

Circular Economy Ontology Network (CEON) - Resource ODP

Metadata

IRI

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

Title

Circular Economy Ontology Network (CEON) - Resource ODP

Creator

Huanyu Li

Contributor

Eva Blomqvist
Mikael Lindecrantz
Robin Keskisärkkä

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Version Iri

<http://w3id.org/CEON/ontology/resourceODP/0.3/>

Version Info

0.3

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

| | |
|-----------------------|---|
| Location ^C | |
| IRI | http://w3id.org/CEON/ontology/location/Location |
| In Range Of | hasResourceLocation ^{Op} |

Batch of objects^C

| | |
|---------------------|---|
| IRI | http://w3id.org/CE0N/ontology/resourceODP/BatchOf0bjects |
| 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} only Physical object ^C <i>and</i> has physical object ^{op} some Physical object ^C |
| In Domain Of | batch size ^{dp} |
| In Range Of | has batch ^{op} |
| Restriction | batch size ^{dp} <i>exactly</i> 1 Batch of objects ^C |

Constituent^C

| | |
|--------------------|---|
| IRI | http://w3id.org/CE0N/ontology/resourceODP/Constituent |
| Description | A constituent is a component of object. |
| In Range Of | has constituent ^{op} |

Digital object^C

| | |
|---------------------|---|
| IRI | http://w3id.org/CE0N/ontology/resourceODP/Digital0bject |
| Sub Class Of | Resource ^C |

Information^C

| | |
|---------------------|--|
| IRI | http://w3id.org/CE0N/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/CE0N/ontology/resource0DP/Matter>

Description A matter is a physical substance.

In Range Of [has matter^{op}](#)

Physical object^C

IRI <http://w3id.org/CE0N/ontology/resource0DP/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}](#) only [Matter^C](#) *and* [has matter^{op}](#) some [Matter^C](#)

In Domain Of [has constituent^{op}](#)
[has matter^{op}](#)

In Range Of [has physical object^{op}](#)

Resource^C

IRI <http://w3id.org/CE0N/ontology/resource0DP/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 products 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/CE0N/ontology/resource0DP/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}](#) only [Physical object^C](#) *and* [has physical object^{op}](#) some [Physical object^C](#)

In Domain Of [has batch^{op}](#)

Object Properties

has location^{op}

IRI <http://w3id.org/CE0N/ontology/location/hasLocation>

Super Property Of [hasResourceLocation^{op}](#)

contains information^{op}

IRI <http://w3id.org/CE0N/ontology/resourceODP/containsInformation>

Sub Property Of [hasPart^{op}](#)

Domain [Information^c](#)

Range [Information^c](#)

has batch^{op}

IRI <http://w3id.org/CE0N/ontology/resourceODP/hasBatch>

Description hasBatch intends to represent that a set of objects can be captured by a number of batches where each batch contains a number of physical objects.

Domain [Set of objects^c](#)

Range [Batch of objects^c](#)

has constituent^{op}

IRI <http://w3id.org/CE0N/ontology/resourceODP/hasConstituent>

Description hasConstituent 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/CE0N/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/CE0N/ontology/resource0DP/hasPart>

Super Property Of

- [containsInformation](#)^{op}
- [has constituent](#)^{op}

has physical object^{op}

IRI <http://w3id.org/CE0N/ontology/resource0DP/hasPhysicalObject>

Description

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

Domain

[Set of objects](#)^c or [Batch of objects](#)^c

Range

[Physical object](#)^c

has resource location^{op}

IRI <http://w3id.org/CE0N/ontology/resource0DP/hasResourceLocation>

Sub Property Of [location:hasLocation](#)^{op}

Domain

[Resource](#)^c

Range

[location:Location](#)^c

is about^{op}

IRI <http://w3id.org/CE0N/ontology/resource0DP/isAbout>

Domain

[Information](#)^c

is realization of^{op}

IRI <http://w3id.org/CE0N/ontology/resource0DP/isRealizationOf>

Range

[Information](#)^c

Datatype Properties

batch size^{dp}

| | |
|--------------------|---|
| IRI | http://w3id.org/CE0N/ontology/resource0DP/batchSize |
| Description | batchSize intends to represent how many physical objects are belong to a batch of objects. |
| Domain | Batch of objects ^c |
| Range | xsd:nonNegativeInteger |

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/cannotation-schema.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# |
| location | http://w3id.org/CEON/ontology/location/ |
| odp | http://www.ontologydesignpatterns.org/schemas/cannotationschema.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 |