Circular Economy Ontology Network (CEON) - Resource ODP

Metadata

IRI

http://w3id.org/CEON/ontology/resourceODP/

Title

Circular Economy Ontology Network (CEON) - Resource ODP

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Version Iri

http://w3id.org/CEON/ontology/resourceODP/0.2/

Version Info

0.2

Preferred Namespace Prefix

resourceODP

Preferred Namespace Uri

http://w3id.org/CEON/ontology/resourceODP/

Description

A core ODP of the CEON ontology network defining aspects of the resource concept.

Covers Requirements

Covers the following requirements from Onto-DESIDE D3.1: CVN-Resource-1,3, CVN-Composition-1,2, CVN-ResrouceType-4, C7-3, E2-2, E4-6, E5-1, E6-3, T3-1.

Classes

Batch of objects [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/BatchOfObjects
Description	A batch of objects is a collection of physical objects that are of the same type, e.g. a set of items (product objects) adhering to the same product model.
Sub Class Of	Resource [c] has physical object [op] some Physical object [c] *and* has physical object [op] only Physical object [c]
In Domain Of	batch size [dp]
In Range Of	has batch [op]
Restriction	batch size [dp] *exactly* 1 Batch of objects [c]

Composition [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/Composition
Description	A composition is used to represent how a whole or mixture is made up. E.g., for chemical elements composing a chemical structure, the compostion should hold information of the ratio of the composing chemical elments.

Constituent [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/Constituent
Description	A constituent is a component of object.
In Range Of	has constituent [op]

Digital object [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/DigitalObject
Sub Class Of	Resource [c]

Information [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/Information
Description	Information is an abstract concept that represents any kind of interpretations. For instance, information can be data generated by software systems or data used by people for communications.
Sub Class Of	Resource [c]
In Domain Of	containsInformation [op] isAbout [op]
In Range Of	containsInformation [op] is realization of [op]

Matter [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/Matter
Description	A matter is a physical substance.
In Range Of	has matter [op]

Physical object [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/PhysicalObject
Description	A physical object is a collection of matter.
Sub Class Of	Resource [c] has constituent [op] some Constituent [c] *and* has constituent [op] only Constituent [c] has matter [op] some Matter [c] *and* has matter [op] only Matter [c]
In Domain Of	has constituent [op] has matter [op]
In Range Of	has physical object [op]

Resource [c]

IRI http://w3id.org/CEON/ontology/resourceODP/Resource

Description A resource able to be handled in the context of a circular value network, e.g. data generated by software systems in the CVN, materials or prooducts as physical objects handled in the CVN.

In Domain Of hasResourceLocation [op]

Super Class Of
Batch of objects [c]
Digital object [c]
Information [c]
Physical object [c]
Set of objects [c]

Set of objects [c]

IRI http://w3id.org/CEON/ontology/resourceODP/SetOfObjects

Description A set of objects is a set of physical objects (items) that can be of different types, i.e. different kinds of items.

Sub Class Of
Resource [c]
has batch [op] some Batch of objects [c] *and* has batch [op] only Batch of objects [c]
has physical object [op] some Physical object [c] *and* has physical object [op] only Physical object [c]

Geometry [c]

IRI http://www.opengis.net/ont/geosparql#Geometry

Description A coherent set of direct positions in space. The positions are held within a Spatial Reference System (SRS).

In Domain Of
as GML [dp]
as GeoJSON [dp]
as WKT [dp]

In Range Of hasResourceLocation [op]

Object Properties

contains information op

IRI	http://w3id.org/CEON/ontology/resourceODP/containsInformation
Sub Property Of	hasPart op
Domain	Information c
Range	Information c

has batch op

IRI	http://w3id.org/CEON/ontology/resourceODP/hasBatch
Description	hasBatch intends to represent that a set or batch of objects can be captured by a number of batches where each batch contains a number of physical objects.
Domain	Set of objects c *or* Batch of objects c
Range	Batch of objects c

has constituent op

IRI	http://w3id.org/CEON/ontology/resourceODP/hasConstituent
Description	hasConstitutent intends to represent that a physical object can have a collection of composing components.
Sub Property Of	hasPart op
Domain	Physical object c
Range	Constituent c

has matter op

IRI	http://w3id.org/CEON/ontology/resourceODP/hasMatter
Description	hasMatter intends to represent that a physical object can have a collection of matter.
Domain	Physical object c
Range	Matter c

has part [op]

IRI http://w3id.org/CEON/ontology/resourceODP/hasPart

Super Property Of
- containsInformation [op]
- has constituent [op]

has physical object [op]

IRI http://w3id.org/CEON/ontology/resourceODP/hasPhysicalObject

Description hasPhysicalObject intends to represent that a batch of objects or a set of objects can have composing components of physical objects.

Domain Batch of objects [c] *or* Set of objects [c]

Range Physical object [c]

has resource location [op]

IRI http://w3id.org/CEON/ontology/resourceODP/hasResourceLocation

Domain Resource [c]

Range Geometry [c]

is about [op]

IRI http://w3id.org/CEON/ontology/resourceODP/isAbout

Domain Information [c]

is realization of [op]

IRI http://w3id.org/CEON/ontology/resourceODP/isRealizationOf

Range Information [c]

Datatype Properties

batch size dp

IRI	http://w3id.org/CEON/ontology/resourceODP/batchSize
Description	batchSize intends to repsent how many physical objects are belong to a batch of objects.
Domain	Batch of objects c
Range	xsd:nonNegativeInteger

as GML dp

IRI	http://www.opengis.net/ont/geosparql#asGML
Is Defined By	http://www.opengis.net/spec/geosparql/1.0/req/geometry-extension/geometry-as-wkt-literal
Description	The GML serialization of a Geometry.
Domain	Geometry c
Range	geo:gmlLiteral

as GeoJSON dp

IRI	http://www.opengis.net/ont/geosparql#asGeoJSON
Is Defined By	http://www.opengis.net/spec/geosparql/1.0/req/geometry-extension/geometry-as-wkt-literal
Description	The GeoJSON serialization of a Geometry.
Domain	Geometry c
Range	geo:geoJSONLiteral

as WKT dp

IRI	http://www.opengis.net/ont/geosparql#asWKT
Is Defined By	http://www.opengis.net/spec/geosparql/1.0/req/geometry-extension/geometry-as-wkt-literal
Description	The WKT serialization of a Geometry.
Domain	Geometry c
Range	geo:wktLiteral

Annotation Properties

description ap

IRI	http://purl.org/dc/elements/1.1/description

contributor ap

IRI	http://purl.org/dc/terms/contributor

created ap

IRI	http://purl.org/dc/terms/created

creator ap

IRI	http://purl.org/dc/terms/creator

description ap

IRI	http://purl.org/dc/terms/description

license ap

IRI	http://purl.org/dc/terms/license

title [ap]

IRI	http://purl.org/dc/terms/title

preferred namespace prefix [ap]

IRI	http://purl.org/vocab/vann/preferredNamespacePrefix

preferred namespace uri [ap]

IRI	http://purl.org/vocab/vann/preferredNamespaceUri

covers requirements [ap]

IRI	http://www.ontologydesignpatterns.org/schemas/cpannotationschema.owl#coversRequirements

definition [ap]

IRI	http://www.w3.org/2004/02/skos/core#definition

pref label [ap]

IRI	http://www.w3.org/2004/02/skos/core#prefLabel

Namespaces

:

http://w3id.org/CEON/ontology/resourceODP/

dc

http://purl.org/dc/elements/1.1/

dcterms

http://purl.org/dc/terms/

geo

http://www.opengis.net/ont/geosparql#

odp

http://www.ontologydesignpatterns.org/schemas/cpannotationschema.owl#

owl

http://www.w3.org/2002/07/owl#

prov

http://www.w3.org/ns/prov#

rdf

http://www.w3.org/1999/02/22-rdf-syntax-ns#

rdfs

http://www.w3.org/2000/01/rdf-schema#

skos

http://www.w3.org/2004/02/skos/core#

vann

http://purl.org/vocab/vann/

xsd

http://www.w3.org/2001/XMLSchema#

Legend

c	Classes
op	Object Properties
dp	Datatype Properties
ap	Annotation Properties