

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/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} 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} <i>exactly</i> 1 Batch of objects ^c |

Composition^C

| | |
|--------------------|--|
| IRI | http://w3id.org/CE0N/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 composition should hold information of the ratio of the composing chemical elements. |

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/DigitalObject |
| 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/resourceODP/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} only Constituent^C <i>and</i> has constituent^{op} some Constituent^C has matter^{op} some Matter^C <i>and</i> 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/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 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/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} only Batch of objects^C <i>and</i> has batch^{op} some Batch of objects^C has physical object^{op} some Physical object^C <i>and</i> 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/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 or batch of objects can be captured by a number of batches where each batch contains a number of physical objects. |
| Domain | Batch of objects ^c <i>or</i> 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/resource0DP/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 | <ul style="list-style-type: none">• 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 | Batch of objects ^c or Set of objects ^c |
| Range | Physical object ^c |

has resource location^{op}

| | |
|---------------|---|
| IRI | http://w3id.org/CE0N/ontology/resource0DP/hasResourceLocation |
| Domain | Resource ^c |
| Range | Geometry ^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 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/cpannotation/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# |
| 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 |