Date range: unknown start, known end

XML:

```
<!-- Date pattern: -1930 -->
<mods:originInfo>
  <mods:dateCreated encoding="w3cdtf" keyDate="yes" point="end">1930</mods:dateCreated>
</mods:originInfo>
```

RDF:[5]

```
<https://example.org/objects/1> dcterms:created "/1930" .
```

Example 6: Inferred date

XML:

```
<mods:originInfo>
  <mods:dateCreated encoding="w3cdtf" keyDate="yes"
qualifier="inferred">1930</mods:dateCreated>
</mods:originInfo>
```

RDF:

```
<https://example.org/objects/1> dcterms:created "1930" ;
                                skos:note "Date: Inferred" .
```

Example 7: Copyright date

XML:

```
<mods:originInfo>
  <mods:copyrightDate encoding="w3cdtf" keyDate="yes">1930</mods:dateCreated>
</mods:originInfo>
```

RDF:

```
<https://example.org/objects/1> dcterms:dateCopyrighted "1930" .
```

Example 8: mods:dateOther

XML:

```
<!-- Date pattern: 1930 -->
```

[4] Syntax reflects revisions to the EDTF spec as of October 2018.
[5] Syntax reflects revisions to the EDTF spec as of October 2018.

```
<mods:originInfo>
  <mods:dateOther encoding="w3cdtf" keyDate="yes">1930</mods:dateOther>
</mods:originInfo>
```

RDF:

```
<https://example.org/objects/1> dcterms:date "1930" .
```

Example 9: mods:frequency

XML:

```
<mods:originInfo>
  <mods:frequency authority="marcfrequency">Semiannual</mods:frequency>
</mods:originInfo>
```

RDF:

```
<https://example.org/objects/1> rdau:frequency.en
<http://id.loc.gov/vocabulary/frequencies/san> .
```

<mods:language>

Predicate	Value Type	Usage Notes
dcterms:language	URI	The language of the resource. Preference is to use a value from a controlled vocabulary, such as ISO 639-2.

Example 1: Item in one language

XML:

```
<mods:language>
  <mods:languageTerm type="text" authority="iso639-2b"
      authorityURI="http://id.loc.gov/vocabulary/iso639-2"
      valueURI="http://id.loc.gov/vocabulary/iso639-2/epo">Esperanto</mods:languageTerm>
</mods:language>
```

RDF:

```
<https://example.org/objects/1> dcterms:language <http://id.loc.gov/vocabulary/iso639-2/esp>
.
```

Example 2: Item in multiple languages

XML:

```
<mods:language>
  <mods:languageTerm type="text" authority="iso639-2b"
      authorityURI="http://id.loc.gov/vocabulary/iso639-2"
      valueURI="http://id.loc.gov/vocabulary/iso639-2/eng">English</mods:languageTerm>
</mods:language>
<mods:language>
  <mods:languageTerm type="text" authority="iso639-2b"
      authorityURI="http://id.loc.gov/vocabulary/iso639-2"
      valueURI="http://id.loc.gov/vocabulary/iso639-2/epo">Esperanto</mods:languageTerm>
</mods:language>
```

RDF:

```
<https://example.org/objects/1> dcterms:language <http://id.loc.gov/vocabulary/iso639-2/eng>
;
                                dcterms:language <http://id.loc.gov/vocabulary/iso639-2/esp>
.
```

<mods:physicalDescription>

Recommended mappings for elements providing a description of the physical characteristics of the resource are below. The use of relatively obscure predicates for <mods:extent> is due to the fact that the defined range for dcterms:extent (the most obvious mapping) does not allow literal values; the mapping was chosen by a vote from the wider community in October 2016. Survey results can be found here.

Note: A mapping for the <mods:extent> attribute "unit" is not provided.

Note: For ease of use, predicates from the RDA Unconstrained vocabulary (rdau) are listed using their lexical alias; the canonical term is provided in the Usage Notes.

Predicate	Value Type	Usage Notes
dce:format	Literal	Use to represent MIME data typically found in <mods:internetMediaType>.[6]
edm:hasType	URI or Literal	Use to represent the physical form or medium of material for a resource (<mods:form>), preferably using a controlled vocabulary such as the Library of Congress TGMII or LCGFT.
opaque:digitalOrigin	Literal	Use to represent the method by which the resource became digital form (<mods:digitalOrigin>).
rdau:extent.en	Literal	Use to represent the extent of a resource (<mods:extent>). (Canonical: rdau:P60550.)
skos:note	Literal	Use to represent notes about a a resource (<mods:note>). @type attribute values for should be precede the element value with a semicolon+space separator. (See Example 2 below.)

Example 1: Digitized photograph

XML:

```
<mods:physicalDescription>
  <mods:internetMediaType>image/jpeg</mods:internetMediaType>
  <mods:internetMediaType>image/tiff</mods:internetMediaType>
  <mods:extent>1 photographic print : 8 x 10 in.</mods:extent>
  <mods:digitalOrigin>reformatted digital</mods:digitalOrigin>
  <mods:note>Bad tear in upper right corner.</mods:note>
```

[6] MIME type information almost certainly belongs in technical metadata regarding the digital surrogate rather than descriptive metadata about the original object. However, we include the mapping here since some institutions may want to maintain this data when converting records from MODS to RDF.

```
</mods:physicalDescription>
```

RDF:

```
<https://example.org/objects/1> dce:format "image/tiff" ;
                                dce:format "image/jpeg" ;
                                opaque:digitalOrigin "reformatted digital" ;
                                rdau:extent.en "1 photographic print : 8 x 10 in." ;
                                skos:note "Bad tear in upper right corner."  .
```

Example 2: Digitized photograph with form and note @type values

XML:

```
<mods:physicalDescription>
  <form authority="lctgm" valueURI="http://id.loc.gov/vocabulary/graphicMaterials/tgm004499">
    Gelatin silver prints
  </form>
  <extent>Print Size: 8 x 10 in. (20.3 x 25.4 cm) Mat / Mount: 14 x 17 in. (35.6 x 43.2
cm)</extent>
  <note type="marks">Signed in pencil with photographer's stamp on print recto.</note>
</mods:physicalDescription>
```

RDF:

```
<https://example.org/objects/1> edm:hasType
<http://id.loc.gov/vocabulary/graphicMaterials/tgm004499> ;
                                rdau:extent.en "Print Size: 8 x 10 in. (20.3 x 25.4 cm) Mat /
Mount: 14 x 17 in. (35.6 x 43.2 cm)" ;
                                skos:note "Marks: Signed in pencil with photographer's stamp
on print recto." .
```

<mods:abstract>

Predicate	Value Type	Usage Notes
dcterms:abstract	Literal	Use to represent an abstract (<mods:abstract>) for the object.

Example 1: Abstract for a poster

XML:

```
<mods:abstract>Poster shows a view of Lake Louise at Banff National Park. In foreground a man and woman near a wall overlooking tennis courts and a swimming pool.</mods:abstract>
```

RDF:

```
<https://example.org/objects/1> dcterms:abstract "Poster shows a view of Lake Louise at Banff National Park. In foreground a man and woman near a wall overlooking tennis courts and a swimming pool." .
```

<mods:tableOfContents>

Predicate	Value Type	Usage Notes
dcterms:tableOfContents	Literal or URI	Use to represent table of contents information (<mods:tableOfContents>).

Example 1: A table of contents

XML:

```
<mods:tableOfContents>Bluegrass odyssey -- Hills of Tennessee --
Sassafrass</mods:tableOfContents>
```

RDF:

```
<https://example.org/objects/1> dcterms:tableOfContents "Bluegrass odyssey -- Hills of
Tennessee -- Sassafrass." .
```

Example 2: Link to an external table of contents

XML:

```
<mods:tableOfContents xlink:href="http://plato.stanford.edu/contents.html" />
```

RDF:

```
<https://example.org/objects/1> dcterms:tableOfContents
<http://plato.stanford.edu/contents.html> .
```

<mods:targetAudience>

This working group has determined that mapping <mods:targetAudience> to dcterms:audience is the simplest implementation of this element. However, that predicate requires a URI value. This document indicates use of terms from *Library of Congress Target Audience Scheme*, but URIs from another classification scheme vocabulary are also valid.

This document does not provide a direct option for recording literal values. For implementation of a locally defined target audience scheme, see the minted object mapping option for <mods:targetAudience>.

Predicate	Value Type	Usage Notes
dcterms:audience	URI	Use for a target audience values pulled from the Library of Congress Target Audience Scheme.

Example 1: A target audience value pulled from id.loc.gov Target Audience Scheme

XML:

```
<mods:targetAudience>Adolescent</mods:targetAudience>
```

RDF:

```
<https://example.org/objects/1> dcterms:audience
<http://id.loc.gov/vocabulary/targetAudiences/ado> .
```

<mods:note>

MODS utilizes attributes to differentiate note types, (for example <mods:note type="language">). However, in a direct mapping, this attribute is not represented in the predicate itself, but prepended to the note text. For context and clarity, these guidelines recommend using system logic to prepend the note type to the note value.

For an RDF mapping that preserves both the @type attribute and the note text without the prepended value, see the minted object mapping option for <mods:note>.

Predicate	Value Type	Usage Notes
skos:note	Literal	Use for the note value.

Example 1: Undifferentiated, general note

XML:

```
<mods:note>Title supplied by cataloger.</mods:note>
```

RDF:

```
<https://example.org/objects/1> skos:note "Title supplied by cataloger." .
```

Example 2: Note regarding statement of responsibility

XML:

```
<mods:note type="statement of responsibility">drawn by Mrs. Ellen B. Mason, from a photograph by Edward S. Curtis</mods:note>
```

RDF:

```
<https://example.org/objects/1> skos:note "Statement of responsibility: drawn by Mrs. Ellen B. Mason, from a photograph by Edward S. Curtis"" .
```

Example 3: Date note

XML:

```
<mods:note type="date">Recorded in 1961 in Vienna.</mods:note>
```

RDF:

```
<https://example.org/objects/1> skos:note "Date: Recorded in 1961 in Vienna." .
```

Example 4: Language note

XML:

```
<mods:note type="language">In English; summaries in French, German, or Russian.</mods:note>
```

RDF:

```
<https://example.org/objects/1> skos:note "Language: In English; summaries in French, German, or Russian." .
```

Example 5: Biographical/historical note

XML:

```
<mods:note type="biographical/historical">Born Kingston, N.Y., April 4, 1856; worked at J.J. Bufford's Lith. in Boston, 1890-1895.</mods:note>
```

RDF:

```
<https://example.org/objects/1> skos:note "Biographical/historical: Born Kingston, N.Y., April 4, 1856; worked at J.J. Bufford's Lith. in Boston, 1890-1895." .
```

<mods:subject>

The direct mapping provided below for subject headings may be used, but provides less granularity and detail; as well as undesirable redundancy, in that subject headings are repeated rather than re-used. It is strongly recommended that the minted object mapping option for <mods:subject> be used instead.

Note: For ease of use, predicates from the RDA Unconstrained vocabulary (rdau) are listed using their lexical alias; the canonical term is provided in the Usage Notes.

Predicate	Value Type	Usage Notes
dce:subject	Literal or URI	Use for name and topical subjects. Use of a URI from a controlled subject vocabulary is preferred over a literal value.
dce:coverage	Literal or URI	Use for geographic subjects. Use of a URI from a controlled vocabulary is preferred over a literal value. Coordinate values should be formatted as a DCMI Point or a DCMI Box.[7]
schema:temporalCoverage	Literal	Use for temporal subjects. Numeric values should formatted using EDTF.
rdau:projectionOfCartographicContent.en	Literal	Use for <mods:cartographic><mods:projection> values. (Canonical: rdau:P60542.)
rdau:scale.en	Literal	Use for <mods:cartographic><mods:scale> values. (Canonical: rdau:P60565.)

Example 1: Topical subject from LCSH

XML:

```
<mods:subject authority="lcsh" authorityURI="http://id.loc.gov/authorities/subjects"
    valueURI="http://id.loc.gov/authorities/subjects/sh89000851">
  <topic>Kayaking</topic>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:subject
<http://id.loc.gov/authorities/subjects/sh89000851> .
```

[7] DCMI Point and Box encoding schemes are an older standard (from 2006), but are recommended here since DCMI is a stable, trusted, and well-known vocabulary. Newer vocabularies such as WGS84 may also be used.

Example 2: Topical subject from TGM

XML:

```
<mods:subject authority="lctgm" authorityURI="http://id.loc.gov/vocabulary/graphicMaterials"
    valueURI="http://id.loc.gov/vocabulary/graphicMaterials/tgm011662">
  <mods:topic>Whirligigs</mods:topic>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:subject
<http://id.loc.gov/vocabulary/graphicMaterials/tgm011662> .
```

Example 3: Uncontrolled keyword or tag

XML:

```
<mods:subject>
  <mods:topic>LOL cats</mods:topic>
  <mods:topic>History</mods:topic>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:subject "LOL cats--History" .
```

Example 4: LCSH subject with separate subdivisions and free floating qualifier

XML:

```
<mods:subject authority="lcsh" authorityURI="http://id.loc.gov/authorities/subjects">
  <mods:topic>Real property</mods:topic>
  <mods:geographic>United States</mods:geographic>
  <mods:genre>Periodicals</mods:genre>
  <mods:topic>History</mods:topic>
</mods:subject>
```

RDF:

```
# PREFERRED
<https://example.org/objects/1> dce:subject
<http://id.loc.gov/authorities/subjects/sh85111739> ;
                                dce:coverage <http://id.loc.gov/authorities/names/n78095330>
;
                                dce:subject
<http://id.loc.gov/authorities/genreForms/gf2014026139> ;
                                dce:subject
<http://id.loc.gov/authorities/subjects/sh85061212> .

# LESS PREFERRED
<https://example.org/objects/1> dce:subject "Real property" ;
                                dce:coverage "United States" ;
                                dce:subject "Periodicals" ;
                                dce:subject "History" .
```

```
# LEAST PREFERRED
<https://example.org/objects/1> dce:subject "Real property--United
States--Periodicals--History" .
```

Example 5: Local subject constructed in LCSH style

XML:

```
<mods:subject>
  <mods:topic>Boats</mods:topic>
  <mods:geographic>New England</mods:geographic>
  <mods:topic>History</mods:topic>
</mods:subject>
```

RDF:

```
# PREFERRED
<https://example.org/objects/1> dce:subject
<http://id.loc.gov/authorities/subjects/sh99004834> ;
                                dce:coverage <http://vocab.getty.edu/tgn/7014203> ;
                                dce:subject
<http://id.loc.gov/authorities/subjects/sh85061212> .

# LESS PREFERRED
<https://example.org/objects/1> dce:subject "Boats" ;
                                dce:coverage "New England" ;
                                dce:subject "History" .

# LEAST PREFERRED
<https://example.org/objects/1> dce:subject "Boats--New England--History" .
```

Example 6: Temporal subjects (single numeric date as a string)

XML:

```
<mods:subject>
  <mods:temporal encoding="w3cdtf">1875</mods:temporal>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> schema:temporalCoverage "1875" .
```

Example 7: Temporal subjects (numeric date range as a string)

XML:

```
<mods:subject>
  <mods:temporal encoding="w3cdtf" point="start">1880</mods:temporal>
  <mods:temporal encoding="w3cdtf" point="end">1889</mods:temporal>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> schema:temporalCoverage "1880/1889" .
```

Example 8: Temporal subjects (non-numeric)

XML:

```
<mods:subject>
  <mods:topic>Real property</mods:topic>
  <mods:temporal>French Revolution</mods:temporal>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:subject
<http://id.loc.gov/authorities/subjects/sh85111739> ;
                                schema:temporalCoverage "French Revolution" .
```

Example 9: Uniform title as subject

XML:

```
<mods:subject>
  <mods:titleInfo type="uniform" authority="naf"
      authorityURI="http://id.loc.gov/authorities/names"
      valueURI="http://id.loc.gov/authorities/names/n00020514">
    <mods:title>Bible</mods:title>
  </mods:titleInfo>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:subject <http://id.loc.gov/authorities/names/n00020514> .
```

Example 10: LC name subject

XML:

```
<mods:subject>
  <mods:name type="corporate" authority="naf"
authorityURI="http://id.loc.gov/authorities/names"
      valueURI="http://id.loc.gov/authorities/names/n2011184651">
    <mods:namePart>United States</mods:namePart>
    <mods:namePart>Veterans Administration</mods:namePart>
    <mods:namePart>Central Office</mods:namePart>
    <mods:namePart>Office of Dentistry</mods:namePart>
  </mods:name>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:subject <http://id.loc.gov/rwo/agents/n2011184651> .
```

Example 11: Local name subject

XML:

```
<mods:subject>
  <mods:name type="personal" authority="local">
    <mods:namePart>Jones, Leslie</mods:namePart>
    <mods:namePart type="date">1886-1967</mods:namePart>
  </mods:name>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:subject "Jones, Leslie, 1886-1967".
```

Example 12: Geographic subject from Library of Congress

XML:

```
<mods:subject authority="naf" authorityURI="http://id.loc.gov/authorities/names"
    valueURI="http://id.loc.gov/authorities/names/n92103355">
  <mods:geographic>East Boston (Boston, Mass.)</mods:geographic>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:coverage <http://id.loc.gov/authorities/names/n92103355>.
```

Example 13: Geographic subject from GeoNames

XML:

```
<mods:subject authority="geonames" authorityURI="http://sws.geonames.org"
    valueURI="http://sws.geonames.org/4931010">
  <mods:geographic>
    <mods:area>Boston Public Library</mods:area>
  </mods:geographic>
  <mods:cartographics>
    <mods:coordinates>42.34926,-71.07838</mods:coordinates>
  </mods:cartographics>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:coverage <http://sws.geonames.org/4931010>.
```

Example 14: Hierarchical geographic heading from TGN, including coordinates

XML:

```
<mods:subject authority="tgn" authorityURI="http://vocab.getty.edu/tgn"
    valueURI="http://vocab.getty.edu/tgn/7015005">
  <mods:hierarchicalGeographic>
    <mods:country>United States</mods:country>
    <mods:state>Massachusetts</mods:state>
    <mods:county>Suffolk</mods:county>
    <mods:city>Boston</mods:city>
    <mods:citySection>Jamaica Plain</mods:citySection>
  </mods:hierarchicalGeographic>
  <mods:cartographics>
    <mods:coordinates>42.3000,-71.1167</mods:coordinates>
  </mods:cartographics>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:coverage <http://vocab.getty.edu/tgn/7015005> .
```

Example 15: Coordinates

XML:

```
<mods:subject>
  <mods:cartographics>
    <mods:coordinates>41.40338,2.17403</mods:coordinates>
  </mods:cartographics>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:coverage "east=41.40338; north=2.17403" .
```

Example 16: Bounding box

XML:

```
<mods:subject>
  <mods:cartographics>
    <mods:coordinates>26.1133 39.8623 26.7906 40.6428</mods:coordinates>
  </mods:cartographics>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:coverage "northlimit=40.6428; southlimit=39.8623;
westlimit=26.7906; eastlimit=26.1133" .
```

Example 17: Uncontrolled geographic heading

XML:

```
<mods:subject>
  <mods:geographic>8 Nantucket Avenue</mods:geographic>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:coverage "8 Nantucket Avenue" .
```

Example 18: Uncontrolled geographic heading with coordinates

XML:

```
<mods:subject>
  <mods:geographic>8 Nantucket Avenue</mods:geographic>
  <mods:cartographics>
    <mods:coordinates>41.291234,-70.107451</mods:coordinates>
  </mods:cartographics>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dce:coverage "east=41.291234; north=-70.107451; name=8
Nantucket Avenue" .
```

Example 19: Scale and projection

XML:

```
<mods:subject>
  <mods:cartographics>
    <mods:scale>Scale [1:6,336,000]. 1" = 100 miles</mods:scale>
    <mods:projection>Conic proj</mods:projection>
  </mods:cartographics>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> rdau:projectionOfCartographicContent.en "Conic proj" ;
                                rdau:scale.en "Scale [1:6,336,000]. 1\" = 100 miles" .
```

<mods:classification>

Predicate	Value Type	Usage Notes
classSchemes:ddc	Literal	Use for values from Dewey Decimal Classification.
classSchemes:lcc	Literal	Use for values from Library of Congress Classification.
classSchemes:[code]	Literal	Use with a designator/code from another classification scheme. Value should be pulled from the controlled list found at Library of Congress Classification Schemes.

Example 1: Classifier from Dewey Decimal Classification

XML:

```
<mods:classification authority="ddc">796.357</mods:classification>
```

RDF:

```
<https://example.org/objects/1> classSchemes:ddc "796.357" .
```

Example 2: Classifier from Library of Congress Classification

XML:

```
<mods:classification authority="lcc">HE6183.B26</mods:classification>
```

RDF:

```
<https://example.org/objects/1> classSchemes:lcc "HE6183.B26" .
```

Example 3: Classifier from any other classification scheme found at id.loc.gov Classification Schemes

XML:

```
<mods:classification authority="nlm">WG 300</mods:classification>
```

RDF:

```
<https://example.org/objects/1> <http://id.loc.gov/vocabulary/classSchemes/nlm> "WG 300" .
```

<mods:relatedItem>

The mappings below focus on use cases where <mods:relatedItem> is used to describe parent collections, series, and subseries; parent works that the work being described forms some part of; and constituent works that represent some part of the item being described. Relationships for digital collection membership are also described. These mappings were informed by a survey distributed to the wider community in January 2017. Survey results can be found here.

WARNING: Direct mappings for this element are complicated by the fact that <mods:relatedItem> "is a container element under which any MODS element may be used as a subelement" (MODS documentation). For this reason, we *strongly* encourage the use of the minted object mapping option for this element, in which minted objects for physical collections, series, subseries, and related works are described. This option is necessary if further nested series levels (subsubseries, etc.) are needed, and provides possibilities for more granular description of related objects.

Notes:

- The mappings below provide an abundance of predicates for representing the concept of a collection membership, to accommodate a variety of use cases. Different predicates are provided for physical/source collection and digital collection membership, since these represent distinct concepts, and an object's digital collection membership has a unique functional role within most repository systems. For physical/source collection membership, two predicates are provided (depending if the collection is represented by a string or a URI), because a single predicate that allows both a literal and a URI was not found in existing vocabularies. For digital collection membership, two predicates are also provided, one for standard/basic membership and another for primary or "administrative" membership, which is a use case in some digital asset management systems (including Samvera[8]).

- For ease of use, predicates from the RDA Unconstrained vocabulary (rdau) are listed using their lexical alias; the canonical term is provided in the Usage Notes.

Predicate	Value Type	Usage Notes
bf:seriesStatement	Literal	Use for the title of the archival or bibliographic series the item belongs to.
bf:subseriesStatement	Literal	Use for the title of the archival subseries the item belongs to.
dcterms:hasVersion	URI	Use to link to an alternate version of the item.
dbo:collection	Literal	Use for the physical/source collection the item belongs to, if the value is a string literal.
dbo:isPartOf	URI	Use for the physical/source collection the item belongs to,

[8] See the concept of "Administrative Set" in Samvera and Hyrax.

		if the value is a URI.
dcterms:isPartOf	URI	Use to indicate the administrative or primary digital collection the item belongs to.
ebucore:eventName	Literal	Use for the name of the event the item was produced as part of.
identifiers:[type]	Literal	Use for an identifier corresponding to a parent item that the item being described belongs to. [Type] should be replaced with the corresponding identifier type abbreviation from Library of Congress Standard Identifier Schemes.
opaque:memberOfArchivalSeries	Literal or URI	Use to indicate the archival series to which the item belongs.
pcdm:memberOf	URI	Use to indicate the digital collection the item belongs to.
rdau:containedIn.en	Literal or URI	Use to indicate the title, citation, or URI for a parent item that the item being described belongs to. (Canonical: rdau:P60101.)
rdau:containerOf.en	Literal or URI	Use to indicate the title, citation, or URI of a constituent item. (Canonical: rdau:P60249.)
schema:pageEnd	Literal	Use for ending page number.
schema:pageStart	Literal	Use for starting page number.

Example 1: Host collection (physical or archival)

XML:

```
<mods:relatedItem type="host">
  <mods:titleInfo>
    <mods:title>Boston matchcover collection</mods:title>
  </mods:titleInfo>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> dbo:collection "Boston matchcover collection" .
```

Example 2: Host collection (physical or archival) with series

XML:

```
<mods:relatedItem type="host">
  <mods:titleInfo>
    <mods:title>Boston matchcover collection</mods:title>
  </mods:titleInfo>
```

```
</mods:relatedItem>
<mods:relatedItem type="series">
  <mods:titleInfo>
    <mods:title>Series 1: Correspondence</mods:title>
  </mods:titleInfo>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> dbo:collection "Boston matchcover collection" ;
                                opaque:memberOfArchivalSeries "Series 1: Correspondence" .
```

Example 3: Host collection (physical or archival) with series, subseries, and subsubseries

XML:

```
<mods:relatedItem type="host">
  <mods:titleInfo>
    <mods:title>Boston matchcover collection</mods:title>
  </mods:titleInfo>
</mods:relatedItem>
<mods:relatedItem type="series">
  <mods:titleInfo>
    <mods:title>Series 1: Correspondence</mods:title>
  </mods:titleInfo>
  <mods:relatedItem type="series">
    <mods:titleInfo>
      <mods:title>Series 1.1: Personal correspondence</mods:title>
    </mods:titleInfo>
    <mods:relatedItem type="series">
      <mods:titleInfo>
        <mods:title>Series 1.1.1: Pen pals</mods:title>
      </mods:titleInfo>
    </mods:relatedItem>
  </mods:relatedItem>
</mods:relatedItem>
```

RDF:

```
# subsubseries cannot be represented in the direct mapping, minted object mapping is needed

<https://example.org/objects/1> dbo:collection "Boston matchcover collection" ;
                                bf:seriesStatement "Series 1: Correspondence" ;
                                bf:subseriesStatement "Series 1.1: Personal correspondence" .
```

Example 4: Nested host collections (physical or archival)

XML:

```
<relatedItem type="host">
  <titleInfo>
    <title>Uncalendared letters</title>
  </titleInfo>
  <relatedItem type="host">
    <titleInfo>
      <title>Letters Received</title>
    </titleInfo>
    <relatedItem type="host">
      <titleInfo>
        <title>Philip Schuyler papers</title>
      </titleInfo>
    </relatedItem>
  </relatedItem>
</relatedItem>
```

RDF:

```
<https://example.org/objects/1> dbo:collection "Uncalendared letters" ;
                                bf:seriesStatement "Letters Received" ;
                                bf:subseriesStatement "Philip Schuyler papers" .
```

Example 5: Digital collection membership

XML:

```
<!-- no corresponding XML for this relationship →
<!-- assuming item belongs to a digital collection called "Anti-Slavery Broadsides" -->
```

RDF:

```
<https://example.org/objects/1> pcdm:memberOf <https://example.org/collections/1> .

<https://example.org/collections/1> a pcdm:Collection ;
                                    rdfs:label "Anti-Slavery Broadsides" .
```

Example 6: Digital collection membership (multiple) with administrative set membership[9]

XML:

```
<!-- no corresponding XML for this relationship →
<!-- assuming item primarily belongs to "Anti-Slavery" digital collection -->
<!-- and to another digital collection called "Anti-Slavery Broadsides" -->
```

[9] See the concept of "Administrative Set" in Samvera and Hyrax.

RDF:

```
<https://example.org/objects/1> pcdm:memberOf <https://example.org/collections/1> ;
                                pcdm:memberOf <https://example.org/collections/2> ;
                                dcterms:isPartOf <https://example.org/collections/2> .

<https://example.org/collections/1> a pcdm:Collection ;
                                      rdfs:label "Anti-Slavery Broadsides" .

<https://example.org/collections/2> a pcdm:Collection ;
                                      rdfs:label "Anti-Slavery" .
```

Example 7: Journal title for article

XML:

```
<!-- parent journal title for an individual article stored in the repository -->
<mods:relatedItem type="host">
  <mods:titleInfo>
    <mods:title>Journal of Clinical Investigation</mods:title>
  </mods:titleInfo>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> rdau:containedIn.en "Journal of Clinical Investigation" .
```

Example 8: Journal with full publication information for article

XML:

```
<!-- full parent journal info for an individual article stored in the repository -->
<mods:relatedItem type="host">
  <mods:titleInfo>
    <mods:title>Journal of Clinical Investigation</mods:title>
  </mods:titleInfo>
  <mods:identifier type="issn">0021-9738</mods:identifier>
  <mods:part>
    <mods:date>May 10, 2017</mods:date>
    <mods:detail type="volume">
      <mods:number>1</mods:number>
    </mods:detail>
    <mods:detail type="issue">
      <mods:number>10</mods:number>
    </mods:detail>
    <mods:extent unit="pages">
      <mods:start>4387</mods:start>
      <mods:end>4394</mods:end>
    </mods:extent>
  </mods:part>
  <mods:identifier type="article number">e0177396</mods:identifier>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> rdau:containedIn.en "Journal of Clinical Investigation, vol. 1, no. 10: e0177396, 10 May 2017." ;
                                schema:pageStart "4387" ;
                                schema:pageEnd "4394" ;
                                identifiers:ean "e0177396" .
```

Example 9: otherVersion: final published version of article

XML:

```
<!-- info on final published version for article stored in the repository -->
<mods:relatedItem type="otherVersion" displayLabel="Final Published Version">
  <mods:identifier type="uri" displayLabel="URL">
    http://www.pnas.org/content/112/15/4719
  </mods:identifier>
  <mods:identifier type="doi" displayLabel="DOI">
    doi:10.1073/pnas.1502619112
  </mods:identifier>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> dcterms:hasVersion <http://www.pnas.org/content/112/15/4719>
;
                                dcterms:hasVersion <https://doi.org/10.1073/pnas.1502619112>
.
```

Example 10: Parent report

XML:

```
<!-- info on parent report item that item being described appears in -->
<mods:relatedItem type="host">
  <mods:titleInfo>
    <mods:title>Larger Parent Report Title</mods:title>
  </mods:titleInfo>
  <mods:originInfo>
    <mods:publisher>Commissioning Bodies</mods:publisher>
  </mods:originInfo>
  <mods:part>
    <mods:detail type="report">
      <mods:number>Report Number</mods:number>
    </mods:detail>
  </mods:part>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> rdau:containedIn.en "Larger Parent Report Title.
Commissioning Bodies: Report Number" .
```

Example 11: Book (item is book chapter)

XML:

```
<mods:relatedItem type="host">
  <mods:titleInfo>
    <mods:title>ACP Medicine Online</mods:title>
  </mods:titleInfo>
  <mods:originInfo>
    <mods:edition>First Edition</mods:edition>
  </mods:originInfo>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> rdau:containedIn.en "ACP Medicine Online, First Edition" .
```

Example 12: Conference (item is conference proceeding, poster, presentation, etc.)

XML:

```
<mods:relatedItem type="host">
  <mods:name type="conference">
    <mods:namePart>2nd Annual Conference on MODS Mapping</mods:namePart>
  </mods:name>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> ebucore:eventName "2nd Annual Conference on MODS Mapping" .
```

Example 13: Constituent parts

XML:

```
<mods:relatedItem type="constituent">
  <mods:titleInfo>
    <mods:title>Symphonies</title>
    <mods:partNumber>no. 3</partNumber>
  </mods:titleInfo>
  <mods:name type="personal">
    <mods:namePart>Harris, Roy,</namePart>
    <mods:namePart type="date">1898-1979</namePart>
  </mods:name>
</mods:relatedItem>
<mods:relatedItem type="constituent">
  <mods:titleInfo>
    <mods:title>Symphonies</title>
    <mods:partNumber>no. 2</partNumber>
  </mods:titleInfo>
  <mods:name type="personal">
    <mods:namePart>Thompson, Randall,</namePart>
    <mods:namePart type="date">1899-1984</namePart>
```

```
  </mods:name>
</mods:relatedItem>
<mods:relatedItem type="constituent">
  <mods:titleInfo>
    <mods:title>Symphonies</title>
    <mods:partNumber>no. 4</partNumber>
  </mods:titleInfo>
  <mods:name type="personal">
    <mods:namePart>Diamond, David,</namePart>
    <mods:namePart type="date">1915-2005</namePart>
  </mods:name>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> rdau:containerOf.en "Harris, Roy, 1898-1979. Symphonies no.
3." ;
                                rdau:containerOf.en "Thompson, Randall, 1899-1984. Symphonies
no. 2." ;
                                rdau:containerOf.en "Diamond, David, 1915-2005. Symphonies
no. 4." .
```

Example 14: Commercial series

XML:

```
<mods:relatedItem type="series">
  <mods:titleInfo usage="primary">
    <mods:title>CRR WP</mods:title>
    <mods:partNumber>2007-12</mods:partNumber>
  </mods:titleInfo>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> bf:seriesStatement "CRR WP: 2007-12" .
```

<mods:identifier>

The majority of mappings for this element are from the Library of Congress Standard Identifier Schemes. This approach was chosen by a vote from the wider community on July 2017. Survey results can be found here with the options listed here.There are more identifiers found within the LOC list than what is listed below.

Notes:

- There is no minted object mapping for this element. The need to designate identifier types beyond the predicate-specific identifier types was not deemed sufficient enough to justify the added complexity of minting an Identifier object.
- There is no mapping provided for @invalid values. An invalid designation may be indicated by prepending "historic (invalid): " before the identifier value.

Predicate	Value Type	Usage Notes
dcterms:identifier	Literal/URI	For primary system identifier (ARK, PID, Handle, UUID, etc.)
identifiers:uri	URI	Use for any URI identifiers
identifiers:lccn	Literal	Use for Library of Congress Control Numbers
identifiers:isbn	Literal	Use for International Standard Book Numbers
identifiers:issn	Literal	Use for International Standard Serial Numbers
identifiers:doi	Literal/URI	Use for Digital Object Identifier (DOIs)
identifiers:local	Literal/URI	Use for local identifiers including local call numbers
identifiers:ismn	Literal	Use for International Standard Music Number identifiers
identifiers:hdl	Literal/URI	Use for Handle system identifiers
identifiers:irsc	Literal	Use for International Standard Recording Code identifiers
opaque:accessionNumber	Literal	Use for accession numbers
opaque:accessionNumberFormer	Literal	Use for legacy accession numbers
opaque:barcode	Literal	Use for local barcodes

Example 1: Primary system identifier - could be ARK, handle, PID, UUID, etc.

XML:

```
Not in MODS
```

RDF:

```
<https://example.org/objects/1> dcterms:identifier "commonwealth:abc123" .
```

Example 2: Local accession number

XML:

```
<mods:identifier type="local-accession">11_04_000008</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> opaque:accessionNumber "11_04_000008" .
```

Example 3: Local accession number (legacy/not in use currently)

XML:

```
<mods:identifier type="local-accession" invalid="yes">11_04_000007</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> opaque:accessionNumberFormer "11_04_000007" .
```

Example 4: Local barcodes

XML:

```
<mods:identifier type="local-barcode">2999901717894</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> opaque:barcode "2999901717894" .
```

Example 5: Identifier as a URL

XML:

```
<mods:identifier type="uri">
  http://ark.digitalcommonwealth.org/ark:50959/1r66j985
</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> identifiers:uri
<http://ark.digitalcommonwealth.org/ark:/50959/1r66j5985>.
```

Example 6: Library of Congress Control Number

XML:

```
<mods:identifier type="lccn">sn2003045678</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> identifiers:lccn "sn2003045678" .
```

Example 7: International Book Standard Number

XML:

```
<mods:identifier type="isbn">0877780116</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> identifiers:isbn "0877780116" .
```

Example 8: International Serial Standard Number

XML:

```
<mods:identifier type="issn">1534-0481</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> identifiers:issn "1534-0481" .
```

Example 9: International Standard Music Number

XML:

```
<mods:identifier type="ismn">979-0-2600-0043-8</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> identifiers:ismn "979-0-2600-0043-8" .
```

Example 10: International Standard Recording Code

XML:

```
<mods:identifier type="isrc">USPR37300012</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> identifiers:isrc "USPR37300012" .
```

Example 11: Digital Object Identifier

XML:

```
<mods:identifier type="doi">doi:10.1006/jmbi.1995.0238</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> identifiers:doi "doi:10.1006/jmbi.1995.0238" .
```

Example 12: Handle system identifier

XML:

```
<mods:identifier type="hdl">hdl.loc.gov/loc.pnp/cph.3c30104</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> identifiers:hdl "hdl:loc.pnp/cph.3c30104" .
```

Example 13: Local call number

XML:

```
<mods:identifier type="local-call">Cab no. 135A</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> identifiers:local "Cab no. 135A" .
```

Example 14: Local call number (legacy/not currently in use)

XML:

```
<mods:identifier type="local-call" invalid="yes">Cab no. 135B</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> identifiers:local "historic (invalid): Cab no. 135B" .
```

Example 15: Other local identifiers

XML:

```
<mods:identifier type="local-other">XHVH456</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> identifiers:local "XHVH456" .
```

Example 16: Local identifiers (legacy/not currently in use)

XML:

```
<mods:identifier type="local-other" invalid="yes">XHVH455</mods:identifier>
```

RDF:

```
<https://example.org/objects/1> identifiers:local "historic (invalid): "XHVH455" .
```

<mods:location>

Mappings for the physical and online locations of the object being described and its digital surrogate. These mappings were informed by a survey distributed to the wider community in August 2016. Survey results can be found here with the options listed here.

A minted object mapping option for this element is also available in which holding institutions are described as distinct objects.

Predicate	Value Type	Usage Notes
bf:physicalLocation	Literal	Use for <mods:subLocation> values.
edm:isShownAt	URI	The URL where the digital object can be found, along with contextual metadata.
edm:object	URI	The URL of the digital object's primary binary file.
edm:preview	URI	The URL where a binary preview image of the object can be found.
opaque:locationShelfLocator	Literal	Use for <mods:shelfLocator> values. Append values from <mods:enumerationAndChronology> to the end of the literal.
relators:rps	Literal or URI	Use for <mods:physicalLocation> values, preferably using a URI for the organization from a controlled vocabulary such as VIAF of Library of Congress Real World Objects.

Example 1: Physical location with sublocation, copy information, and shelf locator

XML:

```
<mods:location>
  <mods:physicalLocation>Boston Public Library</mods:physicalLocation>
  <mods:holdingSimple>
    <mods:copyInformation>
      <mods:subLocation>Print Department</mods:subLocation>
      <mods:shelfLocator>4098B.104 FOLIO</mods:shelfLocator>
      <mods:enumerationAndChronology>v.1</mods:enumerationAndChronology>
    </mods:copyInformation>
  </mods:holdingSimple>
</mods:location>
```

RDF:

```
<https://example.org/objects/1> relators:rps "Boston Public Library" ;
                                bf:physicalLocation "Print Department" ;
                                opaque:locationShelfLocator "4098B.104 FOLIO v.1" .
```

Example 2: Physical location with divisions and shelf locator

XML:

```
<mods:location>
  <physicalLocation type="division">Carl H. Pforzheimer Collection of Shelley and His
Circle</physicalLocation>
  <physicalLocation type="division_short_name">Pforzheimer Collection</physicalLocation>
  <physicalLocation type="code">CPS</physicalLocation>
  <shelfLocator>Pforz MS (LH 0033)</shelfLocator>
</location>
```

RDF:

```
<https://example.org/objects/1> relators:rps <http://id.loc.gov/rwo/agents/n79033065> ;
                                bf:physicalLocation "Carl H. Pforzheimer Collection of
Shelley and His Circle" ;
                                opaque:locationShelfLocator "Pforz MS (LH 0033)" .
```

Example 3: URLs for digital object in context, preview, and raw object

XML:

```
<mods:location>
  <mods:url access="object in context" usage="primary display">
    http://purl.dlib.indiana.edu/iudl/lilly/starr/LL-SSM-1-032-0096
  </mods:url>
  <mods:url access="preview">
    http://purl.dlib.indiana.edu/iudl/lilly/starr/thumbnail/LL-SSM-1-032-0096-01-01
  </mods:url>
  <mods:url access="raw object">
    http://purl.dlib.indiana.edu/iudl/lilly/starr/printable/LL-SSM-1-032-0096-01
  </mods:url>
</location>
```

RDF:

```
<https://example.org/objects/1> edm:isShownAt
<http://purl.dlib.indiana.edu/iudl/lilly/starr/LL-SSM-1-032-0096> ;
                                edm:preview
<http://purl.dlib.indiana.edu/iudl/lilly/starr/thumbnail/LL-SSM-1-032-0096-01-01> ;
                                edm:object
<http://purl.dlib.indiana.edu/iudl/lilly/starr/printable/LL-SSM-1-032-0096-01> .
```

<mods:accessCondition>

Predicates for this element were chosen primarily to align with the Samvera Rights Metadata Recommendation.

Predicate	Value Type	Usage Notes
dce:rights	Literal	For local, free-text rights statements
dcterms:rightsHolder	URI or Literal	Use to designate the copyright owner for the item.
dcterms:accessRights	URI or Literal	Use to describe any restrictions on access.
edm:rights	URI	This would be for URIs such as those from rightsstatement.org

Example 1: Free-text rights statements

XML:

```
<mods:accessCondition displayLabel="rights" type="use and reproduction">We believe that this item has no known US copyright restrictions.</mods:accessCondition>
```

RDF:

```
<https://example.org/objects/1> dce:rights "We believe that this item has no known US copyright restrictions" .
```

Example 2: Rights holder information

XML:

```
<mods:accessCondition displayLabel="rights" type="use and reproduction">Copyright Leslie Jones</mods:accessCondition>
```

RDF:

```
<https://example.org/objects/1> dcterms:rightsHolder
<https://digitalcommonwealth.org/names/leslie> .
```

Example 3: License information

XML:

```
<mods:accessCondition displayLabel="license" type="use and reproduction">This work is licensed for use under a Creative Commons Attribution Non-Commercial No Derivatives License (CC BY-NC-ND).</mods:accessCondition>
```

RDF:

```
<https://example.org/objects/1> edm:rights
<https://creativecommons.org/licenses/by-nc-nd/4.0/> .
```

Example 4: Controlled rights statements (such as from rightsstatement.org)

XML:

```
<mods:accessCondition displayLabel="rights" type="use and reproduction">We believe that this item has no known US copyright restrictions. </mods:accessCondition>
```

RDF:

```
<https://example.org/objects/1> edm:rights <http://rightsstatements.org/vocab/NoC-US/1.0/> .
```

Example 5: Local controlled rights statements

XML:

```
<mods:accessCondition displayLabel="license" type="use and reproduction">Contact host institution.</mods:accessCondition>
```

RDF:

```
<https://example.org/objects/1> edm:rights
<http://opaquenamespace.org/rights/all_rights_reserved> .
```

Example 6: Restrictions on access

XML:

```
<mods:accessCondition type=""restriction on access"">Access is restricted to users with a Boston Public Library account.</mods:accessCondition>
```

RDF:

```
<https://example.org/objects/1> dcterms:accessRights
<http://digitalcommonwealth.org/restrictions/bpl> .
```

<mods:part>

This element was not mapped due to a combination of (1) lack of usage from institutions contributing to this document, and (2) significant local variation in usage for this element.

For a mapping of constituent parts of a resource, see the direct mapping option for <mods:relatedItem>.

<mods:extension>

This element was not mapped due to a combination of (1) lack of usage from institutions contributing to this document, and (2) significant local variation in usage for this element.

When mapping data from <mods:extension>, we encourage the re-use of existing vocabularies whenever possible, and adherence to established best practices.

<mods:recordInfo>

Mappings for information concerning the creation and maintenance of the metadata records are below.

A minted object mapping option is also available, in which the metadata itself and record providers are described using distinct objects.

WARNING: The predicates below from the BIBFRAME vocabulary are intended to describe an object with the class bf:adminMetadata rather than an intellectual, academic, or cultural heritage object. The usage recommended below is therefore questionable. However, since the group was unable to find other predicates representing these concepts, and because there is often a lack of distinction between a digital object and its metadata in many digital asset management systems, we have included the mappings here.

Predicate	Value Type	Usage Notes
bf:changeDate	Literal	The most recent change date of the metadata record.
bf:creationDate	Literal	The date of creation for the original metadata record (may be different than the date of item creation in the repository).
bf:descriptionConventions	Literal	The descriptions standard used for cataloging, preferably from a controlled vocabulary such as LoC Description Conventions.
bf:descriptionLanguage	URI	The language of cataloging, preferably from a controlled vocabulary, such as ISO 639-2.
edm:dataProvider	Literal or URI	The organization responsible for creating the metadata record. Only used where this value may need to be differentiated from the institution managing the repository.
edm:provider	Literal or URI	The organization responsible for making the metadata record and/or digital object available.
bf:derivedFrom	Literal	Information about the origin or provenance of the metadata record.

Example 1: <recordInfo> with all elements

XML:

```
<mods:recordInfo>
  <mods:recordContentSource>Boston Public Library</mods:recordContentSource>
  <mods:recordOrigin>human prepared</mods:recordOrigin>
  <mods:languageOfCataloging>
    <mods:languageTerm type="text" authority="iso639-2b"
```

```
        authorityURI="http://id.loc.gov/vocabulary/iso639-2"
        valueURI="http://id.loc.gov/vocabulary/iso639-2/eng">English</mods:languageTerm>
   </mods:languageOfCataloging>
  <mods:descriptionStandard authority="marcdescription">dcrmg</mods:descriptionStandard>
  <mods:recordChangeDate encoding="w3cdtf">2009-02-11T15:07:17.629631</mods:recordChangeDate>
  <mods:recordCreationDate encoding="w3cdtf">
    2009-02-11T15:07:17.629539
  </mods:recordCreationDate>
</mods:recordInfo>
```

RDF:

```
<https://example.org/objects/1> edm:provider "Boston Public Library" ;
                                 bf:derivedFrom "human prepared" ;
                                 bf:descriptionLanguage
<http://id.loc.gov/vocabulary/iso639-2/eng> ;
                                 bf:descriptionConventions
<http://id.loc.gov/vocabulary/descriptionConventions/dcrmg> ;
                                 bf:creationDate "2009-02-11T15:07:17.629539" ;
                                 bf:changeDate "2009-02-11T15:07:17.629539" .
```

Example 2: Aggregated metadata record

XML:

```
<!-- Assuming Digital Commonwealth as aggregating site, BPL as contributing institution -->
<mods:recordInfo>
  <mods:recordContentSource>Boston Public Library</mods:recordContentSource>
  <mods:recordOrigin>OAI-PMH request</mods:recordOrigin>
</mods:recordInfo>
```

RDF:

```
<https://example.org/objects/1> edm:provider "Digital Commonwealth" ;
                                 edm:dataProvider "Boston Public Library" ;
                                 bf:derivedFrom "OAI-PMH request" .
```

Example 3: Metadata record from other organization

XML:

```
<!-- Assuming Indiana University as digital repository -->
<mods:recordInfo>
  <mods:recordContentSource>InU-Li</mods:recordContentSource>
  <mods:recordOrigin>MODS record generated by transforming the photo cataloging
metadata</mods:recordOrigin>
</mods:recordInfo>
```

RDF:

```
<https://example.org/objects/1> edm:provider "Indiana University" ;
                                edm:dataProvider "InU-Li" ;
                                bf:derivedFrom "MODS record generated by transforming the
photo cataloging metadata" .
```

Minted Object Mappings (Complex Option)

<mods:titleInfo>

The minted object mapping for title requires creation of a local object but also allows for a more exact mapping of title attributes from MODS, such as @supplied, and @usage="primary" when multiple or parallel titles are encoded.

Title types are indicated using the bf:variantType property. A supplied title is indicated by adding a skos:note property with the value “supplied,” providing a machine-readable way of determining if brackets should be rendered (if needed). When multiple title variants exist for an item, the preferred title should be indicated by relating the title object to the item using skosxl:prefLabel.

A direct mapping option for this element is also available that does not require the creation of a local object.

Predicate	Value Type	Usage Notes
bf:variantType	Literal	Use to indicate the type of a non-primary title (alternative, translated, etc.)
dce:title	URI	Use to relate the object being described to its minted title.
rdfs:label	Literal	Use for the main title value, including leading articles and subtitles. (Non-sort articles should be handled via the application indexing logic.)
skos:note	Literal	Use to indicate that the title has been supplied by cataloger.
skos:relatedMatch	URI	Use to relate a minted title to a title with an existing URI authority (e.g. uniform title).
skosxl:prefLabel	URI	Use to indicate a preferred title by indicating the URI of the preferred title as the object.

Class	Usage Notes
bf:Title	The class for minted title objects.

Example 1: Title, with nonSort and subTitle

XML:

```
<mods:titleInfo usage="primary">
  <mods:nonSort>The</mods:nonSort>
  <mods:title>wintermind</mods:title>
  <mods:subTitle>William Bonk and American letters</mods:subTitle>
</mods:titleInfo>
```

RDF:

```
<https://example.org/objects/1> dce:title <https://example.org/titles/1> .

<https://example.org/titles/1> a bf:Title ;
                               rdfs:label "The wintermind : William Bonk and American
letters" .
```

Example 2: Supplied title

XML:

```
<mods:titleInfo usage="primary" supplied="yes">
  <mods:title>Red Cross war poster</mods:title>
</mods:titleInfo>
```

RDF:

```
<https://example.org/objects/1> dce:title <https://example.org/titles/1> .

<https://example.org/titles/1> a bf:Title ;
                               rdfs:label "Red Cross war poster" ;
                               skos:note "supplied" .
```

Example 3: Parallel titles

XML:

```
<mods:titleInfo usage="primary" type="translated" lang="eng">
  <mods:title>Great fire</mods:title>
</mods:titleInfo>
<mods:titleInfo usage="primary" type="translated" lang="fre">
  <mods:title>Grand feu</mods:title>
</mods:titleInfo>
```

RDF:

```
<https://example.org/objects/1> dce:title <https://example.org/titles/1> ;
                                 dce:title <https://example.org/titles/2> ;
                                 skosxl:prefLabel <https://example.org/titles/1> .

<https://example.org/titles/1> a bf:Title ;
                               rdfs:label "Great fire"@en ;
```

```
                                bf:variantType "translated" .

<https://example.org/titles/2> a bf:Title ;
                                rdfs:label "Grand feu"@fr ;
                                bf:variantType "translated" .
```

Example 4: Main title in foreign language, translated into English by cataloger

XML:

```
<mods:titleInfo usage="primary" lang="fre">
  <mods:title>L'arpentage et de l'équipement agricole</mods:title>
</mods:titleInfo>
<mods:titleInfo type="translated" lang="eng">
  <mods:title>Land surveying and agriculture equipment</mods:title>
</mods:titleInfo>
```

RDF:

```
<https://example.org/objects/1> dce:title <https://example.org/titles/1> ;
                                 dce:title <https://example.org/titles/2> ;
                                 skosxl:prefLabel <https://example.org/titles/1> .

<https://example.org/titles/1> a bf:Title ;
                                rdfs:label "L'arpentage et de l'équipement agricole"@fr .

<https://example.org/titles/2> a bf:Title ;
                                rdfs:label "Land surveying and agriculture equipment"@en ;
                                bf:variantType "translated" .
```

Example 5: Alternative title supplied by cataloger

XML:

```
<mods:titleInfo usage="primary">
  <mods:nonSort>The</mods:nonSort>
  <mods:title>fake primary title</mods:title>
</mods:titleInfo>
<mods:titleInfo type="alternative" supplied="yes">
  <mods:nonSort>The</mods:nonSort>
  <mods:title>man who thought he would be king</mods:title>
</mods:titleInfo>
```

RDF:

```
<https://example.org/objects/1> dce:title <https://example.org/titles/1> ;
                                 dce:title <https://example.org/titles/2> ;
                                 skosxl:prefLabel <https://example.org/titles/1> .

<https://example.org/titles/1> a bf:Title ;
                                rdfs:label "The fake primary title" .

<https://example.org/titles/2> a bf:Title ;
```

```
                                rdfs:label "The man who thought he would be king" ;
                                skos:note "supplied" ;
                                bf:variantType "alternative" .
```

Example 6: Uniform title

XML:

```
<mods:titleInfo type="uniform" authority="naf"
    authorityURI="http://id.loc.gov/authorities/names"
    valueURI="http://id.loc.gov/authorities/names/n00020514" usage="primary">
  <mods:title>Bible</mods:title>
</mods:titleInfo>
```

RDF:

```
<https://example.org/objects/1> dce:title <https://example.org/titles/1> .

<https://example.org/titles/1> a bf:Title ;
                                rdfs:label "Bible" ;
                                skos:relatedMatch
<http://id.loc.gov/authorities/names/n00020514> ;
                                bf:variantType "uniform" .
```

Example 7: Titles with multiple scripts

XML:

```
<titleInfo usage="primary" lang="heb" script="Latn">
  <title>Pinḳas ha-ḳehilah Aleksandriya</title>
</titleInfo>
<titleInfo type="alternative" lang="heb" script="Latn">
  <title>Pinḳas Aleksandriya</title>
</titleInfo>
<titleInfo lang="heb" script="Hebr">
  <title>ספר יזכור<title>
</titleInfo>
<titleInfo type="alternative" lang="heb" script="Hebr">
  <title>פנקס אלכסנדריא</title>
</titleInfo>
```

RDF:

```
<https://example.org/objects/1> dce:title <https://example.org/titles/1> ;
                                 dce:title <https://example.org/titles/2> ;
                                 dce:title <https://example.org/titles/3> ;
                                 dce:title <https://example.org/titles/4> ;
                                 skosxl:prefLabel <https://example.org/titles/1> .

<https://example.org/titles/1> a bf:Title ;
                                rdfs:label "Pinḳas ha-ḳehilah Aleksandriya"@he-Latn .

<https://example.org/titles/2> a bf:Title ;
```

```
                                rdfs:label "Pinḳas Aleksandriya"@he-Latn ;
                                bf:variantType "alternative" .

<https://example.org/titles/3> a bf:Title ;
                                rdfs:label "ספר יזכור"@he .

<https://example.org/titles/4> a bf:Title ;
                                rdfs:label "פנקס אלכסנדריא"@he ;
                                bf:variantType "alternative" .
```

<mods:name>

It should be noted that most examples using the Library of Congress Name Authority File (LCNAF) are pointing to Real World Object URIs (rwo) instead of the authorities URI. The common practice has been to record the authorities URI for names from LCNAF but these records have been enhanced to include a real world object URI that reflects a more accurate representation of the person, family, or organization as a Person or Organization and not just an authority record.

A direct mapping option for this element is also available that allows literal values to be provided for creator names.

Predicate	Value Type	Usage Notes
relators:[term]	URI	Use with a role from MARC Code List of Relators role terms. Value is either text or URI from a controlled vocabulary (like Library of Congress Name Authority File).
opaque:nameOrder	Literal	Use this to list multiple names in a specific order associated with the object being described. Use semicolon as delimiter. The delimited list can include URI values (as literals) or text values.
rdf:type	URI	Use to identify class of local minted object. Expressed in example statements as "<https://example.org/names/1> a foaf:Person"
foaf:name	Literal	Use this for the full name value as text.[10]
owl:sameAs	URI	Use to identify an exact match between a minted name and a name with an existing URI authority (e.g. id.loc.gov).
schema:birthDate	Literal	Use for birth date in ISO 8601 date format.
schema:deathDate	Literal	Use for death date in ISO 8601 date format.
schema:affiliation	URI	Used to connect this local minted object to an institution, organization, etc with which the entity recorded was associated at the time the resource was created. Value is from a controlled

[10] The full name as a single string is recommended here. If family and given names must be separated, schema:familyName and scheme:givenName predicates may be used.

		vocabulary (like Library of Congress Name Authority File) or another locally minted object.

Class	Usage Notes
foaf:Person or foaf:Organization or foaf:Agent	The class for minted name objects.

Example 1: Personal name from name authority file with multiple roles

XML:

```
<mods:name type="personal" authority="naf"
    authorityURI="http://id.loc.gov/rwo/agents"
    valueURI="http://id.loc.gov/rwo/agents/n50007142">
  <mods:namePart>Bellows, George</mods:namePart>
  <mods:namePart type="date">1882-1925</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/art">Artist</mods:roleTerm>
  </mods:role>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/ltg">Lithographer</mods:roleTerm>
  </mods:role>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:art <https://example.org/names/1> ;
                                 relators:ltg <https://example.org/names/1> .

<https://example.org/names/1> a foaf:Person ;
                              foaf:name "Bellows, George, 1882-1925" ;
                              schema:birthDate "1882" ;
                              schema:deathDate "1925" ;
                              owl:sameAs <http://id.loc.gov/rwo/agents/n50007142> .
```

Example 2: Corporate name from name authority file with role

XML:

```
<mods:name type="corporate" authority="naf"
    authorityURI="http://id.loc.gov/rwo/agents"
    valueURI="http://id.loc.gov/rwo/agents/n2011184651">
  <mods:namePart>United States</mods:namePart>
  <mods:namePart>Veterans Administration</mods:namePart>
  <mods:namePart>Central Office</mods:namePart>
  <mods:namePart>Office of Dentistry</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/spn">Sponsor</mods:roleTerm>
  </mods:role>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:spn <https://example.org/names/2> .

<https://example.org/names/2> a foaf:Organization ;
                              foaf:name "United States. Veterans Administration. Central
Office. Office of Dentistry." ;
                              owl:sameAs <http://id.loc.gov/rwo/agents/n2011184651> .
```

Example 3: Conference name from name authority file with role

XML:

```
<mods:name type="conference" authority="naf"
    authorityURI="http://id.loc.gov/authorities/names"
    valueURI="http://id.loc.gov/authorities/names/n85303985">
  <mods:namePart>Southern Forest Range and Pasture Symposium (1980 : New Orleans,
La.)</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/spn">Sponsor</mods:roleTerm>
  </mods:role>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:spn <https://example.org/names/3> .

<https://example.org/names/3> a foaf:Organization ;
                              foaf:name "Southern Forest Range and Pasture Symposium (1980 :
New Orleans, La.)" ;
                              owl:sameAs <http://id.loc.gov/authorities/names/n85303985> .
```

Example 4: Personal name from local authority file with role and affiliation

XML:

```
<mods:name type="personal" authority="local">
  <mods:namePart>Jones, Leslie</mods:namePart>
  <mods:namePart type="date">1886-1967</mods:namePart>
  <mods:affiliation>Print Dept., Museum of Fine Arts</mods:affiliation>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/pht">Photographer</mods:roleTerm>
   </mods:role>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:pht <https://example.org/names/4> .

<https://example.org/names/4> a foaf:Person ;
                              foaf:name "Jones, Leslie, 1886-1967" ;
                              schema:birthDate "1886" ;
                              schema:deathDate "1967" ;
                              schema:affiliation <https://example.org/names/5> .

<https://example.org/names/5> a foaf:Organization ;
                              foaf:name "Print Dept., Museum of Fine Arts" .
```

Example 5: Uncontrolled name with role

XML:

```
<mods:name type="personal">
  <mods:namePart>Smith, John</mods:namePart>
  <mods:namePart type="date">1898-1945</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/cre">Creator</mods:roleTerm>
  </mods:role>
</mods:name>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:cre <https://example.org/names/6> .

<https://example.org/names/6> a foaf:Person ;
                              foaf:name "Smith, John, 1898-1945" ;
                              schema:birthDate "1898" ;
                              schema:deathDate "1945" .
```

Example 6: Corporate name from local authority file with role

XML:

```
<mods:name type="corporate" authority="local">
  <mods:namePart>Aerial Photographers of New England</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/pht">Photographer</mods:roleTerm>
  </mods:role>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:pht <https://example.org/names/7> .

<https://example.org/names/7> a foaf:Organization ;
                              foaf:name "Aerial Photographers of New England" .
```

Example 7: Uncontrolled name with role

XML:

```
<mods:name type="personal">
  <mods:namePart>Smith, Jane</mods:namePart>
  <mods:namePart type="date">ca. 1898-1945</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/cre">Creator</mods:roleTerm>
  </mods:role>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:cre <https://example.org/names/8> .

<https://example.org/names/8> a foaf:Person ;
                              foaf:name "Smith, Jane, ca 1898-1945" .
```

Example 8: Multiple personal names with role and specific order, some with name authority file and some without name authority file

XML:f

```
<!-- first name with role and with name authority -->
<mods:name type="personal" authority="naf"
  authorityURI="http://id.loc.gov/rwo/agents"
  valueURI="http://id.loc.gov/rwo/agents/n50007142">
  <mods:namePart>Bellows, George</mods:namePart>
  <mods:namePart type="date">1882-1925</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/art">Author</mods:roleTerm>
  </mods:role>
</mods:name>
<!-- second name with role and without name authority -->
<mods:name type="personal">
  <mods:namePart>Some, Person</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text" authority="marcrelator"
        authorityURI="http://id.loc.gov/vocabulary/relators"
        valueURI="http://id.loc.gov/vocabulary/relators/art">Author</mods:roleTerm>
  </mods:role>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:aut https://example.org/names/1 ;
                                 relators:aut https://example.org/names/45 ;
                                 opaque:nameOrder "https://example.org/names/1;
https://example.org/names/45" .

<https://example.org/names/1> a foaf:Person ;
                              foaf:name "Bellows, George, 1882-1925" ;
                              schema:birthDate "1882" ;
                              schema:deathDate "1925" ;
                              owl:sameAs <http://id.loc.gov/rwo/agents/n50007142> .

<https://example.org/names/45> a foaf:Person ;
                               foaf:name "Some, Person" .
```

Example 9: Name from name authority file with no role

XML:

```
<mods:name type="personal" authority="naf" authorityURI="http://id.loc.gov/rwo/agents"
    valueURI="http://id.loc.gov/rwo/agents/n50007142">
  <mods:namePart>Bellows, George</mods:namePart>
  <mods:namePart type="date">1882-1925</mods:namePart>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:cre <https://example.org/names/1> .

<https://example.org/names/1> a foaf:Person ;
                              foaf:name "Bellows, George, 1882-1925" ;
                              schema:birthDate "1882" ;
                              schema:deathDate "1925" ;
                              owl:sameAs <http://id.loc.gov/rwo/agents/n50007142> .
```

Example 10: Name without knowing personal or corporate

XML:

```
<mods:name>
  <mods:namePart>Anderson, Steven</mods:namePart>
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:ctb <https://example.org/names/10> .

<https://example.org/names/10> a foaf:Agent ;
                               foaf:name "Anderson, Steven" .
```

Example 11: Uncontrolled name with role

XML:

```
<mods:name type="personal">
  <mods:namePart>Harris, Roy, 1898-1979</mods:namePart>
  <mods:role>
    <mods:roleTerm authority="marcrelator" type="code">ctb</mods:roleTerm>
    <mods:roleTerm authority="marcrelator" type="text">Contributor</mods:roleTerm>
  </mods:role>
</name>
<mods:name type="personal">
  <mods:namePart>Thompson, Randall, 1899-1984</mods:namePart>
  <mods:role>
    <mods:roleTerm authority="marcrelator" type="code">ctb</mods:roleTerm>
    <mods:roleTerm authority="marcrelator" type="text">Contributor</mods:roleTerm>
  </mods:role>
```

```
</mods:name>
```

RDF:

```
<https://example.org/objects/1> relators:ctb <https://example.org/names/11> ;
                                relators:ctb <https://example.org/names/12> .

<https://example.org/names/11> a foaf:Person ;
                               foaf:name "Harris, Roy, 1898-1979" .

<https://example.org/names/12> a foaf:Person ;
                               foaf:name "Thompson, Randall, 1899-1984" .
```

<mods:typeOfResource>

This element does not have a minted object mapping. See the direct mapping option for <mods:typeOfResource>.

<mods:genre>

This element does not have a minted object mapping. See the direct mapping option for <mods:genre>.

<mods:originInfo>

In this mapping, the concept of origination (publication, manufacture, distribution, etc.) is represented by an ProvisionActivity object defined by the BIBFRAME ontology (or one of it's subclasses). Using this option allows multiple publishers, places of publication, or <originInfo> types to be described with greater clarity and precision.

Note: Mapping for <mods:issuance> is not provided.

A direct mapping option for this element is also available. (The direct mapping option provides additional examples of date formatting.)

Predicate	Value Type	Usage Notes
bf:editionStatement	Literal	Use for edition statements typically found in <mods:edition>.
bf:provisionActivity	URI	Use to relate the object being described to a minted origination information object.
dcterms:created	Literal	Use to represent the date of creation (<mods:dateCreated>) for the object, formatted as an EDTF string.
dcterms:issued	Literal	Use to represent the date of issuance (<mods:dateIssued>) for the object, formatted as an EDTF string.
relators:dpb	Literal or URI	"place of distribution": Use to represent the place of distribution, preferably using a controlled vocabulary such as TGN or GeoNames.
relators:dst	Literal or URI	"distributor": Use to represent the agent responsible for the manufacture of the item.
relators:mfp	Literal or URI	"place of manufacture": Use to represent the place of manufacture, preferably using a controlled vocabulary such as TGN or GeoNames.
relators:mfr	Literal or URI	"manufacturer": Use to represent the agent responsible for the manufacture of the item.
relators:pbl	Literal or URI	"publisher": Use to represent the agent responsible for the publication or any other general origination event.
relators:pro	Literal or URI	"producer": Use to represent the agent responsible for the production of the item.

relators:prp	Literal or URI	"place of production": Use to represent the place of production, preferably using a controlled vocabulary such as TGN or GeoNames.
relators:pup	Literal or URI	"place of publication": Use to represent the place of publication, preferably using a controlled vocabulary such as TGN or GeoNames.
skos:note	Literal	Use to indicate an inferred date.

Class	**Usage Notes**
bf:ProvisionActivity	The class for minted origination objects.
bf:Manufacture	Subclass of bf:ProvisionActivity, use for minted origination events relating to item manufacture.
bf:Publication	Subclass of bf:ProvisionActivity, use for minted origination events relating to item publication.

Example 1: Place of origin; simple date

XML:

```
<mods:originInfo>
  <mods:place>
    <mods:placeTerm type="text">Boston, Mass.</mods:placeTerm>
  </mods:place>
  <mods:dateCreated encoding="w3cdtf" keyDate="yes">1930</mods:dateCreated>
</mods:originInfo>
```

RDF:[11]

```
<https://example.org/objects/1> bf:provisionActivity <https://example.org/events/1> .

<https://example.org/events/1> a bf:ProvisionActivity ;
                                relators:pup "Boston, Mass." ;
                                dcterms:created "1930" .
```

[11] These examples do not include the use of datatypes to qualify string values for dates. If datatypes are desired, best practice would be to use datatypes from the Library of Congress Extended Date/Time Format Datatypes Scheme. (Example: "1930"^^<http://id.loc.gov/datatypes/edtf/EDTF-level0>)

Example 2: Publication data: place of publication; publisher; edition; questionable date

XML:

```
<mods:originInfo eventType="publication">
  <mods:place>
    <mods:placeTerm type="text">Boston, Mass.</mods:placeTerm>
  </mods:place>
  <mods:publisher>published by John P. Soule</mods:publisher>
  <mods:edition>3rd edition</mods:edition>
  <mods:dateCreated encoding="w3cdtf" keyDate="yes"
      qualifier="questionable">1930</mods:dateCreated>
</mods:originInfo>
```

RDF:

```
<https://example.org/objects/1> bf:provisionActivity <https://example.org/events/1> .

<https://example.org/events/1> a bf:Publication ;
                               relators:pup <http://vocab.getty.edu/tgn/7013445> ;
                               relators:pbl "published by John P. Soule" ;
                               bf:editionStatement "3rd edition" ;
                               dcterms:created "1930?" .
```

Example 3: Multiple production events; date range; specific date

XML:

```
<mods:originInfo eventType="manufacture">
  <mods:publisher>Steven Anderson</mods:publisher>
  <mods:place>
    <mods:placeTerm type="text">[Atlanta, GA]</mods:placeTerm>
  </mods:place>
  <mods:dateCreated encoding="w3cdtf" keyDate="yes" point="start">1970</mods:dateCreated>
  <mods:dateCreated encoding="w3cdtf" point="end">1979</mods:dateCreated>
</mods:originInfo>

<mods:originInfo eventType="publication">
  <mods:place>
    <mods:placeTerm type="text">Boston, Mass.</mods:placeTerm>
  </mods:place>
  <mods:publisher>John P. Soule</mods:publisher>
  <mods:edition>3rd edition</mods:edition>
  <mods:dateIssued encoding="w3cdtf" keyDate="yes">1980-02-14</mods:dateIssued>
</mods:originInfo>
```

RDF:

```
<https://example.org/objects/1> bf:provisionActivity <https://example.org/events/1> .
<https://example.org/objects/1> bf:provisionActivity <https://example.org/events/2> .

<https://example.org/events/1> a bf:Manufacture ;
                               relators:mfp "[Atlanta, GA]" ;
```

```
                                relators:mfr "Steven Anderson"
                                dcterms:created "1970/1979" ;

<https://example.org/events/2> a bf:Publication ;
                                relators:pup <http://vocab.getty.edu/tgn/7013445> ;
                                relators:pbl <http://id.loc.gov/authorities/names/n91108304> ;
                                bf:editionStatement "3rd edition" ;
                                dcterms:issued "1980-02-14" .
```

Example 4: Inferred date

XML:

```
<mods:originInfo>
  <mods:dateCreated encoding="w3cdtf" keyDate="yes"
qualifier="inferred">1930</mods:dateCreated>
</mods:originInfo>
```

RDF:

```
<https://example.org/objects/1> bf:provisionActivity <https://example.org/events/1> .

<https://example.org/events/1> a bf:ProvisionActivity ;
                                dcterms:created "1930" ;
                                skos:note "Date: Inferred" .
```

<mods:language>

This element does not have a minted object mapping. See the direct mapping option for <mods:language>.

<mods:physicalDescription>

This element does not have a minted object mapping. See the direct mapping option for <mods:physicalDescription>.

<mods:abstract>

This element does not have a minted object mapping. See the direct mapping option for <mods:abstract>.

<mods:tableOfContents>

This element does not have a minted object mapping. See the direct mapping option for <mods:tableOfContents>.

<mods:targetAudience>

This working group has determined that mapping <mods:targetAudience> to dcterms:audience is the simplest implementation of this element. However, that predicate requires a URI and does not allow literal values. This mapping provides an option for minting objects for values from a locally defined target audience scheme.

A direct mapping option for this element is also available.

Predicate	Value Type	Usage Notes
dcterms:audience	URI	Use to relate the object being described to its minted target audience.
rdfs:label	Literal	Use for the custom target audience value.

Class	Usage Notes
skos:Concept	The class for minted target audience objects.

Example 1: Custom target audience value

XML:

```
<mods:targetAudience>Teacher</mods:targetAudience>
```

RDF:

```
<https://example.org/objects/1> dcterms:audience <https://example.org/minted_object/1> .

<https://example.org/minted_objects/1> a skos:Concept ;
                                       rdfs:label "Teacher" .
```

<mods:note>

The minted object mapping allows note type values to be provided without having to be prepended to the note value (as shown in the direct mapping option for <mods:note>).

Predicate	Value Type	Usage Notes
bf:note	URI	Use to relate the object being described to its minted note value.
bf:noteType	Literal	Use for the note type value.[12]
rdfs:label	Literal	Use for the note value.

Class	Usage Notes
bf:Note	The class for minted note objects.

Example 1: Undifferentiated, general note

XML:

```
<mods:note>Title supplied by cataloger.</mods:note>
```

RDF:

```
<https://example.org/objects/1> bf:note <https://example.org/notes/1> .

<https://example.org/notes/1> a bf:Note ;
                              rdfs:label "Title supplied by cataloger." .
```

Example 2: Note regarding statement of responsibility

XML:

```
<mods:note type="statement of responsibility">drawn by Mrs. Ellen B. Mason, from a photograph by Edward S. Curtis</mods:note>
```

[12] An alternate strategy recommended by some BIBFRAME adopters is to indicate the note type by assigning a subclass of bf:Note to the object (e.g. DateNote). BIBFRAME does not define such subclasses; they would need to be locally maintained. See https://www.loc.gov/bibframe/docs/pdf/bf2-notes-march2017.pdf.

RDF:

```
<https://example.org/objects/1> bf:note <https://example.org/notes/2> .

<https://example.org/notes/2> a bf:Note ;
                              bf:noteType "statement of responsibility" ;
                              rdfs:label "drawn by Mrs. Ellen B. Mason, from a photograph by
Edward S. Curtis" .
```

Example 3: Date note

XML:

```
<mods:note type="date">Recorded in 1961 in Vienna.</mods:note>
```

RDF:

```
<https://example.org/objects/1> bf:note <https://example.org/notes/3> .

<https://example.org/notes/2> a bf:Note ;
                              bf:noteType "date" ;
                              rdfs:label "Recorded in 1961 in Vienna." .
```

Example 4: Language note

XML:

```
<mods:note type="language">In English; summaries in French, German, or Russian.</mods:note>
```

RDF:

```
<https://example.org/objects/1> bf:note <https://example.org/notes/4> .

<https://example.org/notes/4> a bf:Note ;
                              bf:noteType "language" ;
                              rdfs:label "In English; summaries in French, German, or
Russian." .
```

Example 5: Biographical/historical note

XML:

```
<mods:note type="biographical/historical">Born Kingston, N.Y., April 4, 1856; worked at J.J.
Bufford's Lith. in Boston, 1890-1895.</mods:note>
```

RDF:

```
<https://example.org/objects/1> bf:note <https://example.org/notes/5> .

<https://example.org/notes/5> a bf:Note ;
                              bf:noteType "biographical/historical" ;
                              rdfs:label "Born Kingston, N.Y., April 4, 1856; worked at J.J.
Bufford's Lith. in Boston, 1890-1895." .
```

<mods:subject>

The minted object mapping for <mods:subject> allows creating reusable subject terms with greater detail and granularity. A direct mapping option for this element is also available.

For complex LCSH-style subjects with multiple subdivisions, the full subject string (including hyphens) is designated with skos:prefLabel, preserving the original subject heading from MODS XML. Each <subject> sub-element is also represented by an rdfs:label attribute on the minted subject object. Additional subject facet components such as temporal or geographic subdivisions may be represented by additional minted subjects as needed to allow for temporal or geographic indexing, browsing, and/or display functionality.

Note: For ease of use, predicates from the RDA Unconstrained vocabulary (rdau) are listed using their lexical alias; the canonical term is provided in the Usage Notes.

Predicate	**Value Type**	**Usage Notes**
dcterms:subject	URI	Use for topic and name subjects.
dcterms:spatial	URI	Use for geographic subjects.
dcterms:temporal	URI	Use for text-based temporal subjects that cannot be represented by an EDTF timespan (e.g. "French Revolution").
geojson:bbox	Literal	Use for bounding box coordinates.
geojson:coordinates	Literal	Use for cartographic coordinates.
owl:sameAs	URI	Use to identify an exact match between a minted non-topical subject (name, geographic, etc.) and a real-world object (place, person, etc.) with an existing URI authority (e.g. id.loc.gov).
rdfs:label	Literal	Use for the label of a minted subject.
schema:temporalCoverage	Literal	Use for date-based temporal subjects, formatted as an EDTF timespan.
skos:closeMatch	URI	Use to link two concepts that are sufficiently similar that they can be used interchangeably in some information retrieval applications.

skos:exactMatch	URI	Use to identify an exact match between a minted subject and a subject with an existing URI authority (e.g. id.loc.gov).
schema:birthDate	Literal	Use for birth date in ISO 8601 date format, in minted name subjects.
schema:deathDate	Literal	Use for death date in ISO 8601 date format, in minted name subjects.
skosxl:prefLabel	URI	Use to indicate a preferred title when several labels are provided for a minted subject.
rdau:projectionOfCartographicContent.en	Literal	Use to indicate the cartographic projection (<mods:cartographics><mods:projection>): "the method of representing the surface of a sphere or other shape on a plane." (Canonical: rdau:P60542.)
rdau:scale.en	Literal	Use to indicate the cartographic scale (<mods:cartographics><mods:scale>). (Canonical: rdau:P60565.)
rdfs:seeAlso	URI	Use to link two closely related subjects of any type.

Class	**Usage Notes**
skos:Concept	The class for minted topical subjects.
edm:Place	The class for minted geographic subjects.
foaf:Person	The class for minted personal name subjects.
foaf:Organization	The class for minted corporate name subjects.
bf:Temporal	The class for minted temporal subjects.
bf:Title	The class for minted uniform title subjects.

Example 1: TGM topic subject

XML:

```
<mods:subject authority="lctgm" authorityURI="http://id.loc.gov/vocabulary/graphicMaterials"
    valueURI="http://id.loc.gov/vocabulary/graphicMaterials/tgm011662">
  <mods:topic>Whirligigs</mods:topic>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:subject <https://example.org/subjects/789> .

<https://example.org/subjects/789> a skos:Concept ;
                                   rdfs:label "Whirligigs" ;
                                   skos:exactMatch
<http://id.loc.gov/vocabulary/graphicMaterials/tgm011662> .
```

Example 2: Uncontrolled keyword or tag

XML:

```
<mods:subject>
  <mods:topic>LOL cats</mods:topic>
  <mods:topic>History</mods:topic>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:subject <https://example.org/subjects/456> .

<https://example.org/subjects/456> a skos:concept ;
                                   skos:prefLabel "LOL cats--History" ;
                                   rdfs:label "LOL cats" ;
                                   rdfs:label "History" .
```

Example 3: LCSH subject with separate subdivisions

XML:

```
<mods:subject authority="lcsh" authorityURI="http://id.loc.gov/authorities/subjects"
    valueURI="http://id.loc.gov/authorities/subjects/sh2010109730">
  <mods:topic>Real property</mods:topic>
  <mods:geographic>United States</mods:geographic>
  <mods:genre>Periodicals</mods:genre>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:subject <https://example.org/subjects/456> ;
                                dcterms:spatial <https://example.org/spatial/ss6> .

<https://example.org/subjects/456> a skos:Concept ;
                                   rdfs:label "Real property--United States--Periodicals" ;
                                   skos:exactMatch
<http://id.loc.gov/authorities/subjects/sh2010109730> .

<https://example.org/spatial/ss6> a edm:Place ;
                                  rdfs:label "United States" ;
                                  geojson:coordinates "[-98.0000, 38.0000]" ;
                                  owl:sameAs <http://vocab.getty.edu/tgn/7012149> .
```

Example 4: LCSH subject with separate subdivisions and free floating qualifier

XML:

```
<mods:subject authority="lcsh" authorityURI="http://id.loc.gov/authorities/subjects"
    valueURI="http://id.loc.gov/authorities/subjects/sh2010109730">
  <mods:topic>Real property</mods:topic>
  <mods:geographic>United States</mods:geographic>
  <mods:genre>Periodicals</mods:genre>
  <mods:topic>History</mods:topic>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:subject <https://example.org/subjects/789> ;
                                dcterms:spatial <https://example.org/spatial/ss6> .

<https://example.org/subjects/789> a skos:concept ;
                                   skos:prefLabel "Real property--United
States--Periodicals--History" ;
                                   rdfs:label "Real property--United States--Periodicals" ;
                                   rdfs:label "History" ;
                                   skos:closeMatch
<http://id.loc.gov/authorities/subjects/sh2010109730> .

<https://example.org/spatial/ss6> a edm:Place ;
                                   rdfs:label "United States" ;
                                   geojson:coordinates "[-98.0000, 38.0000]" ;
                                   owl:sameAs <http://vocab.getty.edu/tgn/7012149> .
```

Example 5: Local subject constructed in LCSH style

XML:

```
<mods:subject>
  <mods:topic>Boats</mods:topic>
  <mods:geographic>New England</mods:geographic>
  <mods:topic>History</mods:topic>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:subject <https://example.org/subjects/790> ;
                                dcterms:spatial <https://example.org/spatial/ss7> .

<https://example.org/subjects/790> a skos:concept ;
                                   skos:prefLabel "Boats--New England--History" ;
                                   rdfs:label "Boats" ;
                                   rdfs:label "History" ;
                                   skos:closeMatch
<http://id.loc.gov/authorities/subjects/sh99004834> ;
                                   skos:closeMatch
<http://id.loc.gov/authorities/subjects/sh85061212> .
```

```
<https://example.org/spatial/ss6> a edm:Place ;
                                  rdfs:label "New England" ;
                                  owl:sameAs <http://vocab.getty.edu/tgn/7014203> .
```

Example 6: Temporal subject (numeric)

XML:

```
<mods:subject>
  <mods:temporal encoding="w3cdtf" point="start">1880</mods:temporal>
  <mods:temporal encoding="w3cdtf" point="end">1889</mods:temporal>
</mods:subject>
```

RDF:

```
# do not mint numeric date range subjects
<https://example.org/objects/1> schema:temporalCoverage "1880/1889" .
```

Example 7: Temporal subject (non-numeric)

XML:

```
<mods:subject>
  <mods:topic>Real property</mods:topic>
  <mods:temporal>French Revolution</mods:temporal>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:subject <https://example.org/subjects/998> ;
                                dcterms:temporal <https://example.org/subjects/999> .

<https://example.org/subjects/998> a skos:concept ;
                                   skos:prefLabel "Real property--French Revolution"
                                   rdfs:label "Real property" ;
                                   rdfs:label "French Revolution" ;
                                   skos:closeMatch
<http://id.loc.gov/authorities/subjects/sh85111739> ;
                                   skos:closeMatch
<http://id.loc.gov/authorities/subjects/sh96011479> .

<https://example.org/subjects/998> a bf:Temporal ;
                                   rdfs:label "French Revolution" ;
                                   owl:sameAs
<http://id.loc.gov/authorities/subjects/sh96011479> .
```

Example 8: Uniform title as subject

XML:

```
<mods:subject>
  <mods:titleInfo type="uniform" authority="naf"
      authorityURI="http://id.loc.gov/authorities/names"
      valueURI="http://id.loc.gov/authorities/names/n00020514">
    <mods:title>Bible</mods:title>
```

```
  </mods:titleInfo>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:subject <https://example.org/subjects/111> .

<https://example.org/subjects/111> a bf:Title ;
                                   rdfs:label "Bible" ;
                                   owl:sameAs <http://id.loc.gov/authorities/names/n00020514>
.
```

Example 9: LC name subject

XML:

```
<mods:subject>
  <mods:name type="corporate" authority="naf"
authorityURI="http://id.loc.gov/authorities/names"
      valueURI="http://id.loc.gov/authorities/names/n2011184651">
    <mods:namePart>United States</mods:namePart>
    <mods:namePart>Veterans Administration</mods:namePart>
    <mods:namePart>Central Office</mods:namePart>
    <mods:namePart>Office of Dentistry</mods:namePart>
  </mods:name>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:subject <https://example.org/names/n002> .

<https://example.org/names/n002> a foaf:Organization ;
                                 rdfs:label "United States. Veterans Administration. Central
Office. Office of Dentistry" ;
                                 owl:sameAs <http://id.loc.gov/rwo/agents/n2011184651> .
```

Example 10: Local name subject

XML:

```
<mods:subject>
  <mods:name type="personal" authority="local">
    <mods:namePart>Jones, Leslie</mods:namePart>
    <mods:namePart type="date">1886-1967</mods:namePart>
  </mods:name>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:subject <https://example.org/names/n001> .

<https://example.org/names/n001> a foaf:Person ;
                                 foaf:name "Jones, Leslie, 1886-1967" ;
                                 schema:birthDate "1886" ;
                                 schema:deathDate "1967" .
```

Example 11: Geographic subject from Library of Congress, no coordinates

XML:

```
<mods:subject authority="naf" authorityURI="http://id.loc.gov/authorities/names"
    valueURI="http://id.loc.gov/authorities/names/n92103355">
  <mods:geographic>East Boston (Boston, Mass.)</mods:geographic>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:spatial <https://example.org/spatial/ss1> .

<https://example.org/spatial/ss1> a edm:Place ;
                                  rdfs:label "East Boston (Boston, Mass.)" ;
                                  owl:sameAs <http://id.loc.gov/rwo/agents/n92103355> ;
                                  owl:sameAs <http://vocab.getty.edu/tgn/7015009> .
```

Example 12: Geographic subject from GeoNames

XML:

```
<mods:subject authority="geonames" authorityURI="http://sws.geonames.org"
    valueURI="http://sws.geonames.org/4931010">
  <mods:geographic>
    <mods:area>Boston Public Library</mods:area>
  </mods:geographic>
  <mods:cartographics>
    <mods:coordinates>42.34926,-71.07838</mods:coordinates>
  </mods:cartographics>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:spatial <https://example.org/spatial/ss2> .

<https://example.org/spatial/ss2> a edm:Place ;
                                  rdfs:label "Boston Public Library" ;
                                  geojson:coordinates "[-42.34926, -71.07838]" ;
                                  owl:sameAs <http://sws.geonames.org/4931010> ;
                                  rdfs:seeAlso <http://vocab.getty.edu/tgn/7013445> .
```

Example 13: Hierarchical geographic heading from TGN, including coordinates

XML:

```
<mods:subject authority="tgn" authorityURI="http://vocab.getty.edu/tgn"
    valueURI="http://vocab.getty.edu/tgn/7015005">
  <mods:hierarchicalGeographic>
    <mods:country>United States</mods:country>
    <mods:state>Massachusetts</mods:state>
    <mods:county>Suffolk</mods:county>
    <mods:city>Boston</mods:city>
    <mods:citySection>Jamaica Plain</mods:citySection>
  </mods:hierarchicalGeographic>
```

```
  <mods:cartographics>
    <mods:coordinates>42.3000,-71.1167</mods:coordinates>
  </mods:cartographics>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:spatial <https://example.org/spatial/ss2> .

<https://example.org/spatial/ss2> a edm:Place ;
                                  rdfs:label "Jamaica Plain" ;
                                  geojson:coordinates "[-42.3000, -71.1167]" ;
                                  owl:sameAs <http://vocab.getty.edu/tgn/7015005> .
```

Example 14: Coordinates

XML:

```
<mods:subject>
  <mods:cartographics>
    <mods:coordinates>41.40338,2.17403</mods:coordinates>
  </mods:cartographics>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:spatial <https://example.org/spatial/ss3> .

<https://example.org/spatial/ss3> a edm:Place ;
                                  geojson:coordinates "[41.40338, 2.17403]" .
```

Example 15: Bounding box

XML:

```
<mods:subject>
  <mods:cartographics>
    <mods:coordinates>26.1133 39.8623 26.7906 40.6428</mods:coordinates>
  </mods:cartographics>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:spatial <https://example.org/spatial/ss35> .

<https://example.org/spatial/ss35> a edm:Place ;
                                   geojson:bbox "[26.1133, 39.8623, 26.7906, 40.6428]" .
```

Example 16: Uncontrolled geographic heading

XML:

```
<mods:subject>
  <mods:geographic>8 Nantucket Avenue</mods:geographic>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:spatial <https://example.org/spatial/ss4> .

<https://example.org/spatial/ss4> a edm:Place ;
                                  rdfs:label "8 Nantucket Avenue" .
```

Example 17: Uncontrolled geographic heading with coordinates

XML:

```
<mods:subject>
  <mods:geographic>8 Nantucket Avenue</mods:geographic>
  <mods:cartographics>
    <mods:coordinates>41.291234,-70.107451</mods:coordinates>
  </mods:cartographics>
</mods:subject>
```

RDF:

```
<https://example.org/objects/1> dcterms:spatial <https://example.org/spatial/ss4> .

<https://example.org/spatial/ss4> a edm:Place ;
                                  rdfs:label "8 Nantucket Avenue" ;
                                  geojson:coordinates "[41.291234, -70.107451]" .
```

Example 18: Scale and projection

XML:

```
<mods:subject>
  <mods:cartographics>
    <mods:scale>Scale [1:6,336,000]. 1" = 100 miles</mods:scale>
    <mods:projection>Conic proj</mods:projection>
  </mods:cartographics>
</mods:subject>
```

RDF:

```
# do not mint subjects for scale or projection values
<https://example.org/objects/1> rdau:projectionOfCartographicContent.en "Conic proj" ;
                                rdau:scale.en "Scale [1:6,336,000]. 1" = 100 miles" .
```

<mods:classification>

This element does not have a minted object mapping. See the direct mapping option for <mods:classification>.

<mods:relatedItem>

The mappings below focus on use cases where <mods:relatedItem> is used to describe parent collections, series, and subseries; parent works that the work being described forms some part of; and constituent works that represent some part of the item being described. Relationships for digital collection membership are also described. These mappings were informed by a survey distributed to the wider community in January 2017. Survey results can be found here.

A direct mapping option without minted objects for physical/source collections, series, subseries, and related works is also available, however use of the direct mapping for this element is *strongly* discouraged.

Notes:

- Different predicates are provided for physical/source collection and digital collection membership, since these represent distinct concepts, and an object's digital collection membership has a unique functional role within most repository systems. For digital collection membership, two predicates are provided, one for standard/basic membership and another for primary or "administrative" membership, which is a use case in some digital asset management systems (including Samvera[13]).

- For ease of use, predicates from the RDA Unconstrained vocabulary (rdau) are listed using their lexical alias; the canonical term is provided in the Usage Notes.

Predicate	Value Type	Usage Notes
bf:editionStatement	Literal	Use for the edition number of the related item.
bf:hasSeries	URI	Use to relate a commercial or bibliographic series object to the item being described.
bf:seriesOf	URI	Use to relate an archival series object to its parent collection.
bibo:issue	Literal	Use for the issue number of the related item.
bibo:presentedAt	URI	Use to indicate the URI for the event the item was produced as part of.
bibo:volume	Literal	Use for the volume number of the related item.
dbo:isPartOf	URI	Use to indicate the URI for the physical/source collection the item belongs to.
dce:creator	Literal	Use for the creator name of the related item.

[13] See the concept of "Administrative Set" in Hyrax.

dce:publisher	Literal	Use for the publisher name of the related item
dcterms:hasVersion	URI	Use to link to an alternate version of the item.
dcterms:isPartOf	URI	Use to link to the administrative or primary digital collection the item belongs to.
dcterms:issued	Literal	Use for the date of publication for the related item.
foaf:name	Literal	Use for the name of a related conference.
identifiers:[type]	Literal	Use for an identifier corresponding to a parent item that the item being described belongs to. [Type] should be replaced with the corresponding identifier type abbreviation from Library of Congress Standard Identifier Schemes.
opaque:memberOfArchivalSeries	URI	Use to relate an archival series object to the item being described.
pcdm:memberOf	URI	Use to link to the digital collection the item belongs to.
rdau:containedIn.en	Literal or URI	Use to indicate the title, citation, or URI for a parent item that the item being described belongs to. (Canonical: rdau:P60101.)
rdau:containerOf.en	Literal or URI	Use to indicate the title, citation, or URI of a constituent item. (Canonical: rdau:P60249.)
rdfs:label	Literal	Use for the title of the related item.
schema:pageEnd	Literal	Use for ending page number.
schema:pageStart	Literal	Use for starting page number.

Class	**Usage Notes**
dcmitype:Collection	The class for minted physical or archival collection objects.
foaf:Organization	The class for minted conference name objects.
opaque:ArchivalSeries	The class for minted archival series objects.
opaque:BibliographicSeries	The class for minted bibliographic series objects.
pcdm:Collection	The class for minted digital collection objects.
schema:CreativeWork	The class for minted related work objects.

Example 1: Host collection (physical or archival)

XML:

```
<mods:relatedItem type="host">
  <mods:titleInfo>
    <mods:title>Boston matchcover collection</mods:title>
  </mods:titleInfo>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> dbo:isPartOf <https://example.org/physical_collections/1> .

<https://example.org/physical_collections/1> a dcmitype:Collection ;
                                             rdfs:label "Boston matchcover collection" .
```

Example 2: Host collection (physical or archival) with series

XML:

```
<mods:relatedItem type="host">
  <mods:titleInfo>
    <mods:title>Boston matchcover collection</mods:title>
  </mods:titleInfo>
</mods:relatedItem>
<mods:relatedItem type="series">
  <mods:titleInfo>
    <mods:title>Series 1: Correspondence</mods:title>
  </mods:titleInfo>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> dbo:isPartOf <https://example.org/physical_collections/1> ;
                                opaque:memberOfArchivalSeries <https://example.org/series/1>
.

<https://example.org/physical_collections/1> a dcmitype:Collection ;
                                             rdfs:label "Boston matchcover collection" .

<https://example.org/series/1> a opaque:ArchivalSeries ;
                               rdfs:label "Series 1: Correspondence" ;
                               bf:seriesOf <https://example.org/physical_collections/1> .
```

Example 3: Host collection (physical or archival) with series, subseries, and subsubseries

XML:

```
<mods:relatedItem type="host">
```

```
  <mods:titleInfo>
    <mods:title>Boston matchcover collection</mods:title>
  </mods:titleInfo>
</mods:relatedItem>
<mods:relatedItem type="series">
  <mods:titleInfo>
    <mods:title>Series 1: Correspondence</mods:title>
  </mods:titleInfo>
  <mods:relatedItem type="series">
    <mods:titleInfo>
      <mods:title>Series 1.1: Personal correspondence</mods:title>
    </mods:titleInfo>
    <mods:relatedItem type="series">
      <mods:titleInfo>
        <mods:title>Series 1.1.1: Pen pals</mods:title>
      </mods:titleInfo>
    </mods:relatedItem>
  </mods:relatedItem>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> dbo:isPartOf <https://example.org/physical_collections/1> ;
                                 opaque:memberOfArchivalSeries <https://example.org/series/3>
.

<https://example.org/physical_collections/1> a dcmitype:Collection ;
                                             rdfs:label "Boston matchcover collection" .

<https://example.org/series/1> a opaque:ArchivalSeries ;
                               rdfs:label "Series 1: Correspondence" ;
                               bf:seriesOf <https://example.org/physical_collections/1> .

<https://example.org/series/2> a opaque:ArchivalSeries ;
                               rdfs:label "Series 1.1: Personal correspondence" ;
                               bf:subseriesOf <https://example.org/series/1> .

<https://example.org/series/3> a opaque:ArchivalSeries ;
                               rdfs:label "Series 1.1.1: Pen pals" ;
                               bf:subseriesOf <https://example.org/series/2> .
```

Example 4: Nested host collections (physical or archival)

XML:

```
<relatedItem type="host">
  <titleInfo>
    <title>Uncalendared letters</title>
  </titleInfo>
  <relatedItem type="host">
    <titleInfo>
      <title>Letters Received</title>
    </titleInfo>
```

```
    <relatedItem type="host">
      <titleInfo>
        <title>Philip Schuyler papers</title>
      </titleInfo>
    </relatedItem>
  </relatedItem>
</relatedItem>
```

RDF:

```
<https://example.org/objects/1> dbo:isPartOf <https://example.org/physical_collections/1> ;
                                opaque:memberOfArchivalSeries <https://example.org/series/2>
.

<https://example.org/physical_collections/1> a dcmitype:Collection ;
                                             rdfs:label "Uncalendared letters" .

<https://example.org/series/1> a opaque:ArchivalSeries ;
                               rdfs:label "Letters Received" ;
                               bf:seriesOf <https://example.org/physical_collections/1> .

<https://example.org/series/2> a opaque:ArchivalSeries ;
                               rdfs:label "Philip Schuyler papers" ;
                               bf:subseriesOf <https://example.org/series/1> .
```

Example 5: Digital collection membership

XML:

```
<!-- no corresponding XML for this relationship →
<!-- assuming item belongs to digital collection called "Anti-Slavery Broadsides" -->
```

RDF:

```
<https://example.org/objects/1> pcdm:memberOf <https://example.org/collections/1> .

<https://example.org/collections/1> a pcdm:Collection ;
                                    rdfs:label "Anti-Slavery Broadsides" .
```

Example 6: Digital collection membership (multiple) with administrative set membership[14]

XML:

```
<!-- no corresponding XML for this relationship →
<!-- assuming item primarily belongs to "Anti-Slavery Broadsides" digital collection -->
<!-- and to another digital collection called "Anti-Slavery Broadsides" -->
```

RDF:

```
<https://example.org/objects/1> pcdm:memberOf <https://example.org/collections/1> ;
                                pcdm:memberOf <https://example.org/collections/2> ;
```

[14] See the concept of "Administrative Set" in Samvera and Hyrax.

```
                                dcterms:isPartOf <https://example.org/collections/2> .

<https://example.org/collections/1> a pcdm:Collection ;
                                    rdfs:label "Anti-Slavery Broadsides" .

<https://example.org/collections/2> a pcdm:Collection ;
                                    rdfs:label "Anti-Slavery" .
```

Example 7: Journal title for article

XML:

```
<!-- parent journal title for an individual article stored in the repository -->
<mods:relatedItem type="host">
  <mods:titleInfo>
    <mods:title>Journal of Clinical Investigation</mods:title>
  </mods:titleInfo>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> rdau:containedIn.en <https://example.org/relatedworks/1> .

<https://example.org/relatedworks/1> a schema:CreativeWork ;
                                     rdfs:label "Journal of Clinical Investigation" .
```

Example 8: Journal with full publication information for article

XML:

```
<!-- full parent journal info for an individual article stored in the repository -->
<mods:relatedItem type="host">
  <mods:titleInfo>
    <mods:title>Journal of Clinical Investigation</mods:title>
  </mods:titleInfo>
  <mods:identifier type="issn">0021-9738</mods:identifier>
  <mods:part>
    <mods:date>May 10, 2017</mods:date>
    <mods:detail type="volume">
      <mods:number>1</mods:number>
    </mods:detail>
    <mods:detail type="issue">
      <mods:number>10</mods:number>
    </mods:detail>
    <mods:extent unit="pages">
      <mods:start>4387</mods:start>
      <mods:end>4394</mods:end>
    </mods:extent>
  </mods:part>
  <mods:identifier type="article number">e0177396</mods:identifier>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> rdau:containedIn.en <https://example.org/relatedworks/1> ;
                                schema:pageStart "4387" ;
                                schema:pageEnd "4394" ;
                                identifiers:ean "e0177396" .

<https://example.org/relatedworks/1> a schema:CreativeWork ;
                                     rdfs:label "Journal of Clinical Investigation" ;
                                     bibo:volume "1" ;
                                     bibo:issue "10" ;
                                     identifiers:issn "0021-9738" ;
                                     dcterms:issued "2017-05-10" .
```

Example 9: otherVersion: final published version of article

XML:

```
<!-- info on final published version for article stored in the repository -->
<mods:relatedItem type="otherVersion" displayLabel="Final Published Version">
  <mods:identifier type="uri" displayLabel="URL">
    http://www.pnas.org/content/112/15/4719
  </mods:identifier>
  <mods:identifier type="doi" displayLabel="DOI">
    doi:10.1073/pnas.1502619112
  </mods:identifier>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> dcterms:hasVersion <http://www.pnas.org/content/112/15/4719>
;
                                dcterms:hasVersion
<http://dx.doi.org/10.1073/pnas.1502619112> .
```

Example 10: Parent report

XML:

```
<!-- info on parent report item that item being described appears in -->
<mods:relatedItem type="host">
  <mods:titleInfo>
    <mods:title>Larger Parent Report Title</mods:title>
  </mods:titleInfo>
  <mods:originInfo>
    <mods:publisher>Commissioning Bodies</mods:publisher>
  </mods:originInfo>
  <mods:part>
    <mods:detail type="report">
      <mods:number>Report Number</mods:number>
    </mods:detail>
  </mods:part>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> rdau:containedIn.en <https://example.org/relatedworks/1> .

<https://example.org/relatedworks/1> a schema:CreativeWork ;
                                     rdfs:label "Larger Parent Report Title" ;
                                     dce:publisher "Commissioning Bodies" ;
                                     identifiers:local "report: Report Number" .
```

Example 11: Book (item is book chapter)

XML:

```
<mods:relatedItem type="host">
  <mods:titleInfo>
    <mods:title>ACP Medicine Online</mods:title>
  </mods:titleInfo>
  <mods:originInfo>
    <mods:edition>First Edition</mods:edition>
  </mods:originInfo>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> rdau:containedIn.en <https://example.org/relatedworks/1> .

<https://example.org/relatedworks/1> a schema:CreativeWork ;
                                     rdfs:label "ACP Medicine Online" ;
                                     bf:editionStatement "First Edition" .
```

Example 12: Conference (item is conference proceeding, poster, presentation, etc.)

XML:

```
<mods:relatedItem type="host">
  <mods:name type="conference">
    <mods:namePart>2nd Annual Conference on MODS Mapping</mods:namePart>
  </mods:name>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> bibo:presentedAt <https://example.org/names/1> .

<https://example.org/names/1> a foaf:Organization ;
                              foaf:name "2nd Annual Conference on MODS Mapping" .
```

Example 13: Constituent parts

XML:

```
<mods:relatedItem type="constituent">
  <mods:titleInfo>
    <mods:title>Symphonies</title>
    <mods:partNumber>no. 3</partNumber>
  </mods:titleInfo>
  <mods:name type="personal">
    <mods:namePart>Harris, Roy,</namePart>
    <mods:namePart type="date">1898-1979</namePart>
  </mods:name>
</mods:relatedItem>
<mods:relatedItem type="constituent">
  <mods:titleInfo>
    <mods:title>Symphonies</title>
    <mods:partNumber>no. 2</partNumber>
  </mods:titleInfo>
  <mods:name type="personal">
    <mods:namePart>Thompson, Randall,</namePart>
    <mods:namePart type="date">1899-1984</namePart>
  </mods:name>
</mods:relatedItem>
<mods:relatedItem type="constituent">
  <mods:titleInfo>
    <mods:title>Symphonies</title>
    <mods:partNumber>no. 4</partNumber>
  </mods:titleInfo>
  <mods:name type="personal">
    <mods:namePart>Diamond, David,</namePart>
    <mods:namePart type="date">1915-2005</namePart>
  </mods:name>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> rdau:containerOf.en <https://example.org/relatedworks/1> ;
                                rdau:containerOf.en <https://example.org/relatedworks/2> ;
                                rdau:containerOf.en <https://example.org/relatedworks/3> .

<https://example.org/relatedworks/1> a schema:CreativeWork ;
                                     rdfs:label "Symphonies no. 3." ;
                                     dce:creator "Harris, Roy, 1898-1979" .

<https://example.org/relatedworks/2> a schema:CreativeWork ;
                                     rdfs:label "Symphonies no. 2." ;
                                     dce:creator "Harris, Roy, 1898-1979" .
```

```
<https://example.org/relatedworks/3> a schema:CreativeWork ;
                                     rdfs:label "Symphonies no. 4." ;
                                     dce:creator "Harris, Roy, 1898-1979" .
```

Example 14: Commercial series

XML:

```
<mods:relatedItem type="series">
  <mods:titleInfo usage="primary">
    <mods:title>CRR WP</mods:title>
    <mods:partNumber>2007-12</mods:partNumber>
  </mods:titleInfo>
</mods:relatedItem>
```

RDF:

```
<https://example.org/objects/1> bf:hasSeries <https://example.org/series/1> .

<https://example.org/series/1> a opaque:BibliographicSeries ;
                               rdfs:label "CRR WP: 2007-12" .
```

<mods:identifier>

This element does not have a minted object mapping. See the direct mapping option for <mods:identifier>.

<mods:location>

In some cases, it may be preferable to create an Organization object to capture data about the holding location (if there is no existing URI, for example). Examples using this pattern are shown below. These mappings were informed by a survey distributed to the wider community in August 2016. Survey results can be found here with the options listed here.

For examples of <mods:url> to indicate the location of a digital object, see the direct mapping option for this element.

Predicate	Value Type	Usage Notes
bf:physicalLocation	Literal	Use for <mods:subLocation> values.
opaque:locationShelfLocator	Literal	Use for <mods:shelfLocator> values. Append values from <mods:enumerationAndChronology> to the end of the literal.[15]
rdfs:label	Literal	Use for the title of the minted organization object.
relators:rps	URI or Literal	Use for <mods:physicalLocation> values, preferably using a URI for the organization from a controlled vocabulary such as VIAF of Library of Congress Real World Objects.
owl:sameAs	URI	Use to link the minted organization object to an existing URI from another dataset (rdfs:seeAlso could also potentially be used here).

Class	Usage Notes
foaf:Organization	The class for minted organization objects.

Example 1: Physical location with sublocation, copy information, and shelf locator

XML:

```
<mods:location>
  <mods:physicalLocation>Boston Public Library</mods:physicalLocation>
  <mods:holdingSimple>
    <mods:copyInformation>
      <mods:subLocation>Print Department</mods:subLocation>
      <mods:shelfLocator>4098B.104 FOLIO</mods:shelfLocator>
      <mods:enumerationAndChronology>v.1</mods:enumerationAndChronology>
    </mods:copyInformation>
```

[15] BIBFRAME predicates for these concepts were deemed unsuitable, since they require the creation of additional minted bf:ShelfMark and bf:EnumerationAndChronology objects.

```
  </mods:holdingSimple>
</mods:location>
```

RDF:

```
<https://example.org/objects/1> relators:rps <https://example.org/organizations/1> ;
                                bf:physicalLocation "Print Department" ;
                                opaque:locationShelfLocator "4098B.104 FOLIO v.1" .

<https://example.org/organizations/1> a foaf:Organization ;
                                       rdfs:label "Boston Public Library" ;
                                       owl:sameAs <http://id.loc.gov/rwo/agents/n79117036> .
```

Example 2: Physical location with divisions and shelf locator

XML:

```
<mods:location>
  <physicalLocation type="division">Carl H. Pforzheimer Collection of Shelley and His
Circle</physicalLocation>
  <physicalLocation type="division_short_name">Pforzheimer Collection</physicalLocation>
  <physicalLocation type="code">CPS</physicalLocation>
  <shelfLocator>Pforz MS (LH 0033)</shelfLocator>
</location>
```

RDF:

```
<https://example.org/objects/1> relators:rps <https://example.org/organizations/2> ;
                                bf:physicalLocation "Carl H. Pforzheimer Collection of
Shelley and His Circle" ;
                                opaque:locationShelfLocator "Pforz MS (LH 0033)" .

<https://example.org/organizations/2> a foaf:Organization ;
                                       rdfs:label "New York Public Library" ;
                                       owl:sameAs <http://id.loc.gov/rwo/agents/n79033065> .
```

<mods:accessCondition>

This element does not have a minted object mapping. See the direct mapping option for <mods:accessCondition>.

<mods:part>

This element was not mapped due to a combination of (1) lack of usage from institutions contributing to this document, and (2) significant local variation in usage for this element.

For a mapping of constituent parts of a resource, see the minted object mapping option for <mods:relatedItem>.

<mods:extension>

This element was not mapped due to a combination of (1) lack of usage from institutions contributing to this document, and (2) significant local variation in usage for this element.

When mapping data from <mods:extension>, we encourage the re-use of existing vocabularies whenever possible, and adherence to established best practices.

<mods:recordInfo>

The minted object mapping involves creating a new object to represent the metadata itself, and allows for creating objects to represent an institution, department, or other named entity that is responsible for the creation or publication of the metadata record. This may be needed in cases where there is no existing URI for the entity.

See the direct mapping option if literal values for all properties are to be used.

Predicate	Value Type	Usage Notes
bf:adminMetadata	URI	Use to relate the object being described to an object representing the information about the metadata, such as provenance and description standards.
bf:changeDate	Literal	The most recent change date of the metadata record.
bf:creationDate	Literal	The date of creation for the original metadata record (may be different than the date of item creation in the repository).
bf:descriptionConventions	Literal	The descriptions standard used for cataloging, preferably from a controlled vocabulary such as LoC Description Conventions.
bf:descriptionLanguage	URI	The language of cataloging, preferably from a controlled vocabulary, such as ISO 639-2.
edm:dataProvider	Literal or URI	The organization responsible for creating the metadata record. Only used where this value may need to be differentiated from the institution managing the repository.
edm:provider	Literal or URI	The organization responsible for making the metadata record and/or digital object available.
bf:derivedFrom	Literal	Information about the origin or provenance of the metadata record.
rdfs:seeAlso	URI	Use to link a minted institution object to a closely related existing authority or URI.

Class	Usage Notes
bf:AdminMetadata	The class for minted metadata objects.
foaf:Organization	The class for minted institution or corporate name objects.

Example 1: <recordInfo> with all elements

XML:

```
<mods:recordInfo>
  <mods:recordContentSource>Boston Public Library</mods:recordContentSource>
  <mods:recordOrigin>human prepared</mods:recordOrigin>
  <mods:languageOfCataloging>
    <mods:languageTerm type="text" authority="iso639-2b"
        authorityURI="http://id.loc.gov/vocabulary/iso639-2"
        valueURI="http://id.loc.gov/vocabulary/iso639-2/eng">
       English
     </mods:languageTerm>
   </mods:languageOfCataloging>
  <mods:descriptionStandard authority="marcdescription">dcrmg</mods:descriptionStandard>
  <mods:recordChangeDate encoding="w3cdtf">2009-02-11T15:07:17.629631</mods:recordChangeDate>
  <mods:recordCreationDate encoding="w3cdtf">
    2009-02-11T15:07:17.629539
  </mods:recordCreationDate>
</mods:recordInfo>
```

RDF:

```
<https://example.org/objects/1> bf:adminMetadata <https://example.org/admin_metadata/1> .

<https://example.org/admin_metadata/1> a bf:AdminMetadata ;
                                       edm:provider <https://example.org/names/1> ;
                                       bf:derivedFrom "human prepared" ;
                                       bf:descriptionLanguage
<http://id.loc.gov/vocabulary/iso639-2/eng> ;
                                       bf:descriptionConventions
<http://id.loc.gov/vocabulary/descriptionConventions/dcrmg> ;
                                       bf:creationDate
"2009-02-11T15:07:17.629539"^^xsd:dateTime ;
                                       bf:changeDate
"2009-02-11T15:07:17.629539"^^xsd:dateTime .

<https://example.org/names/1> a foaf:Organization ;
                              rdfs:label "Boston Public Library" ;
                              rdfs:seeAlso <http://id.loc.gov/vocabulary/organizations/mb> .
```

Example 2: Aggregated metadata record

XML:

```
<!-- Assuming Digital Commonwealth as aggregating site, BPL as contributing institution -->
<mods:recordInfo>
  <mods:recordContentSource>Boston Public Library</mods:recordContentSource>
  <mods:recordOrigin>OAI-PMH request</mods:recordOrigin>
</mods:recordInfo>
```

RDF:

```
<https://example.org/objects/1> bf:adminMetadata <https://example.org/admin_metadata/2> .

<https://example.org/admin_metadata/2> a bf:AdminMetadata ;
                                       edm:provider <https://example.org/names/2> ;
                                       edm:dataProvider <https://example.org/names/1> ;
                                       bf:derivedFrom "OAI-PMH request" .

<https://example.org/names/1> a foaf:Organization ;
                              rdfs:label "Boston Public Library" ;
                              rdfs:seeAlso <http://id.loc.gov/vocabulary/organizations/mb> .

<https://example.org/names/2> a foaf:Organization ;
                              rdfs:label "Digital Commonwealth" .
```

Example 3: Metadata record from other organization

XML:

```
<!-- Assuming Indiana University Libraries as digital repository -->
<mods:recordInfo>
  <mods:recordContentSource>InU-Li</mods:recordContentSource>
  <mods:recordOrigin>MODS record generated by transforming the photo cataloging
metadata</mods:recordOrigin>
</mods:recordInfo>
```

RDF:

```
<https://example.org/objects/1> bf:adminMetadata <https://example.org/admin_metadata/3> .

<https://example.org/admin_metadata/3> a bf:AdminMetadata ;
                                       edm:provider <https://example.org/names/3> ;
                                       edm:dataProvider <https://example.org/names/4> ;
                                       bf:derivedFrom "MODS record generated by transforming
the photo cataloging metadata" .

<https://example.org/names/3> a foaf:Organization ;
                              rdfs:label "Indiana University Libraries" ;
                              rdfs:seeAlso <http://id.loc.gov/vocabulary/organizations/inu> .

<https://example.org/names/4> a foaf:Organization ;
                              rdfs:label "InU-Li" .
```

Full Record Mapping Examples

XML Source Record

```
<?xml version='1.0' encoding='UTF-8'?>
<mods:mods xmlns:mods='http://www.loc.gov/mods/v3'
xsi:schemaLocation='http://www.loc.gov/mods/v3
http://www.loc.gov/standards/mods/v3/mods-3-5.xsd' version='3.5'
xmlns:xlink='http://www.w3.org/1999/xlink'
xmlns:xsi='http://www.w3.org/2001/XMLSchema-instance'>
  <mods:titleInfo usage="primary">
    <mods:nonSort>The</mods:nonSort>
    <mods:title>art of presumption</mods:title>
    <mods:subTitle>A guide for know-it-alls</mods:subTitle>
  </mods:titleInfo>
  <mods:titleInfo type="alternative" lang="fre">
    <mods:title>C'est la vie</mods:title>
  </mods:titleInfo>
  <mods:name type="personal" authority="naf"
             authorityURI="http://id.loc.gov/rwo/agents"
             valueURI="http://id.loc.gov/rwo/agents/n50007142">
    <mods:namePart>Bellows, George</mods:namePart>
    <mods:namePart type="date">1882-1925</mods:namePart>
    <mods:role>
      <mods:roleTerm type="text" authority="marcrelator"
                     authorityURI="http://id.loc.gov/vocabulary/relators"
                     valueURI="http://id.loc.gov/vocabulary/relators/art">
        Artist
      </mods:roleTerm>
    </mods:role>
    <mods:role>
      <mods:roleTerm type="text" authority="marcrelator"
                     authorityURI="http://id.loc.gov/vocabulary/relators"
                     valueURI="http://id.loc.gov/vocabulary/relators/ltg">
        Lithographer
      </mods:roleTerm>
    </mods:role>
  </mods:name>
  <mods:name type="corporate">
    <mods:namePart>Ministry of Fun</mods:namePart>
    <mods:role>
      <mods:roleTerm type="text" authority="marcrelator"
                     authorityURI="http://id.loc.gov/vocabulary/relators"
                     valueURI="http://id.loc.gov/vocabulary/relators/spn">
        Sponsor
      </mods:roleTerm>
    </mods:role>
  </mods:name>
  <mods:typeOfResource manuscript="yes">text</mods:typeOfResource>
  <mods:genre authority='gmgpc' authorityURI='http://id.loc.gov/vocabulary/graphicMaterials'
              valueURI='http://id.loc.gov/vocabulary/graphicMaterials/tgm001221'>
```

```
    Books
  </mods:genre>
  <mods:genre>Diatribes</mods:genre>
  <mods:originInfo eventType="publication">
    <mods:place>
      <mods:placeTerm type="text">Boston, Mass.</mods:placeTerm>
    </mods:place>
    <mods:publisher>published by Jane Q. Public</mods:publisher>
    <mods:edition>3rd edition</mods:edition>
    <mods:dateCreated encoding="w3cdtf" keyDate="yes"
                      qualifier="questionable">1930</mods:dateCreated>
  </mods:originInfo>
  <mods:language>
    <mods:languageTerm type="text" authority="iso639-2b"
                    authorityURI="http://id.loc.gov/vocabulary/iso639-2"
                    valueURI="http://id.loc.gov/vocabulary/iso639-2/eng">
      English
    </mods:languageTerm>
  </mods:language>
  <mods:physicalDescription>
    <mods:internetMediaType>application/pdf</mods:internetMediaType>
    <mods:extent>23 p. : ill. ; 25 cm.</mods:extent>
    <mods:digitalOrigin>reformatted digital</mods:digitalOrigin>
    <mods:note>Bad tear in upper right corner.</mods:note>
  </mods:physicalDescription>
  <mods:abstract>A book about overcoming the impossible.</mods:abstract>
  <mods:tableOfContents>Bluegrass odyssey -- Hills of Tennessee --
Sassafrass</mods:tableOfContents>
  <mods:targetAudience>Adolescent</mods:targetAudience>
  <mods:note type="date">Originally written in Vienna in 1903.</mods:note>
  <mods:subject authority="lctgm"
authorityURI="http://id.loc.gov/vocabulary/graphicMaterials"
                valueURI="http://id.loc.gov/vocabulary/graphicMaterials/tgm011662">
    <mods:topic>Whirligigs</mods:topic>
  </mods:subject>
  <mods:subject>
    <mods:topic>Boats</mods:topic>
    <mods:geographic>New England</mods:geographic>
    <mods:topic>History</mods:topic>
  </mods:subject>
  <mods:subject authority='tgn' authorityURI='http://vocab.getty.edu/tgn/'
valueURI='http://vocab.getty.edu/tgn/7013445'>
    <mods:hierarchicalGeographic>
      <mods:state>Massachusetts</mods:state>
      <mods:country>United States</mods:country>
      <mods:county>Suffolk</mods:county>
      <mods:continent>North and Central America</mods:continent>
      <mods:city>Boston</mods:city>
    </mods:hierarchicalGeographic>
    <mods:cartographics>
      <mods:coordinates>42.35,-71.05</mods:coordinates>
    </mods:cartographics>
  </mods:subject>
```

```
  <mods:classification authority="lcc">HE6183.B26</mods:classification>
  <mods:relatedItem type="host">
    <mods:titleInfo>
      <mods:title>Boston ephemera collection</mods:title>
    </mods:titleInfo>
  </mods:relatedItem>
  <mods:relatedItem type="series">
    <mods:titleInfo>
      <mods:title>Series 1: Rants and Ravings</mods:title>
    </mods:titleInfo>
  </mods:relatedItem>
  <mods:relatedItem type="constituent">
    <mods:titleInfo>
      <mods:title>Ravings of a lunatic</mods:title>
      <mods:subtitle>no. 3</mods:subtitle>
    </mods:titleInfo>
  </mods:relatedItem>
  <mods:identifier type="local-barcode">2999901717894</mods:identifier>
  <mods:identifier type="isbn">0877780116</mods:identifier>
  <mods:identifier type="local-call">Cab no. 135A</mods:identifier>
  <mods:location>
    <mods:physicalLocation>Boston Public Library</mods:physicalLocation>
    <mods:holdingSimple>
      <mods:copyInformation>
        <mods:subLocation>Print Department</mods:subLocation>
        <mods:shelfLocator>4098B.104 FOLIO</mods:shelfLocator>
      </mods:copyInformation>
    </mods:holdingSimple>
  </mods:location>
  <mods:accessCondition displayLabel="rights" type="use and reproduction">No known US
copyright restrictions.</mods:accessCondition>
  <mods:accessCondition displayLabel="license" type="use and reproduction">No known
restrictions on use.</mods:accessCondition>
  <mods:recordInfo>
    <mods:recordContentSource>Boston Public Library</mods:recordContentSource>
    <mods:recordOrigin>human prepared</mods:recordOrigin>
    <mods:languageOfCataloging>
      <mods:languageTerm type="text" authority="iso639-2b"
                         authorityURI="http://id.loc.gov/vocabulary/iso639-2"
                         valueURI="http://id.loc.gov/vocabulary/iso639-2/eng">
        English
      </mods:languageTerm>
    </mods:languageOfCataloging>
    <mods:descriptionStandard authority="marcdescription">dcrmg</mods:descriptionStandard>
    <mods:recordChangeDate encoding="w3cdtf">
      2009-02-11T15:07:17.629631
    </mods:recordChangeDate>
    <mods:recordCreationDate encoding="w3cdtf">
      2009-02-11T15:07:17.629539
    </mods:recordCreationDate>
  </mods:recordInfo>
</mods:mods>
```

RDF: Direct mapping (simple option)

```
BASE   <https://example.org/>
PREFIX dcterms: <http://purl.org/dc/terms/>
PREFIX relators: <http://id.loc.gov/vocabulary/relators>
PREFIX edm: <http://www.europeana.eu/schemas/edm/>
PREFIX bf: <http://id.loc.gov/ontologies/bibframe/>
PREFIX dce: <http://purl.org/dc/elements/1.1/>
PREFIX opaque: <http://opaquenamespace.org/>
PREFIX rdau: <http://rdaregistry.info/Elements/u/#>
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
PREFIX classSchemes: <http://id.loc.gov/vocabulary/classSchemes>
PREFIX dbo: <http://dbpedia.org/ontology/>
PREFIX pcdm: <http://pcdm.org/models#>
PREFIX identifiers: <http://id.loc.gov/vocabulary/identifiers>

<objects/1>
    dcterms:title "The art of presumption : A guide for know-it-alls" ;
    dcterms:alternative "C'est la vie"@fr ;
    relators:art <http://id.loc.gov/rwo/agents/n50007142> ;
    relators:ltg <http://id.loc.gov/rwo/agents/n50007142> ;
    relators:spn "Ministry of Fun" ;
    dcterms:type <http://id.loc.gov/vocabulary/resourceTypes/man> ;
    dcterms:type <http://id.loc.gov/vocabulary/resourceTypes/txt> ;
    edm:hasType <http://id.loc.gov/vocabulary/graphicMaterials/tgm001221> ;
    edm:hasType <http://id.loc.gov/vocabulary/marcgt/bio> ;
    edm:hasType "Diatribes" ;
    relators:pup <http://vocab.getty.edu/tgn/7013445> ;
    relators:pbl "published by Jane Q. Public" ;
    bf:editionStatement "3rd edition" ;
    dcterms:created "1930?" ;
    dcterms:language <http://id.loc.gov/vocabulary/iso639-2/eng> ;
    dce:format "application/pdf" ;
    opaque:digitalOrigin "reformatted digital" ;
    rdau:extent.en "23 p. : ill. ; 25 cm." ;
    skos:note "Bad tear in upper right corner." ;
    dcterms:abstract "A book about overcoming the impossible." ;
    dcterms:tableOfContents "Bluegrass odyssey -- Hills of Tennessee -- Sassafrass." ;
    dcterms:audience <http://id.loc.gov/vocabulary/targetAudiences/ado> ;
    skos:note "Date: Originally written in Vienna in 1903." ;
    dce:subject <http://id.loc.gov/vocabulary/graphicMaterials/tgm011662> ;
    dce:subject <http://id.loc.gov/authorities/subjects/sh99004834> ;
    dce:coverage <http://vocab.getty.edu/tgn/7014203> ;
    dce:subject <http://id.loc.gov/authorities/subjects/sh85061212> ;
    dce:coverage <http://vocab.getty.edu/tgn/7013445> ;
    classSchemes:lcc "HE6183.B26" ;
    dbo:collection "Boston ephemera collection" ;
    opaque:memberOfArchivalSeries "Series 1: Rants and Ravings" ;
    pcdm:memberOf <https://example.org/collections/1> ;
    rdau:containerOf.en "Ravings of a lunatic : no. 3" ;
    opaque:barcode "2999901717894" ;
```

```
    identifiers:isbn "0877780116" ;
    identifiers:local "Cab no. 135A" ;
    relators:rps <http://id.loc.gov/rwo/agents/n79117036> ;
    bf:physicalLocation "Print Department" ;
    opaque:locationShelfLocator "4098B.104 FOLIO" ;
    dce:rights "No known US copyright restrictions" ;
    edm:rights "No known restrictions on use." ;
    edm:provider "Boston Public Library" ;
    bf:derivedFrom "human prepared" ;
    bf:descriptionLanguage <http://id.loc.gov/vocabulary/iso639-2/eng> ;
    bf:descriptionConventions <http://id.loc.gov/vocabulary/descriptionConventions/dcrmg> ;
    bf:creationDate "2009-02-11T15:07:17.629539" ;
    bf:changeDate "2009-02-11T15:07:17.629539" .

## --------------
## MINTED OBJECTS
## --------------

<collections/1>
    a pcdm:Collection ;
    rdfs:label "Boston Ephemera Digital Collection" .
```

RDF: Minted object mapping (complex option)

```
BASE   <https://example.org/>
PREFIX dcterms: <http://purl.org/dc/terms/>
PREFIX relators: <http://id.loc.gov/vocabulary/relators>
PREFIX edm: <http://www.europeana.eu/schemas/edm/>
PREFIX bf: <http://id.loc.gov/ontologies/bibframe/>
PREFIX dce: <http://purl.org/dc/elements/1.1/>
PREFIX opaque: <http://opaquenamespace.org/>
PREFIX rdau: <http://rdaregistry.info/Elements/u/#>
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
PREFIX classSchemes: <http://id.loc.gov/vocabulary/classSchemes>
PREFIX dbo: <http://dbpedia.org/ontology/>
PREFIX pcdm: <http://pcdm.org/models#>
PREFIX identifiers: <http://id.loc.gov/vocabulary/identifiers>
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
PREFIX rdfs: <https://www.w3.org/TR/rdf-schema/>
PREFIX schema: <http://schema.org/>
PREFIX owl: <https://www.w3.org/2002/07/owl# >
PREFIX skosxl: <http://www.w3.org/2008/05/skos-xl>
PREFIX geojson: <https://purl.org/geojson/vocab#>
PREFIX dcmitype: <http://dublincore.org/documents/2000/07/11/dcmi-type-vocabulary/#>

<objects/1>
    dce:title <titles/1> ;
    dce:title <titles/2> ;
    skosxl:prefLabel <titles/1> ;
    relators:art <names/1> ;
    relators:ltg <names/1> ;
    relators:spn <names/2> ;
    dcterms:type <http://id.loc.gov/vocabulary/resourceTypes/man> ;
    dcterms:type <http://id.loc.gov/vocabulary/resourceTypes/txt> ;
    edm:hasType <http://id.loc.gov/vocabulary/graphicMaterials/tgm001221> ;
    edm:hasType <http://id.loc.gov/vocabulary/marcgt/bio> ;
    edm:hasType "Diatribes" ;
    bf:provisionActivity <events/1> ;
    dcterms:language <http://id.loc.gov/vocabulary/iso639-2/eng> ;
    dce:format "application/pdf" ;
    opaque:digitalOrigin "reformatted digital" ;
    rdau:extent.en "23 p. : ill. ; 25 cm." ;
    bf:note <notes/1> ;
    dcterms:abstract "A book about overcoming the impossible." ;
    dcterms:tableOfContents "Bluegrass odyssey -- Hills of Tennessee -- Sassafrass." ;
    dcterms:audience <http://id.loc.gov/vocabulary/targetAudiences/ado> ;
    bf:note <notes/2> ;
    dcterms:subject <subjects/1> ;
    dcterms:subject <subjects/2> ;
    dcterms:spatial <spatial/1> ;
    dcterms:spatial <spatial/2> ;
    classSchemes:lcc "HE6183.B26" ;
    dbo:isPartOf <physical_collections/1> ;
```

```
    opaque:memberOfArchivalSeries <series/1> ;
    pcdm:memberOf <collections/1> ;
    rdau:containerOf.en <relatedworks/1> ;
    opaque:barcode "2999901717894" ;
    identifiers:isbn "0877780116" ;
    identifiers:local "Cab no. 135A" ;
    relators:rps <names/3> ;
    bf:physicalLocation "Print Department" ;
    opaque:locationShelfLocator "4098B.104 FOLIO" ;
    dce:rights "No known US copyright restrictions" ;
    edm:rights "No known restrictions on use." ;
    bf:adminMetadata <admin_metadata/1> .

## --------------
## MINTED OBJECTS
## --------------

<titles/1>
    a bf:Title ;
    rdfs:label "The art of presumption : A guide for know-it-alls" .

<titles/2>
    a bf:Title ;
    rdfs:label "C'est la vie"@fr ;
    bf:variantType "alternative" .

<names/1>
    a foaf:Person ;
    foaf:name "Bellows, George, 1882-1925" ;
    schema:birthDate "1882" ;
    schema:deathDate "1925" ;
    owl:sameAs <http://id.loc.gov/rwo/agents/n50007142> .

<names/2>
    a foaf:Organization ;
    foaf:name "Ministry of Fun" .

<names/3>
    a foaf:Organization ;
    rdfs:label "Boston Public Library" ;
    owl:sameAs <http://id.loc.gov/rwo/agents/n79117036> ;
    rdfs:seeAlso <http://id.loc.gov/vocabulary/organizations/mb> .

<events/1>
    a bf:Publication ;
    relators:pup <http://vocab.getty.edu/tgn/7013445> ;
    relators:pbl "published by Jane Q. Public" ;
    bf:editionStatement "3rd edition" ;
    dcterms:created "1930?" .

<notes/1>
    a bf:Note ;
    bf:noteType "physical description" ;
```

```
    rdfs:label "Bad tear in upper right corner." .

<notes/2>
    a bf:Note ;
    bf:noteType "date" ;
    rdfs:label "Originally written in Vienna in 1903." .

<subjects/1>
    a skos:Concept ;
    rdfs:label "Whirligigs" ;
    skos:exactMatch <http://id.loc.gov/vocabulary/graphicMaterials/tgm011662> .

<subjects/2>
    a skos:concept ;
    skos:prefLabel "Boats--New England--History" ;
    rdfs:label "Boats" ;
    rdfs:label "History" ;
    skos:closeMatch <http://id.loc.gov/authorities/subjects/sh99004834> ;
    skos:closeMatch <http://id.loc.gov/authorities/subjects/sh85061212> .

<spatial/1>
    a edm:Place ;
    rdfs:label "New England" ;
    owl:sameAs <http://vocab.getty.edu/tgn/7014203> .

<spatial/2>
    a edm:Place ;
    rdfs:label "Boston" ;
    geojson:coordinates "[42.35, -71.05]" ;
    owl:sameAs <http://vocab.getty.edu/tgn/7013445> .

<physical_collections/1>
    a dcmitype:Collection ;
    rdfs:label "Boston ephemera collection" .

<series/1>
    a opaque:ArchivalSeries ;
    rdfs:label "Series 1: Rants and Ravings" ;
    bf:seriesOf <physical_collections/1> .

<collections/1>
    a pcdm:Collection ;
    rdfs:label "Boston Ephemera Digital Collection" .

<relatedworks/1>
    a schema:CreativeWork ;
    rdfs:label "Ravings of a lunatic : no. 3" .

<admin_metadata/1>
    a bf:AdminMetadata ;
    edm:provider <names/3> ;
    bf:derivedFrom "human prepared" ;
    bf:descriptionLanguage <http://id.loc.gov/vocabulary/iso639-2/eng> ;
```

```
    bf:descriptionConventions <http://id.loc.gov/vocabulary/descriptionConventions/dcrmg> ;
    bf:creationDate "2009-02-11T15:07:17.629539"^^xsd:dateTime ;
    bf:changeDate "2009-02-11T15:07:17.629539"^^xsd:dateTime .
```