ODRL Vocabulary & Expression 2.2

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Please check the **errata** for any errors or issues reported since publication.

See also **translations**.

Abstract

The Open Digital Rights Language (ODRL) is a policy expression language that provides a flexible and interoperable information model, vocabulary, and encoding mechanisms for representing statements about the usage of content and services. The ODRL Vocabulary and Expression describes the terms used in ODRL policies and how to encode them.

Status of This Document

This section describes the status of this document at the time of its publication. Other documents may supersede this document. A list of current W3C publications and the latest revision of this technical report can be found in the [W3C technical reports index](#) at https://www.w3.org/TR/.

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Please see the Working Group's [implementation report](#).

This document has been reviewed by W3C Members, by software developers, and by other W3C groups and interested parties, and is endorsed by the Director as a W3C Recommendation. It is a stable document and may be used as reference material or cited from another document. W3C's role in making the Recommendation is to draw attention to the specification and to promote its widespread deployment. This enhances the functionality and interoperability of the Web.

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This document is governed by the [1 February 2018 W3C Process Document](#).

Table of Contents

1. Introduction

This section is non-normative.

The ODRL Vocabulary and Expression specifies the set of RDF classes, predicates and named entities that are used by the ODRL Information Model [odrl-model] which defines the ODRL Core Vocabulary. This document also lists recommended terms in the ODRL Common Vocabulary that may be used to define ODRL Profiles.

In addition to supported RDF serialisations, the ODRL Vocabulary and Expression provides the JSON-LD Context and profile definitions needed to use the ODRL JSON serialisation in a Linked Data context, and includes an alternate XML serialisation.

2. Conformance

As well as sections marked as non-normative, all authoring guidelines, diagrams, examples, and notes in this specification are non-normative. Everything else in this specification is normative.

The key words *MAY*, *MUST*, *MUST NOT*, *OPTIONAL*, *REQUIRED*, and *SHOULD* are to be interpreted as described in [RFC2119].

The ODRL Vocabulary & Expression is formalized as the ODRL Ontology. See section 5 Vocabulary Expression for further details.

2.1 Namespaces

The ODRL Vocabulary references the following Namespaces:

Prefix	*Namespace*	*Description*
odrl	http://www.w3.org/ns/odrl/2/	ODRL Vocabulary
rdf	http://www.w3.org/1999/02/22-rdf-syntax-ns#	[rdf11-concepts]
rdfs	http://www.w3.org/2000/01/rdf-schema#	[rdf-schema]
owl	http://www.w3.org/2002/07/owl#	[owl2-overview]
xsd	http://www.w3.org/2001/XMLSchema#	[xmlschema11-2]
skos	http://www.w3.org/2004/02/skos/core#	[skos-reference]
dcterms	http://purl.org/dc/terms/	[dcterms]
vcard	http://www.w3.org/2006/vcard/ns#	[vcard-rdf]
foaf	http://xmlns.com/foaf/0.1/	[foaf]
schema	http://schema.org/	schema.org
cc	https://creativecommons.org/ns#	creativecommons.org

3. ODRL Core Vocabulary

The ODRL Core Vocabulary defines the semantics for the concepts and terms from the ODRL Information Model [odrl-model]. The ODRL Core Vocabulary represents the minimally supported terms for ODRL Policies.

Any reference to vocabulary items other than ODRL terms are considered to be informative.

3.1 Policy

3.1.1 Policy

Definition:	A non-empty group of Permissions and/or Prohibitions.
Label:	Policy
Identifier:	http://www.w3.org/ns/odrl/2/Policy
Note:	A Policy may contain multiple Rules.
Sub-classes:	Agreement, Assertion, Offer, Privacy, Request, Set, Ticket
Properties:	conflict, permission, prohibition, inheritFrom, profile, obligation, uid, relation, target, function, action, constraint, assignee, assigner
In Range Of:	hasPolicy, inheritFrom, assigneeOf, assignerOf

3.1.2 Unique Identifier

Definition:	An unambiguous identifier
Label:	Unique Identifier
Identifier:	http://www.w3.org/ns/odrl/2/uid
Note:	Used by the Policy, Rule, Asset, Party, Constraint, and Logical Constraint Classes.

Domain:	Asset, Constraint, LogicalConstraint, Party, Policy, Rule

3.1.3 Profile

Definition:	The identifier(s) of an ODRL Profile that the Policy conforms to.
Label:	Profile
Identifier:	http://www.w3.org/ns/odrl/2/profile
Note:	The profile property is mandatory if the Policy is using an ODRL Profile.
Domain:	Policy

3.1.4 Inherits From

Definition:	Relates a (child) policy to another (parent) policy from which terms are inherited.
Label:	Inherits From
Identifier:	http://www.w3.org/ns/odrl/2/inheritFrom
Note:	The child policy will inherit Rules from the parent policy
Domain:	Policy
Range:	Policy

3.2 Policy Subclasses

3.2.1 Agreement

Definition:	A Policy that grants the assignee a Rule over an Asset from an assigner.
Label:	Agreement
Identifier:	http://www.w3.org/ns/odrl/2/Agreement
Note:	An Agreement Policy *MUST* contain at least one Permission or Prohibition rule, a Party with Assigner function, and a Party with Assignee function (in the same Permission or Prohibition). The Agreement Policy will grant the terms of the Policy from the Assigner to the Assignee.
Parent class:	Policy
Disjoint classes:	Assertion, Offer, Privacy, Request, Ticket

3.2.2 Offer

Definition:	A Policy that proposes a Rule over an Asset from an assigner.
Label:	Offer
Identifier:	http://www.w3.org/ns/odrl/2/Offer
Note:	An Offer Policy *MUST* contain at least one Permission or Prohibition rule and a Party with Assigner function (in the same Permission or Prohibition). The Offer Policy *MAY* contain a Party with Assignee function, but *MUST* not grant any privileges to that Party.
Parent class:	Policy
Disjoint classes:	Agreement, Assertion, Privacy, Request, Ticket

3.2.3 Set

Definition:	A Policy that expresses a Rule over an Asset.
Label:	Set
Identifier:	http://www.w3.org/ns/odrl/2/Set
Note:	A Set Policy *MUST* contain a target Asset, and at least one Rule. A Set Policy is the default Policy subclass. The Set is aimed at scenarios where there is an open criteria for the semantics of the policy expressions and typically refined by other systems/profiles that process the information at a later time. No privileges are granted to any Party (if defined).
Parent class:	Policy
Disjoint classes:	Agreement, Assertion, Offer, Privacy, Request, Ticket

3.3 Rule

3.3.1 Rule

Definition:	An abstract concept that represents the common characteristics of Permissions, Prohibitions, and Duties.
Label:	Rule
Identifier:	http://www.w3.org/ns/odrl/2/Rule
Note:	Rule is an abstract concept.
Sub-classes:	Duty, Permission, Prohibition
Properties:	output, failure, uid, relation, target, function, action, constraint, assignee, assigner

In Range Of:	failure

3.3.2 Relation

Definition:	Relation is an abstract property which creates an explicit link between an Action and an Asset.
Label:	Relation
Identifier:	http://www.w3.org/ns/odrl/2/relation
Note:	Sub-properties of relation are used to define the nature of that link.
Sub-properties:	output, target
Domain:	Policy, Rule
Range:	Asset

3.3.3 Function

Definition:	Function is an abstract property whose sub-properties define the functional roles which may be fulfilled by a party in relation to a Rule.
Label:	Function
Identifier:	http://www.w3.org/ns/odrl/2/function
Sub-properties:	assignee, assigner, attributedParty, attributingParty, compensatedParty, compensatingParty, consentedParty, consentingParty, contractedParty, contractingParty, informedParty, informingParty, trackedParty, trackingParty
Domain:	Policy, Rule
Range:	Party

3.3.4 Failure

Definition:	Failure is an abstract property that defines the violation (or unmet) relationship between Rules.
Label:	Failure
Identifier:	http://www.w3.org/ns/odrl/2/failure
Note:	The parent property to sub-properties that express explicit failure contexts.
Sub-properties:	consequence, remedy
Domain:	Rule
Range:	Rule

3.4 Asset

3.4.1 Asset

Definition:	A resource or a collection of resources that are the subject of a Rule.
Label:	Asset
Identifier:	http://www.w3.org/ns/odrl/2/Asset
Note:	The Asset entity can be any form of identifiable resource, such as data/information, content/media, applications, or services. Furthermore, it can be used to represent other Asset entities that are needed to undertake the Policy expression, such as with the Duty entity. To describe more details about the Asset, it is recommended to use Dublin Core [dcterms] elements or other content metadata.
Sub-classes:	AssetCollection

Properties:	hasPolicy, partOf, uid
In Range Of:	relation, output, target

3.4.2 Asset Collection

Definition:	An Asset that is collection of individual resources
Label:	Asset Collection
Identifier:	http://www.w3.org/ns/odrl/2/AssetCollection
Parent class:	Asset
Properties:	source, refinement
In Range Of:	partOf

3.5 Asset Relations

3.5.1 Target

Definition:	The target property indicates the Asset that is the primary subject to which the Rule action directly applies.
Label:	Target
Identifier:	http://www.w3.org/ns/odrl/2/target
Parent property:	relation

Domain:	Policy, Rule
Range:	Asset

3.5.2 Target Policy

Definition:	Identifies an ODRL Policy for which the identified Asset is the target Asset to all the Rules.
Label:	Target Policy
Identifier:	http://www.w3.org/ns/odrl/2/hasPolicy
Note:	The Asset being identified *MUST* be inferred to be the target Asset of all of the Rules of the Policy.
Domain:	Asset
Range:	Policy

3.6 Party

3.6.1 Party

Definition:	An entity or a collection of entities that undertake Roles in a Rule.
Label:	Party
Identifier:	http://www.w3.org/ns/odrl/2/Party
Note:	The Party entity could be a person, group of people, organisation, or agent. An agent is a person or thing that takes an active role or produces a specified effect. To describe more details about the Party, it is recommended to use W3C vCard Ontology [vcard-rdf] or FOAF Vocabulary [foaf].

Parent class:	schema:Organization, schema:Person, vcard:Agent, vcard:Individual, vcard:Organization, foaf:Agent, foaf:Organization, foaf:Person
Sub-classes:	PartyCollection
Properties:	assigneeOf, assignerOf, partOf, uid
In Range Of:	function, assignee, assigner

3.6.2 Party Collection

Definition:	A Party that is a group of individual entities
Label:	Party Collection
Identifier:	http://www.w3.org/ns/odrl/2/PartyCollection
Parent class:	Party
Properties:	source, refinement
In Range Of:	partOf

3.7 Party Functions

3.7.1 Assignee

Definition:	The Party is the recipient of the Rule.
Label:	Assignee

Identifier:	http://www.w3.org/ns/odrl/2/assignee
Parent property:	function
Domain:	Policy, Rule
Range:	Party

3.7.2 Assigner

Definition:	The Party is the issuer of the Rule.
Label:	Assigner
Identifier:	http://www.w3.org/ns/odrl/2/assigner
Parent property:	function
Domain:	Policy, Rule
Range:	Party

3.7.3 Assignee Of

Definition:	Identifies an ODRL Policy for which the identified Party undertakes the assignee functional role.
Label:	Assignee Of
Identifier:	http://www.w3.org/ns/odrl/2/assigneeOf
Note:	When assigneeOf has been asserted between a metadata expression and an ODRL Policy, the Party being identified *MUST* be inferred to undertake the assignee functional role of all the Rules of that Policy.

Domain:	Party
Range:	Policy

3.7.4 Assigner Of

Definition:	Identifies an ODRL Policy for which the identified Party undertakes the assigner functional role.
Label:	Assigner Of
Identifier:	http://www.w3.org/ns/odrl/2/assignerOf
Note:	When assignerOf has been asserted between a metadata expression and an ODRL Policy, the Party being identified *MUST* be inferred to undertake the assigner functional role of all the Rules of that Policy.
Domain:	Party
Range:	Policy

3.8 Asset and Party

3.8.1 Part Of

Definition:	Identifies an Asset/PartyCollection that the Asset/Party is a member of.
Label:	Part Of
Identifier:	http://www.w3.org/ns/odrl/2/partOf
Domain:	Asset, Party
Range:	AssetCollection, PartyCollection

3.8.2 Source

Definition:	Reference to a Asset/PartyCollection
Label:	Source
Identifier:	http://www.w3.org/ns/odrl/2/source
Note:	Used by AssetCollection and PartyCollection when constraints are applied.
Domain:	AssetCollection, PartyCollection

3.9 Permission

3.9.1 Permission

Definition:	The ability to perform an Action over an Asset.
Label:	Permission
Identifier:	http://www.w3.org/ns/odrl/2/Permission
Parent class:	Rule
Disjoint classes:	Duty, Prohibition
Properties:	duty
In Range Of:	permission

3.9.2 Has Permission

Definition:	Relates an individual Permission to a Policy.

Label:	Has Permission
Identifier:	http://www.w3.org/ns/odrl/2/permission
Domain:	Policy
Range:	Permission

3.10 Prohibition

3.10.1 Prohibition

Definition:	The inability to perform an Action over an Asset.
Label:	Prohibition
Identifier:	http://www.w3.org/ns/odrl/2/Prohibition
Parent class:	Rule
Disjoint classes:	Duty, Permission
Properties:	remedy
In Range Of:	prohibition

3.10.2 Has Prohibition

Definition:	Relates an individual Prohibition to a Policy.
Label:	Has Prohibition
Identifier:	http://www.w3.org/ns/odrl/2/prohibition

Domain:	Policy
Range:	Prohibition

3.11 Action

3.11.1 Action

Definition:	An operation on an Asset.
Label:	Action
Identifier:	http://www.w3.org/ns/odrl/2/Action
Note:	Actions may be allowed by Permissions, disallowed by Prohibitions, or made mandatory by Duties.
Parent class:	schema:Action
Properties:	includedIn, implies, refinement
In Range Of:	includedIn, implies, action
Instances:	Attribution, CommericalUse, DerivativeWorks, Distribution, Notice, Reproduction, ShareAlike, Sharing, SourceCode, acceptTracking, adHocShare, aggregate, annotate, anonymize, append, appendTo, archive, attachPolicy, attachSource, attribute, commercialize, compensate, concurrentUse, copy, delete, derive, digitize, display, distribute, ensureExclusivity, execute, export, extract, extractChar, extractPage, extractWord, give, grantUse, include, index, inform, install, lease, lend, license, modify, move, nextPolicy, obtainConsent, pay, play, present, preview, print, read, reproduce, reviewPolicy, secondaryUse, sell, share, shareAlike, stream, synchronize, textToSpeech, transfer, transform, translate, uninstall, use, watermark, write, writeTo

3.11.2 Has Action

Definition:	The operation relating to the Asset for which the Rule is being subjected.
Label:	Has Action
Identifier:	http://www.w3.org/ns/odrl/2/action
Domain:	Policy, Rule
Range:	Action

3.11.3 Included In

Definition:	An Action transitively asserts that another Action that encompasses its operational semantics.
Label:	Included In
Identifier:	http://www.w3.org/ns/odrl/2/includedIn
Note:	The purpose is to explicitly assert that the semantics of the referenced instance of an other Action encompasses (includes) the semantics of this instance of Action. The includedIn property is transitive, and as such, the Actions form ancestor relationships.
Domain:	Action
Range:	Action

3.11.4 Implies

Definition:	An Action asserts that another Action is not prohibited to enable its operational semantics.
Label:	Implies

Identifier:	http://www.w3.org/ns/odrl/2/implies
Note:	The property asserts that an instance of Action entails that the other instance of Action is not prohibited.
Domain:	Action
Range:	Action

3.12 Actions for Rules

3.12.1 Use

Definition:	To use the Asset
Label:	Use
Identifier:	http://www.w3.org/ns/odrl/2/use
Note:	Use is the most generic action for all non-third-party usage. More specific types of the use action can be expressed by more targeted actions.
Included By:	Attribution, CommericalUse, DerivativeWorks, Distribution, Notice, Reproduction, ShareAlike, Sharing, SourceCode, acceptTracking, aggregate, annotate, anonymize, archive, attribute, compensate, concurrentUse, delete, derive, digitize, distribute, ensureExclusivity, execute, grantUse, include, index, inform, install, modify, move, nextPolicy, obtainConsent, play, present, print, read, reproduce, reviewPolicy, stream, synchronize, textToSpeech, transform, translate, uninstall, watermark
Class:	Action

3.12.2 Transfer Ownership

Definition:	To transfer the ownership of the Asset in perpetuity.

Label:	Transfer Ownership
Identifier:	http://www.w3.org/ns/odrl/2/transfer
Included By:	give, sell
Class:	Action

3.13 Duty

3.13.1 Duty

Definition:	The obligation to perform an Action
Label:	Duty
Identifier:	http://www.w3.org/ns/odrl/2/Duty
Parent class:	Rule
Disjoint classes:	Permission, Prohibition
Properties:	consequence
In Range Of:	duty, obligation, consequence, remedy

3.13.2 Obligation

Definition:	Relates an individual Duty to a Policy.
Label:	Obligation

Identifier:	http://www.w3.org/ns/odrl/2/obligation
Note:	The Duty is a requirement which must be fulfilled.
Domain:	Policy
Range:	Duty

3.13.3 Has Duty

Definition:	Relates an individual Duty to a Permission.
Label:	Has Duty
Identifier:	http://www.w3.org/ns/odrl/2/duty
Note:	A Duty is a pre-condition which must be fulfilled in order to receive the Permission.
Domain:	Permission
Range:	Duty

3.13.4 Consequence

Definition:	Relates a Duty to another Duty, the latter being a consequence of not fulfilling the former.
Label:	Consequence
Identifier:	http://www.w3.org/ns/odrl/2/consequence
Note:	The consequence property is utilised to express the repercussions of not fulfilling an agreed Policy obligation or duty for a Permission. If either of these fails to be fulfilled, then this will result in the consequence Duty also becoming a new requirement, meaning that the original obligation or duty, as well as the consequence Duty must all be fulfilled

Parent property:	failure
Domain:	Duty
Range:	Duty

3.13.5 Remedy

Definition:	Relates an individual remedy Duty to a Prohibition.
Label:	Remedy
Identifier:	http://www.w3.org/ns/odrl/2/remedy
Note:	The remedy property expresses an agreed Duty that must be fulfilled in case that a Prohibition has been violated by being exercised.
Parent property:	failure
Domain:	Prohibition
Range:	Duty

3.14 Constraint

3.14.1 Constraint

Definition:	A boolean expression that refines the semantics of an Action and Party/Asset Collection or declare the conditions applicable to a Rule.
Label:	Constraint
Identifier:	http://www.w3.org/ns/odrl/2/Constraint

Properties:	unit, dataType, operator, rightOperand, rightOperandReference, leftOperand, status, uid
In Range Of:	constraint, refinement

3.14.2 Has Constraint

Definition:	Constraint applied to a Rule
Label:	Has Constraint
Identifier:	http://www.w3.org/ns/odrl/2/constraint
Note:	Constraints on Rules are used to determine if a rule is Active or not. Example: the Permission rule is only active during the year 2018.
Domain:	Policy, Rule
Range:	Constraint, LogicalConstraint

3.14.3 Refinement

Definition:	Constraint used to refine the semantics of an Action, or Party/Asset Collection
Label:	Refinement
Identifier:	http://www.w3.org/ns/odrl/2/refinement
Note:	Example: the Action print is only permitted on 50% of the asset.
Domain:	Action, AssetCollection, PartyCollection
Range:	Constraint, LogicalConstraint

3.14.4 Operator

Definition:	Operator for constraint expression.
Label:	Operator
Identifier:	http://www.w3.org/ns/odrl/2/Operator
Note:	Instances of the Operator class representing relational operators.
In Range Of:	operator
Instances:	eq, gt, gteq, hasPart, isA, isAllOf, isAnyOf, isNoneOf, isPartOf, lt, lteq, neq

3.14.5 Has Operator

Definition:	The operator function applied to operands of a Constraint
Label:	Has Operator
Identifier:	http://www.w3.org/ns/odrl/2/operator
Domain:	Constraint
Range:	Operator

3.14.6 Right Operand

Definition:	Right operand for constraint expression.
Label:	Right Operand
Identifier:	http://www.w3.org/ns/odrl/2/RightOperand
Note:	Instances of the RightOperand class are used as the rightOperand of a Constraint.

In Range Of:	rightOperand
Instances:	policyUsage

3.14.7 Has Right Operand

Definition:	The value of the right operand in a constraint expression.
Label:	Has Right Operand
Identifier:	http://www.w3.org/ns/odrl/2/rightOperand
Note:	When used with set-based operators, a list of values may be used.
Domain:	Constraint
Range:	rdfs:Literal, xsd:anyURI, RightOperand

3.14.8 Has Right Operand Reference

Definition:	A reference to a web resource providing the value for the right operand of a Constraint.
Label:	Has Right Operand Reference
Identifier:	http://www.w3.org/ns/odrl/2/rightOperandReference
Note:	An IRI that *MUST* be dereferenced to obtain the actual right operand value. When used with set-based operators, a list of IRIs may be used
Domain:	Constraint

3.14.9 Left Operand

Definition:	Left operand for a constraint expression.
Label:	Left Operand
Identifier:	http://www.w3.org/ns/odrl/2/LeftOperand
Note:	Instances of the LeftOperand class are used as the leftOperand of a Constraint.
In Range Of:	leftOperand
Instances:	absolutePosition, absoluteSize, absoluteSpatialPosition, absoluteTemporalPosition, count, dateTime, delayPeriod, deliveryChannel, device, elapsedTime, event, fileFormat, industry, language, media, meteredTime, payAmount, percentage, product, purpose, recipient, relativePosition, relativeSize, relativeSpatialPosition, relativeTemporalPosition, resolution, spatial, spatialCoordinates, system, systemDevice, timeInterval, unitOfCount, version, virtualLocation

3.14.10 Has Left Operand

Definition:	The left operand in a constraint expression.
Label:	Has Left Operand
Identifier:	http://www.w3.org/ns/odrl/2/leftOperand
Domain:	Constraint
Range:	LeftOperand

3.14.11 Unit

Definition:	The unit of measurement of the value of the rightOperand or rightOperandReference of a Constraint.

Label:	Unit
Identifier:	http://www.w3.org/ns/odrl/2/unit
Domain:	Constraint

3.14.12 Datatype

Definition:	The datatype of the value of the rightOperand or rightOperandReference of a Constraint.
Label:	Datatype
Identifier:	http://www.w3.org/ns/odrl/2/dataType
Note:	In RDF encodings, use of the rdf:datatype *MUST* be used. In JSON-LD encoding, the use of @type *MUST* be used.
Domain:	Constraint
Range:	rdfs:Datatype

3.14.13 Status

Definition:	the value generated from the leftOperand action or a value related to the leftOperand set as the reference for the comparison.
Label:	Status
Identifier:	http://www.w3.org/ns/odrl/2/status
Domain:	Constraint

3.15 Logical Constraint

3.15.1 Logical Constraint

Definition:	A logical expression that refines the semantics of an Action and Party/Asset Collection or declare the conditions applicable to a Rule.
Label:	Logical Constraint
Identifier:	http://www.w3.org/ns/odrl/2/LogicalConstraint
Properties:	operand, uid
In Range Of:	constraint, refinement

3.15.2 Operand

Definition:	Operand is an abstract property for a logical relationship.
Label:	Operand
Identifier:	http://www.w3.org/ns/odrl/2/operand
Note:	Sub-properties of operand are used for Logical Constraints.
Sub-properties:	and, andSequence, or, xone
Domain:	LogicalConstraint

3.16 Constraint Operators

3.16.1 Equal to

Definition:	Indicating that a given value equals the right operand of the Constraint.
Label:	Equal to

Identifier:	http://www.w3.org/ns/odrl/2/eq
Class:	Operator

3.16.2 Greater than

Definition:	Indicating that a given value is greater than the right operand of the Constraint.
Label:	Greater than
Identifier:	http://www.w3.org/ns/odrl/2/gt
Class:	Operator

3.16.3 Greater than or equal to

Definition:	Indicating that a given value is greater than or equal to the right operand of the Constraint.
Label:	Greater than or equal to
Identifier:	http://www.w3.org/ns/odrl/2/gteq
Class:	Operator

3.16.4 Less than

Definition:	Indicating that a given value is less than the right operand of the Constraint.
Label:	Less than
Identifier:	http://www.w3.org/ns/odrl/2/lt
Class:	Operator

3.16.5 Less than or equal to

Definition:	Indicating that a given value is less than or equal to the right operand of the Constraint.
Label:	Less than or equal to
Identifier:	http://www.w3.org/ns/odrl/2/lteq
Class:	Operator

3.16.6 Not equal to

Definition:	Indicating that a given value is not equal to the right operand of the Constraint.
Label:	Not equal to
Identifier:	http://www.w3.org/ns/odrl/2/neq
Class:	Operator

3.16.7 Is a

Definition:	A set-based operator indicating that a given value is an instance of the right operand of the Constraint.
Label:	Is a
Identifier:	http://www.w3.org/ns/odrl/2/isA
Class:	Operator

3.16.8 Has part

Definition:	A set-based operator indicating that a given value contains the right operand of the Constraint.
Label:	Has part
Identifier:	http://www.w3.org/ns/odrl/2/hasPart
Class:	Operator

3.16.9 Is part of

Definition:	A set-based operator indicating that a given value is contained by the right operand of the Constraint.
Label:	Is part of
Identifier:	http://www.w3.org/ns/odrl/2/isPartOf
Class:	Operator

3.16.10 Is all of

Definition:	A set-based operator indicating that a given value is all of the right operand of the Constraint.
Label:	Is all of
Identifier:	http://www.w3.org/ns/odrl/2/isAllOf
Class:	Operator

3.16.11 Is any of

| *Definition:* | A set-based operator indicating that a given value is any of the right operand of |

the Constraint.

Label:	Is any of
Identifier:	http://www.w3.org/ns/odrl/2/isAnyOf
Class:	Operator

3.16.12 Is none of

Definition:	A set-based operator indicating that a given value is none of the right operand of the Constraint.
Label:	Is none of
Identifier:	http://www.w3.org/ns/odrl/2/isNoneOf
Class:	Operator

3.17 Logical Constraint Operands

3.17.1 Or

Definition:	The relation is satisfied when at least one of the Constraints is satisfied.
Label:	Or
Identifier:	http://www.w3.org/ns/odrl/2/or
Note:	This property *MUST* only be used for Logical Constraints, and the list of operand values *MUST* be Constraint instances.
Parent property:	operand

3.17.2 Only One

Definition:	The relation is satisfied when only one, and not more, of the Constaints is satisfied
Label:	Only One
Identifier:	http://www.w3.org/ns/odrl/2/xone
Note:	This property *MUST* only be used for Logical Constraints, and the list of operand values *MUST* be Constraint instances.
Parent property:	operand

3.17.3 And

Definition:	The relation is satisfied when all of the Constraints are satisfied.
Label:	And
Identifier:	http://www.w3.org/ns/odrl/2/and
Note:	This property *MUST* only be used for Logical Constraints, and the list of operand values *MUST* be Constraint instances.
Parent property:	operand

3.17.4 And Sequence

Definition:	The relation is satisfied when each of the Constraints are satisfied in the order specified.
Label:	And Sequence
Identifier:	http://www.w3.org/ns/odrl/2/andSequence

Note:	This property *MUST* only be used for Logical Constraints, and the list of operand values *MUST* be Constraint instances. The order of the list *MUST* be preserved. The andSequence operator is an example where there may be temporal conditional requirements between the operands. This may lead to situations where the outcome is unresolvable, such as deadlock if one of the Constraints is unable to be satisfied. ODRL Processing systems *SHOULD* plan for these scenarios and implement mechanisms to resolve them.
Parent property:	operand

3.18 Policy Conflict Strategy

3.18.1 Conflict Strategy Preference

Definition:	Used to establish strategies to resolve conflicts that arise from the merging of Policies or conflicts between Permissions and Prohibitions in the same Policy.
Label:	Conflict Strategy Preference
Identifier:	http://www.w3.org/ns/odrl/2/ConflictTerm
Note:	Instances of ConflictTerm describe strategies for resolving conflicts.
In Range Of:	conflict
Instances:	invalid, perm, prohibit

3.18.2 Handle Policy Conflicts

Definition:	The conflict-resolution strategy for a Policy.
Label:	Handle Policy Conflicts

Identifier:	http://www.w3.org/ns/odrl/2/conflict
Note:	If no strategy is specified, the default is invalid.
Domain:	Policy
Range:	ConflictTerm

3.18.3 Prefer Permissions

Definition:	Permissions take preference over prohibitions.
Label:	Prefer Permissions
Identifier:	http://www.w3.org/ns/odrl/2/perm
Note:	Used to determine policy conflict outcomes.
Class:	ConflictTerm

3.18.4 Prefer Prohibitions

Definition:	Prohibitions take preference over permissions.
Label:	Prefer Prohibitions
Identifier:	http://www.w3.org/ns/odrl/2/prohibit
Note:	Used to determine policy conflict outcomes.
Class:	ConflictTerm

3.18.5 Void Policy

Definition:	The policy is void.

Label:	Void Policy
Identifier:	http://www.w3.org/ns/odrl/2/invalid
Note:	Used to indicate the policy is void for Conflict Strategy.
Class:	ConflictTerm

4. ODRL Common Vocabulary

This section is non-normative.

The ODRL Common Vocabulary defines semantics for generic terms that *MAY* be used in ODRL Profiles.

4.1 Policy Subclasses

4.1.1 Assertion

Definition:	A Policy that asserts a Rule over an Asset from parties.
Label:	Assertion
Identifier:	http://www.w3.org/ns/odrl/2/Assertion
Note:	For example, a party (an assignee or assigner) can claim what terms they have over an Asset. An Assertion Policy does not grant such permissions/prohibitions but only asserts the parties claims. An Assetion Policy *MUST* contain a target Asset, a Party with any functional role, and at least one of a Permission or Prohibition rule.
Parent class:	Policy
Disjoint classes:	Offer, Privacy, Request, Ticket

4.1.2 Privacy Policy

Definition:	A Policy that expresses a Rule over an Asset containing personal information.
Label:	Privacy Policy
Identifier:	http://www.w3.org/ns/odrl/2/Privacy
Note:	A Privacy Policy *MUST* contain a target Asset, a Party with Assigner is, a Party with Assignee function, and at least one of a Permission or Prohibition rule that *MUST* include a Duty. The target Asset *SHOULD* contain or relate to personal information about the Assignee. The Duty *MUST* describe obligations on the Assigner about managing the Asset. The Assignee is being granted the terms of the Privacy policy from the Assigner.
Parent class:	Policy
Disjoint classes:	Agreement, Assertion, Offer, Request, Ticket

4.1.3 Request

Definition:	A Policy that proposes a Rule over an Asset from an assignee.
Label:	Request
Identifier:	http://www.w3.org/ns/odrl/2/Request
Note:	A Request Policy *MUST* contain a target Asset, a Party with Assignee function, and at least one of a Permission or Prohibition rule. The Request *MAY* also contain the Party with Assigner function if this is known. No privileges are granted to any Party.
Parent class:	Policy
Disjoint classes:	Agreement, Assertion, Offer, Privacy, Ticket

4.1.4 Ticket

Definition:	A Policy that grants the holder a Rule over an Asset from an assigner.
Label:	Ticket
Identifier:	http://www.w3.org/ns/odrl/2/Ticket
Note:	A Ticket Policy *MUST* contain a target Asset and at least one of a Permission or Prohibition rule. The Ticket *MAY* contain the Party with Assigner function and *MUST NOT* contain an Assignee. The Ticket Policy will grant the terms of the Policy to the holder of that Ticket. The holder of the Ticket *MAY* remain unknown or *MAY* have to be identified at some later stage.
Parent class:	Policy
Disjoint classes:	Agreement, Assertion, Offer, Privacy, Request

4.2 Asset Relations

4.2.1 Output

Definition:	The output property specifies the Asset which is created from the output of the Action.
Label:	Output
Identifier:	http://www.w3.org/ns/odrl/2/output
Parent property:	relation
Domain:	Rule
Range:	Asset

4.3 Party Functions

4.3.1 Attributed Party

Definition:	The Party to be attributed.
Label:	Attributed Party
Identifier:	http://www.w3.org/ns/odrl/2/attributedParty
Note:	Maybe specified as part of the attribute action.
Parent property:	function

4.3.2 Attributing Party

Definition:	The Party who undertakes the attribution.
Label:	Attributing Party
Identifier:	http://www.w3.org/ns/odrl/2/attributingParty
Note:	Maybe specified as part of the attribute action.
Parent property:	function

4.3.3 Compensated Party

Definition:	The Party is the recipient of the compensation.
Label:	Compensated Party
Identifier:	http://www.w3.org/ns/odrl/2/compensatedParty

Note:	Maybe specified as part of the compensate duty action.
Parent property:	function

4.3.4 Compensating Party

Definition:	The Party that is the provider of the compensation.
Label:	Compensating Party
Identifier:	http://www.w3.org/ns/odrl/2/compensatingParty
Note:	Maybe specified as part of the compensate duty action.
Parent property:	function

4.3.5 Consenting Party

Definition:	The Party to obtain consent from.
Label:	Consenting Party
Identifier:	http://www.w3.org/ns/odrl/2/consentingParty
Note:	Maybe specified as part of the obtainConsent action.
Parent property:	function

4.3.6 Consented Party

Definition:	The Party who obtains the consent.

Label:	Consented Party
Identifier:	http://www.w3.org/ns/odrl/2/consentedParty
Note:	Maybe specified as part of the obtainConsent action.
Parent property:	function

4.3.7 Contracting Party

Definition:	The Party who is offering the contract.
Label:	Contracting Party
Identifier:	http://www.w3.org/ns/odrl/2/contractingParty
Parent property:	function

4.3.8 Contracted Party

Definition:	The Party who is being contracted.
Label:	Contracted Party
Identifier:	http://www.w3.org/ns/odrl/2/contractedParty
Parent property:	function

4.3.9 Informed Party

Definition:	The Party to be informed of all uses.

Label:	Informed Party
Identifier:	http://www.w3.org/ns/odrl/2/informedParty
Note:	Maybe specified as part of the inform action.
Parent property:	function

4.3.10 Informing Party

Definition:	The Party who provides the inform use data.
Label:	Informing Party
Identifier:	http://www.w3.org/ns/odrl/2/informingParty
Note:	Maybe specified as part of the inform action.
Parent property:	function

4.3.11 Tracking Party

Definition:	The Party who is tracking usage.
Label:	Tracking Party
Identifier:	http://www.w3.org/ns/odrl/2/trackingParty
Note:	May be specified as part of the acceptTracking action.
Parent property:	function

4.3.12 Tracked Party

Definition:	The Party whose usage is being tracked.
Label:	Tracked Party
Identifier:	http://www.w3.org/ns/odrl/2/trackedParty
Note:	May be specified as part of the acceptTracking action.
Parent property:	function

4.4 Actions for Rules

4.4.1 Accept Tracking

Definition:	To accept that the use of the Asset may be tracked.
Label:	Accept Tracking
Identifier:	http://www.w3.org/ns/odrl/2/acceptTracking
Note:	The collected information may be tracked by the Assigner, or may link to a Party with the role 'trackingParty' function.
Included In:	use
Class:	Action

4.4.2 Aggregate

Definition:	To use the Asset or parts of it as part of a composite collection.
Label:	Aggregate
Identifier:	http://www.w3.org/ns/odrl/2/aggregate

Included In:	use
Class:	Action

4.4.3 Annotate

Definition:	To add explanatory notations/commentaries to the Asset without modifying the Asset in any other way.
Label:	Annotate
Identifier:	http://www.w3.org/ns/odrl/2/annotate
Included In:	use
Class:	Action

4.4.4 Anonymize

Definition:	To anonymize all or parts of the Asset.
Label:	Anonymize
Identifier:	http://www.w3.org/ns/odrl/2/anonymize
Note:	For example, to remove identifying particulars for statistical or for other comparable purposes, or to use the Asset without stating the author/source.
Included In:	use
Class:	Action

4.4.5 Archive

Definition:	To store the Asset (in a non-transient form).
Label:	Archive
Identifier:	http://www.w3.org/ns/odrl/2/archive
Note:	Temporal constraints may be used for temporal conditions.
Included In:	use
Class:	Action

4.4.6 Attribute

Definition:	To attribute the use of the Asset.
Label:	Attribute
Identifier:	http://www.w3.org/ns/odrl/2/attribute
Note:	May link to an Asset with the attribution information. May link to a Party with the role "attributedParty" function.
Included In:	use
Class:	Action

4.4.7 Attribution

Definition:	Credit be given to copyright holder and/or author.
Label:	Attribution
Identifier:	http://creativecommons.org/ns#Attribution

Note:	This term is defined by Creative Commons.
Included In:	use
Class:	Action

4.4.8 Commercial Use

Definition:	Exercising rights for commercial purposes.
Label:	Commercial Use
Identifier:	http://creativecommons.org/ns#CommericalUse
Note:	This term is defined by Creative Commons.
Included In:	use
Class:	Action

4.4.9 Compensate

Definition:	To compensate by transfer of some amount of value, if defined, for using or selling the Asset.
Label:	Compensate
Identifier:	http://www.w3.org/ns/odrl/2/compensate
Note:	The compensation may use different types of things with a value: (i) the thing is expressed by the value (term) of the Constraint name; (b) the value is expressed by operator, rightOperand, dataType and unit. Typically the assignee will compensate the assigner, but other compensation party roles may be used.

Included In:	use
Class:	Action

4.4.10 Concurrent Use

Definition:	To create multiple copies of the Asset that are being concurrently used.
Label:	Concurrent Use
Identifier:	http://www.w3.org/ns/odrl/2/concurrentUse
Included In:	use
Class:	Action

4.4.11 Delete

Definition:	To permanently remove all copies of the Asset after it has been used.
Label:	Delete
Identifier:	http://www.w3.org/ns/odrl/2/delete
Note:	Use a constraint to define under which conditions the Asset must be deleted.
Included In:	use
Class:	Action

4.4.12 Derive

Definition:	To create a new derivative Asset from this Asset and to edit or modify the derivative.
Label:	Derive
Identifier:	http://www.w3.org/ns/odrl/2/derive
Note:	A new asset is created and may have significant overlaps with the original Asset. (Note that the notion of whether or not the change is significant enough to qualify as a new asset is subjective). To the derived Asset a next policy may be applied.
Included In:	use
Class:	Action

4.4.13 Derivative Works

Definition:	Distribution of derivative works.
Label:	Derivative Works
Identifier:	http://creativecommons.org/ns#DerivativeWorks
Note:	This term is defined by Creative Commons.
Included In:	use
Class:	Action

4.4.14 Digitize

Definition:	To produce a digital copy of (or otherwise digitize) the Asset from its analogue form.

Label:	Digitize
Identifier:	http://www.w3.org/ns/odrl/2/digitize
Included In:	use
Class:	Action

4.4.15 Display

Definition:	To create a static and transient rendition of an Asset.
Label:	Display
Identifier:	http://www.w3.org/ns/odrl/2/display
Note:	For example, displaying an image on a screen. If the action is to be performed to a wider audience than just the Assignees, then the Recipient constraint is recommended to be used.
Included In:	play
Class:	Action

4.4.16 Distribute

Definition:	To supply the Asset to third-parties.
Label:	Distribute
Identifier:	http://www.w3.org/ns/odrl/2/distribute
Note:	It is recommended to use nextPolicy to express the allowable usages by third-parties.

Included In:	use
Class:	Action

4.4.17 Distribution

Definition:	Distribution, public display, and publicly performance.
Label:	Distribution
Identifier:	http://creativecommons.org/ns#Distribution
Note:	This term is defined by Creative Commons.
Included In:	use
Class:	Action

4.4.18 Ensure Exclusivity

Definition:	To ensure that the Rule on the Asset is exclusive.
Label:	Ensure Exclusivity
Identifier:	http://www.w3.org/ns/odrl/2/ensureExclusivity
Note:	If used as a Duty, the assignee should be explicitly indicated as the party that is ensuring the exclusivity of the Rule.
Included In:	use
Class:	Action

4.4.19 Execute

Definition:	To run the computer program Asset.
Label:	Execute
Identifier:	http://www.w3.org/ns/odrl/2/execute
Note:	For example, machine executable code or Java such as a game or application.
Included In:	use
Class:	Action

4.4.20 Extract

Definition:	To extract parts of the Asset and to use it as a new Asset.
Label:	Extract
Identifier:	http://www.w3.org/ns/odrl/2/extract
Note:	A new asset is created and may have very little in common with the original Asset. (Note that the notion of whether or not the change is significant enough to qualify as a new asset is subjective). To the extracted Asset a next policy may be applied.
Included In:	reproduce
Class:	Action

4.4.21 Give

Definition:	To transfer the ownership of the Asset to a third party without compensation and while deleting the original asset.

Label:	Give
Identifier:	http://www.w3.org/ns/odrl/2/give
Included In:	transfer
Class:	Action

4.4.22 Grant Use

Definition:	To grant the use of the Asset to third parties.
Label:	Grant Use
Identifier:	http://www.w3.org/ns/odrl/2/grantUse
Note:	This action enables the assignee to create policies for the use of the Asset for third parties. The nextPolicy is recommended to be agreed with the third party. Use of temporal constraints is recommended.
Included In:	use
Class:	Action

4.4.23 Include

Definition:	To include other related assets in the Asset.
Label:	Include
Identifier:	http://www.w3.org/ns/odrl/2/include
Note:	For example: bio picture must be included in the attribution. Use of a relation sub-property is required for the related assets.

Included In:	use
Class:	Action

4.4.24 Index

Definition:	To record the Asset in an index.
Label:	Index
Identifier:	http://www.w3.org/ns/odrl/2/index
Note:	For example, to include a link to the Asset in a search engine database.
Included In:	use
Class:	Action

4.4.25 Inform

Definition:	To inform that an action has been performed on or in relation to the Asset.
Label:	Inform
Identifier:	http://www.w3.org/ns/odrl/2/inform
Note:	May link to a Party with the role 'informedParty' function.
Included In:	use
Class:	Action

4.4.26 Install

Definition:	To load the computer program Asset onto a storage device which allows operating or running the Asset.
Label:	Install
Identifier:	http://www.w3.org/ns/odrl/2/install
Included In:	use
Class:	Action

4.4.27 Modify

Definition:	To change existing content of the Asset. A new asset is not created by this action.
Label:	Modify
Identifier:	http://www.w3.org/ns/odrl/2/modify
Note:	This action will modify an asset which is typically updated from time to time without creating a new asset. If the result from modifying the asset should be a new asset the actions derive or extract should be used. (Note that the notion of whether or not the change is significant enough to qualify as a new asset is subjective).
Included In:	use
Class:	Action

4.4.28 Move

Definition:	To move the Asset from one digital location to another including deleting the original copy.

Label:	Move
Identifier:	http://www.w3.org/ns/odrl/2/move
Note:	After the Asset has been moved, the original copy must be deleted.
Included In:	use
Class:	Action

4.4.29 Next Policy

Definition:	To grant the specified Policy to a third party for their use of the Asset.
Label:	Next Policy
Identifier:	http://www.w3.org/ns/odrl/2/nextPolicy
Note:	Useful for downstream policies.
Included In:	use
Class:	Action

4.4.30 Notice

Definition:	Copyright and license notices be kept intact.
Label:	Notice
Identifier:	http://creativecommons.org/ns#Notice
Note:	This term is defined by Creative Commons.

Included In:	use

Class:	Action

4.4.31 Obtain Consent

Definition:	To obtain verifiable consent to perform the requested action in relation to the Asset.
Label:	Obtain Consent
Identifier:	http://www.w3.org/ns/odrl/2/obtainConsent
Note:	May be used as a Duty to ensure that the Assigner or a Party is authorized to approve such actions on a case-by-case basis. May link to a Party with the role "consentingParty" function.
Included In:	use
Class:	Action

4.4.32 Play

Definition:	To create a sequential and transient rendition of an Asset.
Label:	Play
Identifier:	http://www.w3.org/ns/odrl/2/play
Note:	For example, to play a video or audio track. If the action is to be performed to a wider audience than just the Assignees, then the Recipient constraint is recommended to be used.

Included By:	[display](#)
Included In:	[use](#)
Class:	[Action](#)

4.4.33 Present

Definition:	To publicly perform the Asset.
Label:	Present
Identifier:	http://www.w3.org/ns/odrl/2/present
Note:	The asset can be performed (or communicated) in public.
Included In:	[use](#)
Class:	[Action](#)

4.4.34 Print

Definition:	To create a tangible and permanent rendition of an Asset.
Label:	Print
Identifier:	http://www.w3.org/ns/odrl/2/print
Note:	For example, creating a permanent, fixed (static), and directly perceivable representation of the Asset, such as printing onto paper.
Included In:	[use](#)

Class:	Action

4.4.35 Read

Definition:	To obtain data from the Asset.
Label:	Read
Identifier:	http://www.w3.org/ns/odrl/2/read
Note:	For example, the ability to read a record from a database (the Asset).
Included In:	use
Class:	Action

4.4.36 Reproduce

Definition:	To make duplicate copies the Asset in any material form.
Label:	Reproduce
Identifier:	http://www.w3.org/ns/odrl/2/reproduce
Included By:	extract
Included In:	use
Class:	Action

4.4.37 Reproduction

Definition:	Making multiple copies.
Label:	Reproduction
Identifier:	http://creativecommons.org/ns#Reproduction
Note:	This term is defined by Creative Commons.
Included In:	use
Class:	Action

4.4.38 Review Policy

Definition:	To review the Policy applicable to the Asset.
Label:	Review Policy
Identifier:	http://www.w3.org/ns/odrl/2/reviewPolicy
Note:	Used when human intervention is required to review the Policy. May link to an Asset which represents the full Policy information.
Included In:	use
Class:	Action

4.4.39 Sell

Definition:	To transfer the ownership of the Asset to a third party with compensation and while deleting the original asset.
Label:	Sell
Identifier:	http://www.w3.org/ns/odrl/2/sell

Included In:	transfer
Class:	Action

4.4.40 Share Alike

Definition:	Derivative works be licensed under the same terms or compatible terms as the original work.
Label:	Share Alike
Identifier:	http://creativecommons.org/ns#ShareAlike
Note:	This term is defined by Creative Commons.
Included In:	use
Class:	Action

4.4.41 Sharing

Definition:	Permits commercial derivatives, but only non-commercial distribution.
Label:	Sharing
Identifier:	http://creativecommons.org/ns#Sharing
Note:	This term is defined by Creative Commons.
Included In:	use
Class:	Action

4.4.42 Source Code

Definition:	Source code (the preferred form for making modifications) must be provided when exercising some rights granted by the license.
Label:	Source Code
Identifier:	http://creativecommons.org/ns#SourceCode
Note:	This term is defined by Creative Commons.
Included In:	use
Class:	Action

4.4.43 Stream

Definition:	To deliver the Asset in real-time.
Label:	Stream
Identifier:	http://www.w3.org/ns/odrl/2/stream
Note:	The Asset maybe utilised in real-time as it is being delivered. If the action is to be performed to a wider audience than just the Assignees, then the Recipient constraint is recommended to be used.
Included In:	use
Class:	Action

4.4.44 Synchronize

Definition:	To use the Asset in timed relations with media (audio/visual) elements of another Asset.

Label:	Synchronize
Identifier:	http://www.w3.org/ns/odrl/2/synchronize
Included In:	use
Class:	Action

4.4.45 Text-to-speech

Definition:	To have a text Asset read out loud.
Label:	Text-to-speech
Identifier:	http://www.w3.org/ns/odrl/2/textToSpeech
Note:	If the action is to be performed to a wider audience than just the Assignees, then the recipient constraint is recommended to be used.
Included In:	use
Class:	Action

4.4.46 Transform

Definition:	To convert the Asset into a different format.
Label:	Transform
Identifier:	http://www.w3.org/ns/odrl/2/transform
Note:	Typically used to convert the Asset into a different format for consumption on/transfer to a third party system.
Included	use

In:	
Class:	[Action](#)

4.4.47 Translate

Definition:	To translate the original natural language of an Asset into another natural language.
Label:	Translate
Identifier:	http://www.w3.org/ns/odrl/2/translate
Note:	A new derivative Asset is created by that action.
Included In:	[use](#)
Class:	[Action](#)

4.4.48 Uninstall

Definition:	To unload and delete the computer program Asset from a storage device and disable its readiness for operation.
Label:	Uninstall
Identifier:	http://www.w3.org/ns/odrl/2/uninstall
Note:	The Asset is no longer accessible to the assignees after it has been used.
Included In:	[use](#)
Class:	[Action](#)

4.4.49 Watermark

Definition:	To apply a watermark to the Asset.
Label:	Watermark
Identifier:	http://www.w3.org/ns/odrl/2/watermark
Included In:	use
Class:	Action

4.5 Constraint Left Operands

This section contains instances of LeftOperands that can be used as the leftOperand of a Constraint . The LeftOperands may be used in Constraints for either the constraint property (applying to a Rule) or a refinement property (applying to the Action). ODRL policy expressions should utilise Constraints that are appropriate for the intended semantics of the LeftOperand.

4.5.1 Absolute Asset Position

Definition:	A point in space or time defined with absolute coordinates for the positioning of the target Asset.
Label:	Absolute Asset Position
Identifier:	http://www.w3.org/ns/odrl/2/absolutePosition
Note:	Example: The upper left corner of a picture may be constrained to a specific position of the canvas rendering it.
Narrower terms:	absoluteSpatialPosition, absoluteTemporalPosition
Class:	LeftOperand

4.5.2 Absolute Spatial Asset Position

Definition:	The absolute spatial positions of four corners of a rectangle on a 2D-canvas or the eight corners of a cuboid in a 3D-space for the target Asset to fit.
Label:	Absolute Spatial Asset Position
Identifier:	http://www.w3.org/ns/odrl/2/absoluteSpatialPosition
Note:	Example: The upper left corner of a picture may be constrained to a specific position of the canvas rendering it. Note: see also the Left Operand Relative Spatial Asset Position.
Broader terms:	absolutePosition
Class:	LeftOperand

4.5.3 Absolute Temporal Asset Position

Definition:	The absolute temporal positions in a media stream the target Asset has to fit.
Label:	Absolute Temporal Asset Position
Identifier:	http://www.w3.org/ns/odrl/2/absoluteTemporalPosition
Note:	Use with Actions including the target Asset in a larger media stream. The fragment part of a Media Fragment URI (https://www.w3.org/TR/media-frags/) may be used for the right operand. See the Left Operand realativeTemporalPosition. Example: The MP3 music file must be positioned between second 192 and 250 of the temporal length of a stream.
Broader terms:	absolutePosition
Class:	LeftOperand

4.5.4 Absolute Asset Size

Definition:	Measure(s) of one or two axes for 2D-objects or measure(s) of one to tree axes for 3D-objects of the target Asset.
Label:	Absolute Asset Size
Identifier:	http://www.w3.org/ns/odrl/2/absoluteSize
Note:	Example: The image can be resized in width to a maximum of 1000px.
Class:	LeftOperand

4.5.5 Count

Definition:	Numeric count of executions of the action of the Rule.
Label:	Count
Identifier:	http://www.w3.org/ns/odrl/2/count
Class:	LeftOperand

4.5.6 Datetime

Definition:	The date (and optional time and timezone) of exercising the action of the Rule. Right operand value *MUST* be an xsd:date or xsd:dateTime as defined by [xmlschema11-2].
Label:	Datetime
Identifier:	http://www.w3.org/ns/odrl/2/dateTime
Note:	The use of Timezone information is strongly recommended. The Rule may be exercised before (with operator lt/lteq) or after (with operator gt/gteq) the date(time) defined by the Right operand. Example: `dateTime gteq 2017-12-31T06:00Z` means the Rule can only be

exercised after (and including) 6:00AM on the 31st Decemeber 2017 UTC time.

Class:	LeftOperand

4.5.7 Delay Period

Definition:	A time delay period prior to exercising the action of the Rule. The point in time triggering this period *MAY* be defined by another temporal Constraint combined by a Logical Constraint (utilising the odrl:andSequence operand). Right operand value *MUST* be an xsd:duration as defined by [xmlschema11-2].
Label:	Delay Period
Identifier:	http://www.w3.org/ns/odrl/2/delayPeriod
Note:	Only the eq, gt, gteq operators *SHOULD* be used.
	Example: `delayPeriod eq P60M` indicates a delay of 60 Minutes before exercising the action.
Class:	LeftOperand

4.5.8 Delivery Channel

Definition:	The delivery channel used for exercising the action of the Rule.
Label:	Delivery Channel
Identifier:	http://www.w3.org/ns/odrl/2/deliveryChannel
Note:	Example: the asset may be distributed only on mobile networks.
Class:	LeftOperand

4.5.9 Elapsed Time

Definition:	A continuous elapsed time period which may be used for exercising of the action of the Rule. Right operand value *MUST* be an xsd:duration as defined by [xmlschema11-2].
Label:	Elapsed Time
Identifier:	http://www.w3.org/ns/odrl/2/elapsedTime
Note:	Only the eq, lt, lteq operators *SHOULD* be used. See also Metered Time. Example: `elpasedTime eq P60M` indicates a total elapsed time of 60 Minutes.
Class:	LeftOperand

4.5.10 Event

Definition:	An identified event setting a context for exercising the action of the Rule.
Label:	Event
Identifier:	http://www.w3.org/ns/odrl/2/event
Note:	Events are temporal periods of time, and operators can be used to signal before (lt), during (eq) or after (gt) the event. Example: May be taken during the "FIFA World Cup 2020" only.
Class:	LeftOperand

4.5.11 File Format

Definition:	A transformed file format of the target Asset.
Label:	File Format
Identifier:	http://www.w3.org/ns/odrl/2/fileFormat
Note:	Example: An asset may be transformed into JPEG format.

| *Class:* | LeftOperand |

4.5.12 Industry Context

Definition:	A defined industry sector setting a context for exercising the action of the Rule.
Label:	Industry Context
Identifier:	http://www.w3.org/ns/odrl/2/industry
Note:	Example: publishing or financial industry.
Class:	LeftOperand

4.5.13 Language

Definition:	A natural language used by the target Asset.
Label:	Language
Identifier:	http://www.w3.org/ns/odrl/2/language
Note:	Example: the asset can only be translated into Greek. Must use [bcp47] codes for language values.
Class:	LeftOperand

4.5.14 Media Context

Definition:	Category of a media asset setting a context for exercising the action of the Rule.
Label:	Media Context

Identifier:	http://www.w3.org/ns/odrl/2/media
Note:	Example media types: electronic, print, advertising, marketing. Note: The used type should not be an IANA MediaType as they are focused on technical characteristics.
Class:	LeftOperand

4.5.15 Metered Time

Definition:	An accumulated amount of one to many metered time periods which were used for exercising the action of the Rule. Right operand value *MUST* be an xsd:duration as defined by [xmlschema11-2].
Label:	Metered Time
Identifier:	http://www.w3.org/ns/odrl/2/meteredTime
Note:	Only the eq, lt, lteq operators *SHOULD* be used. See also Elapsed Time. Example: `meteredTime lteq P60M` indicates an accumulated period of 60 Minutes or less.
Class:	LeftOperand

4.5.16 Payment Amount

Definition:	The amount of a financial payment. Right operand value *MUST* be an xsd:decimal.
Label:	Payment Amount
Identifier:	http://www.w3.org/ns/odrl/2/payAmount
Note:	Can be used for compensation duties with the unit property indicating the currency of the payment.

| Class: | LeftOperand |

4.5.17 Asset Percentage

Definition:	A percentage amount of the target Asset relevant for exercising the action of the Rule. Right operand value *MUST* be an xsd:decimal from 0 to 100.
Label:	Asset Percentage
Identifier:	http://www.w3.org/ns/odrl/2/percentage
Note:	Example: Extract less than or equal to 50%.
Class:	LeftOperand

4.5.18 Product Context

Definition:	Category of product or service setting a context for exercising the action of the Rule.
Label:	Product Context
Identifier:	http://www.w3.org/ns/odrl/2/product
Note:	Example: May only be used in the XYZ Magazine.
Class:	LeftOperand

4.5.19 Purpose

Definition:	A defined purpose for exercising the action of the Rule.
Label:	Purpose

Identifier:	http://www.w3.org/ns/odrl/2/purpose
Note:	Example: Educational use.
Class:	LeftOperand

4.5.20 Recipient

Definition:	The party receiving the result/outcome of exercising the action of the Rule.
Label:	Recipient
Identifier:	http://www.w3.org/ns/odrl/2/recipient
Note:	The Right Operand must identify one or more specific Parties or category/ies of the Party.
Class:	LeftOperand

4.5.21 Relative Asset Position

Definition:	A point in space or time defined with coordinates relative to full measures the positioning of the target Asset.
Label:	Relative Asset Position
Identifier:	http://www.w3.org/ns/odrl/2/relativePosition
Note:	Example: The upper left corner of a picture may be constrained to a specific position of the canvas rendering it.
Narrower terms:	relativeSpatialPosition, relativeTemporalPosition
Class:	LeftOperand

4.5.22 Relative Spatial Asset Position

Definition:	The relative spatial positions - expressed as percentages of full values - of four corners of a rectangle on a 2D-canvas or the eight corners of a cuboid in a 3D-space of the target Asset.
Label:	Relative Spatial Asset Position
Identifier:	http://www.w3.org/ns/odrl/2/relativeSpatialPosition
Note:	See also Absolute Spatial Asset Position.
Broader terms:	relativePosition
Class:	LeftOperand

4.5.23 Relative Temporal Asset Position

Definition:	A point in space or time defined with coordinates relative to full measures the positioning of the target Asset.
Label:	Relative Temporal Asset Position
Identifier:	http://www.w3.org/ns/odrl/2/relativeTemporalPosition
Note:	See also Absolute Temporal Asset Position. Example: The MP3 music file must be positioned between the positions at 33% and 48% of the temporal length of a stream.
Broader terms:	relativePosition
Class:	LeftOperand

4.5.24 Relative Asset Size

Definition:	Measure(s) of one or two axes for 2D-objects or measure(s) of one to tree axes for 3D-objects - expressed as percentages of full values - of the target Asset.
Label:	Relative Asset Size
Identifier:	http://www.w3.org/ns/odrl/2/relativeSize
Note:	Example: The image can be resized in width to a maximum of 200%. Note: See the Left Operand absoluteSize.
Class:	LeftOperand

4.5.25 Rendition Resolution

Definition:	Resolution of the rendition of the target Asset.
Label:	Rendition Resolution
Identifier:	http://www.w3.org/ns/odrl/2/resolution
Note:	Example: the image may be printed at 1200dpi.
Class:	LeftOperand

4.5.26 Geospatial Named Area

Definition:	A named and identified geospatial area with defined borders which is used for exercising the action of the Rule. An IRI *MUST* be used to represent this value.
Label:	Geospatial Named Area
Identifier:	http://www.w3.org/ns/odrl/2/spatial
Note:	A code value for the area and source of the code must be presented in the Right Operand. Example: the [iso3166] Country Codes or the Getty Thesaurus of Geographic Names.

Narrower terms:	spatialCoordinates
Class:	LeftOperand

4.5.27 Geospatial Coordinates

Definition:	A set of coordinates setting the borders of a geospatial area used for exercising the action of the Rule. The coordinates *MUST* include longitude and latitude, they *MAY* include altitude and the geodetic datum.
Label:	Geospatial Coordinates
Identifier:	http://www.w3.org/ns/odrl/2/spatialCoordinates
Note:	The default values are the altitude of earth's surface at this location and the WGS 84 datum.
Broader terms:	spatial
Class:	LeftOperand

4.5.28 System Device

Definition:	An identified computing system or computing device used for exercising the action of the Rule.
Label:	System Device
Identifier:	http://www.w3.org/ns/odrl/2/systemDevice
Note:	Example: The system device can be identified by a unique code created from the used hardware.
Class:	LeftOperand

Equivalent Match:	device, system

4.5.29 Recurring Time Interval

Definition:	A recurring period of time before the next execution of the action of the Rule. Right operand value *MUST* be an xsd:duration as defined by [xmlschema11-2].
Label:	Recurring Time Interval
Identifier:	http://www.w3.org/ns/odrl/2/timeInterval
Note:	Only the eq operator *SHOULD* be used. Example: `timeInterval eq P7D` indicates a recurring 7 day period.
Class:	LeftOperand

4.5.30 Unit Of Count

Definition:	The unit of measure used for counting the executions of the action of the Rule.
Label:	Unit Of Count
Identifier:	http://www.w3.org/ns/odrl/2/unitOfCount
Note:	Note: Typically used with Duties to indicate the unit entity to be counted of the Action. Example: A duty to compensate and a unitOfCount constraint of 'perUser' would indicate that the compensation by multiplied by the 'number of users'.
Class:	LeftOperand

4.5.31 Version

Definition:	The version of the target Asset.
Label:	Version
Identifier:	http://www.w3.org/ns/odrl/2/version
Note:	Example: Single Paperback or Multiple Issues or version 2.0 or higher.
Class:	LeftOperand

4.5.32 Virtual IT Communication Location

Definition:	An identified location of the IT communication space which is relevant for exercising the action of the Rule.
Label:	Virtual IT Communication Location
Identifier:	http://www.w3.org/ns/odrl/2/virtualLocation
Note:	Example: an Internet domain or IP address range.
Class:	LeftOperand

4.6 Constraint Right Operands

4.6.1 Policy Rule Usage

Definition:	Indicates the actual datetime the action of the Rule was exercised.
Label:	Policy Rule Usage
Identifier:	http://www.w3.org/ns/odrl/2/policyUsage
Note:	This can be used to express constraints with a LeftOperand relative to the time the rule is exercised. Operators indicate before (lt, lteq), during (eq) or after (gt, gteq) the usage of the rule.

Example: `event lt policyUsage` expresses that the identified event must have happened before the action of the rule is exercised.

Class: RightOperand

5. Vocabulary Expression

This specification includes serialisation syntaxes for the ODRL Vocabulary.

Implementations of ODRL expressions must be serialised using the UTF-8 character encoding.

5.1 RDF

ODRL Policies may be serialised in any supported RDF serialisation syntax.

NOTE

The ODRL Ontology and can be downloaded in:

- RDF/Turtle serialisation
- RDF/XML serialisation
- RDF/N-Triples serialisation
- JSON-LD serialisation

When a list of values is required, then the `rdf:List` predicate *SHOULD* be used.

5.2 JSON-LD

The JSON-LD [json-ld] serialisation uses the `@context` property to define the processing context. Implementations producing ODRL expressions should include a `@context` property value using at least the URL `http://www.w3.org/ns/odrl.jsonld` or any other `@context` (file) including the content of `http://www.w3.org/ns/odrl.jsonld` plus terms defined by a non-ODRL namespace.

> NOTE
>
> The ODRL JSON-LD Context can be downloaded.

5.3 XML

This section is non-normative.

ODRL Policy expressions can be encoded in XML [xml] serialisations as defined by XML Schema [xmlschema11-1] and XML Datatypes [xmlschema11-2]. All of the ODRL Vocabulary IRIs used in ODRL XML instances *MUST* follow those defined in the ODRL Vocabulary.

> NOTE
>
> The ODRL XML Schema can be downloaded.

Each of the classes from the ODRL Information Model [odrl-model] will be represented by an XML element of the same name. Additionally, each class property will be represented as an XML attribute of the parent element. The fixed values defined in the ODRL Information Model are represented as enumerated types. Cardinalities are also represented with XML Schema occurrence rules. Attributes are optional unless explicitly noted as *REQUIRED*.

Note that the Rule class is not represented in the XML encoding, only the child classes; Permission, Prohibition, and Duty.

Note that the Policy Type *MAY* infer additional constraints and requirements on the cardinalities of XML elements. See the definition of the Policy Subclasses for further details.

XML Elements and Attributes

The Policy element contains the following attributes:

- uid - an IRI (*REQUIRED*)

- type -an IRI (*REQUIRED*)

- conflict - fixed enumeration (defined in XML Schema)

- inheritFrom - an IRI

- profile - an IRI (*REQUIRED* when using an ODRL Profile)

NOTE: The **type** attribute is used to express the ODRL Policy subclass.

The Policy element *MAY* contain the following elements:

- permission, and/or

- prohibition, and/or

- obligation

The Policy element *MAY* contain the following policy-level elements that apply to all Rules (see ODRL Rule Composition).

- asset,

- party, and/or

- action

The Policy element *MAY* also contain Dublin Core elements to support Policy metadata.

The Policy element *MAY* also contain constraint elements which are Constraints referenced by either another constraint element or Logical Constraint within a Rule. Note that these Constraints are not to be interpreted as a direct constraint of all Rules.

The Asset class is a single asset element to represent both the Asset uid and how it is related to the Rule. The Asset element contains the following attributes:

- uid - an IRI

- relation - an IRI

- type - an IRI

- partOf - an IRI

- source - an IRI

- id - an local identifier for this element

- idref - a reference to an Asset element

Asset element attributes *MUST* be used as defined by one of the sets of attributes and their cardinalities below:

1. uid (*REQUIRED*), relation (*REQUIRED*), type (*OPTIONAL*), id (*OPTIONAL*), or

2. idref (*REQUIRED*)

The asset element may also contain the refinement element for asset collections.

The Party class is a single party element to represent both the Party uid and the functional role to the Rule. The Party element contains the following attributes:

- uid - an IRI
- function - an IRI
- type - an IRI
- partOf - an IRI
- source - an IRI
- id - a local identifier for this element
- idref - a reference to a Party element

Party element attributes *MUST* be used as defined by one of the sets of attributes and their cardinalities below:

1. uid (*REQUIRED*), function (*REQUIRED*), type (*OPTIONAL*), id (*OPTIONAL*), or
2. idref (*REQUIRED*)

The party element may also contain the refinement element for party collections.

The Permission element contains the following elements:

- asset (*REQUIRED*)
- action (*REQUIRED*)
- constraint
- party
- duty

The Prohibition element contains the following elements:

- asset (*REQUIRED*)
- action (*REQUIRED*)
- constraint
- party
- remedy

The Duty element contains the following elements:

- action (*REQUIRED*)

- constraint

- asset

- party

- consequence

The Duty element contains the following attributes:

- uid - an IRI

- id - a local identifier for this element

- idref - a reference to an Duty element

Duty element attributes *MUST* be used as defined by one of the sets of attributes and their cardinalities below:

1. uid (*OPTIONAL*), or

2. id (*REQUIRED*), or

3. idref (*REQUIRED*)

The Action element contains the following attributes:

- name - an IRI

- id - a local identifier for this element

- idref - a reference to an Action element

Action element attributes *MUST* be used as defined by one of the sets of attributes and their cardinalities below:

1. name (*REQUIRED*), id (*OPTIONAL*), or

2. idref (*REQUIRED*)

The action element may also contain the refinement element.

The Constraint element contains the following attributes:

- name - an IRI for the leftOperand or logical operand (for Logical Constraints)

- operator - an IRI

- rightOperand - string or IRI, space separated list for set values (must be a list of Constraint

identifiers for a Logical Constraint)

- rightOperandReference - an IRI

- dataType - an IRI

- unit - an IRI

- status - string

- id - a local identifier for this element

- idref - a reference to an Constraint element

NOTE: The Constraint **name** attribute is called **leftOperand** in the ODRL Information Model.

Constraint element attributes *MUST* be used as defined by one of the sets of attributes and their cardinalities below:

1. name (*REQUIRED*), operator (*REQUIRED*), rightOperand and/or rightOperandReference (*REQUIRED*), dataType (*OPTIONAL*), unit (*OPTIONAL*), status (*OPTIONAL*), id (*OPTIONAL*), or

2. idref (*REQUIRED*)

Logical Constraint element attributes *MUST* be used as defined by the sets of attributes and their cardinalities below:

1. name (*REQUIRED*), rightOperand (*REQUIRED*)

In some cases where Duties refer to (external) Assets, it will be necessary to package the ODRL XML expression with the representation of that (external) Asset. This XML Encoding specification does not mandate any specific packaging mechanism as communities will utilise their preferred options for data interoperability.

XML Example

The below example shows the XML serialisation of an ODRL Policy including some metadata about the Policy. In this example, the target asset and assigner and assignee parties are defined at the policy-level, and hence, are applied to both permission rules. The first permission allows the assignee to play the target asset as long as they accept they will be tracked. The second permission allows the assignee to distribute the target asset to the identified country (Italy) for a compensation payment of EUR5,000.

EXAMPLE 1

```xml
<o:Policy xmlns:o="http://www.w3.org/ns/odrl/2/" xmlns:dc="http://purl.org/dc/t
          type="http://www.w3.org/ns/odrl/2/Agreement"
          uid="http://example.com/policy:9001"
          profile="http://example.com/odrl:profile:10X">
    <dc:creator>Acme Enterprises</dc:creator>
    <dc:issued>2017-01-01T12:00</dc:issued>
    <o:asset uid="http://example.com/music:4545"
             relation="http://www.w3.org/ns/odrl/2/target"/>
    <o:party uid="http://example.com/sony"
             function="http://www.w3.org/ns/odrl/2/assigner"/>
    <o:party uid="http://example.com/billie"
             function="http://www.w3.org/ns/odrl/2/assignee"/>
    <o:permission>
        <o:action name="http://www.w3.org/ns/odrl/2/play"/>
        <o:duty>
            <o:action name="http://www.w3.org/ns/odrl/2/acceptTracking"/>
        </o:duty>
    </o:permission>
    <o:permission>
        <o:action name="http://www.w3.org/ns/odrl/2/distribute"/>
        <o:constraint name="http://www.w3.org/ns/odrl/2/spatial"
                      operator="http://www.w3.org/ns/odrl/2/eq"
                      rightOperand="http://vocab.getty.edu/tgn/1000080"/>
        <o:duty>
            <o:action name="http://www.w3.org/ns/odrl/2/compensate">
              <o:refinement name="http://www.w3.org/ns/odrl/2/payAmount"
                  operator="http://www.w3.org/ns/odrl/2/eq"
                  rightOperand="5000.00"
                  unit="http://dbpedia.org/resource/Euro"/>
            </o:action>
        </o:duty>
    </o:permission>
</o:Policy>
```

XML Linking

To support repeating the same element content across Permissions and Prohibitions, the Asset, Party, Constraint, Action, and Duty elements support the xml id and idref attributes. Any of these element that has been identified using the id attribute can then be referred to by an element with the same name

using the idref attribute. In this case, the referring element must have no other content.

As shown in the below example, the Prohibition refers to elements defined in the Permission, except for the Constraint element. In this case, the assignee can play the music asset in Italy but not in France.

EXAMPLE 2

```xml
<o:Policy xmlns:o="http://www.w3.org/ns/odrl/2/"
          type="http://www.w3.org/ns/odrl/2/Set"
          uid="http://example.com/policy:Z1XZ"
          profile="http://example.com/odrl:profile:10X">
  <o:permission>
    <o:asset id="as1" uid="http://example.com/music:1234908"
                relation="http://www.w3.org/ns/odrl/2/target"/>
    <o:action id="ac1" name="http://www.w3.org/ns/odrl/2/play"/>
    <o:constraint id="c1" name="http://www.w3.org/ns/odrl/2/spatial"
                    operator="http://www.w3.org/ns/odrl/2/eq"
                    rightOperand="http://www.itu.int/tML/tML-ISO-3166:it"/>
    <o:party id="p1" uid="http://example.com/sony:10"
                function="http://www.w3.org/ns/odrl/2/assigner"/>
    <o:party id= "p2" uid="http://example.com/billie:888"
                function="http://www.w3.org/ns/odrl/2/assignee"/>
  </o:permission>
  <o:prohibition>
    <o:asset idref="as1"/>
    <o:action idref="ac1"/>
    <o:constraint name="http://www.w3.org/ns/odrl/2/spatial"
                    operator="http://www.w3.org/ns/odrl/2/eq"
                    rightOperand="http://www.itu.int/tML/tML-ISO-3166:fr"/>
    <o:party idref="p1"/>
    <o:party idref="p2"/>
  </o:prohibition>
</o:Policy>
```

Note that there is an important distinction when using this feature with the Duty element which also has the uid attribute. The uid attribute is used to refer to the same Duty from multiple Permissions. In this case the Duty has to be performed only once to gain access to all the Permissions. When using the id and idref attributes then the semantics change as in this case the Duty must be performed for each time it is referenced (potentially, many times). Note that the use of the uid and id attribute for the same Duty element is not permitted.

Logical Constraints

To support Logical Constraints, Constraint objects can be expressed at the Policy level and locally identified with the `id` attribute. The Logical Constraint (in the Rule) can then refer to these Constraints using its `#id` in the leftOperand, and the logical relationship in the name attribute.

ODRL XML processing systems *MUST* detect the use of `#id` in the rightOperand in Logical Constraints. If detected, the processing model for Logical Constraints (defined in [odrl-model]) *MUST* then be followed.

The below example shows two Constraints defined with ids `C1` and `C2`. The Logical Constraint in the Permission refers to these using the `#C1` and `#C2` values in the rightOperand, and the logical relationship (xone) in the name attribute.

EXAMPLE 3

```xml
<o:Policy xmlns:o="http://www.w3.org/ns/odrl/2/"
          type="http://www.w3.org/ns/odrl/2/Offer"
          uid="http://example.com/policy:9001"
          profile="http://example.com/odrl:profile:10X">
    <o:party uid="http://example.com/billie"
             function="http://www.w3.org/ns/odrl/2/assignee"/>
    <o:permission>
        <o:asset uid="http://example.com/music:4545"
                 relation="http://www.w3.org/ns/odrl/2/target"/>
        <o:action name="http://www.w3.org/ns/odrl/2/distribute"/>
        <o:constraint name="http://www.w3.org/ns/odrl/2/xone"
                      rightOperand="#C1 #C2"/>
    </o:permission>
</o:Policy>
...
<o:constraint id="C1" name="http://www.w3.org/ns/odrl/2/spatial"
              operator="http://www.w3.org/ns/odrl/2/eq"
              rightOperand="http://vocab.getty.edu/tgn/1000080"/>

<o:constraint id="C2" name="http://www.w3.org/ns/odrl/2/spatial"
              operator="http://www.w3.org/ns/odrl/2/eq"
              rightOperand="http://vocab.getty.edu/tgn/1000090"/>
```

6. Privacy Considerations

This section is non-normative.

ODRL Policies that support the `Privacy` subclass may contain links to potentially sensitive personal information such as the identity of parties and the identity of the existence of assets containing such data related to the parties. Implementations that produce or consume ODRL Privacy expressions must take steps to communicate to all relevant users the manner in which the policy is being used, the identity of any other party with whom that policy is being shared, and the reason the policy is being shared with other parties.

A. Deprecated Terms

Label	Identifier	Deprecated By
Device	http://www.w3.org/ns/odrl/2/device	http://www.w3.org/ns/odrl/2/systemDevice
System	http://www.w3.org/ns/odrl/2/system	http://www.w3.org/ns/odrl/2/systemDevice
proximity	http://www.w3.org/ns/odrl/2/proximity	
Append	http://www.w3.org/ns/odrl/2/append	http://www.w3.org/ns/odrl/2/modify
Append To	http://www.w3.org/ns/odrl/2/appendTo	http://www.w3.org/ns/odrl/2/modify
Copy	http://www.w3.org/ns/odrl/2/copy	http://www.w3.org/ns/odrl/2/reproduce
Export	http://www.w3.org/ns/odrl/2/export	http://www.w3.org/ns/odrl/2/transform
Lease	http://www.w3.org/ns/odrl/2/lease	
License	http://www.w3.org/ns/odrl/2/license	http://www.w3.org/ns/odrl/2/grantUse

Lend	http://www.w3.org/ns/odrl/2/lend	
Pay	http://www.w3.org/ns/odrl/2/pay	http://www.w3.org/ns/odrl/2/compensate
Payee Party	http://www.w3.org/ns/odrl/2/payeeParty	http://www.w3.org/ns/odrl/2/compensatedParty
Preview	http://www.w3.org/ns/odrl/2/preview	
Secondary Use	http://www.w3.org/ns/odrl/2/secondaryUse	
Write	http://www.w3.org/ns/odrl/2/write	http://www.w3.org/ns/odrl/2/modify
Write to	http://www.w3.org/ns/odrl/2/writeTo	http://www.w3.org/ns/odrl/2/modify
Ad-hoc sharing	http://www.w3.org/ns/odrl/2/adHocShare	
Extract character	http://www.w3.org/ns/odrl/2/extractChar	
Extract page	http://www.w3.org/ns/odrl/2/extractPage	
Extract word	http://www.w3.org/ns/odrl/2/extractWord	
Timed Count	http://www.w3.org/ns/odrl/2/timedCount	
Inherit Relation	http://www.w3.org/ns/odrl/2/inheritRelation	
Inheritance Allowed	http://www.w3.org/ns/odrl/2/inheritAllowed	

Undefined Term	http://www.w3.org/ns/odrl/2/UndefinedTerm	
Handle Undefined Term	http://www.w3.org/ns/odrl/2/undefined	
Ignore Undefined Actions	http://www.w3.org/ns/odrl/2/ignore	
Support Undefined Actions	http://www.w3.org/ns/odrl/2/support	
Asset Scope	http://www.w3.org/ns/odrl/2/AssetScope	
Party Scope	http://www.w3.org/ns/odrl/2/PartyScope	
Scope	http://www.w3.org/ns/odrl/2/scope	
Group	http://www.w3.org/ns/odrl/2/Group	
Individual	http://www.w3.org/ns/odrl/2/Individual	
All	http://www.w3.org/ns/odrl/2/All	
All First-Level Connections	http://www.w3.org/ns/odrl/2/AllConnections	
All Second-level Connections	http://www.w3.org/ns/odrl/2/All2ndConnections	
All Group Connections	http://www.w3.org/ns/odrl/2/AllGroups	
Attach policy	http://www.w3.org/ns/odrl/2/attachPolicy	http://creativecommons.org/ns#Notice

Attach source	http://www.w3.org/ns/odrl/2/attachSource	http://creativecommons.org/ns#SourceCode
Share-alike	http://www.w3.org/ns/odrl/2/shareAlike	http://creativecommons.org/ns#ShareAlike
Commercialize	http://www.w3.org/ns/odrl/2/commercialize	http://creativecommons.org/ns#CommercialUse
Share	http://www.w3.org/ns/odrl/2/share	http://creativecommons.org/ns#Sharing

B. Acknowledgements

C. Candidate Recommendation Exit Criteria

For this specification to be advanced to Proposed Recommendation, there must be at least two independent implementations of each feature described below. Each feature may be implemented by a different set of products, and there is no requirement that any single product implement every feature.

Features

For the purposes of evaluating exit criteria, the following are considered as features:

- A Set/Offer/Agreement Policy type with required properties

- A Policy that utilises an ODRL Profile

- A Policy with an Asset Collection, including parts

- A Policy with a Party Collection, including parts

- A Policy with a Rule including a constraint property

- A Policy with a Permission including a duty property

- A Policy with a Permission including a duty and a consequence property

- A Policy with a Prohibition

- A Policy with a Prohibition including a remedy property

- A Policy with an Obligation

- A Policy with a refinement property on an Action, Asset and Party Collection

- A Policy with a Logical Constraint

- A Compact Policy that requires translation into an Atomic Policy

- A Policy containing metadata

- A Policy that includes Policy inheritance

- A Policy that includes a Conflict Strategy

In addition, the ODRL Vocabulary will be considered valid when the following conditions have been demonstrated:

- The ontology documents can be parsed without errors by RDF Schema validators

- The ontology is internally consistent with respect to domains, ranges, inverses, and any other ontology features specified

- The JSON-LD context document can be parsed without errors by JSON-LD validators

- The JSON-LD context document can be used to convert JSON-LD serialized Policies into RDF triples

Software that does not alter its behavior in the presence or lack of a given feature is not deemed to implement that feature for the purposes of exiting the Candidate recommendation phase.

D. Relationship to the W3C ODRL Community Group Reports

The basis for the deliverables for the Permissions & Obligations Expression Working Group are the reports created by the W3C ODRL Community Group. The ODRL Community Group has developed a family of specifications to support innovative expression of asset usage for the publication, distribution and consumption of content services. The final outputs of the ODRL Community Group were the Version 2.1 specifications that were a major update for ODRL and superseded the original ODRL Version 1.1 [odrl] (published as a W3C NOTE)

The following documents are part of the ODRL Community Group report series:

- ODRL V2 Requirements [odrl2-req]

- ODRL V2.1 Core Model [odrl21-model]

- ODRL V2.1 Common Vocabulary [odrl21-vocab]

- ODRL V2.1 XML Encoding [odrl21-xml]

- ODRL V2.1 Ontology [odrl21-onto]

- ODRL V2.1 JSON Encoding [odrl21-json]

The ODRL Vocabulary and Expression was derived from the combination and merger of four of the ODRL Community Group's outcomes; ODRL V2.1 Common Vocabulary, ODRL V2.1 XML Encoding, ODRL V2.1 Ontology, and ODRL V2.1 JSON Encoding. Details of the differences between the W3C Working Group deliverables and the ODRL Community Group Reports are maintained in the Appendix. All new ODRL implementations are expected to use the deliverables of the W3C Permissions & Obligations Expression Working Group.

E. Changes from Previous Versions

Changes from the First Public Working Draft 21 July 2016:

- Clarified Permission cardinality in XML Encoding (Issue#17)

- Added missing inheritRelation term (Issue#51)

- Added compensatingParty term (Issue#53)

- Added Assertion Policy Type (Issue#54)

- Designated some terms as non-normative (Issue#64)

- Added Right Operand Reference (Issue#56)

- Added explicit Left Operand (Issue#84)

- Added inverse Target link (Issue#61)

- Added UnitOfCount constraint (Issue#58)

- Updated XML Encoding to support multiple and policy-level Assets, Parties, and Actions. (Issue#82)

- Added Scopes to Assets and updated Scopes for Parties. (Issue#59)

- Improved Constraint definitions. (Issue#67)

- Added extended Relations operators for Constraints. (Issue#63)

- Added Constraint on Constraint operator term. (Issue#62)

- Added Stream to the vocabulary. (Issue#103)

Changes from the Working Draft 23 February 2017:

- Added additional Party roles. (Issue#110)

- Deprecated inheritRelation. (Issue#22)

- Removed (deprecated) the Undefined Actions vocab terms. (Issue#139)

- Removed period support from dateTime constraint. (Issue#118)

- Removed support for Qnames and Qcodes in XML serialisation. (Issue#151)

- Removed Scopes and replaced with Constraints on Asset and Party. (Issue#183)

- Split vocabulary into Core Vocabulary (normative) and Common Vocabulary (non-normative). (Issue#182)

- Added hasPolicy property (Issue#184)

- Added includedIn and implies properties for Action. Added partOf property for Asset and Party (Issue#160)

- Added assigneeOf/AssignerOf properties (Issue#190)

- Added CC terms to Common Vocab (Issue#158)

- Added source property for Asset/PartyColection (Issue#164)

- Removed inheritAllowed property and support multiple inheritance (Issue#204)

- Added Logical Constraints class with typed operands property(Issue#206)

- Added support for Duty at Policy-level using new obligation property (Issue#191)

- Added Consequence, Remedy and Failure properties (Issue#209)

- Added mandatory use of ODRL Profiles (Issue#210)

- Added Refinement property (Issue#211)

Changes from the Candidate Recommendation 26 September 2017:

- Updated note of consequence property (Issue#267) (Issue#275)

- Updated domain of uid property with Constraint/Logical Constraint classes (Issue#278)

- Removed Set from disjoint Policy classes (Issue#280)

- Added version "2.2" to the document title to make it clear the provenance of the specification. (Issue#283)

- Clarified definitions of some LeftOperand terms. (Issue#284) and their role with constraint and

refinement properties (Issue#282).

- Removed (informative) dc:license subproperty of hasPolicy statement (Issue#286).

Changes from the Proposed Recommendation 04 January 2018:

- No significant changes.

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