

## Changes for preservation vocabularies at <http://id.loc.gov>

This documents changes being made to the controlled vocabularies at <http://id.loc.gov/vocabulary/preservationdescriptions/> that are used with the revised [PREMIS OWL ontology version 3](#).

*Note that as of September 24, 2018, the vocabularies have not yet been updated, and it is expected that they'll be available in October 2018.*

### Links to related documents

PREMIS OWL ontology:

<https://github.com/PREMIS-OWL-Revision-Team/revise-premis-owl/blob/master/premis3.owl>

Guidelines for Using the PREMIS Version 3 OWL Ontology:

<http://www.loc.gov/standards/premis/ontology/pdf/premis3-owl-guidelines-20180924.pdf>

PREMIS OWL Ontology List of Classes and Properties:

<http://www.loc.gov/standards/premis/ontology/pdf/premis3-owl-ont-classprop-20180924.pdf>

Full PREMIS Examples:

<https://github.com/PREMIS-OWL-Revision-Team/revise-premis-owl/tree/master/examples>

Mapping PREMIS 3 Data Dictionary to RDF:

<http://www.loc.gov/standards/premis/ontology/pdf/mapping-premissdd-to-rdf-20180924.pdf>

### actionsGranted

- Deprecate this vocabulary and harmonize with actions in **eventType**
- Declare these members being added to **eventType** as individuals of `premis:Action`.
- Add *display*
- In **eventType** link to deprecated URIs with `madsrdf:useFor`; in **actionsGranted** link from deprecated URIs to **eventType** with `madsrdf:useInstead`

### agentType

- Members of this vocabulary should be declared subclasses of `premis:Agent`.
- They should be redefined in the ontology as `premis:Person`, `premis:Organization`, `premis:SoftwareAgent`, `premis:HardwareAgent`; corresponding elements in <http://id.loc.gov/vocabulary/preservation/agentType> should be linked by `owl:sameAs` properties in the ontology.

## contentLocationType

Declare members as subclasses of `premis:StorageLocation`.

## copyrightStatus

Declare members as subclasses of `premis:RightsStatus`.

## cryptographicHashFunction

- Declare members as subclasses of `premis:Fixity`.
- Remove declaration as OWL annotation properties.

## environmentFunctionType

- Declare members as subclasses of `premis:IntellectualEntity`.
- Add class/subclass relationships for those that are asserted as broader/narrower (e.g. software/software application)
- Add vocabulary terms from Hardware type and Software type that are not already included
- Link to deprecated URIs with `madsrdf:useFor`

## environmentCharacteristic

- Declare members as individuals of `premis:EnvironmentCharacteristic`

## environmentPurpose

- Deprecate this vocabulary and harmonize with actions in **eventType**
- In **eventType** link to deprecated URIs with `madsrdf:useFor`; in **environmentPurpose** link from deprecated URIs to **eventType** with `madsrdf:useInstead`
- Declare members now in `eventType` as individuals of `premis:Action`.

## environmentRegistryRole

Declare members subproperties of `skos:closeMatch` (the object being described is related to the one in another registry/repository).

*Note: We assert that an Object that we describe is somehow related to the one described or stored in another registry or repository. If we need to specify the registry role (provides the Object specification, just describes the Object, gives the source code, etc.), it is likely that both resources will be related, but cannot be exactly the same. So, as we used `skos:closeMatch` to express the relationship between both Objects, members of this vocabulary should be subproperties of `skos:closeMatch`.*

## eventOutcome

Create a new vocabulary with values:

- Success
- Warning  
(To also include partial success, e.g. a Schematron validation message like “you should probably include this information if you can”)
- Fail

Make members subclasses of `premis:OutcomeStatus`

### **eventRelatedAgentRole**

Declare members subproperties of `prov:wasAssociatedWith`.

### **eventRelatedObjectRole**

Declare `evRelObjRole:out` (outcome) as a subproperty of `prov:generated` and `evRelObjRole:sou` (source) as a subproperty of `prov:used`, both with domain `premis:Event` and range `premis:Object`.

### **eventType**

- Declare members of the existing `eventType` vocabulary subclasses of `premis:Event`
- Harmonize members with `actionsGranted`, `environmentPurpose` and `inhibitorTarget`
- Add new members decided by the Ontology revision group and PREMIS-EC
- Link to deprecated URIs with `madsrdf:useInstead`

*Note: The PREMIS Editorial Committee has harmonized these four vocabularies.*

### **formatRegistryRole**

Declare members of these vocabularies subproperties of `skos:closeMatch`.

### **hardwareType**

Deprecate this vocabulary. See under **Environment function type**.

### **inhibitorTarget**

- Deprecate this vocabulary and harmonize with actions in **eventType**
- In **eventType** link to deprecated URIs with `madsrdf:useFor`; in **inhibitorTarget** link from deprecated URIs to **eventType** with `madsrdf:useInstead`
- Declare these members being added to **eventType** as individuals of `premis:Action`.

### **inhibitorType**

Declare members of this vocabulary subclasses of `premis:Inhibitor`.

### **linkingEnvironmentRole**

Declare members of this vocabulary subproperties of `premis:relationship`.

### **objectCategory**

- Declare members of this vocabulary subclasses of `premis:Object`
- Redefine the members in the ontology as `premis:File`, `premis:Bitstream`, etc.; corresponding elements should be linked by `owl:sameAs` properties

### **preservationLevelType**

Create a new vocabulary with the following values. Declare members as subclasses of `premis:PreservationPolicy`

- Bit level preservation (definition: Preservation of bits, i.e. the required preservation activities to ensure that the bitstreams remain intact and readable (as sequences of 0's and 1's).

- Logical preservation (definition: Preservation of the logical part, i.e. the part of digital preservation that ensures that the bits remain understandable and usable according to the preservation purposes.)

### preservationLevelRole

Declare members as subproperties of `premis:policy`.

### relationshipSubType

OWL/RDF changes:

- Declare members as object properties. Make them subproperties of `premis:relationship`.

Vocabulary issues:

- Add to the definition of `hasSource/isSourceOf` that the relationship could also apply to disk images.
- Revise the definition of `derivation` to include that it applies to disk images (derivation is not only a result of a transformation).
- Change the definition of `includes/isIncludedIn`. Currently `includes` is defined as: “A relationship in which the described object includes the referenced object, when objects have different object categories. For instance, an intellectual entity includes a representation. A representation includes files. Has a reciprocal relationship of `isIncludedIn`”. Since relationships between representations and IEs are `represents/isRepresentedBy` (added in v3), the sentence “an intellectual entity includes a representation” should be removed.
- `compressedTo/compressedFrom`; `encryptedTo/encryptedFrom`: add these as subtypes of `derivation`. They have also been added as event types.
- Expand the definition of `isRepresentedBy`. In the PREMIS OWL Guidelines, the property may be used to link from an Agent to an Environment Object stored in the repository as a PREMIS Object (Rep/File/BS). Currently defined as: “A relationship in which an abstract intellectual entity is represented as a file or representation”. Add: “... or a software agent is represented by an Environment Object”.

### rightsBasis

- Declare members as subclasses of `premis:RightsBasis`.
- Redefine the members in the ontology as `premis:Copyright`, `premis:Statute`, etc.; corresponding elements should be linked by `owl:sameAs` properties.
- Add *Institutional policy*.

*Note: The PREMIS Editorial Committee is considering expanding Rights basis to include security classification. Individuals who are interested in participating in such an effort should send comments to the PREMIS ontology review list, [premis-ontology-review-2018@googlegroups.com](mailto:premis-ontology-review-2018@googlegroups.com).*

### rightsRelatedAgentRole

- Declare members subproperties of `prov:wasInfluencedBy`.
- Add *assignee*, subproperty of `prov:influenced`.

### **signatureEncoding**

Declare members as individuals of `premis:SignatureEncoding`.

### **signatureMethod**

Declare members as subclasses of `premis:Signature`.

### **softwareType**

Deprecate this vocabulary. See under **Environment function type**.

### **storageMedium**

Declare members as subclasses of `premis:StorageMedium`.

*Note: The group considered expanding the vocabulary for physical media, although there are other vocabularies available. It was considered possible future work.*

**Other enhancements.** The PREMIS OWL Ontology Revision Working Group considered enriching the preservation vocabularies with controlled vocabulary from the Global Digital Format Registry Data Model, [http://hul.harvard.edu/gdfr/documents/GDFR-Data-Model-5\\_0\\_6.rtf](http://hul.harvard.edu/gdfr/documents/GDFR-Data-Model-5_0_6.rtf). Those most relevant are Hardware (**environmentFunctionType**), Media (**storageMedium**), Process (**eventType**), and Software (**environmentFunctionType**).

*Note: Individuals who are interested in participating in such an effort should send comments to the PREMIS ontology review list, [premis-ontology-review-2018@googlegroups.com](mailto:premis-ontology-review-2018@googlegroups.com).*