# Mapping DD semantic units – RDF constructs

The mapping indicates the RDF construct used to express the semantic unit according to the Turtle expression and with the following conventions:

- <Xxxx> stands for an instance of the class premis: Xxxx.
- <yyy:Xxxx> stands for an instance of the class yyy:Xxxx.
- "xxx" stands for any literal.

For abbreviations of preservation vocabularies namespaces hosted at <a href="http://id.loc.gov/vocabulary/preservation">http://id.loc.gov/vocabulary/preservation</a>, see the <a href="http://id.loc.gov/vocabulary/preservation">Guidelines document</a>, section "External vocabularies".

Links to related documents

**Object** 

**Event** 

<u>Agent</u>

**Rights** 

#### 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

Changes to id.loc.gov Preservation Vocabularies:

"http://www.loc.gov/standards/premis/ontology/pdf/changes-preservation-vocab-20180924.pdf

#### 1.Object

Semantic unit	RDF mapping	Comment
1.1 objectIdentifier	<object></object>	Generally, the Object identifier is the URI for the resource.
	<object> dct:identifier "id"</object>	This construct should be used if the identifier is not a URI.
	<object> premis:identifier <identifier></identifier></object>	This construct may be used if additional assertions on the identifier must be added, or if a controlled vocabulary that declares identifiers as classes must be used.
1.1.1 objectIdentifierType	?identifierType rdfs:subPropertyOf dct:identifier	Declare subproperties of dct:identifier
	<identifier> rdf:type ?identifierType.</identifier>	This construct may be used if additional assertions on the identifier must be added,

	?identifierType rdfs:subClassOf premis:Identifier.	or if a controlled vocabulary that declares identifiers as classes must be used.
1.1.2 objectIdentifierValue	<object> dct:identifier "id".</object>	
	<identifier> rdf:value "id".</identifier>	This construct may be used if additional assertions on the identifier must be added, or if a controlled vocabulary that declares identifiers as classes must be used.
1.2 objectCategory	<pre><object> rdf:type ?object . ?object rdfs:subClassOf premis:Object</object></pre>	Use subclasses of premis:Object
1.3 preservationLevel	<object> premis:policy <preservationpolicy>.</preservationpolicy></object>	
1.3.1 preservationLevelType	<pre><pre><pre><rd color="1"></rd></pre></pre><pre> <pre>color="1"&gt;</pre></pre><pre></pre><pre></pre><pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1"&gt;</pre><pre>color="1</pre></pre></pre>	Declare subclasses of premis:PreservationPolicy or use those defined at http://id.loc.gov/vocabulary/preservation/preservationLevelType (not yet established)
1.3.2 preservationLevelValue	<preservationpolicy> premis:note "note".</preservationpolicy>	
1.3.3 preservationLevelRole	<pre><object> presLevRole:req <preservationpolicy> .</preservationpolicy></object></pre>	Declare subproperties of premis:policy or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/p">http://id.loc.gov/vocabulary/preservation/p</a> reservationLevelRole
1.3.4 preservationLevelRationale	<pre><preservationpolicy> premis:rationale "rationale".</preservationpolicy></pre>	

	1.3.5	preservationLevelDateAssigned	<pre><object> prov:wasUsedBy <event>.   <event> rdf:type evType:poa.   <event>dct:date "date".</event></event></event></object></pre>	The date should be attached to a policy assignment Event.
1.4	signif	icantProperties	<object> premis:policy <significantproperties>.</significantproperties></object>	
	1.4.1	significantPropertiesType	/	
	1.4.2	significantPropertiesValue	<pre><object> ?significantProperty "true". <significantproperties> rdf:value ?significantProperty.</significantproperties></object></pre>	
	1.4.3	significantPropertiesExtension	/	
1.5	objec	tCharacteristics	/	
	1.5.1	compositionLevel	<object> premis:compositionLevel "n".</object>	
	1.5.2	fixity	<object> premis:fixity <fixity>.</fixity></object>	
		1.5.2.1 messageDigestAlgorithm	<pre><fixity> rdf:type ?fixityType.     ?fixityType rdfs:subClassOf     premis:Fixity</fixity></pre>	Declare subclasses of premis:Fixity or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/cryptographicHashFunctions">http://id.loc.gov/vocabulary/preservation/cryptographicHashFunctions</a>
		1.5.2.2 messageDigest	<fixity> rdf:value "checksum".</fixity>	
		1.5.2.3 messageDigestOriginator	<fixity> dct:creator <dc:creator>.</dc:creator></fixity>	Or use dce:creator to specify the message digest originator as a literal and attach to the Object ( <fixity> dce:creator "creator".).</fixity>

1.5.3 size	<object> premis:size "size".</object>	
1.5.4 format	<object> dct:format <dct:fileformat>.</dct:fileformat></object>	Expressing the format by its MIME type may also be achieved by using the ebucore:hasMimeType property.
1.5.4.1 formatDesignation	/	
1.5.4.1.1 formatName	<dct:fileformat> rdfs:label "formatName".</dct:fileformat>	
1.5.4.1.2 formatVersion	<dct:fileformat> premis:version "formatVersion".</dct:fileformat>	The format designation being expressed by both <i>formatName</i> and <i>formatVersion</i> , version may also be mentioned in the value of the rdfs:label.
1.5.4.2 formatRegistry	<dct:fileformat> skos:exactMatch <pronom:format>.</pronom:format></dct:fileformat>	skos:exactMatch should be used if the format is strictly the same as the one described in the registry.
	<dct:fileformat> skos:closeMatch <pre> <pre> <pre> <pre></pre></pre></pre></pre></dct:fileformat>	skos:closeMatch should be used if the format is not strictly the same as the one described in the registry (in particular, if the format described in the registry is more general).
1.5.4.2.1 formatRegistryName	<pre><dct:fileformat> ?myRegistry <my:format>.  ?myRegistry rdfs:subPropertyOf skos:exactMatch.</my:format></dct:fileformat></pre>	Declare subproperties of skos:exactMatch.
	<dct:fileformat> ?myRegistry <my:format>.</my:format></dct:fileformat>	Declare subproperties of skos:closeMatch

	?myRegistry rdfs:subPropertyOf skos:closeMatch.	
1.5.4.2.2 formatRegistryKey		URI of the object of skos:closeMatch / skos:exactMatch (or subproperties of these).
1.5.4.2.3 formatRegistryRole	<dct:fileformat> my:registry01 <my:format>. my:registry01 rdfs:subPropertyOf forRegRole:spe.</my:format></dct:fileformat>	Declare subproperties of skos:closeMatch or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/formatRegistryRole">http://id.loc.gov/vocabulary/preservation/formatRegistryRole</a>
1.5.4.3 formatNote	<dct:fileformat> premis:note "note".</dct:fileformat>	
1.5.5 creatingApplication	<object> dct:creator <pre><pre><pre><pre>SoftwareAgent&gt;.</pre></pre></pre></pre></object>	Or use a creation Event, or an IntellectualEntity with environmentPurpose = "create"
1.5.5.1 creatingApplicationName	<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	Or use dce:creator to specify the application name as a literal and attach to the Object ( <object> dce:creator "SoftwareAgent".).</object>
1.5.5.2 creatingApplicationVersion	<pre><pre><pre><pre><pre><pre><pre>"n".</pre></pre></pre></pre></pre></pre></pre>	
1.5.5.3 dateCreatedByApplication	<object> prov:generatedAtTime "dateTime".</object>	
1.5.5.4 creatingApplicationExtensio	/	
1.5.6 inhibitors	<object> premis:inhibitedBy <inhibitor>.</inhibitor></object>	

1.5.6.1 inhibitorType	<inhibitor> rdf:type ?inhibitorType.</inhibitor>	Declare subclasses of premis:Inhibitor or use those defined at
	?inhibitorType rdfs:subClassOf premis:Inhibitor	http://id.loc.gov/vocabulary/preservation/inhibitorType.
1.5.6.2 inhibitorTarget	<inhibitor> premis:inhibits <action>.</action></inhibitor>	Declare individuals of premis:Action or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/eventType">http://id.loc.gov/vocabulary/preservation/eventType</a> .
1.5.6.3 inhibitorKey	<inhibitor> premis:key "key".</inhibitor>	
1.5.7 objectCharacteristicsExtension	/	
1.6 originalName	<object> premis:originalName "originalName".</object>	
1.7 storage	<object> premis:storedAt <storagelocation>.</storagelocation></object>	
1.7.1 contentLocation	/	
1.7.1.1 contentLocationType	<pre><storagelocation> rdf:type ?storageLocationType. ?storageLocationType rdfs:subClassOf premis:StorageLocation.</storagelocation></pre>	Declare subclasses of premis:StorageLocation or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/contentLocationType">http://id.loc.gov/vocabulary/preservation/contentLocationType</a> .
1.7.1.2 contentLocationValue	<storagelocation> rdf:value "location".</storagelocation>	
1.7.2 storageMedium	<storagelocation> premis:medium <storagemedium>.</storagemedium></storagelocation>	Declare subclasses of premis:StorageMedium or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/st">http://id.loc.gov/vocabulary/preservation/st</a>

		orageMedium.
1.8 signatureInformation	/	
1.8.1 signature	<object> premis:signature <signature>.</signature></object>	
1.8.1.1 signatureEncoding	<pre><signature> premis:encoding ?signatureEncodingTy pe. ?signatureEncodingType rdf:type premis:SignatureEncoding.</signature></pre>	Declare individuals of premis:SignatureEncoding or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/signatureEncoding">http://id.loc.gov/vocabulary/preservation/signatureEncoding</a> .
1.8.1.2 signer	<signature> dct:creator <dc:creator>.</dc:creator></signature>	Or use dce:creator to specify the signer name as a literal ( <signature> dce:creator "creator").  For information about the authority</signature>
		responsible for generating the signature, recommended practice is to use a 'digital signature generation' Event.
1.8.1.3 signatureMethod	<pre><signature> rdf:type ?signatureMethodType. ?signatureMethodType rdfs:subClassOf premis:Signature.</signature></pre>	Declare subclasses of premis:Signature or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/signatureMethod">http://id.loc.gov/vocabulary/preservation/signatureMethod</a> .
1.8.1.4 signatureValue	<signature> rdf:value "value".</signature>	
1.8.1.5 signatureValidationRules	<signature> premis:validationRules "validation rules".</signature>	Use premis:documentation to point to a resource documenting validation rules.
1.8.1.6 signatureProperties	<signature> premis:note "note"</signature>	For date and time of the signature generation or information about software,

		recommended practice is to use a 'digital signature generation' Event.
1.8.1.7 keyInformation	<signature> premis:key <key></key></signature>	
1.8.2 signatureInformationExtension	/	
1.9 environmentFunction	<intellectualentity> rdf:type ?environmentFunctionType. ?environmentFunctionType rdfs:subClassOf premis:IntellectualEntity.</intellectualentity>	Declare subclasses of premis:IntellectualEntity or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/e">http://id.loc.gov/vocabulary/preservation/e</a> <a href="mailto:nvironmentFunctionType">nvironmentFunctionType</a> .
1.9.1 environmentFunctionType	/	
1.9.2 environmentFunctionLevel		environmentFunctionLevel is indicated in the vocabulary with class/subclass relationships (currently, broader/narrower relationships)
1.10 environmentDesignation	/	
1.10.1 environmentName	<intellectualentity> rdfs:label "envtName".</intellectualentity>	
1.10.2 environmentVersion	<intellectualentity> premis:version "n".</intellectualentity>	
1.10.3 environmentOrigin	<intellectualentity> dct:creator <foaf:person>.</foaf:person></intellectualentity>	
	<pre><intellectualentity> dct:creator <foaf:organization>.</foaf:organization></intellectualentity></pre>	
1.10.4 environmentDesignationNote	<intellectualentity> premis:note "note".</intellectualentity>	

1.10.5 environmentDesignationExtension	/	
1.11 environmentRegistry	<intellectualentity> skos:exactMatch <intellectualentity>.</intellectualentity></intellectualentity>	skos:exactMatch should be used if the Environment is strictly the same as the one described in the registry.
	<intellectualentity> skos:closeMatch <intellectualentity>.</intellectualentity></intellectualentity>	skos:closeMatch should be used if the Environmentis not strictly the same as the one described in the registry (in particular, if the Environment described in the registry is more general).
1.11.1 environmentRegistryName	<intellectualentity>?myRegistry <intellectualentity>.</intellectualentity></intellectualentity>	Declare subproperties of skos:closeMatch.
	?myRegistry rdfs:subPropertyOf skos:closeMatch.	
1.11.2 environmentRegistryKey	/	URI of the object of the skos:closeMatch property or subproperty of skos:closeMatch.
1.11.3 environmentRegistryRole	<pre><intellectualentity> ?registryRole <my:environment>.     ?registryRole rdfs:subPropertyOf     skos:closeMatch.</my:environment></intellectualentity></pre>	Declare subproperties of skos:closeMatch or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/e">http://id.loc.gov/vocabulary/preservation/e</a>

	?relationshipType rdfs:subPropertyOf premis:relationship.	premis:relationship or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/relationshipSubType">http://id.loc.gov/vocabulary/preservation/relationshipSubType</a> .
	<object> premis:dependency <dependency>.</dependency></object>	If environmentPurpose and/or environmentCharacteristic need to be
	<dependency> ?relationshipType <object>.</object></dependency>	specified.
	?relationshipType rdfs:subPropertyOf premis:relationship.	
1.13.3 relatedObjectIdentifier	/	
1.13.3.1 relatedObjectIdentifierType	/	
1.13.3.2 relatedObjectIdentifierValue	/	URI of the object of the relationship property.
1.13.3.3 relatedObjectSequence	<object> edm:isNextInSequence <object>.</object></object>	For aggregation-specific sequencing, the use of ore:Proxy is recommended.
1.13.4 relatedEventIdentifier	<object> prov:wasUsedBy <event>.</event></object>	Use prov:wasUsedBy if the Object pre- existed the Event.
	<object> prov:wasGeneratedBy <event>.</event></object>	Use prov:wasGeneratedBy if he Object was created by the Event.
1.13.4.1 relatedEventIdentifierType	/	
1.13.4.2 relatedEventIdentifierValue	/	
1.13.4.3 relatedEventSequence	/	The Events sequence is expressed by their date and time properties.

1.13.5 relatedEnvironmentPurpose	<dependency> premis:purpose <action>.</action></dependency>	Declare individuals of premis:Action or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/eventType">http://id.loc.gov/vocabulary/preservation/eventType</a> .
1.13.6 relatedEnvironmentCharacteristic	<dependency> premis:characteristic <environmentcharacteristic>.</environmentcharacteristic></dependency>	Declare individuals of premis:EnvironmentCharacteristic or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/environmentCharacteristic">http://id.loc.gov/vocabulary/preservation/environmentCharacteristic</a> .
1.14 linkingEventIdentifier	<object> prov:wasUsedBy <event>.</event></object>	Use prov:wasUsedBy if the Object pre- existed the Event.
	<object> prov:wasGeneratedBy <event>.</event></object>	Use prov:wasGeneratedBy if he Object was created by the Event.
1.14.1 linkingEventIdentifierType	/	
1.14.2 linkingEventIdentifierValue	/	
1.15 linkingRightsStatementIdentifier	<object> dct:rights <rightsbasis>.</rightsbasis></object>	
1.15.1 linkingRightsStatementIdentifierTyp e	/	
1.15.2 linkingRightsStatementIdentifierValu	/	

### 2.Event

Semantic unit	RDF mapping	Comment
2.1 eventIdentifier	<event></event>	Generally, the Event identifier is the URI for the resource.
	<event> dct:identifier "id"</event>	This construct should be used if the identifier is not a URI.
	<event> premis:identifier <identifier></identifier></event>	This construct may be used if additional assertions on the identifier must be added, or if a controlled vocabulary that declares identifiers as classes must be used.
2.1.1 eventIdentifierType	?identifierType rdfs:subPropertyOf dct:identifier	Declare subproperties of dct:identifier
	<pre><identifier> rdf:type ?identifierType. ?identifierType rdfs:subClassOf premis:Identifier.</identifier></pre>	This construct may be used if additional assertions on the identifier must be added, or if a controlled vocabulary that declares identifiers as classes must be used.
2.1.2 eventIdentifierValue	<event> dct:identifier "id".</event>	
2.2 eventType	<pre><event> rdf:type ?eventType. ?eventType rdfs:subClassOf premis:Event.</event></pre>	Declare subclasses of premis:Event or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/e">http://id.loc.gov/vocabulary/preservation/e</a> <a href="http://id.loc.gov/vocabulary/preservation/e">ventType</a> .
2.3 eventDateTime	<event> prov:startedAtTime "dateTime". <event> prov:endedAtTime</event></event>	In the case of legacy data and if the value of <i>eventDateTime</i> cannot be determined as the Event start date or end date,

		"dateTime".	implementers may use dct:date.
2.4	eventDetailInformation	/	
	2.4.1 eventDetail	<event> premis:note "eventDetail".</event>	
	2.4.2 eventDetailExtension	/	
2.5	eventOutcomeInformation	/	
	2.5.1 eventOutcome	<event> premis:outcome ?outcomeStatus.  ?outcomeStatus rdf:type premis:OutcomeStatus.</event>	Declare subclasses of premis:OutcomeStatus or use those defined at http://id.loc.gov/vocabulary/preservation/e ventOutcome/ (not yet established).
	2.5.2 eventOutcomeDetail	/	
	2.5.2.1 eventOutcomeDetailNote	<event> premis:outcomeNote "outcomeDetail".</event>	
on	2.5.2.2 eventOutcomeDetailExtensi	/	
2.6	linkingAgentIdentifier	<event> prov:wasAssociatedWith <agent>.</agent></event>	
	2.6.1 linkingAgentIdentifierType	/	
	2.6.2 linkingAgentIdentifierValue	/	
	2.6.3 linkingAgentRole	<event> ?agentRole <agent>.     ?agentRole rdfs:subPropertyOf     prov:wasAssociatedWith.</agent></event>	Declare subproperties of prov:wasAssociatedWith or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/e">http://id.loc.gov/vocabulary/preservation/e</a>

		ventRelatedAgentRole.
2.7 linkingObjectIdentifier	<event> prov:used <object>.</object></event>	Use prov:used if the Object pre-existed the Event.
	<event> prov:generated <object>.</object></event>	Use prov:generated if the Event generated the Object.
2.7.1 linkingObjectIdentifierType	/	
2.7.2 linkingObjectIdentifierValue	/	
2.7.3 linkingObjectRole	<pre><event> ?objectRole <object>.   ?objectRole rdfs:subPropertyOf   prov:used.</object></event></pre>	Declare subproperties of prov:used / prov:generated or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/e">http://id.loc.gov/vocabulary/preservation/e</a> ventRelatedObjectRole.
	<pre><event> ?objectRole <object>.   ?objectRole rdfs:subPropertyOf   prov:generated.</object></event></pre>	

## 3.Agent

	Semantic unit	RDF mapping	Comment
3.	1 agentIdentifier	<agent></agent>	Generally, the Agent identifier is the URI for the resource.
		<agent> dct:identifier "id"</agent>	This construct should be used if the identifier is not a URI.

	<agent> premis:identifier <identifier></identifier></agent>	This construct may be used if additional assertions on the identifier must be added, or if a controlled vocabulary that declares identifiers as classes must be used.
3.1.1 agentIdentifierType	?identifierType rdfs:subPropertyOf dct:identifier	Declare subproperties of dct:identifier
	<identifier> rdf:type ?identifierType. ?identifierType rdfs:subClassOf premis:Identifier.</identifier>	This construct may be used if additional assertions on the identifier must be added, or if a controlled vocabulary that declares identifiers as classes must be used.
3.1.2 agentIdentifierValue	<agent> dct:identifier "id".</agent>	
3.2 agentName	<person> foaf:name "name".</person>	For person or organization Agent.
	<softwareagent> rdfs:label "name"</softwareagent>	For software or hardware Agent.
3.3 agentType	<pre><agent> rdf:type ?agentType. ?agentType rdfs:subClassOf premis:Agent.</agent></pre>	Use subclasses of premis:Agent
3.4 agentVersion	<agent> premis:version "n".</agent>	
3.5 agentNote	<agent> premis:note "note".</agent>	
3.6 agentExtension	/	
3.7 linkingEventIdentifier	<agent> prov:wasAssociateFor <event>.</event></agent>	
3.7.1 linkingEventIdentifierType	/	

	3.7.2 linkingEventIdentifierValue	/	
3.8 linkingRightsStatementIdentifier	linkingRightsStatementIdentifier	<agent> prov:influenced <rightsbasis>.</rightsbasis></agent>	If the Agent contributed to elaborate the rights basis, use prov:influenced pointing to an instance of premis:RightsBasis.
		<agent> prov:wasInfluencedBy <rule>.</rule></agent>	If the Agent is the one to whom the permission or prohibition defined in the Rights Entity applies, use prov:wasInfluencedBy pointing to an instance of premis:Rule.
e	3.8.1 linkingRightsStatementIdentifierTyp	/	
e	3.8.2 linkingRightsStatementIdentifierValu	/	
3.9 linkingEnvironmentIdentifier	linkingEnvironmentIdentifier	<agent> skos:closeMatch <object>.</object></agent>	Use skos:closeMatch if the Object is an Intellectual Entity.
		<agent> relSubType:isr <object>.</object></agent>	Use relSubType:isr if the Object is a Representation, File or Bitstream
	3.9.1 linkingEnvironmentIdentifierType	/	
	3.9.2 linkingEnvironmentIdentifierValue	/	
	3.9.3 linkingEnvironmentRole	<agent> ?objectRole <object>.  ?objectRole rdfs:subPropertyOf premis:relationship.</object></agent>	Declare subproperties of premis:relationship or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/linkingEnvironmentRole">http://id.loc.gov/vocabulary/preservation/linkingEnvironmentRole</a> .

# 4. Rights

	Semantic unit	RDF mapping	Comment
4.1	rightsStatement	/	/
	4.1.1 rightsStatementIdentifier	<rightsbasis></rightsbasis>	Generally, the RightsBasis identifier is the URI for the resource.
		<rightsbasis> dct:identifier "id"</rightsbasis>	This construct should be used if the identifier is not a URI.
		<rightsbasis> premis:identifier <identifier></identifier></rightsbasis>	This construct may be used if additional assertions on the identifier must be added, or if a controlled vocabulary that declares identifiers as classes must be used.
e	4.1.1.1 rightsStatementIdentifierTyp	?identifierType rdfs:subPropertyOf dct:identifier	Declare subproperties of dct:identifier
		<identifier> rdf:type ?identifierType. ?identifierType rdfs:subClassOf premis:Identifier.</identifier>	This construct may be used if additional assertions on the identifier must be added, or if a controlled vocabulary that declares identifiers as classes must be used.
ue	4.1.1.2 rightsStatementIdentifierVal	<rightsbasis> dct:identifier "id".</rightsbasis>	
	4.1.2 rightsBasis	/	
	4.1.3 copyrightInformation	<rightsbasis> rdf:type ?rightsBasisType. ?rightsBasisType rdfs:subClassOf</rightsbasis>	Use subclasses of premis:RightsBasis.

	premis:RightsBasis.	
4.1.3.1 copyrightStatus	<object> premis:rightsStatus <rightsstatus>.</rightsstatus></object>	Declare subclasses of premis:RightsStatus or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/copyrightStatus">http://id.loc.gov/vocabulary/preservation/copyrightStatus</a> .
4.1.3.2 copyrightJurisdiction	<copyright> premis:jurisdiction <rdf:resource>.</rdf:resource></copyright>	
4.1.3.3 copyrightStatusDeterminati onDate	<rightsstatus> premis:determinationDate "date".</rightsstatus>	
4.1.3.4 copyrightNote	<copyright> premis:note "note".</copyright>	Attach the property to the instance of premis:Copyright if the note is a general note about the legislation.
	<rightsstatus> premis:note "note".</rightsstatus>	Attach the property to the instance of premis:RightsStatus if the note is a specific note about the Object governed by copyright.
4.1.3.5 copyrightDocumentationIde ntifier	<pre><copyright> premis:documentation <documentation>.</documentation></copyright></pre>	
4.1.3.5.1 copyrightDocume ntationIdentifierType	/	
4.1.3.5.2 copyrightDocume ntationIdentifierValue	/	
4.1.3.5.3 copyrightDocume ntationRole	<pre><copyright> ?documentationRole <documentation>.  ?documentationRole</documentation></copyright></pre>	Declare subproperties of premis:documentation.

	rdfs:subPropertyOf premis:documentation.	
4.1.3.6 copyrightApplicableDates	/	
4.1.3.6.1 startDate	<rightsstatus> premis:startDate "date".</rightsstatus>	
4.1.3.6.2 endDate	<rightsstatus> premis:endDate "date".</rightsstatus>	
4.1.4 licenseInformation	<rightsbasis> rdf:type premis:License.</rightsbasis>	
4.1.4.1 licenseDocumentationIdentifi	<license> premis:documentation <documentation>.</documentation></license>	
4.1.4.1.1 licenseDocumentat ionIdentifierType	/	
4.1.4.1.2 licenseDocumentat ionIdentifierValue	/	
4.1.4.1.3 licenseDocumentat ionRole	<license> ?documentationRole <documentation>.</documentation></license>	Declare subproperties of premis:documentation.
	?documentationRole rdfs:subPropertyOf premis:documentation.	
4.1.4.2 licenseTerms	<license> premis:terms "terms".</license>	
4.1.4.3 licenseNote	<license> premis:note "note".</license>	Attach the property to the instance of premis:License if the note is a general note about the license.
	<rightsstatus> premis:note "note".</rightsstatus>	Attach the property to the instance of premis:RightsStatus if the note is a specific note about the Object governed by the

		license.
4.1.4.4 licenseApplicableDates	/	
4.1.4.4.1 startDate	<rightsstatus> premis:startDate "date".</rightsstatus>	
4.1.4.4.2 endDate	<rightsstatus> premis:endDate "date".</rightsstatus>	
4.1.5 statuteInformation	<rightsbasis> rdf:type premis:Statute.</rightsbasis>	
4.1.5.1 statuteJurisdiction	<statute> premis:jurisdiction <rdf:resource>.</rdf:resource></statute>	
4.1.5.2 statuteCitation	<statute> premis:citation "citation".</statute>	
4.1.5.3 statuteInformationDeterminat ionDate	<rightsstatus> premis:determinationDate "dateTime".</rightsstatus>	
4.1.5.4 statuteNote	<statute> premis:note "note".</statute>	Attach the property to the instance of premis:Statute if the note is a general note about the legislation.
	<rightsstatus> premis:note "note".</rightsstatus>	Attach the property to the instance of premis:RightsStatus if the note is a specific note about the Object governed by statute.
4.1.5.5 statuteDocumentationIdentifi er	<statute> premis:documentation <documentation>.</documentation></statute>	
4.1.5.5.1 statuteDocumentati onIdentifierType		
4.1.5.5.2 statuteDocumentati onIdentifierValue		

4.1.5.5.3 statuteDocumentati onRole	<statute> ?documentationRole <documentation>. ?documentationRole rdfs:subPropertyOf premis:documentation.</documentation></statute>	Declare subproperties of premis:documentation.
4.1.5.6 statuteApplicableDates	/	
4.1.5.6.1 startDate	<rightsstatus> premis:startDate "date".</rightsstatus>	
4.1.5.6.2 endDate	<rightsstatus> premis:endDate "date".</rightsstatus>	
4.1.6 otherRightsInformation	<rightsbasis> rdf:type premis:InstitutionalPolicy.</rightsbasis>	Use premis:InstitutionalPolicy if relevant, otherwise declare a subclass of premis:RightsBasis.
4.1.6.1 otherRightsDocumentationId entifier	<institutionalpolicy> premis:documentation <documentation>.</documentation></institutionalpolicy>	
4.1.6.1.1 otherRightsDocum entationIdentifierType	/	
4.1.6.1.2 otherRightsDocum entationIdentifierValue	/	
4.1.6.1.3 otherRightsDocum entationRole	<institutionalpolicy> ?documentationR ole <documentation>.  ?documentationRole rdfs:subPropertyOf premis:documentation.</documentation></institutionalpolicy>	Declare subproperties of premis:documentation.
4.1.6.2 otherRightsBasis	/	

4.1.6.3 otherRightsApplicableDates	/	
4.1.6.3.1 startDate	<rightsstatus> premis:startDate "date".</rightsstatus>	
4.1.6.3.2 endDate	<rightsstatus> premis:endDate "date".</rightsstatus>	
4.1.6.4 otherRightsNote	<institutionalpolicy> premis:note "note".</institutionalpolicy>	Attach the property to the instance of premis:InstitutionalPolicy (or other locally-defined subclass of premis:RightsBasis) if the note is a general note about the policy.
	<rightsstatus> premis:note "note".</rightsstatus>	Attach the property to the instance of premis:RightsStatus if the note is a specific note about the Object governed by policy.
4.1.7 rightsGranted	<rightsbasis> premis:allows <rule>.</rule></rightsbasis>	
	<rightsbasis> premis:prohibits <rule>.</rule></rightsbasis>	Use premis:prohibits if the action is prohibited.
4.1.7.1 act	<rule> premis:act <action>.</action></rule>	Declare individuals of premis:Action or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/eventType">http://id.loc.gov/vocabulary/preservation/eventType</a> .
4.1.7.2 restriction	<action> odrl:constraint <odrl:constraint>.</odrl:constraint></action>	Recommended practice is to use odrl:Constraint to express restrictions.
	<action> premis:restriction "restriction".</action>	If the restriction is free-text or can't be expressed with odrl:Constraint, use the datatype property premis:restriction.
4.1.7.3 termOfGrant	/	Term of grant should be expressed by

4.1.7.3.1 startDate	<action> premis:startDate "date".</action>	premis:startDate and premis:endDate applied to an allowed premis:Rule
4.1.7.3.2 endDate	<action> premis:endDate "date".</action>	opposition and many respectively.
4.1.7.4 termOfRestriction	/	Term of restriction should be expressed by
4.1.7.4.1 startDate	<action> premis:startDate "date"</action>	premis:startDate and premis:endDate applied to a prohibited premis:Rule.
4.1.7.4.2 endDate	<action> premis:endDate "date".</action>	
4.1.7.5 rightsGrantedNote	<rule> premis:note "note".</rule>	
4.1.8 linkingObjectIdentifier	<rightsbasis> premis:governs <object>.</object></rightsbasis>	
4.1.8.1 linkingObjectIdentifierType	/	
4.1.8.2 linkingObjectIdentifierValue	/	
4.1.8.3 linkingObjectRole	<rightsbasis> ?my:objectRole <object>.</object></rightsbasis>	Declare subproperties of premis:governs.
	?objectRole rdfs:subPropertyOf premis;governs.	
4.1.9 linkingAgentIdentifier	<rightsbasis> prov:wasInfluencedBy <agent>.</agent></rightsbasis>	If the Agent contributed to elaborate the, use prov:wasInfluencedBy pointing from an instance of premis:RightsBasis.
	<rule> prov:influenced <agent>.</agent></rule>	If the Agent is the one to whom the permission or prohibition defined by the premis:Rule applies, use prov:influenced pointing from an instance of premis:Rule.
4.1.9.1 linkingAgentIdentifierType	/	

4.1.9.2 linkingAgentIdentifierValue	/	
4.1.9.3 linkingAgentRole	<rightsbasis> ?agentRole <agent>.     ?agentRole rdfs:subPropertyOf     prov:wasInfluencedBy.</agent></rightsbasis>	Declare subproperties of prov:wasInfluencedBy or use those defined at <a href="http://id.loc.gov/vocabulary/preservation/rightsRelatedAgentRole">http://id.loc.gov/vocabulary/preservation/rightsRelatedAgentRole</a> .
4.2 rightsExtension	/	