NeMO - NeDiMAH Methods Ontology

NeMO Entity Class Definitions

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This document contains the definitions of the entity classes of NeMO, the NeDiMAH Methods Ontology. Each definition entry lists the superclasses, subclasses and properties, and supplies a scope note and examples for the respective entity class. Property declarations are of the form *property name : property value domain*.

Activity

Superclass of: Project
                      Course

Scope Note: This class comprises activities that take place in the scholarly domain. These are actions that are carried out by instances of Actor class, have a specific goal, and happen at a specific time and place.

                      This notion includes complex and long-lasting actions such as an academic conference or a research project, as well as simple short-lived activities such as the writing of a note.

                      Activities in the scholarly domain constitute the actual actions or events that may happen and not the prescription of what should have happened. Instances of the latter should be documented using the Method class.

Properties: employs: Method
                      hasScope: ActivityType
                      hasParticipant: Actor
                          inTheRoleOf: ActorRole
                      produces: InformationResource
                      uses: InformationResource
                      usesInstrument: Instrument
                      when: Time
                      where: Place
                      involves: Object
                      part of: Activity
                      follows: Activity

Examples: The ESF NeDiMAH Research Networking Project
                      The 2014 ADHO Conference on Digital Humanities
                      Writing a thesis
                      Translating a text

Actor

Superclass of: Person
                                     Group

Scope Note: This class comprises people, either individually or in groups, who have the potential to perform intentional actions for which they can be held responsible.

Individual people should be documented as instances of Person Class, whereas groups should be documented as instances of either Group or its subclass Legal Body.

Actors in the scholarly domain participate in activities through certain roles that define them. Depending on the actual actions that take place in an activity an actor can have more than one role that could be prescribed in a method.

Properties: participatesIn: Activity
                                     inTheRoleOf: ActorRole

Examples: Athens University of Economics and Business
                                     John Smith
                                     Digital Curation Unit
                                     Library of Congress

Object

Superclass of: PhysicalObject
                                     ConceptualObject
                                     Instrument
                                     Collection

Scope Note: This general class comprises usable discrete, identifiable, persistent items that can be documented as single units.

Instances of this class can be either intellectual products of our minds, or physical objects, that are involved in activities. Aggregations of objects can be regarded as collections.

Depending on their use, objects can also be characterized as instruments used in specific actions.

Properties:	isInvolvedIn: Activity
	inTheRoleOf: ObjectRole
	isMemberOf: Collection

Examples:	Adobe Photoshop
	The topic of a thesis
	Web Of Science website (http://www.ekt.gr/wos/)
	The Discipline of Applied Linguistics
	A research Article

Instrument

Superclass of:	Tool
	Service
	Model

Subclass of:	Object

Scope Note:	This class comprises all objects that are used in order to enable or support the accomplishment of activities.
	Instances of this class can be of material or immaterial nature depending on the type of service that they provide. Hence, every object of the scholarly domain that can be used as a tool, a service or even a model according to which a particular action is accomplished, can be documented as an instance of the Instrument class.

Properties:	isUsedAsInstrumentFor: Activity
	isUsedFor: ActivityType

Examples:	Evernote (App for iPad)
	MS Word 2013
	Online registration for a conference

Tool

Subclass of: Instrument

Scope Note: This class comprises objects that are specifically designed to support activities. Tools are used for specific purposes in order to accomplish certain tasks or actions.

Instances of this class can be of material or immaterial nature, such as a round hand brush used in archeological excavations, or a computer program used in image enhancement.

Examples: Adobe Photoshop
MS Word
Archaeologist' s mini hand Mattock
Book Suction Table

Service

Subclass of: Instrument

Scope Note: This class comprises all identifiable objects that have been created in order to support the accomplishment of activities by providing solutions in the form of responses to certain requests.

Services can be executed or delivered either directly by other actors, such as in the case of professional services, or by systems, such as in the case of utilities.

Instances of this class are objects that, in contrast with tools, are not held locally by an individual person, but instead are remotely provided by actors to everyone who wants to use and benefit from them.

Examples: Gmail
Google maps
Interlibrary loan

ConceptualObject

Superclass of:	Topic
	Type
	SchoolOfThought
	Discipline
	Method
	InformationResource
	Model
	Statement

Subclass of:	Object

Scope Note: This class comprises immaterial products of our minds and other human produced data that have become objects of a discourse about their identity, circumstances of creation or historical implication.

Instances of this class are created, invented or thought by someone, and then may be documented or communicated between persons. Conceptual objects can simultaneously exist on more than one particular physical carrier, such as paper, flash memory, marks, audio media, paintings, photos, etc.

Examples: The topic of a thesis
Manchester School of thought
Discipline of History of Art
Semiotic Analysis
A specific finding that was the outcome of an activity

Model

Superclass of:	ClassificationSchema
	DatabaseSchema
	MetadataSchema

Subclass of:	ConceptualObject
	Instrument

Scope Note: This class comprises immaterial products of our minds that constitute abstract representations of a given domain (specified part of a world or state of affairs) that we want to describe. A model's primary use is to convey the fundamental principles and basic functionality of the system in which it represents. Also, a model must be developed in such a way as to provide an easily understood system interpretation for the models users.

Instances of this class vary in form and type, depending on their purpose and the subject matter that they are taken to represent. They include but are not limited to conceptual representations of entities and relations, structured schemata of different types, scaled representations of actual physical objects, complex mathematical models that can be used for simulations or constitute interpretations under which particular statements are true, etc.

Examples: The Dublin Core metadata Schema
An XML structure
CIDOC CRM Conceptual Reference Model

InformationResource

Superclass of: LinguisticExpression
VisualExpression

Subclass of: ConceptualObject

Scope Note: This class comprises all instances of information that can be used as resources in activities in the scholarly domain. All kinds of Information, that can be the product of or used in a scholarly activity, are considered as information resources.

Instances of this Class are identifiable, immaterial units of information that exist on one or more physical carriers. These information items can be characterized according to their format, type or topic and can appear either as the input or the output of an activity.

Properties: hasType: InformationResourceType
hasFormat: MediaType
isDecribedBy: Metadata
hasTopic: Topic
isRepresentationOf: Statement
isProductOf: Activity
isUsedIn: Activity

Examples: A research article
Encyclopedia Britannica
A scientific journal
A set of Dublin Core metadata
A computer program code
A dataset with measurements from an archeological excavation

Metadata

Subclass of: ConceptualObject

Scope Note: This class comprises all instances of "data about data". This kind of information can be about the design and specification of data structures or the individual instances of application data or the actual data content.

Instances of this class are identifiable immaterial units that provide information about one or more aspects of the data, such as: Means of creation of the data, Purpose of the data, Time and date of creation, Creator or author of the data, Location on a computer network where the data were created, Standards used, etc. Their main purpose is to assist in resource discovery by allowing resources to be found by relevant criteria, identifying resources, bringing similar resources together, distinguishing dissimilar resources, and giving location information. They usually follow metadata standarts specific to a particular discipline.

Properties: describe: InformationResource

Examples: an xml file regarding a particular book

Topic

Subclass of: ConceptualObject

Scope Note: This class comprises identifiable conceptual objects that denote the essence or the main concept of a discourse.

Instances of this class are usually in the form of words or phrases that summarize the main idea of an information resource.

Properties: isTheTopicOf: InformationResource

Examples: Holocaust
Islam and Nation-State
Nuer Kinship

SchoolOfThought

Subclass of: ConceptualObject

Scope Note: This class comprises conceptual objects that express ways of thinking that are shared and followed by particular groups of people.

Instances of this Class are often named after their founders or their places of origin and usually denote common opinion or outlook.

Properties: isFollowedBy: Actor
influences: Method

Examples: The Manchester school of thought
The Chicago school of architecture
Behaviorism
Freud's school of thought

Method

Subclass of: ConceptualObject

Scope Note: This class comprises documented descriptions, plans or procedures that describe in a systematic or informal way how to accomplish specific kinds of activities.

Instances of this class can be considered as the "recipes" that describe how to combine different "ingredients" (information resources or physical objects), which instruments to use and which steps to follow in order to accomplish a particular activity.

Methods can be referenced in bibliography, taught in a Course or be influenced by a particular School Of Thought.

Properties: hasPart: Step
hasDescription: Description
isEmployedIn: Activity
isReferencedIn: InformationResource
isUsedIn: Discipline
isUsedFor: ActivityType
isTaughtIn: Course
isInfluencedBy: SchoolOfThought

Examples:	Minimum Information Criterion
	Random Forests
	POS Tagging
	Stemmatics
	Biographical method

Statement

Subclass of:	ConceptualObject

Scope Note:	This class comprises conceptual objects that can be identified as propositions, research questions, or any conceptual statement that is the the outcome or result of an inquiry or research in a specific topic.

Instances of this class constitute concepts that appear as discoveries, conclusions, findings, propositions, research questions, hypothesis, or any kind of propositions that appear related to research activities in general.

Being conceptual objects, statements are mental creations of our minds and do not constitute documented information. The actual representations of them, that can be treated as resources of information in various types and formats such as tables, figures, text, sound, etc. should be documented using the InformationResource class.

Properties:	hasRepresentation: InformationResource

Examples:	"The songs by aiko, Nakajima, and Utada have high classification performance, whereas those by Hirose, Oguro, and Matsutoya have low classification performance"

"What specific factors trigger the intuition people feel which makes them say ""this sounds like so-and-so""?"

Discipline

Subclass of:	ConceptualObject

Scope Note:	This class comprises conceptual objects that constitute concentrations of knowledge in an academic field. A discipline incorporates expertise, people, projects, communities, challenges, studies, inquiry, and research areas that are strongly associated with a particular academic area of study.

Properties:	usesMethod: Method

Examples: Archaeology
                               Electrical Engineering
                               Anthropology
                               Linguistics
                               History of Art

Type

Superclass of: ActivityType
                               InformationResourceType
                               MediaType

Subclass of: ConceptualObject

Scope Note: This class comprises concepts denoted by terms from thesauri and controlled
                               vocabularies used to characterize and classify instances of NeMO classes.

                               These controlled vocabularies are modeled as Simple Knowledge Organization
                               Systems so that their terms can be interconnected using SKOS properties as
                               defined in the W3C SKOS Recomendation (http://www.w3.org/TR/2009/REC-
                               skos-reference-20090818/).

                               Instances of this class can also be used in order to interconnect instances from
                               other NeMO classes and thus create alternate "semantic paths" in addittion to
                               their direct interrelationships.

Examples: 4.1.30 Spatial Analysis
                               4.3.1.2 Tagging
                               1. Acquiring

ActivityType

Subclass of: Type

Scope Note:	This class comprises identifiable types of activities in scholarly domain that are treated here as terms of a Controlled Vocabulary and can be interconnected with SKOS relations (such as narrowerThan, BroaderThan, relatedTerm, etc.) in order to form a hierarchy, based on the nature of the Activity that they describe.
	In addition to the SKOS properties, instances of this class can also be interconnected with special predifined properties such as "hasGoal" or "follows" in order to create "semantic chains" of interconnected terms.
	Instances of this class can also be used in order to interconnect instances from different classes of the NeMO Ontology based on their predefined relationships with the "ActivityType" class, thus providing extra -indirect- "semantic paths" across the Ontology. As such, can be considered a path among the "Method", "ActivityType" and "Activity" classes, interconnecting an instance of the "Method" Class that "isUsedFor" the same "ActivityType" that an instence of "Activity" class "hasScope", for example.
Properties:	isScopeOf: Activity isThePurposeOfUseOf: Method isThePurposeOfUseOf: Instrument
Examples:	4.3 Organizing 4.2.19 Visualizing 4.1.27 Sentiment Analysis

InformationResourceType

Subclass of:	Type
Scope Note:	This class comprises identifiable types of Information Resources that constitute formats for bibliographic data.
	Instances of this class characterize and classify InformationResources according to the type that they instanciate.
	NeMO adopts the Marc 21 format for Bibliographic Data as provided in http://www.loc.gov/marc/bibliographic/bd008.html for categorizig the terms related to this taxonomy.
Properties:	isTypeOf: InformationResource

Examples: Book
                                Map
                                Festshrift

MediaType

Subclass of: Type

Scope Note: This class comprises identifiable types of Media. Instances of this class
                                characterize and classify InformationResources according to their format.

                                NeMO adopts the IANA standart for Media Types as provided in
                                http://www.iana.org/assignments/media-types/media-types.xhtml#examples
                                for categorizig the terms related to this taxonomy.

Properties: isFormatOf: InformationResource

Examples: H224
                                tiff
                                mp4