

**MAYO CLINIC**  
**DIVISION OF BIOMEDICAL INFORMATICS**

**LexGrid Ontology Loader Mapping**  
*LexGrid Vocabulary Services for caBIG™ (LexBIG)*

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**Revision History**

<b>Version Number</b>	<b>Revision Data</b>	<b>Author</b>	<b>Summary of Changes</b>
1.0		Scott Bauer Craig Stancl	Initial Draft

**Related Documents**

<b>Document Name</b>	
LexGrid_Source_Mapping_Guide.doc	This document contains additional detail specific to individual loaders.

### OWL Mapping - Protégé (New)

OWL Element	LexGrid	Comments
<b>OWL: RDF Schema Features</b>		
owl:ontology	codingScheme	
xml:lang	codingScheme.defaultLanguage	Default is 'en'
dc:title	codingScheme.formalName	
rdfs:label	codingScheme.localName	
URI	codingScheme.registeredName	
owl:versionInfo	codingScheme.representsVersion	Default is 'UNASSIGNED'
dc:rights	codingScheme.copyright	
owl:Class (Thing, Nothing)	concept	
rdf:ID	concept.conceptCode	
	concept.isActive	Hard coded as "Active"
	concept.isAnonymous	
rsfs:label	concept.entityDescription	
rdf:comment	concept.comment	
rdfs:subClassOf	association	
	association.id = "subClassOf"	
	association.forwardName = "subClassOf"	
	association.isFunctional = "false"	
	association.isNavigable = "true"	
	association.isReflexive="true"	
	association.isSymmetric="false"	
	association.isTransitive="true"	
rdf:Property (ObjectProperty)	association	An association between two classes (hasDomain, hasRange)
rdf:Property (DatatypeProperty)	association concept.conceptProperty	An association between one class (domain) and one assoication (hasDomain and hasDataProperty). The conceptProperty defines the range.
rdfs:subPropertyOf	association	
	association.id = "subPropertyOf"	
	association.forwardName = "subPropertyOf"	
	association.isFunctional = "false"	
	association.isNavigable = "true"	
	association.isReflexive="true"	
	association.isSymmetric="false"	
	association.isTransitive="true"	
rdfs:domain	association	
	association.id = "hasDomain"	
	association.forwardName = "hasDomain"	
	association.isNavigable = "true"	
	association.isReflexive="false"	
	association.isSymmetric="false"	
	association.isTransitive="true"	
rdfs:range	association	

	association.id = "hasRange"	
	association.forwardName = "hasRange"	
	association.isNavigable = "true"	
	association.isReflexive="false"	
	association.isSymmetric="false"	
	association.isTransitive="false"	
Individual	association	A 'hasInstance' association is created. (ie. sourceId = Country, targetId = America)
	association.id = "hasInstance"	
<b>OWL (In)Equality</b>		
owl:equivalentClass	association	
	association.id = "equivalentClass"	
	association.forwardName = "equivalentClass"	
	association.isFunctional = "false"	
	association.isNavigable = "true"	
	association.isReflexive="true"	
	association.isSymmetric="true"	
	association.isTransitive="true"	
	association.reverseName="equivalentClass"	
owl:equivalentProperty	association	
	association.id = "equivalentProperty"	
	association.forwardName = "equivalentProperty"	
	association.isFunctional = "false"	
	association.isNavigable = "true"	
	association.isReflexive="true"	
	association.isSymmetric="true"	
	association.isTransitive="true"	
	association.reverseName="equivalentProperty"	
owl:sameAs	association	
	association.id = "sameAs"	
	association.forwardName = "sameAs"	
	association.isFunctional = "false"	
	association.isNavigable = "true"	
	association.isReflexive="true"	
	association.isSymmetric="true"	
	association.isTransitive="true"	
	association.reverseName="sameAs"	
differentFrom	association	
	association.id = "differentFrom"	
	association.forwardName = "differentFrom"	
	association.isFunctional = "false"	
	association.isNavigable = "true"	
	association.isReflexive="true"	
	association.isSymmetric="true"	
	association.isTransitive="true"	
	association.reverseName= "differentFrom"	

owl:AllDifferent	association association.id = "AllDifferent" association.forwardName = "AllDifferent" association.isFunctional = "false" association.isNavigable = "true" association.isReflexive="true" association.isSymmetric="true" association.isTransitive="true" association.reverseName= "AllDifferent"	
<b>OWL: Property Characteristics</b>		
owl:inverseOf	association association.id = "inverseOf" association.forwardName = "inverseOf" association.isFunctional = "false" association.isNavigable = "true" association.isReflexive="true" association.isSymmetric="true" association.isTransitive="true" association.reverseName="inverseOf"	
owl:TransitiveProperty	association.isTransitive	association property 'isTransitive'
owl:SymmetricProperty	association.isSymmetric	association property 'isSymmetric'
owl:InverseFunctionalProperty	association.isReverseFunctional	association property 'isReverseFunctional'
owl:FunctionalProperty	association.isFunctional	association property 'isFunctional'
<b>OWL: Property Restrictions</b>		
owl:Restriction	concept concept.id concept.isActive = true concept.isAnonymous = true	Create an anonymous concept for the restriction System generated Hardcoded "True"
owl:onProperty	association.id	
owl: allValuesFrom	concept.entityDescription concept.presentation.propertyId concept.presentation.propertyName concept.presentation.isPreferred = true concept.presentation.text concept.conceptProperty.propertyId concept.conceptProperty.propertyName = type concept.conceptProperty.text = "owl:unionOf"	String of allValuesFrom values Generated value for property textual presentation using "P" concatenated with a steadily incremented numerical value. Hardcoded "textualPresentation" Hardcoded "true" String of allValuesFrom values Generated value for property using "P" concatenated with a steadily incremented numerical value. Hardcoded "type"
owl: someValuesFrom	concept.entityDescription concept.presentation.propertyId concept.presentation.propertyName concept.presentation.isPreferred = true concept.presentation.text	String of someValuesFrom values Generated value for property textual presentation using "P" concatenated with a steadily incremented numerical value. Hardcoded "textualPresentation" Hardcoded "true" String of someValuesFrom values

	concept.conceptProperty.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
	concept.conceptProperty.propertyName = type	Hardcoded "type"
	concept.conceptProperty.text = "owl:intersectionOf"	
owl:intersectionOf	concept.entityDescription	String of intersectionOf values (ie. Pizza and not VegetarianPizza)
	concept.presentation.propertyId	Generated value for property textual presentation using "P" concatenated with a steadily incremented numerical value.
	concept.presentation.propertyName	Hardcoded "textualPresentation"
	concept.presentation.isPreferred = true	Hardcoded "true"
	concept.presentation.text	String of intersectionOf values (ie. Pizza and not VegetarianPizza)
	concept.conceptProperty.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
	concept.conceptProperty.propertyName = type	Hardcoded "type"
	concept.conceptProperty.text = "owl:intersectionOf"	
UnionOf	concept.conceptProperty.text = "owl:unionOf"	
owl:complementOf	association	association.id = "subClassOf"
owl:oneOf	concept.entityDescription	String of oneOf values
	concept.presentation.propertyId	Generated value for property textual presentation using "P" concatenated with a steadily incremented numerical value.
	concept.presentation.propertyName	Hardcoded "textualPresentation"
	concept.presentation.isPreferred = true	Hardcoded "true"
	concept.presentation.text	String of oneOf values
	concept.conceptProperty.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
	concept.conceptProperty.propertyName = type	Hardcoded "type"
	concept.conceptProperty.text = "owl:intersectionOf"	
owl:hasValue	associationQualification.nameAndValueList.content	
owl:minCardinality	concept.entityDescription	String of minCardinality Values (ie. (hasTopping min 3) and Pizza)
	concept.presentation.propertyId	Generated value for property textual presentation using "P" concatenated with a steadily incremented numerical value.
	concept.presentation.propertyName	Hardcoded "textualPresentation"
	concept.presentation.isPreferred = true	Hardcoded "true"
	concept.presentation.text	String of minCardinality Value (ie. (hasTopping min 3) and Pizza)
	concept.conceptProperty.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
	concept.conceptProperty.propertyName = type	Hardcoded "type"
	concept.conceptProperty.text = "owl:intersectionOf"	
owl:maxCardinality	concept.entityDescription	String of maxCardinality Values (ie. (hasTopping max 2) and Pizza)
	concept.presentation.propertyId	Generated value for property textual presentation using "P" concatenated with a steadily incremented numerical value.
	concept.presentation.propertyName	Hardcoded "textualPresentation"

	concept.presentation.isPreferred = true	Hardcoded "true"
	concept.presentation.text	String of maxCardinality Values (ie. (hasTopping max 2) and Pizza)
	concept.conceptProperty.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
	concept.conceptProperty.propertyName = type	Hardcoded "type"
	concept.conceptProperty.text = "owl:intersectionOf"	
		String of cardinality Values
owl:cardinality	concept.entityDescription	
	concept.presentation.propertyId	Generated value for property textual presentation using "P" concatenated with a steadily incremented numerical value.
	concept.presentation.propertyName	Hardcoded "textualPresentation"
	concept.presentation.isPreferred = true	Hardcoded "true"
	concept.presentation.text	String of cardinality Values
	concept.conceptProperty.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
	concept.conceptProperty.propertyName = type	Hardcoded "type"
	concept.conceptProperty.text = "owl:intersectionOf"	
owl:disjointWith	association	association.id = "disjointWith"
<b>OWL: Annotation Property</b>		
rdfs:label	Presentation	
	concept.presentation.propertyId	Generated value for property textual presentation using "P" concatenated with a steadily incremented numerical value.
	concept.presentation.propertyName = "textualPresentation"	Hardcoded "textualPresentation"
	concept.presentation.isPreferred = true	Hardcoded "true"
	concept.presentation.text	Value of rdfs:label
rdfs:comment	Comment	
	concept.comment.propertyId	Generated value for property textual presentation using "P" concatenated with a steadily incremented numerical value.
	concept.comment.propertyName = "comment"	Hardcoded "comment"
	concept.presentation.text	Value of rdfs:comment
rdfs:seeAlso	conceptProperty	
rdfs:isDefinedBy	conceptProperty	
<b>OWL: Versioning</b>		
owl:versionInfo	codingScheme.representsVersion	
priorVersion		Not Mapped
backwardCompatibleWith		Not Mapped
owl:incompatibleWith	association	
	association.id = "incompatibleWith"	
	association.forwardName = "incompatibleWith"	
	association.isFunctional = "false"	
	association.isNavigable = "true"	
	association.isReflexive="true"	
	association.isSymmetric="true"	
	association.isTransitive="true"	
	association.reverseName="incompatibleWith"	
DeprecatedClass	Concept attribute setIsActive = false	Not Mapped
DeprecatedProperty		Not Mapped

## OWL Mapping - NCI OWL

OWL Element	LexGrid	Comments
<b>OWL: RDF Schema Features</b>		
owl:ontology	codingScheme	Hardcoded "NCI_Thesaurus"
xml:lang	codingScheme.defaultLanguage	Hardcoded "en"
dc:title	codingScheme.formalName	Hardcoded "NCI_Thesaurus"
rdfs:label	codingScheme.localName	Hardcoded "NCI_Thesaurus"
		Hardcoded "40010"
		Hardcoded "urn:oid:2.16.840.1.113883.3.26.1.1"
URI	codingScheme.registeredName	Hardcoded "http://ncicb.nci.nih.gov/xml/owl/EVS/Thesaurus.owl#"
owl:versionInfo	codingScheme.representsVersion	
dc:rights	codingScheme.copyright	Read from hardcoded "Terms.txt" file .
rdfs:comment	codingScheme.entityDescription	
	codingScheme.isNative	Hardcoded "true"
owl:Class (Thing, Nothing)	concept	
code	concept.id	
	concept.isActive	Hard coded as "true" unless class "owl:DeprecatedClass", then 'false'
	concept.isAnonymous	
rdfs:label	concept.entityDescription	
rdf:comment	concept.comment	
	conceptProperty	Indicate whether the concept is primitive (has no equivalent classes)
	concept.conceptProperty.propertyName	Hard coded as "primitive"
	concept.conceptProperty.text	"true"
	concept.conceptProperty.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
	presentation	Provide default presentation to match concept entity description if not provided as property
	concept.presentation.propertyId	Generated value for property textual presentation using "P" concatenated with a steadily incremented numerical value.
	concept.presentation.propertyName	Hardcoded "NCI_PREFERRED_TERM"
rdfs:label	concept.presentation.text	concept.entityDescription
	conceptProperty	Property with designated concept name label (per NCI requirements and used in codeToName/nameToCode lookup).
	concept.conceptProperty.propertyName	Hard coded as "CONCEPT_NAME"
rdfs:label	concept.conceptProperty.text	concept.entityDescription
	concept.conceptProperty.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.

	relation	Top-level container for associations (non-inheritable, non-defining relationships between concepts).
	relations.dc	Hard coded as "associations"
	relations.isNative	Hard coded as "true"
	relations.entityDescription	Hard coded as "Non-inheritable non-defining relations."
	relation	Top-level container for roles (inheritable relationships)
	relations.dc	Hard coded as "roles"
	relations.isNative	Hard coded as "true"
	relations.entityDescription	Hard coded as "Inheritable/defining relations."
rdfs:subClassOf	association	Association for subtype hierarchy.
	association.id = "hasSubtype"	
	association.forwardName = "hasSubtype"	
	association.reverseName = "isA"	
	association.isNavigable = "true"	Hard coded as "true"
	association.isReflexive="true"	Hard coded as "true"
	association.isSymmetric="false"	Hard coded as "false"
	association.isTransitive="true"	Hard coded as "true"
hasElement	association	Association used to register component classes as elements of anonymous node representations.
	association.id = "hasElement"	
	association.forwardName = "hasElement"	
	association.isNavigable = "true"	Hard coded as "true"
	association.isSymmetric="false"	Hard coded as "false"
	association.isTransitive="true"	Hard coded as "true"
rdfs:domain	association	Association for role_has_domain relations
	association.id = "Role_Has_Domain"	
	association.forwardName = "roleHasDomain"	
	association.reverseName = "kindIsDomainOf"	
	association.isNavigable = "true"	Hard coded as "true"
	association.isReflexive="false"	Hard coded as "false"
	association.isSymmetric="false"	Hard coded as "false"
	association.isTransitive="true"	Hard coded as "true"
rdfs:range	association	Association for range relations
	association.id = "Role_Has_Range"	
	association.forwardName = "roleHasRange"	
	association.reverseName = "kindIsRangeOf"	
	association.isNavigable = "true"	Hard coded as "true"
	association.isReflexive="false"	Hard coded as "false"
	association.isSymmetric="false"	Hard coded as "false"
	association.isTransitive="false"	Hard coded as "false"



rdf:Property (ObjectProperty)	association	An association between two classes (hasDomain, hasRange)
rdfs:subPropertyOf		Not Mapped
<b>OWL (In)Equality</b>		
owl:equivalentClass	association	Association for equivalent class.
	association.id = "equivalentClass"	
	association.forwardName = "equivalentClass"	
	association.reverseName = "equivalentClass"	
	association.isNavigable = "true"	Hard coded as "true"
	association.isReflexive="true"	Hard coded as "true"
	association.isSymmetric="true"	Hard coded as "true"
	association.isTransitive="true"	Hard coded as "true"
<b>OWL: Property Characteristics</b>		
owl:inverseOf	association	
	association.id = "inverseOf"	
	association.forwardName = "inverseOf"	
	association.isFunctional = "false"	
	association.isNavigable = "true"	
	association.isReflexive="true"	
	association.isSymmetric="true"	
	association.isTransitive="true"	
	association.reverseName="inverseOf"	
owl:TransitiveProperty	association.isTransitive	association property 'isTransitive'
owl:SymmetricProperty	association.isSymmetric	association property 'isSymmetric'
owl:InverseFunctionalProperty	association.isReverseFunctional	association property 'isReverseFunctional'
owl:FunctionalProperty	association.isFunctional	association property 'isFunctional'
<b>OWL: Property Restrictions</b>		
owl:Restriction	concept	Anonymous concept created.
	concept.entityDescription = "RestrictionOn: " + association name	Concatination of "Restriction On: " and association name
	concept.isAnonymous = true	
owl: allValuesFrom	associationQualification.association.Qualifier = "AllValuesFrom"	
owl: someValuesFrom	associationQualification.association.Qualifier = "someValuesFrom"	
owl:intersectionOf	concept.entityDescription	Concatination of "Restriction On: " and association name
	concept.isAnonymous = true	

	concept.presentation.propertyId	Generated value for property textual presentation using "P" concatenated with a steadily incremented numerical value.
	concept.presentation.propertyName	Hardcoded "textualPresentation"
	concept.presentation.isPreferred = true	Hardcoded "true"
	concept.presentation.text	Set to concept.entityDescription
	concept.conceptProperty.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
	concept.conceptProperty.propertyName = type	Hardcoded "type"
	concept.conceptProperty.text = "owl:intersectionOf"	
owl:unionOf	concept.entityDescription	Concatination of "Restriction On: " and association name
	concept.isAnonymous = true	
	concept.presentation.propertyId	Generated value for property textual presentation using "P" concatenated with a steadily incremented numerical value.
	concept.presentation.propertyName	Hardcoded "textualPresentation"
	concept.presentation.isPreferred = true	Hardcoded "true"
	concept.presentation.text	Set to concept.entityDescription
	concept.conceptProperty.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
	concept.conceptProperty.propertyName = type	Hardcoded "type"
	concept.conceptProperty.text = "owl:unionOf"	
owl:oneOf	concept.conceptProperty.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
	concept.conceptProperty.propertyName = "owl:oneOf"	Hardcoded "owl:oneOf"
	concept.conceptProperty.text	String of oneOf values
<b>OWL: Annotation Property</b>		
rdfs:comment	Comment	
	concept.comment.propertyId	Generated value for property textual presentation using "P" concatenated with a steadily incremented numerical value.
	concept.comment.propertyName = "comment"	Hardcoded "comment"
	concept.presentation.text	Value of rdfs:comment
rdfs:seeAlso	conceptProperty	
rdfs:isDefinedBy	conceptProperty	
<b>OWL: Versioning</b>		
owl:versionInfo	codingScheme.representsVersion	
priorVersion		Not Mapped
backwardCompatibleWith		Not Mapped
DeprecatedClass		Not Mapped
DeprecatedProperty		Not Mapped

### Legacy Complex Properties Mapping

tag	persentation	source	repreesentational form	qualifier	model element	value column name	model element
go-term	x					propertyValue	
go-id				x	propertyQualifierId	val1	PropertyQualifier attribute content?
go-source				x	propertyQualifierId	val1	PropertyQualifier attribute content?
source-date				x	propertyQualifierId	val1	PropertyQualifier attribute content?
term-name	x					propertyValue	
term-group			x			representationalForm	property attribute
term-source		x				attributeValue	source
def-source		x				attributeValue	source
def-definition	x					propertyValue	definition
Definition_Review_Date				x	propertyQualifierId	val1	PropertyQualifier attribute content?
Definition_Reviewer_Name				x	propertyQualifierId	val1	PropertyQualifier attribute content?

### UMLS SemNet Mapping

RRF File Name	RRF Column Name	RRF Definition	NCI Meta only	LexGrid Model Element	comments
<b>Coding Scheme</b>					
				codingScheme.representsVersion	
				codingScheme.codingScheme	hard coded in java file as "UMLS_SemNet"
				codingScheme.formalName	hard coded in java file as "UMLS Semantic Network"
				codingScheme.defaultLanguage	hard coded in java file as "en"
				codingScheme.approxNumConcepts	hard coded in java file as
				codingScheme.entityDescription	hard coded in java file as "The UMLS Semantic Network is one of three UMLS Knowledge Sources developed as part of the Unified Medical Language System project. The network provides a consistent categorization of all concepts represented in the UMLS Metathesaurus."
license.txt				codingScheme.copyright	Read from license.txt file or hard coded reference in java file
				codingScheme.registeredName	hard coded in java file as "urn:lsid.nlm.nih.gov:semnet"
				codingScheme.concepts.dc	hard coded in java file as "concepts"
				codingScheme.relations.dc	hard coded in java file as "relations"
				codingScheme.mappings.dc	hard coded in java file as "mappings"
				codingScheme.localNameList	
				codingScheme.localNameList.<element>	hard coded in java file as "UMLS_SemNet"
				codingScheme.localNameList	
				codingScheme.localNameList.<element>	
				codingScheme.source	
				codingScheme.source.content	
				codingScheme.localNameList	
				codingScheme.localNameList.<element>	
				codingScheme.localNameList	
				codingScheme.localNameList.<element>	
				codingScheme.localNameList	
				codingScheme.localNameList.<element>	
				codingScheme.localNameList	
				codingScheme.localNameList.<element>	
				mappings.supportedFormat	
				mappings.supportedFormat.localId	hard coded in java file as "text/plain"
				mappings.supportedFormat.urn	hard coded in java file as "urn:oid:2.16.840.1.113883.6.10:text_plain"
				mappings.supportedAssociation	
SRDEF	RL			mappings.supportedAssociation.localId	
				mappings.supportedContext	
				mappings.supportedSource	
				mappings.supportedSource.localId	hard coded in java file as "NLM"
				mappings.supportedSource.urn	hard coded in java file as "urn:lsid.nlm.nih.gov"
				mappings.supportedHierarchy	

				mappings.supportedHierarchy.localId	hard coded in java file as "is_a"
				mappings.supportedHierarchy.isForwardNavigable	hard coded as "true"
				mappings.supportedHierarchy.rootCode	hard coded as "@"
				mappings.supportedHierarchy.associationList<element>	hard coded in java file as "hasSubtype"
				mappings.supportedAssociationQualifier	
SRFLD	COL			mappings.supportedProperty	
				mappings.supportedProperty.localId	If SRDEF appears in the FIL column then this is treated a potential supported property and is entered in supported properties as such.
				mappings.supportedProperty.urn	hard coded in java file as ""
				mappings.supportedLanguage	
				mappings.supportedLanguage.localId	hard coded in java file as "en"
				mappings.supportedLanguage.urn	hard coded in java file as "urn:oid:2.16.840.1.113883.6.84:en"
				mappings.supportedCodingScheme	
				mappings.supportedCodingScheme.localId	hard coded in java file as "UMLS_SemNet"
				mappings.supportedCodingScheme.urn	hard coded in java file as "urn:lsid.nlm.nih.gov:semnet"
				mappings.supportedRepresentationalForm	
				mappings.supportedConceptStatus	
				mappings.supportedPropertyLink	
				mappings.supportedPropertyQualifier	
				mappings.supportedDataType	
<b>Concepts</b>					
SRDEF	UI			concept.id(inherited from Entity)	
SRDEF	STY/RL			concept.entityDescription(inheritance path Entity->versionableAndDescribable)	
SRDEF	NH			concept.conceptProperty	
				concept.conceptProperty.text.content	
				concept.conceptProperty.format	hard coded in java file as "text/plain"
				concept.conceptProperty.propertyName	hard coded in java file as "NH"
				concept.conceptProperty.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
				concept.presentation	
				concept.presentation.propertyName (inherited from Property)	Hard coded in java file as "STY/RL" or "ABR"
				concept.presentation.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
SRDEF	STY/RL, ABR			concept.presentation.text.content	
				concept.presentation.format	hard coded in java file as "text/plain"
				concept.presentation.isPreferred	hard coded in java file as true.
				concept.definition.propertyName (inherited from Property)	Hard coded in java file as "DEF"
				concept.definition.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
SRDEF	DEF			concept.definition.text.content	
				concept.definition.format	hard coded in java file as "text/plain"
				concept.definition.isPreferred	hard coded in java file as true.
				concept.comment	
SRDEF	EX			concept.comment.propertyName (inherited from Property)	Hard coded in java file as "EX"

				concept.comment.text.content	
				concept.comment.format	hard coded in java file as "text/plain"
				concept.comment.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
				concept.instruction	
				concept.instruction.propertyName (inherited from Property)	Hard coded in java file as "UN"
SRDEF	UN			concept.instruction.text.content	
				concept.instruction.format	hard coded in java file as "text/plain"
				concept.instruction.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
<b>Relations</b>					
SRSTR	RL			association.id (inherited from Entity)	In the case of RL value is "isa" the id is hard coded to hasSubtype. The direction of the association is also reversed
				association.isTransitive	hard coded to true if the value of RL is "isa"
SRSTR	RL			association.forwardName	Reversed when value of RL is "isa"
SRSTR	STY/RL			associationInstance.sourceId	Reversed when value of RL is "isa"
SRSTR	STY/RL			associationTarget.targetId	
SRDEF	RIN			association.reverseName	
SRDEF	DEF			association.entityDescription.content (inheritance path for entityDescription is Entity->versionableAndDescribable)	When SRDEF value RT is "RL"
SRSTRE1	UI/STY(first argument)			associationInstance.sourceId	Reversed when value of RL is "isa"
SRSTRE1	UI/STY(2nd argument)			associationTarget.targetId	Reversed when value of RL is "isa"

### UMLS Mapping

RRF File Name	RRF Column Name	RRF Definition	NCI Meta only	LexGrid Model Element	comments
<b>Coding Scheme</b>					
MRSAB.RRF	SVER	Release date or version number of a source		codingScheme.representsVersion	
MRSAB.RRF	SSN	Source short name		codingScheme.codingScheme	
MRSAB.RRF	SON	Source Official Name		codingScheme.formalName	
MRSAB.RRF	LAT	Language of Term(s)		codingScheme.defaultLanguage	
MRSAB.RRF	TRF	Term frequency for a source		codingScheme.approxNumConcepts	
MRSAB.RRF	SCIT	Source citation		codingScheme.entityDescription	inherits entityDescription from versionableAndDescribable
MRSAB.RRF	SCC	Content contact info for a source		codingScheme.copyright	
				codingScheme.registeredName	Pulled from iso mapping configuration file using method getISOString(RSAB from MRSAB.RRF)
MRDOC.RRF	EXPL	Detailed explanation	x	codingScheme.representsVersion	Where Dockey = "RELEASE" and value = "umls.release.name"
			x	codingScheme.codingScheme	Hard coded in java file as "NCI MetaThesaurus"
			x	codingScheme.formalName	Hard coded in java file as "NCI MetaThesaurus"
			x	codingScheme.defaultLanguage	Hard coded in java file as "ENG"
MRCONSO.RRF			x	codingScheme.approxNumConcepts	Count of CODE value in MRCONSO.RRF
			x	codingScheme.entityDescription	Hard coded in java file as "NCI MetaThesaurus loaded from RRF files."
			x	codingScheme.copyright	Hard coded in java file as "Some material in the NCI Metathesaurus is from copyrighted sources of the respective copyright claimants. All sources appearing in the NCI Metathesaurus are licensed or authorized for NCI use. Users of the NCI Metathesaurus are responsible for compliance with the terms of these licenses and with any copyright restrictions and are referred to NCI Center of Bioinformatics for license terms and to the copyright notices appearing in the original sources, all of which are obtainable online by reference at <a href="http://ncimeta.nci.nih.gov/">http://ncimeta.nci.nih.gov/</a> ."
				codingScheme.localNameList	Hard coded as constant in java file as "localName"
MRSAB.RRF	SON	Source Official Name		codingScheme.localNameList.<element>	
				codingScheme.localNameList	Hard coded as constant in java file as "localName"
				codingScheme.localNameList.<element>	Pulled from iso mapping configuration file using method getISOString(RSAB from MRSAB.RRF)
				codingScheme.source	Hard coded as constant in java file as "source"
MRDOC.RRF	EXPL	Detailed explanation		codingScheme.source.content	String concatenation of "UMLS-" and value of EXPL
			x	codingScheme.localNameList	Hard coded as constant in java file as "localName"
			x	codingScheme.localNameList.<element>	Hard coded in java file as "NCI Thesaurus"
			x	codingScheme.localNameList	Hard coded as constant in java file as "localName"
			x	codingScheme.localNameList.<element>	Hard coded in java file as "NCI Thesaurus"
			x	codingScheme.localNameList	Hard coded as constant in java file as "localName"
			x	codingScheme.localNameList.<element>	Hard coded in java file as "10001"
			x	codingScheme.localNameList	Hard coded as constant in java file as "source"
			x	codingScheme.localNameList.<element>	Hard coded in java file as "RRF Files"
				mappings.supportedFormat	Hard coded as constant in java file as "Format"
				mappings.supportedFormat.localId	Hard coded as one of several constants in a java file
				mappings.supportedAssociation	Hard coded as constant in java file as "Association"
MRREL.RRF	REL, RELA	Relationship, Relationship attribute		mappings.supportedAssociation.localId	
				mappings.supportedContext	Hard coded as constant in java file as "Context" May not be used in individual RRF load
				mappings.supportedSource	Hard coded as constant in java file as "Source" May not be used in individual RRF load
				mappings.supportedHierarchy	Hard coded as constant in java file as "Hierarchy"

				mappings.supportedAssociationQualifier	Hard coded as constant in java file as "AssociationQualifier"
				mappings.supportedProperty	Hard coded as constant in java file as "Property"
				mappings.supportedLanguage	Hard coded as constant in java file as "Language"
				mappings.supportedCodingScheme	Hard coded as constant in java file as "CodingScheme"
				mappings.supportedRepresentationalForm	Hard coded as constant in java file as "RepresentationalForm"
				mappings.supportedConceptStatus	Hard coded as constant in java file as "ConceptStatus"
				mappings.supportedPropertyLink	Hard coded as constant in java file as "PropertyLink"
				mappings.supportedPropertyQualifier	Hard coded as constant in java file as "PropertyQualifier"
				mappings.supportedDataType	Hard coded as constant in java file as "DataType"
<b>Concepts</b>					
MRCONSO.RRF	CODE	Unique Identifier or code for string in source		concept.conceptCode	
MRCONSO.RRF	CUI	Unique identifier for concept	x	concept.conceptCode	
				concept.isActive	Hardcoded in parameter as true.
				concept.conceptStatus	Hard coded as constant in java file as "Active"
				concept.isAnonymous	Hardcoded in parameter as false.
MRCONSO.RRF	STR	String		concept.entityDescription	
				concept.conceptProperty.Format	Hard coded as constant in java file as "text/plain" or null
				concept.conceptProperty.propertyName	May be hard coded as constant in java file as one of several properties.
				concept.conceptProperty.usageContext	
				concept.conceptProperty.propertyId	Generated value for property using "P" concatenated with a steadily incremented numerical value.
				concept.presentation.propertyId	Generated value for property textual presentation using "T" concatenated with a steadily incremented numerical value.
				concept.comment.propertyId	Generated value for property comment using "C" concatenated with a steadily incremented numerical value.
				concept.definition.propertyId	Generated value for property definition using "D" concatenated with a steadily incremented numerical value.
				concept.instruction.propertyId	Generated value for property instruction using "I" concatenated with a steadily incremented numerical value.
MRCONSO.RRF	CUI	Unique identifier for concept		concept.conceptProperty.text.content.	
				concept.conceptProperty.propertyId	Generated value for property using "CUI" concatenated with a steadily incremented numerical value.
				concept.conceptProperty.propertyName	hard coded as constant in java file as "UMLS_CUI"
				concept.conceptProperty.propertyType	hard coded as constant in java file as "property"
				concept.conceptProperty.format	left as null
MRSTY.RRF	STY	Semantic type		concept.conceptProperty.text.content	
				concept.conceptProperty.propertyId	Generated value for property using "SemType" concatenated with a steadily incremented numerical value.
				concept.conceptProperty.propertyName	hard coded as constant in java file as "Semantic_Type"
				concept.conceptProperty.propertyType	hard coded as constant in java file as "property"
				concept.conceptProperty.format	Hard coded as constant in java file as "text/plain"
MRCONSO.RRF	LAT	Language of Term(s)		concept.conceptProperty.language	Logic of code simply selects the first definition in the source as the preferred source
MRCONSO.RRF	TS	Term status		concept.presentation.isPreferred	One or a combination of these RRF values determines whether a presentation is preferred: LAT, TS, STT, ISPREF, RANK.
MRCONSO.RRF	STT	String type		concept.presentation.isPreferred	One or a combination of these RRF values determines whether a presentation is preferred: LAT, TS, STT, ISPREF, RANK.
MRCONSO.RRF	ISPREF	Indicates whether AUI is preferred		concept.presentation.isPreferred	One or a combination of these RRF values determines whether a presentation is preferred: LAT, TS, STT, ISPREF, RANK.
MRRANK.RRF	RANK	Termgroup ranking		concept.presentation.isPreferred	One or a combination of these RRF values determines whether a presentation is preferred: LAT, TS, STT, ISPREF, RANK.



					The first presentation for each language is automatically marked as isPreferred="true" after using comparator to sort list of presentations using comparator to evaluate each presentation based on a combination of values from LAT, TS, STT, ISPREF, RANK.
MRDEF.RRF	DEF	Definition		concept.presentation.isPreferred concept.definition.text.content	
				concept.definition.isPreferred	Logic of code simply selects the first definition in the source as the preferred source
MRSAT.RRF	ATN	Attribute name		concept.conceptProperty.propertyType	Translated to a LexGrid property type. For values AN, CX, HN this property is typed as a "COMMENT" in LexGrid. For value EV this property is typed "PRESENTATION" This only occurs when the STYPE points to the CODE, SCUI or SDUI columns in MRREL.RRF or MRCONSO.RRF. If the STYPE points to SAUI then the values are loaded as property qualifiers.
MRSAT.RRF	ATV	Attribute value		concept.conceptProperty.propertyValue	
MRSAT.RRF	ATN	Attribute name		concept.conceptProperty.propertyQualifier.propertyQualifierId	If the STYPE points to SAUI then the value is loaded as a property qualifier attribute
MRSAT.RRF	ATV	Attribute value		concept.conceptProperty.propertyQualifier.content	If the STYPE points to SAUI then the value is loaded as a property qualifier attribute
MRCONSO.RRF	SAB		x	concept.conceptProperty.source.content	
			x	concept.conceptProperty.propertyQualifier.propertyQualifierId	hard coded as constant in java file as "source-code"
MRCONSO.RRF	CODE		x	concept.conceptProperty.propertyQualifier.content	
			x	concept.conceptProperty.propertyQualifier.propertyQualifierId	hard coded as constant in java file as "AUI"
MRCONSO.RRF	AUI		x	concept.conceptProperty.propertyQualifier.content	
				concept.presentation.representationalForm	When ATN value is EV this presentation will be given a representationalForm of "Abbrev."
MRCONSO.RRF	TTY	Term type in source		concept.presentation.representationForm	When TTY value is FN then representationalForm is represented as "Full Form" Otherwise the representationalForm is the same as the TTY source (i.e. if TTY is PT then representationalForm is PT.) PT is one of the preferred presentations.
				concept.conceptProperty.propertyQualifier.propertyQualifierId	hard coded as "HCD"
MRHIER.RRF	HCD	Source asserted hierarchical number or code for this atom in this context		concept.conceptProperty.propertyQualifier.content	This propertyQualifier is present when the HCD is populated in the MRHIER file. The corresponding code and property for concept or code is qualified as a code or concept with a context derived heirarchy.
<b>Relations</b>					
MRREL.RRF	CUI1	Unique identifier for first concept			
MRREL.RRF	AUI1	Unique identifier for first atom			
				ConceptReference.conceptCode (Model element is a ResolvedConceptReference with the value sourceOf attached to the appropriate AssociationList containing this particular REL or RELA association name.)	Mapping to the CODE depends upon the CUI or a combination of CUI and AUI values. If the CODE value is "NOCODE" then LexBIG concatenates "NOCODE" with a "-" and the CUI value. Target or source code value requires use of the DIR flag which indicates the directionality of the relationship in REL or RELA. CUI1 can be used as a pointer to the source CODE value if DIR equals Y, else CUI1 is the targetCode. Similarly, if an AUI exists AUI1 can be an indicator for CODE value to be either or source or target depending on the DIR flag.
MRCONSO.RRF	CODE	Unique Identifier or code for string in source			
MRREL.RRF	CUI2	Unique identifier for second concept			
MRREL.RRF	AUI2	Unique identifier for second atom			

MRCONSO.RRF	CODE	Unique Identifier or code for string in source	ConceptReference.conceptCode (Model element is a ResolvedConceptReference with the value targetOf attached to the appropriate AssociationList containing this particular REL or RELA association name.)	Mapping to the CODE depends upon the CUI or a combination of CUI and AUI values. If the CODE value is "NOCODE" then LexBIG concatenates "NOCODE" with a "-" and the CUI value. Target or source code value requires use of the DIR flag which indicates the directionality of the relationship in REL or RELA. CUI2 can be used as a pointer to the source CODE value if DIR equals Y, else CUI1 is the targetCode. Similarly, if an AUI exists AUI2 can be an indicator for CODE value to be either or source or target depending on the DIR flag.
MRREL.RRF	DIR	Source asserted directionality flag		The UMLS directional flag. Y indicates that this is the direction of the RELA relationship in its source; N indicates that it is not; otherwise indicates that it is not important or has not yet been determined. (If blank RELA, we interpret as 'N', based on empirical review of meta files).
MRREL.RRF	RELA	Relationship attribute	association.id (id inherited from Entity)	Source defined associations. If RELA value is "inverse_isa" then it is changed to "hasSubtype." All others mapped as defined in source.
MRREL.RRF	REL	Relationship	association.id (id inherited from Entity)	UMLS defined associations
MRSAT.RRF	METAUI	Metathesaurus asserted unique identifier		Presence of RUI in MRSAT.RRF METAUI column indicates the association defined in MRREL has an association qualifier. Currently only MedDRA uses these.
MRSAT.RRF	ATN		AssociatedConcept.nameAndValueList.name	
MRSAT.RRF	ATV		AssociationQualification.nameAndValueList.content	
MRHIER.RRF	HCD		AssociatedConcept.nameAndValueList.name	qualifier name is hard coded to "HCD" This association qualifier is attached to an association when the HCD field in MRHIER.RRF is populated. Associations are identified by evaluating a structured series of AUI's that describe the path to root (PTR field in MRHIER) Once these associations are identified they have and association qualifier attached to them with the value of the HCD loaded as the qualifier.
MRSAB.RRF	SSN	Source short name	AssociationQualification.nameAndValueList.content	
MRREL.RR	REL or RELA	Relationship or Relationship attribute	association.codingSchemeId (Inherited from Entity)	unqualified REL or RELA value (inverse_isa remains the same)
MRDOC.RRF	EXPL	Detailed explanation	association.reverseName	Where DOCKEY in MRDOC equals REL or RELA and value is the association name and TYPE is REL or RELA name prepended to "_inverse".
			association.inverse	Hard coded as a blank string.
			association.isAntiReflexive	hard coded to null.
			association.isAntiSymmetric	hard coded to null.
			association.isAntiTransitive	hard coded to null.
			association.isAntiTransitive	hard coded to null.
			association.isNavigable	hard coded as Boolean with value true.
			association.isReflexive	hard coded to null.
			association.isReverseFunctional	hard coded to null.
			association.isSymmetric	hard coded to null.
MRREL.RRF	SAB, REL, RELA	Source abbreviation	association.isTransitive	True when the name of the association can be mapped to a source defined in the SAB attribute of MRREL.RRF. Not the SAB value itself, but extrapolated from it using SAB to REL, RELA relationship.
			association.isTranslationAssociation	hard coded to null.
			association.targetCodingScheme	hard coded to null.
			association.entityDescription.content (inheritance path for entityDescription is Entity->versionableAndDescribable)	Hard coded to: "UMLS-defined relationships"

				relations.dc	If REL, this is hard coded as "UMLS-Relations" if RELA then it is hard coded to "Relations"
MRREL.RRF	REL, RELA		x	propertyLink.link	This is a link established when the MRREL.RRF file contains a relationship where the CUI is related to itself. Under these conditions the relationship is mapped as a property link with the MRREL defined relationship mapped as the link value.
			x	propertyLink.sourceProperty	Generated as a propertyId for concept, ex: "T-10" This is retrieved based on the AUI value in MRCONSO.RRF from the entityPropertyMultiAttrib table where the AUI equals the attributeValue column.
			x	propertyLink.targetProperty	Generated as a propertyId for concept, ex: "T-10" This is retrieved based on the AUI value in MRCONSO.RRF from the entityPropertyMultiAttrib table where the AUI equals the attributeValue column.

### SNOMED UMLS Mapping

RRF File Name	RRF Column Name	RRF Definition	LexGrid Model Element	comments
RSAB.RRF	SVER	Release date or version number of a source	codingScheme.representsVersion	
RSAB.RRF	SSN	Source short name	codingScheme.codingScheme?	
RSAB.RRF	SON	Source Official Name	codingScheme.formalName	
		Hard coded to "en"	codingScheme.defaultLanguage	
MRSAT.RRF	ATV		concept.presentation.language	Unique to snomed.

## OBO Mapping

OBO Class	OBO Entity	LexGrid Model Element	Notes
Document Header	format-version		Not mapped.
Document Header	data-version	CodingScheme.representsVersion	Creates a codingSchemeVersion and SystemRelease record. If not specified, then hard coded "UNASSIGNED"
Document Header	version	CodingScheme.representsVersion	Deprecated - use data-version if present.
Document Header	date		Not mapped.
Document Header	saved-by		Ignored but included if contained in the remark entity.
Document Header	auto-generated-by		Ignored but included if contained in the remark entity.
Document Header	subsetdef		Not mapped.
Document Header	import		Deprecated - Imports are used to assemble a larger document from smaller.
Document Header	typeref		Deprecated.
Document Header	synonymtypedef		Not mapped.
Document Header	idspace		Not mapped. The idspace is a triple - localName, URN and description.
Document Header	default-relationship-id-prefix		Not mapped.
Document Header	id-mapping	CodingScheme.supportedAssociation	This is more generalized than the LexGrid model, as it supports mapping between *any* id's. Note that its primary purpose, however, is to handle supportedAssociation.
Document Header	remark	CodingScheme.entityDescription	Will combine multiple remark entities into the entityDescription.
Document Header	default-namespace	codingScheme.codingScheme	Will use default-namespace if provided; otherwise will use filename without the extension.
Document Header	default-namespace	codingScheme.formalName	Will use default-namespace if provided; otherwise will use filename without the extension.
Document Header	default-namespace	codingScheme.registeredName	Combination of "urn:lsid:bioontology.org:" and if provided, the value in "default-namespace"; but if not will use filename without the extension.
		codingScheme.defaultLanguage	Hardcoded "en"
		codingScheme.isNative	Hardcoded "true"
Stanza	id	CodedEntry.conceptCode	
Stanza	name	CodedEntry.entityDescription	
		CodedEntry.presentation['textualPresentation'].text	
		CodedEntry.presentation['textualPresentation'].isPreferred = true	
Stanza	alt_id	CodedEntry.property.property="alt_id"	
		CodedEntry.property['alt_id'].propertyId	
		CodedEntry.property['alt_id'].text	
Stanza	is_anonymous	CodedEntry.isAnonymous = true	
Stanza	is_obsolete	CodedEntry.isActive = false	
Stanza	def	CodedEntry.definition	
		CodedEntry.definition.isPreferred = true	
Stanza	def.dbxref		See dbxref
Stanza	comment	CodedEntry.comment.text	
Stanza	subset	property[subset tag]	See subsetdef
Stanza	synonym	presentation['textualPresentation'].text	
Stanza	synonym.scope	presentation['textualPresentation'].degreeOfFidelity	

Stanza	synonym.type	presentation['textualPresentation'].representationalForm	
Stanza	synonym.dbxref	(see dbxref)	
Stanza	exact_synonym		See synonym
Stanza	narrow_synonym		See synonym
Stanza	broad_synonym		See synonym
Stanza	xref	associations.[mapsTo]	
Stanza	xref_analog		See synonym
Stanza	xref_unk		
Stanza	is_a	associations.[hasSubtype]	Reverse of the source and target.
Stanza	is_a.namespace		If present, the supplied namespace becomes the owning "codingScheme".
Stanza	is_a.derived	associations.hasSubtype.associationQualifier	If present, need to include derived in the supportedAssociationQualifiers section
Stanza	intersection_of		Processed the same way that OWL intersection operator is processed. This includes creation of anonymous sets.
Stanza	union_of		Same as OWL
Stanza	disjoint_from		Same as OWL
Stanza	relationship	associations.<relationship>	
Stanza	relationship.not_necessary	associations.<relationship>.associationQualifier	
Stanza	relationship.inverse_necessary	associations.<relationship>.associationQualifier	
Stanza	relationship.namespace		If present, the supplied namespace becomes the owning "codingScheme".
Stanza	relationship.derived	associations.<relationship>.associationQualifier	
Stanza	relationship.cardinality	associations.<relationship>.associationQualifier	
Stanza	relationship.maxCardinality	associations.<relationship>.associationQualifier	
Stanza	relationship.minCardinality	associations.<relationship>.associationQualifier	
Stanza	is_obsolete	codedEntry.isActive = false codedEntry.conceptStatus="is_obsolete"	
Stanza	replaced_by		
Stanza	consider		Not Mapped
Stanza	use_term		(deprecated)
dbxref	dbxref name	CodedEntry.<property>.source	
		supportedSource	dbxref name format is inconsistent. In most cases, it can be the localName of supportedSource, but special processing may be necessary in the case of URL's, etc
dbxref	dbxref description		Not mapped.
dbxref	trailing modifiers		Not mapped.
typeDef Stanza	domain	associations.[has_domain]	
typeDef Stanza	range	associations.[has_range]	
typeDef Stanza	is_cyclic	property['is_cyclic']	
typeDef Stanza	is_reflexive	property['is_reflexive']	
typeDef Stanza	is_symmetric	association.isReflexive property['is_symmetric']	
typeDef Stanza	is_transitive	association.isSymmetric property['is_transitive']	

		association.isTransitive	
typeDef Stanza	inverse_of	association.inverse	
instance stanza	id	same rules as general stanza	same rules as general stanza
instance stanza	name	same rules as general stanza	same rules as general stanza
instance stanza	instance_of	association['has_instance']	
instance stanza	<property values>	CodedEntry.property.property="<property value>"	data type properties go in Coded Entry property section

### HL7 RIM Mapping

HL7 Table	HL7 Column	LexGrid Model Element	Notes	Intentionally Not mapped	Outstanding issues	
Model	<modelID>	<codingSchemeName>				
	<name>	<formalName>				
		<registeredName>		<a href="http://www.hl7.org/Library/data-model/RIM.html">http://www.hl7.org/Library/data-model/RIM.html</a>		
		<defaultLanguage>		en		
	<versionNumber>	<representsVersion>				
		<isNative>		0*		
		<approximateNumberOfConcepts>		Result of count on concept bearing table?		
		<firstRelease>		MISSING		
		<modifiedInRelease>		MISSING		
		<deprecated>		MISSING		
	<description>	<entityDescription>				
		<copyright>	MISSING			
VCS_code_system	codeSystemId	codingScheme.registeredName	Moved to metadata file.			
	codeSystemType	commonTypes::Properties				
	codeSystemName	concept.conceptCode	This is an HL7 specific code system property to distinguish internal vs external code systems. Moved to metadata file.			
	codeSystemName	concept.presentation[ <i>textualPresentation</i> ].text	Moved to metadata file.			
	fullName	codingScheme.formalName				
	description	codingScheme.entityDescription	Moved to metadata file.			
	releaseId	codingScheme.representsVersion	Moved to metadata file.			
	copyrightNotice	codingScheme.copyright	Moved to metadata file.			
	literal('en')	codingScheme.defaultLanguage	Moved to metadata file.			
VCS_concept_code_xref	internalId					
	Concept Code	concept.conceptCode		RIM db column conceptCode2		
	Case Difference	commonTypes::Properties	Basically a proptry to outline whether there are case differences in the Concept Code or not (mainly used, but not restricted tor units of measure)	RIM db column codeInstance		
	Status	concept.isActive=(conceptStatus=='A?')		RIM db column conceptStatus		
		concept.conceptStatus	Not used by HL7. A = isActive, R = retired			
VCS_concept_designation	internalId		foreign key			
	designation	concept.presentation[ <i>textualPresentation</i> ].text				
	designationSeq					
	language	concept.presentation[ <i>textualPresentation</i> ].language	Can be omitted if language = default language			
	preferredForLanguage	concept.presentation[ <i>textualPresentation</i> ].isPreferred				
VCS_concept_description	internalId	with (codeSystem[deref(internalId)], concept[deref(internalId)]).definition	foreign key			
	description	concept.presentation[ <i>textualPresentation</i> ].text				
	language	concept.presentation[ <i>textualPresentation</i> ].language				
	literal('true')	concept.presentation[ <i>textualPresentation</i> ].isPreferred				
	uniqueId()	concept.presentation[ <i>textualPresentation</i> ].propertyId				
	literal('definition')	concept.presentation[ <i>textualPresentation</i> ].property				
VCS_concept_property	internalId		foreign key			
	propertyCode	concept.property.property				
	propertySeq			Currently not used by HL7		
	propertyValue	concept.property.text				
	language	concept.property.language				
VCS_concept_relationship	relationCode	association.association				
	sourceInternalId	associationInstance.sourceConcept				
	targetInternalId	associationTarget.targetConcept				
Model	modelID	systemRelease.releaseId				
	name	service.service				
	versionNumber	service.version				
	lastModifiedDate	systemRelease.releaseDate				
	developingOrganization	systemRelease.releaseAgency				
		committeeID				
	description	systemRelease.entityDescription				
	concat('urn:oid:2.16.840.1.11388.0.1.1')	systemRelease.releaseLJRN				
	literal('true')	systemRelease.isLatest	Also have to set the prior release isLatest to false			
	preceding-sibling/releaseOrder	systemRelease.releaseOrder				
Model (Special mapping for NCI)	modelID	commonTypes::Properties				
	name	codingScheme.localName				
	versionNumber	codingScheme.representsVersion				
	lastModifiedDate	commonTypes::Properties				
	developingOrganization	commonTypes::Properties				





		valueDomainVersion.entityDescription		
	editorID		There is no place for these currently.	
	forWhomID			
		concat('urn:oid:2.16.840.1.113883:.systemRelease.releaseId')	This corresponds to the containing system release <i>when</i> the sytem release occurs. It is empty until then.	

