



Digital Ontology-Based
Rights Management for
Archival Collections

Connecting CIDOC CRM with the
rights expression language ODRL
(*Open Digital Rights Language*)

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Computer Science

25.03.2026

Online

Sig Meeting



Agenda



Key facts about the project

Deutsches Kunstarchiv

Rights Expression Language

Harmonization CIDOC CRM & ODRL

Key facts about the project



**DFG pilot project on the
digitalization and provision
of (still) rights restricted
objects**

Netzwerken für
Netz-Works

Lehr- und
Forschungsabbildungen

Kleinschrifttum aus dem
studentischen Kontext



DFG pilot project on the
digitalization and provision
of (still) rights restricted
objects

Forschen mit
Derivaten



Normative
Rahmenbedingungen

Entwicklung
Kitodo.Presentation

Res4Film

Charité-
Filmstudios

Dissify

PRIMUS

Beschreibung rechte-
bewehrter Objekte

DORA - for Digital Ontology-based Rights Management in the Archive

- Organisation **Germanisches Nationalmuseum (Nuremberg)**
Deutsches Kunstarchiv & Museums- and Culturalinformatics

- Project duration **September 2025 – August 2027**

- Team

Research Associates

Project Lead

Kathrin Fischeidl

Coordination, content implementation

Katharina Hefele

Computer Science

3 student Assistants

Annotation

Susanna Brogi

Head of Deutsches Kunstarchiv

Mark Fichtner

Head of Museums- and Culturalinformatics

Juliane Hamisch

Head of Central Digital Documentation

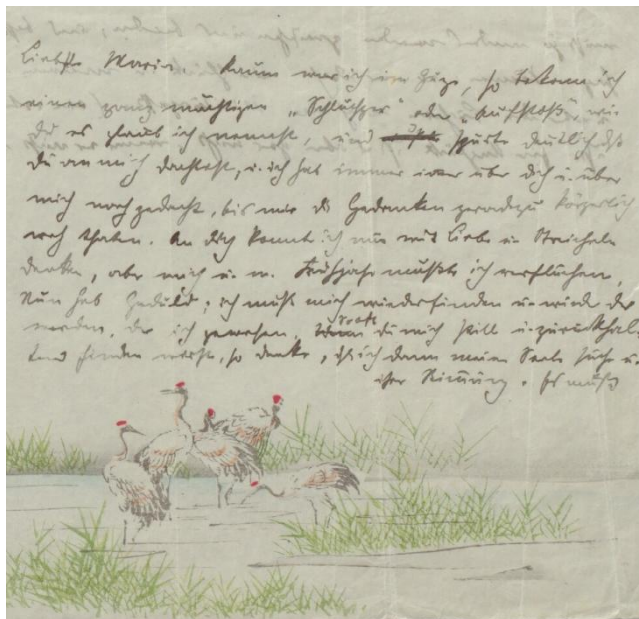
Deutsches Kunstarchiv

Deutsches Kunstarchiv (DKA)

→ Archive for personal papers on art and culture (19.-21. century)

→ „flat goods“

like photographs, letters, postcards, manuscripts, diaries, identity cards, certificates, ...



Letter from Franz Marc to Maria Marc, 1906 (detail)



Photograph of Ernst May, 1926



Letter from Til Brugman to Hannah Höch, 1936

Database of the DKA – Researchspace



Archivaliensuche

Die Volltextsuche umfasst Konvolute, Archivalien, Verzeichnungseinheiten sowie Einzelressourcen mit Digitalisaten.

Zeigt 1 - 50 von 32123

[Hier](#) finden Sie Hilfe bei der Suche.

Stammbaum mit Rückführung auf Hans Holbein

Akte

Entitäten

Einzelressource (4496)

Verzeichnungseinheit (27627)

Bestand

Max, Gabriel von (4035)

Grote, Ludwig (2666)

May, Ernst (1811)

Arnold/Gutbier, Galerie (1626)

Corinth, Lovis (1537)

mehr

Screenshot - URL: <https://ais-dka.gnm.de/index.php/archivalien-suche>

Rights apply to documents

- **copyright law** → Urheberrecht (UrhG)
drawing pads, poems, drafts, ...
- **exploitation rights** → Verwertungsrechte (UrhG)
postcards, exhibition catalogs, ...
- **personal rights** → Persönlichkeitsrechte (KunstUrhG)
photographs, letters, medical examination
- **data protection law** → Datenschutz-Grundverordnung (DSGVO)
contact information

UrhG: https://www.gesetze-im-internet.de/englisch_urhg/index.html,

KunstUrhG: <https://www.gesetze-im-internet.de/kunsturhg/>,

DSGVO: <https://eur-lex.europa.eu/eli/reg/2016/679/>

NOW:

Two different categories of online access

A large, horizontally-oriented oval with a dark teal border, containing the word 'published' in a bold, dark teal sans-serif font.

published

A large, horizontally-oriented oval with a dark teal border, containing the word 'protected' in a bold, dark teal sans-serif font.

protected

GOAL:

Three different categories of online access

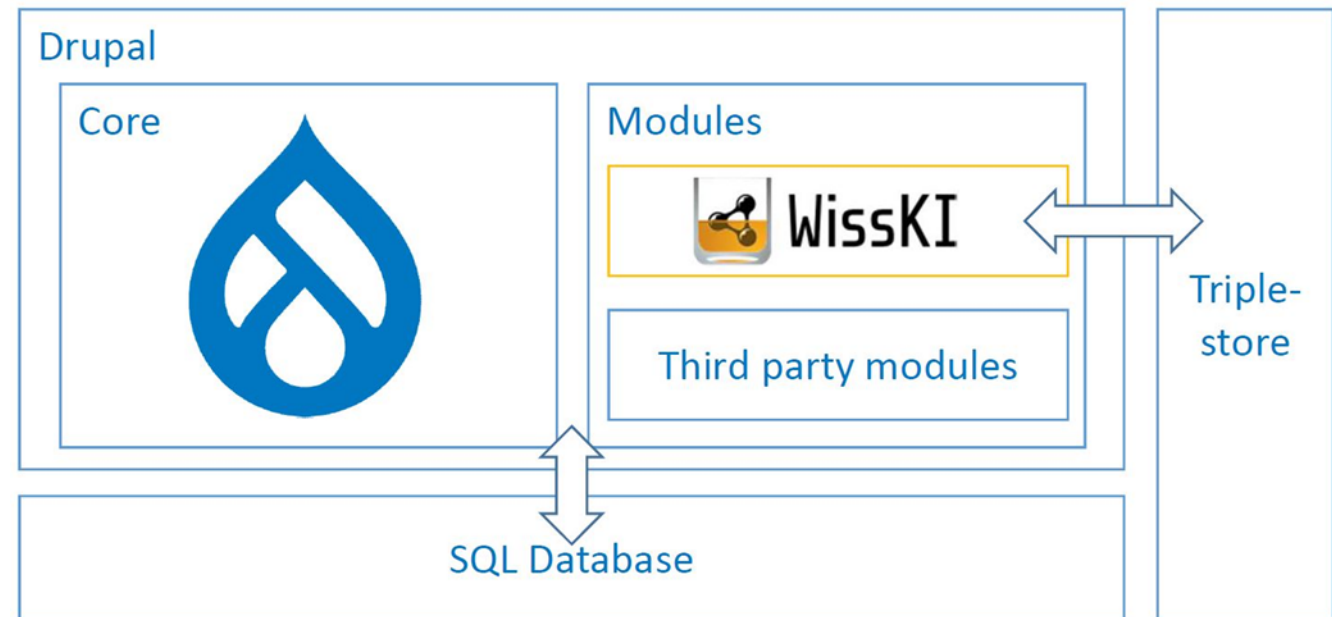


Technical basis of our system

→ „WissKI = Wissenschaftliche KommunikationsInfrastruktur“

→ used Database

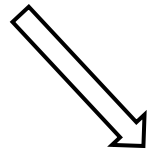
virtual research environment
software for **linked open data**
based on **Drupal CMS**



Ontologies in our archival information system

ecrm (200717)

ecrm = Erlangen CRM OWL (implementation of CIDOC CRM)



ais-com (domain – ontology)

ais-com = archival information system – common (both archives at GNM)



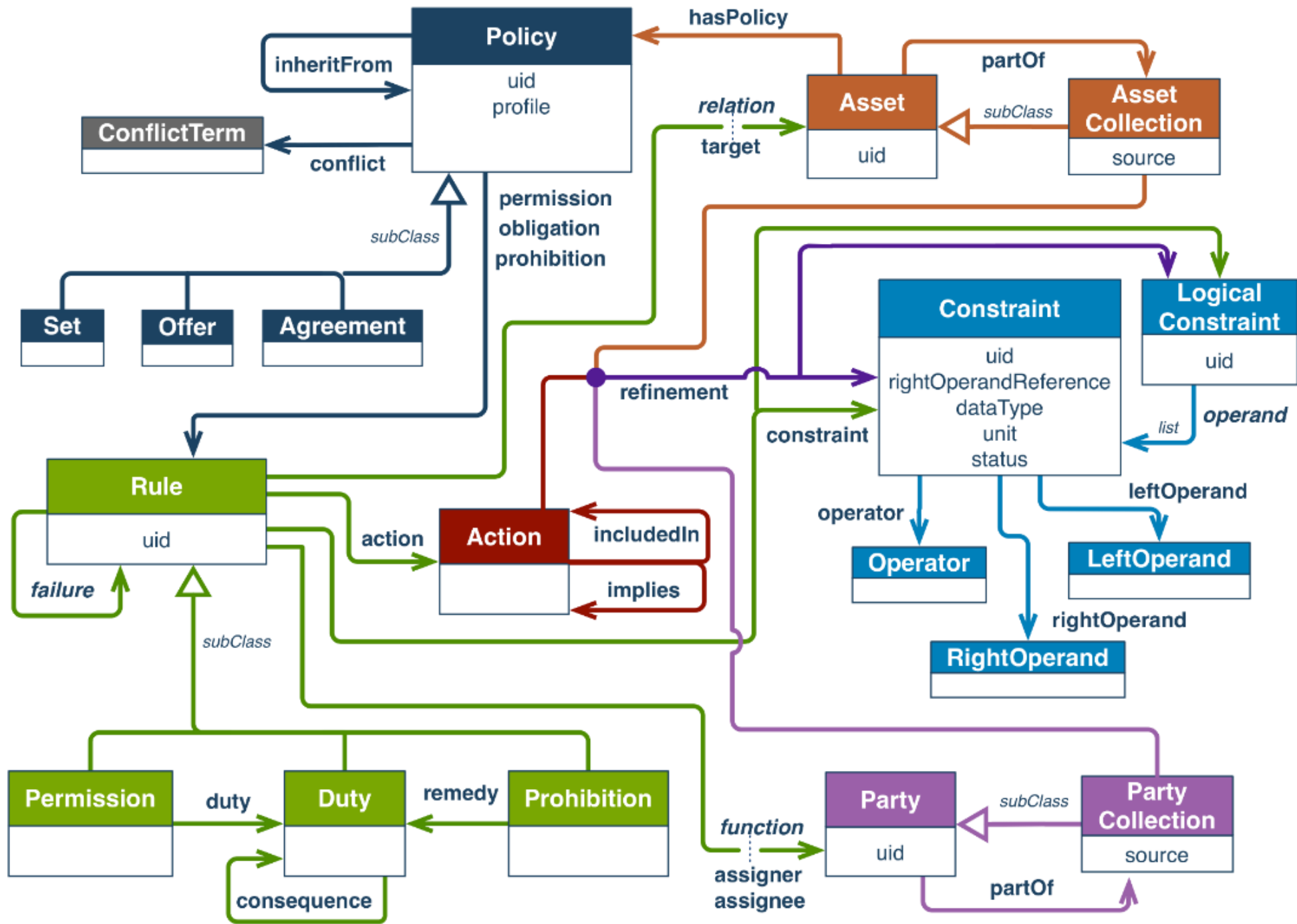
ais-dka (domain – ontology)

ais-dka = archival information system – deutsches kunstarchiv

Rights Expression Language

Open Digital Rights Language

short: ODRL



Selection Criteria



Standardization

W3C Recommendation
since 2018



Sustainability

actively maintained by
the ODRL Community
Group



Technical Integration

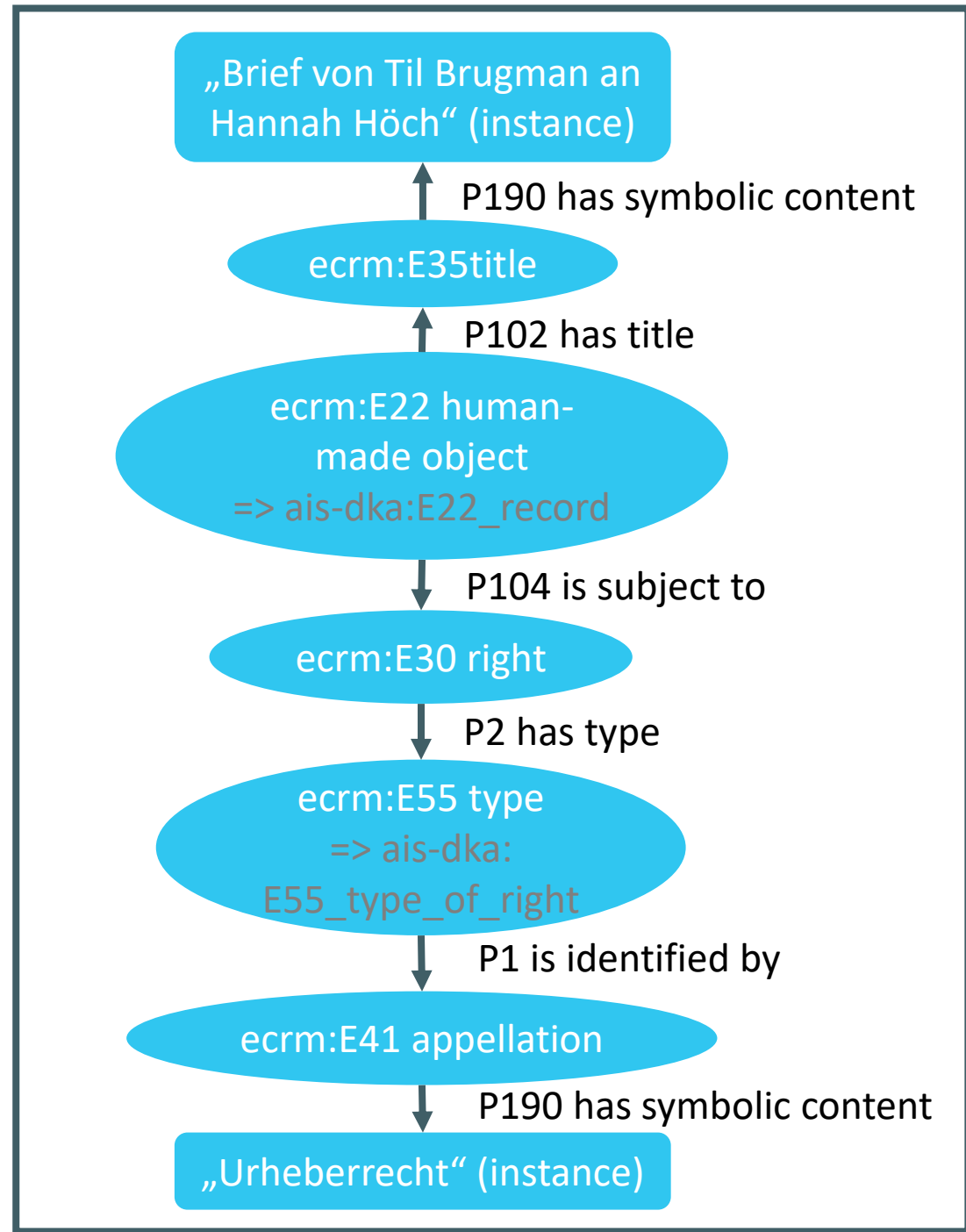
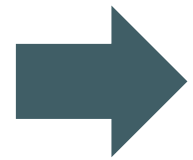
provides an RDF/OWL
ontology

Example





*copyright
protected*



„Brief von Til Brugman an Hannah Höch“ (instance)

P190 has symbolic content

ecrm:E35title

P102 has title

ecrm:E22 human-made object
=> ais-dka:E22_record

P104 is subject to

ecrm:E30 right

P2 has type

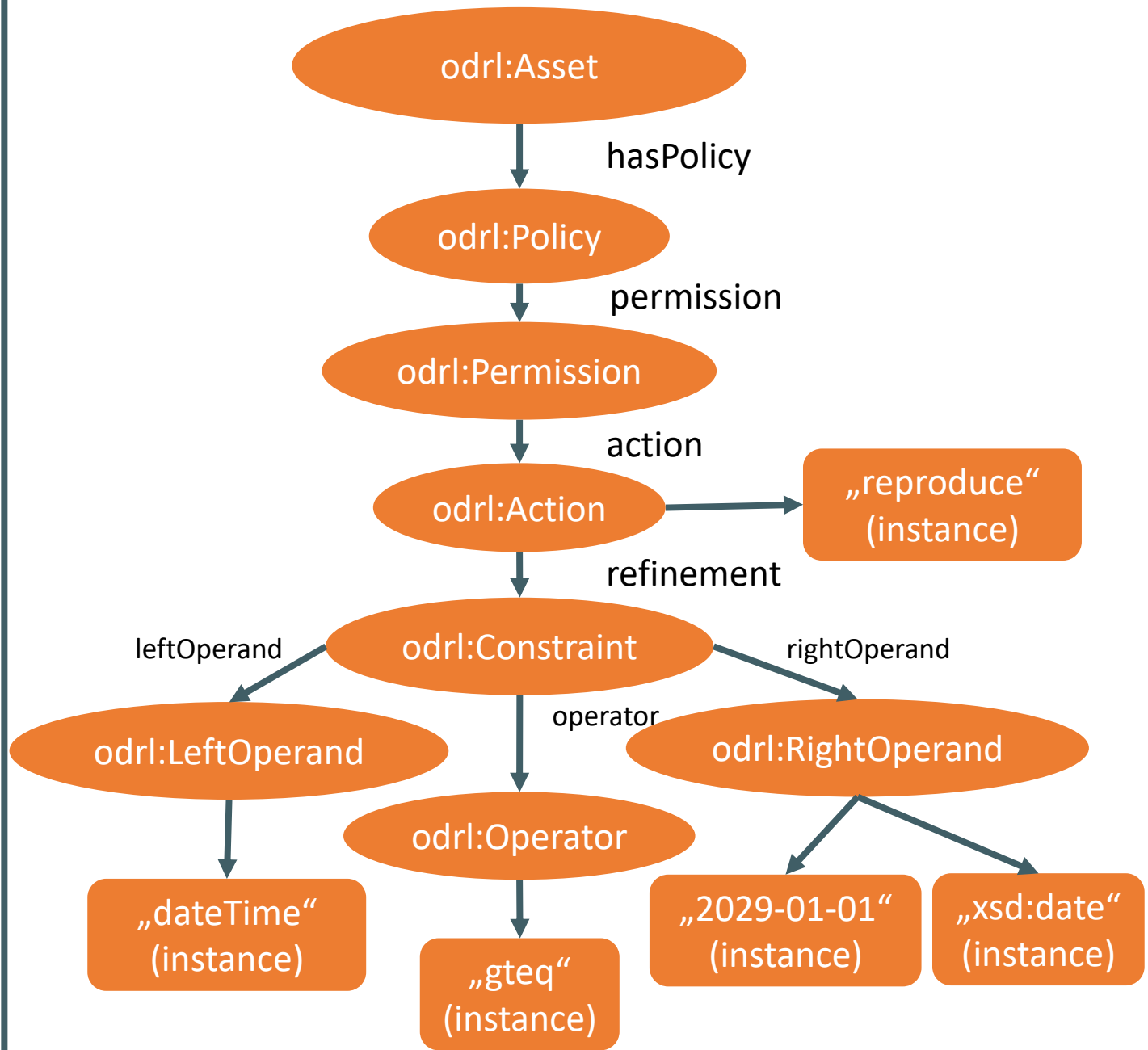
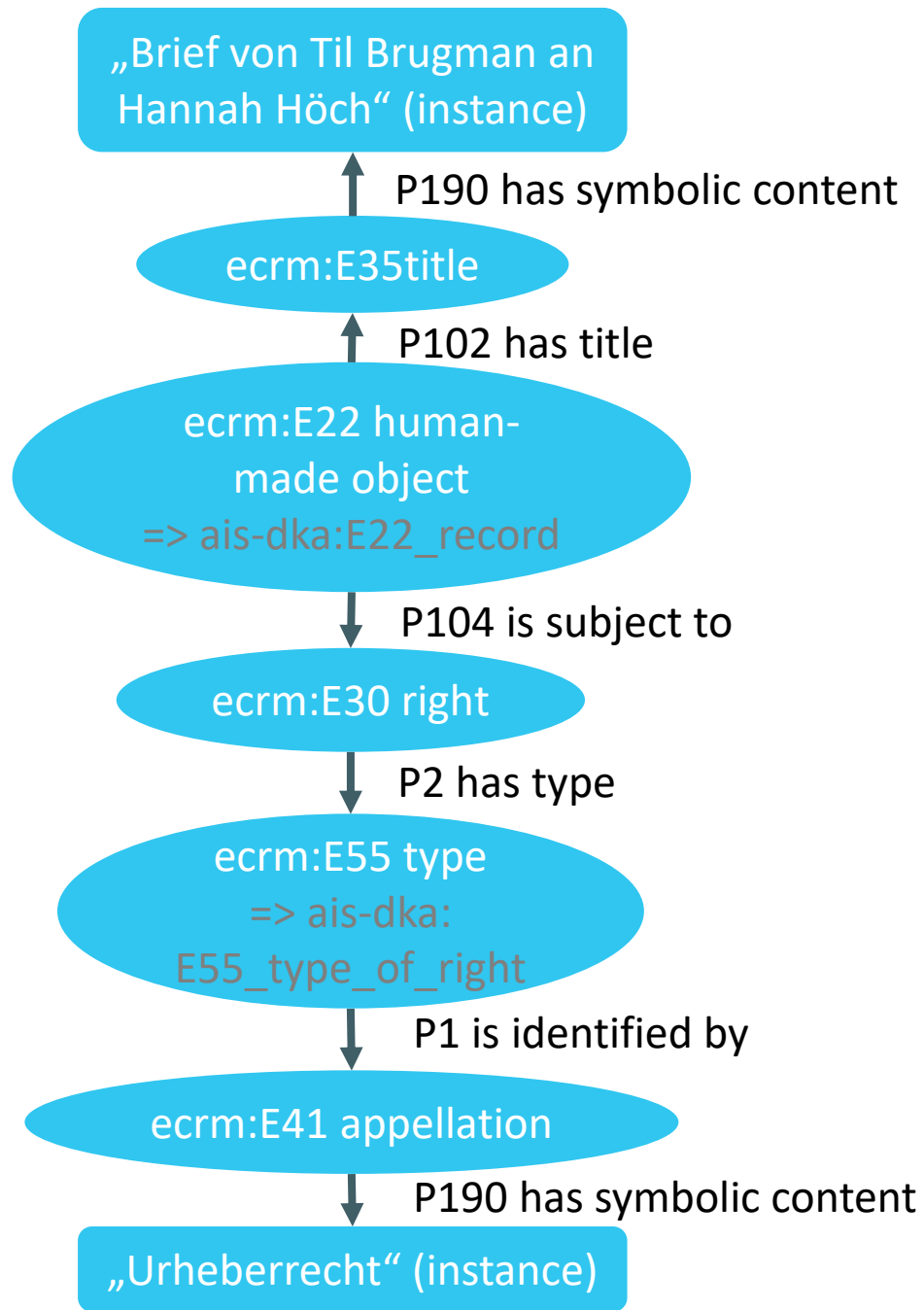
ecrm:E55 type
=> ais-dka:E55_type_of_right

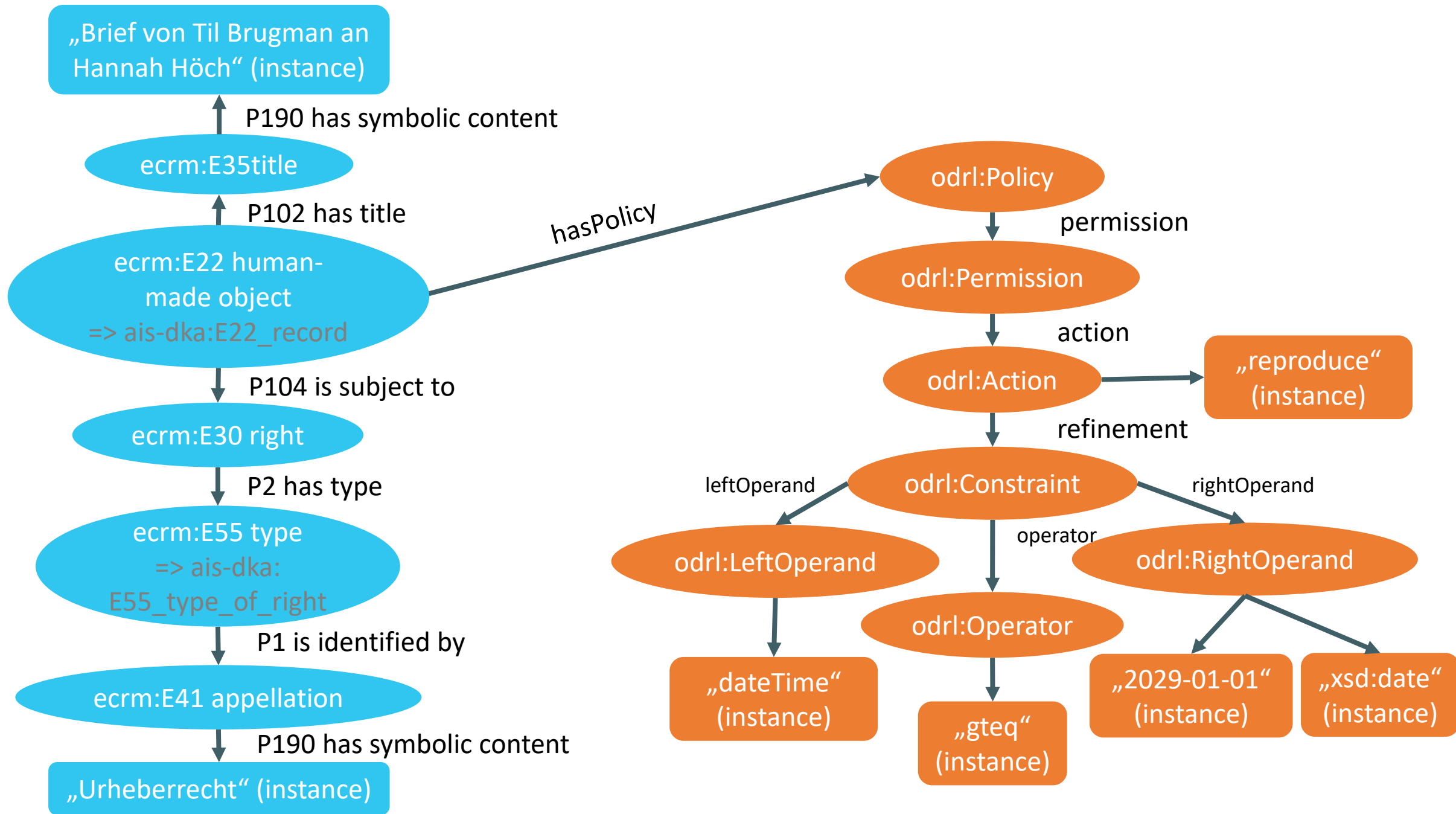
P1 is identified by

ecrm:E41 appellation

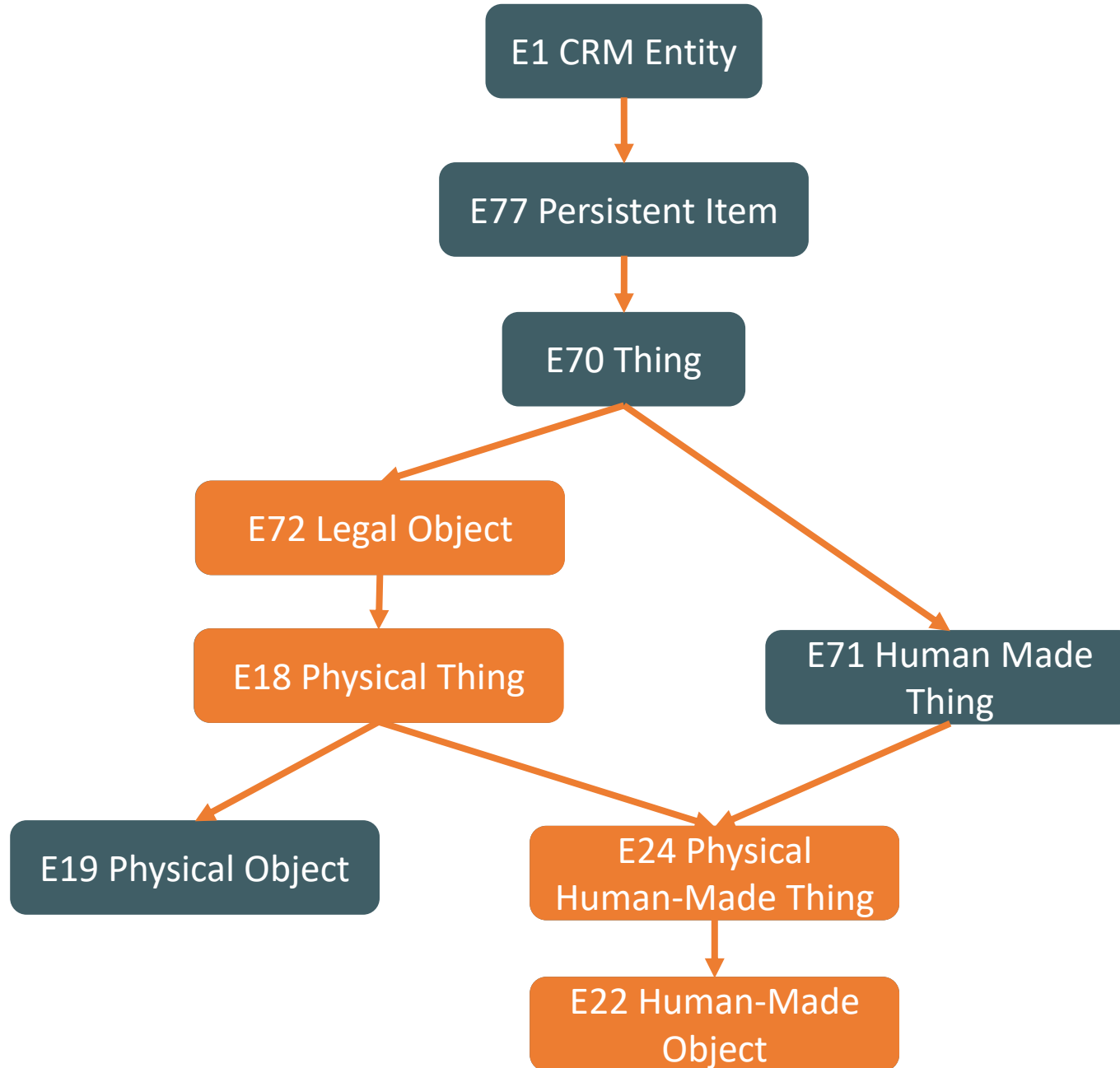
P190 has symbolic content

„Urheberrecht“ (instance)





Harmonisation CIDOC CRM & ODRL



ODRL Asset Class

An Asset class is a resource or a collection of resources that are the subject of a Rule. The Asset can be any form of identifiable resource, such as data/information, content/media, applications, services, or physical artefacts. Furthermore, it can be used to represent other Asset classes that are needed to undertake the Policy expression, such as with a Duty. An Asset is referred to by the Permission and/or Prohibition, and also by the Duty.

...

CIDOC CRM E72 Legal Object

ODRL Asset Class

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...

URI:

http://www.cidoc-crm.org/cidoc-crm/E72_Legal_Object

SubClass Of:

[E70](#) Thing

SuperClass Of: *

[E18](#) Physical Thing

[E90](#) Symbolic Object

Scope Note:

This class comprises those material or immaterial items to which instances of [E30 Right](#), such as the right of ownership or use, can be applied.

This is generally true for all instances of [E18 Physical Thing](#). In the case of instances of [E28 Conceptual Object](#), however, the identity of an instance of [E28 Conceptual Object](#) or the method of its use may be too ambiguous to reliably establish instances of [E30 Right](#), as in the case of taxa and inspirations.

Ownership of corporations is currently regarded as out of scope of the CIDOC CRM.

Examples:

- the Cullinan diamond ([E19](#)) (Scarratt and Shor, 2006)
- definition of the CIDOC Conceptual Reference Model Version 5.0.4 ([E73](#)) (ISO 21127: 2014)

In First Order Logic:

- $E72(x) \Rightarrow E70(x)$

Properties:

[P104](#) is subject to (applies to): [E30](#) Right

[P105](#) right held by (has right on): [E39](#) Actor

* [E73 Information Object](#), which „comprises identifiable immaterial items, such as poems, jokes, data sets, images, texts, multimedia objects, [...] computer program code [...]“

Thank you for
your attention!



Digitales Ontologie-gestütztes
Rechtmanagement im Archiv