

valunode

W3C Workshop on the Future of ODRL Position paper

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Biography: Philippe works on digital rights with creative enterprises, service providers, trade and standardisation bodies, law firms, and government agencies. As an innovation trailblazer, he assembles and leads prestigious multi-disciplinary teams to initiate, create and operate ground-breaking solutions, such as Valunode's Copyright Data Exchange. He co-authored the "Study on copyright and new technologies" for the European Commission, the report on "Interoperable, trustworthy, and machine-readable copyright data in the AI era" for the Finnish Government, and the "Mapping of databases and metadata standards providing information on copyright-protected works" for the EU Intellectual Property Office. He also contributes to the work of the EU AI Office on AI traceability and opt-out solutions. Philippe is a member of the WIPO AIII Technical Exchange Network and an ISO expert working on the JPEG Trust standard and the methods of binding content with associated information.

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CONTEXT

[Valunode](#) develops a Copyright Data Exchange that requires machine-readable assertions of rights usage policies, aka Terms & Conditions (T&C). Having observed during the "Study on copyright and new technologies" that many authors and interviewees understood "rights" differently, Valunode disambiguated the concept in 2022.

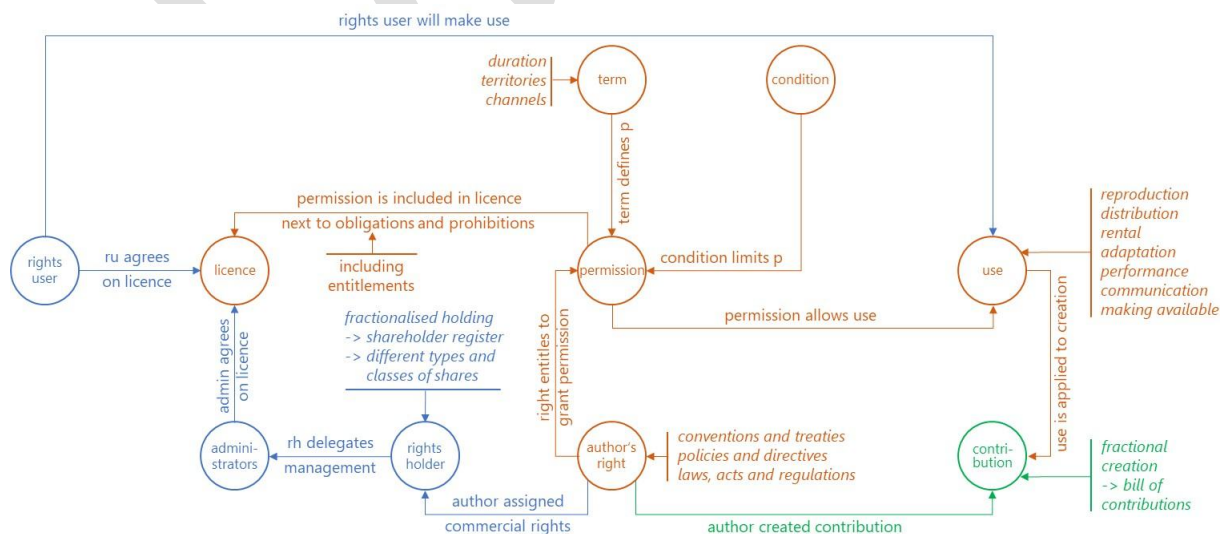


Figure 1: Disambiguating right, permission, term, condition, use, and licence

Figure 1 is a non-exhaustive illustration of our efforts; e.g., a licence includes also prohibitions and obligations, whereby we also look at –

- Vocabulary equivalences, e.g., in the [Dublin Core™ Metadata Element Set](#) “author” is “2 Creator” and “administrator” is “5 Publisher”.
- Rights combinations such as reproduction + distribution = mechanical “rights”, performance + communication = neighbouring “rights”, performance + communication + making available = performing “rights”

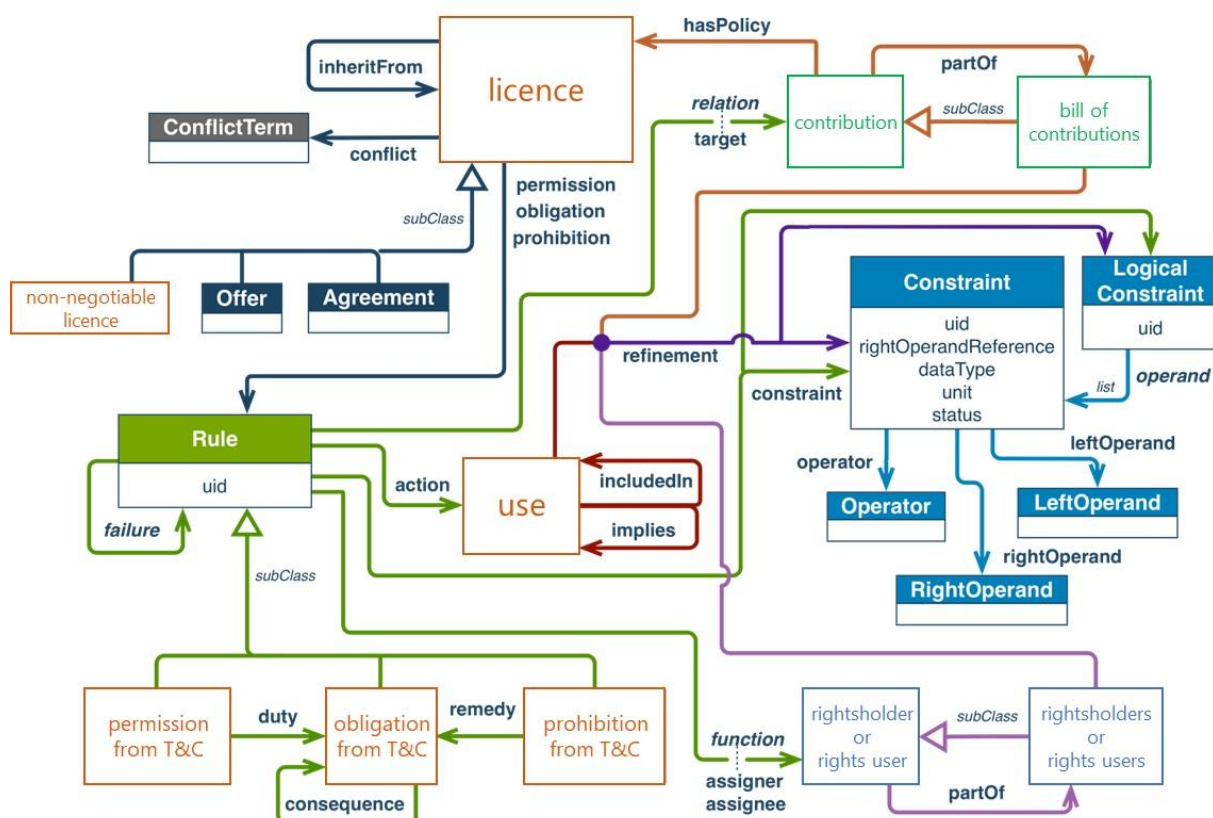


Figure 2: W3C ODRL fulfilling the requirements of Valunode's Copyright Data Exchange

There is an almost perfect overlap between our disambiguation of the concept of rights and [ODRL Information Model 2.2](#). Indeed, ODRL provides standard description model and format to express permission, prohibition, and obligation statements to be associated to content in general. We adopted ODRL for the development of Valunode's Copyright Data Exchange.

[JPEG Trust \(ISO/IEC 21617\)](#) provides a framework for establishing trust in media. This framework includes aspects of authenticity, provenance, attribution, intellectual property rights, and integrity through secure and reliable annotation of the media assets throughout their life cycle. The first part – Core Foundation – was published in January 2025, a second edition of this part will be published soon. When used, a rights expression assertion shall consist of a single JSON content type box containing the JSON-LD serialisation of an ODRL rights expression, as described in [ODRL Vocabulary & Expression 2.2](#).

In Figure 3, Renato Iannella revisited a JPEG Trust working example where a user (“cool web”) has licensed the “large” version of the photo for £375.00 to “display” on websites. In this case, he explicitly defines the size of the image as a refinement.

```

{
  "@context": "http://www.w3.org/ns/odrl.jsonld",
  "@type": "Agreement",
  "uid": "http://stock.photo/licence:A9999",
  "profile": "http://jpeg.iso/odrl:profile:10",
  "permission": [{
    "assigner": "http://afp.photo/",
    "assignee": "http://cool.magazine/",
    "target": {
      "@type": "AssetCollection",
      "source": "http://afp.photo/image/AFP8XZ4ZA",
      "refinement": [{
        "leftOperand": "absoluteSize",
        "operator": "eq",
        "rightOperand": { "@value": "5568x3552", "@type": "xsd:string" },
        "unit": "http://dbpedia.org/resource/Pixel" }]
    },
    "action": "odrl:display",
    "duty": [{
      "action": [{
        "rdf:value": { "@id": "odrl:compensate" },
        "refinement": [{
          "leftOperand": "payAmount",
          "operator": "eq",
          "rightOperand": { "@value": "375.00", "@type": "xsd:decimal" },
          "unit": "http://4217.iso//GBP"
        }]
      }]
    }]
  }]
}

```

Figure 3: JPEG Trust's JSON-LD serialisation of a rights assertion at hand of ODRL

Figure 4 shows an example for the rightsholder use case. The image may be used by get.my.images if they compensate the rightsholders. They must pay 30% to the photographer (Stephane De Sakutin) and 10% to the agency (AFP).

```

{
  "@context": "http://www.w3.org/ns/odrl.jsonld",
  "@type": "Agreement",
  "uid": "http://get.my.images/agree:QF5001",
  "profile": "http://example.com/odrl:profile:10",
  "permission": [{
    "target": "http://afp.photo/image/AFP8XZ4ZA",
    "assignee": "http://get.my.images/",
    "assigner": [
      "http://people.photo/stephDeSakutin",
      "http://afp.photo/" ],
    "action": "odrl:use",
    "duty": [ {

```

```

"action": {
  "@id": "odrl:compensate",
  "refinement": [{
    "leftOperand": "payPercentage",
    "operator": "eq",
    "rightOperand": { "@value": "30", "@type": "xsd:decimal" }
  }]
},
"compensatedParty": {
  "@id": "http://people.photo/stephDeSakutin",
  "function": "http://ddex.net/role/photographer"
}
},
{
  "action": {
    "@id": "odrl:compensate",
    "refinement": [{
      "leftOperand": "payPercentage",
      "operator": "eq",
      "rightOperand": { "@value": "10", "@type": "xsd:decimal" }
    }]
  },
  "compensatedParty": {
    "@id": "http://afp.photo/",
    "function": "http://ddex.net/role/agency"
  }
}
]
}}
}

```

Figure 4: The rightsholder use case

The International Press Telecommunications Council (IPTC) built [RightsML](#) on ODRL to provide a data model for marking up rights expressions about content of all relevant media types in a machine readable way.

Valunode mentioned ODRL in the report on “Interoperable, trustworthy, and machine-readable copyright data in the AI era” for the Finnish Government, and in the “Mapping of databases and metadata standards providing information on copyright-protected works” for the EU Intellectual Property Office.

The [W3C Text and Data Mining \(TDM\) Reservation Protocol Community Group](#) aims at facilitating the expression of TDM reservations in Europe and elsewhere by specifying a simple and practical machine-readable solution, capable of expressing the reservation of TDM rights – following the rules set by the Article 4 of the EU CDSM Directive – and the availability of machine-readable licenses for TDM actors.

Notwithstanding the use of ODRL in the financial and mobile telecommunication sectors, it recently became clear that creative sectors are showing an intertest in ODRL, which would justify review and enhancement of the current version 2.2.

QUESTIONS OR SUGGESTIONS FOR THE FUTURE OF ODRL

WIZARDS – Rights usage policies are complex and dynamic. Most rightsholders and their representatives have neither the IT nor the IP expertise required to express their T&C according to the ODRL Information Model. They will need to resort to user-friendly ODRL **wizards** –

- Should the development of such wizard(s) be included in the remit of the W3C ODRL Community Group, or
- Should the ODRL Information Model, Vocabulary and Expression be made wizard-ready for third parties to develop such wizards “on top of” ODRL?

PARSERS – The music industry relies on the well-established [DDEX](#) taxonomy and ontology to exchange rights data across various stakeholders; the book industry relies on the well-established [ONIX](#) taxonomy and ontology to do the same. The fast-growing multimedia production would be served by a *lingua franca* crossing sectoral boundaries. The ODRL genericity and exhaustiveness predestine it to be that *lingua franca*. Parsers would translate in the background ODRL ontologies into sectoral ontologies such as DDEX and ONIX. Valunode is engaged in a project foreseeing a **parser** between ODRL and DDEX Musical Works Data and Rights communication ([MWDR](#)) standards –

- Should the development of such parsers be included in the remit of the W3C ODRL Community Group, or
- Should the ODRL Information Model, Vocabulary and Expression be made parser-ready for third parties to develop such parsers “on top of” ODRL?

TOKENISATION – TDM reservations can express opt-outs. They will probably express many more conditional opt-ins than opt-outs. The fulfilment of conditional opt-ins will require an automation of licensing and remuneration. Machine-readable ODRL expressions of usage policies may “meet” machine-readable expressions of usage contexts in micro-licensing systems, e.g., expert systems, set of non-fungible tokens, or AI agents – applications that could lead to “**media tokenisation**”. MPEG published a standard on [Smart Contracts for Media](#) based on the [MPEG 21](#) taxonomy and ontology. The developers of the MPEG reference software confirmed that Smart Contracts for Media could also be based on ODRL. Furthermore, JPEG Trust is considering media tokenisation –

- Does ODRL 3.0 require some development to be tokenisation-ready?
- Would a standardisation of media tokenisation be a joint project between W3C ODRL and JPEG Trust?

Wizards, parsers, and tokenisation readiness could accelerate the adoption of ODRL in the creative industries, which in turn would foster a greater interoperability across creative sectors.

Coupled with other W3C recommendations such as [verifiable credentials](#), [decentralised](#) and [controlled identifiers](#), W3C would offer a coherent ontological backbone to the semantic layer of a copyright infrastructure – catering for interoperable, trustworthy, and machine-readable copyright data in the AI era.

References provided as hyperlinks.