



The role of the *Publications Office of the EU* in semantic web and standardisation activities

SEMIC 2014 conference (9 April 2014)

Marc Wilhelm Küster / Willem van Gemert

REACH

EUROPEAN CHEMICALS
LEGISLATION
Information for Exporters to Europe

What should your
company know?

REACH ME!

What is REACH?

REACH is a European Community Regulation on chemicals and their safe use. It deals with the Registration, Evaluation, Authorisation and Restriction of Chemical substances.



REACH — Registration, Evaluation and Authorisation of Chemicals

01/06/2007

Journal officiel
de l'Union européenne

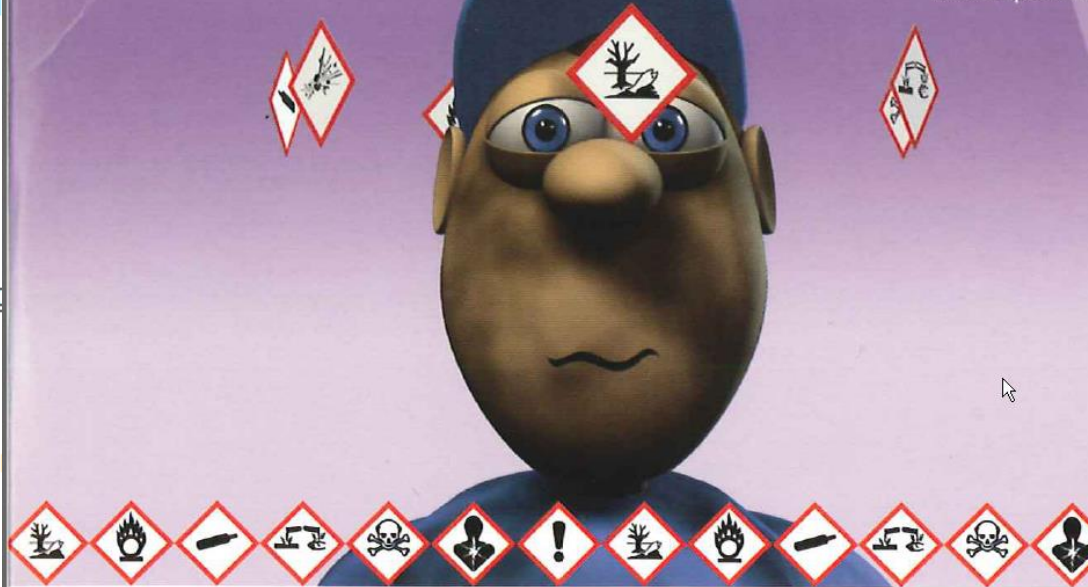
L 136

In order to introduce a chemical substance on the European market, a manufacturer or importer must demonstrate that it has to submit comprehensive information on properties...

Safety and health at work is everyone's concern. It's good for you. It's good for business.

Napo in... Danger: chemicals!

www.napofilm...



INAIL

inrs

SUVA



DGUV



European Agency for Safety and Health at Work

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[?](#) [Partager](#)

Document 32006L0121 > [Sauvegarder dans Mon EUR-Lex](#) [Ajouter aux favoris](#) [Download notice](#)

Notice bibliographique | Texte | Procédure | Documents liés | Tout | Tout réduire | Tout afficher

Titre et référence

Directive 2006/121/CE du Parlement européen et du Conseil du 18 décembre 2006 modifiant la directive 67/548/CEE du Conseil concernant le rapprochement des dispositions législatives, réglementaires et administratives relatives à la classification, l'emballage et l'étiquetage des substances dangereuses afin de l'adapter au règlement (CE) n o 1907/2006 concernant l'enregistrement, l'évaluation et l'autorisation des substances chimiques ainsi que les restrictions applicables à ces substances (REACH), et instituant une agence européenne des produits chimiques

JO L 396 du 30/12/2006, p. 795-801 (PL)
 JO L 396 du 30/12/2006, p. 851-857 (ET, LV, LT, MT, SK)
 JO L 396 du 30/12/2006, p. 853-859 (ES, DA)
 JO L 396 du 30/12/2006, p. 850-856 (EN, FR, IT, FI, SV)
 JO L 396 du 30/12/2006, p. 855-861 (PT)
 JO L 396 du 30/12/2006, p. 850-855 (SL)
 JO L 396 du 30/12/2006, p. 852-858 (CS, DE, HU)
 JO L 396 du 30/12/2006, p. 854-860 (EL)
 JO L 396 du 30/12/2006, p. 849-855 (NL)
 édition spéciale bulgare: chapitre 13 tome 059 p. 11 - 12
 édition spéciale roumaine: chapitre 13 tome 059 p. 11 - 12
 édition spéciale croate chapitre 13 tome 016 p. 293 - 294

WORK
 <Directive>
 e.g. 32006L0121

SUBJECT
 002897: rapprochement des législations

Expression
 FR: Directive 2006/121/CE du Parlement européen et du Conseil du 18 décembre 2006[...]

Manifestation
 PDF

Manifestation
 xhtml

Expression
 EN: Directive 2006/121/EC of the European Parliament and of the Council of 18 December 2006 amending Council Directive 67/548/EEC[...]

Manifestation
 PDF

Manifestation
 xhtml

Expression
 EL: Οδηγία 2006/121/ΕΚ του Ευρωπαϊκού Κοινοβουλίου και του Συμβουλίου, της 18ης Δεκεμβρίου 2006 , για την τροποποίηση της οδηγίας 67/548/ΕΟΚ [...]

Manifestation
 PDF

Manifestation
 xhtml

Langues, formats et lien vers le JO

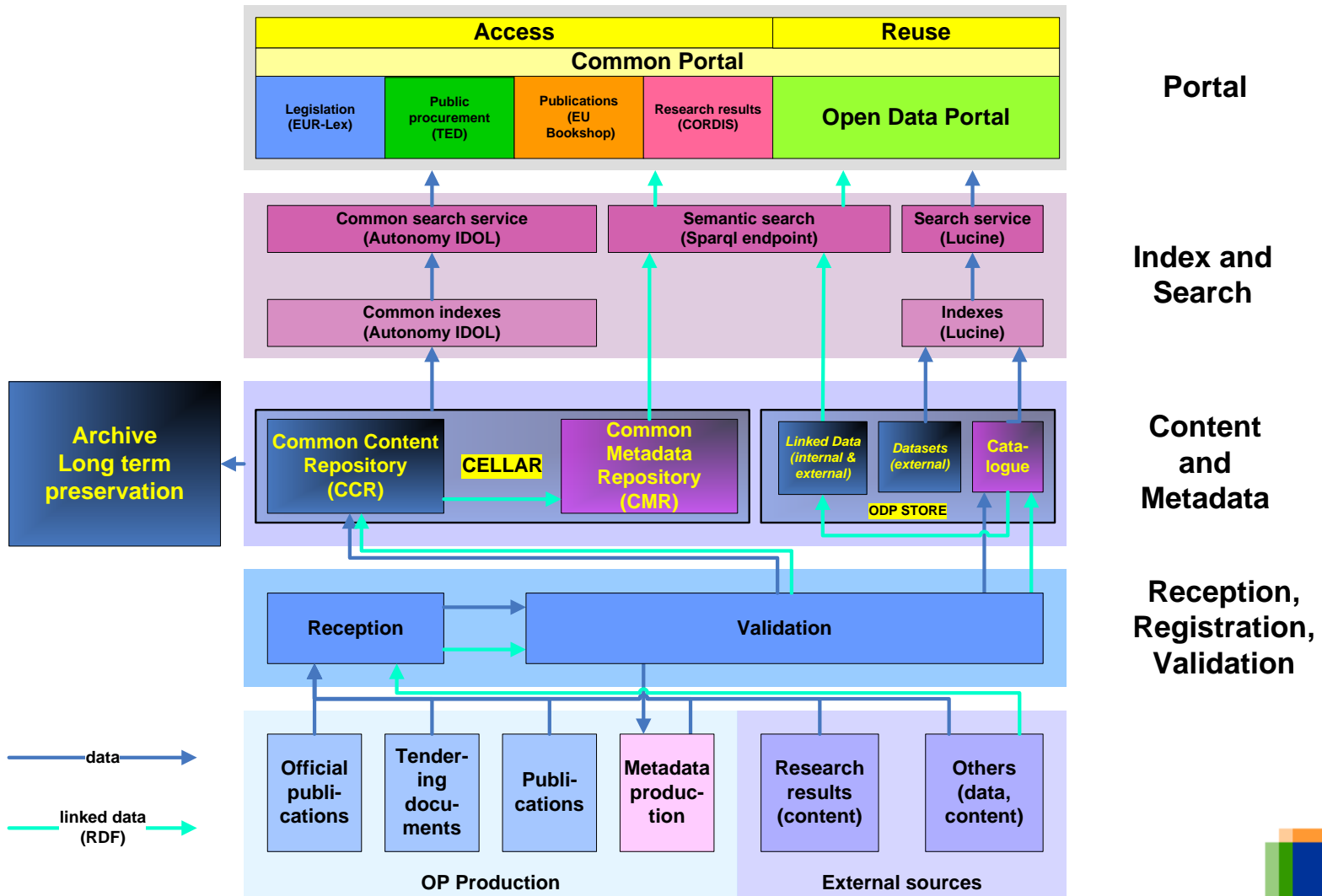
| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | BG | ES | CS | DA | DE | ET | EL | EN | FR | GA | HR | IT | LV | LT | HU | MT | NL | PL | PT | RO | SK | SL | SV | TR |
| HTML | | | | | | | | | | | | | | | | | | | | | | | | |
| PDF | | | | | | | | | | | | | | | | | | | | | | | | |
| Journal officiel | | | | | | | | | | | | | | | | | | | | | | | | |

AGENT
 PE: European Parliament
 CONSIL: Council

Pour vérifier la version électronique ayant valeur juridique de ce JO, cliquez sur l'icône ci-dessus



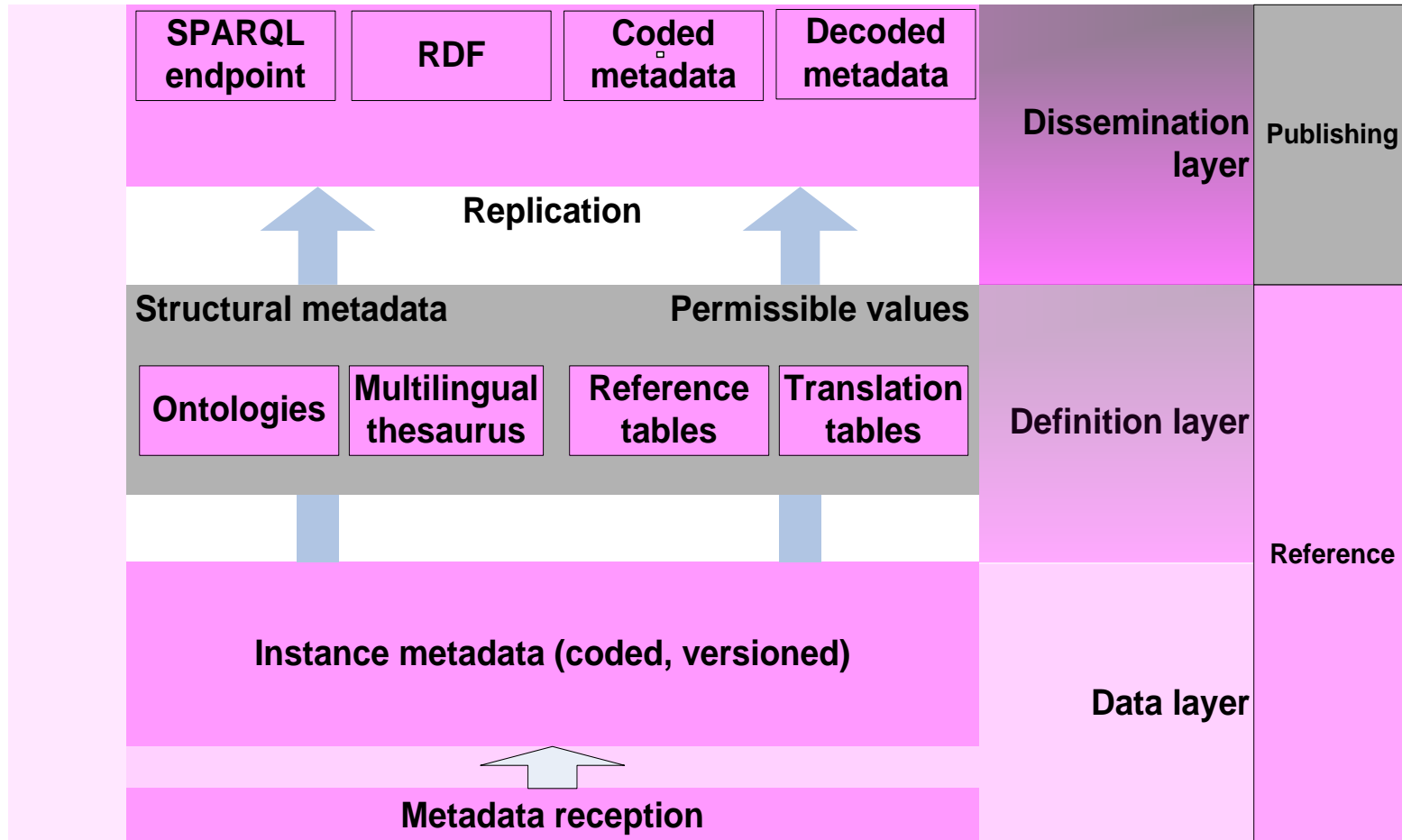
Content and Metadata Layer



By Peter Schmitz



CELLAR – metadata repository



Based on slide from Peter Schmitz



Semantic technology aspects - Open Data

- Dublin Core (core metadata)
- Linked Open Data (LOD)
- Web-friendly ("RESTful")
- Resource Description Framework (RDF)
- Standard Query Language (SPARQL)
- FRBR compliant

Sparql Endpoint

Used prefixes:

oracle: <http://www.oracle.com/2009/05/orardf/jena-joseki-ns#>
rdfs: <http://www.w3.org/2000/01/rdf-schema#>
rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
xsd: <http://www.w3.org/2001/XMLSchema#>
module: <http://joseki.org/2003/06/module#>
joseki: <http://joseki.org/2005/06/configuration#>
ja: <http://jena.hpl.hp.com/2005/11/Assembler#>
cdm: <http://publications.europa.eu/ontology/cdm#>
owl: <http://www.w3.org/2002/07/owl#>
cmr: <http://publications.europa.eu/ontology/cdm/cmr#>
Example query:

Select / Ask

PREFIX cdm: <http://publications.europa.eu/ontology/cdm#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

SELECT ?work_uri WHERE { ?work_uri rdf:type cdm:work }

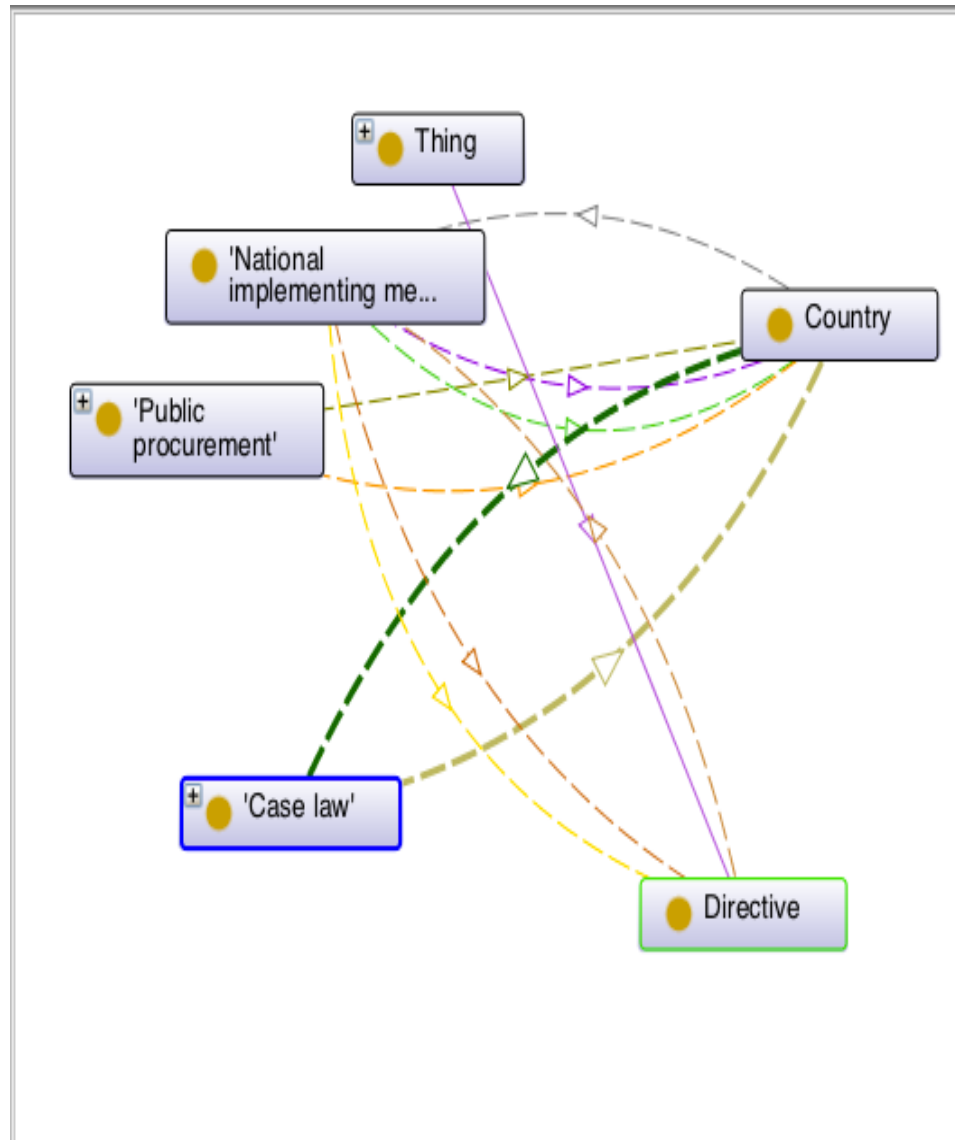
```
1 <?xml version="1.0"?>
2 <sparql xmlns="http://www.w3.org/2005/sparql-results#">
3   <head>
4     <variable name="work_uri"/>
5   </head>
6   <results>
7     <result>
8       <binding name="work_uri">
9         <uri>http://cellar-dev.publications.europa.eu/resource/oj/JOC_2007_018_R_0001_01</uri>
10      </binding>
11    </result>
12    <result>
13      <binding name="work_uri">
14        <uri>http://cellar-dev.publications.europa.eu/resource/celex/32009A1013%2802%29R%2801%29</uri>
15      </binding>
16    </result>
17    <result>
18      <binding name="work_uri">
19        <uri>http://cellar-dev.publications.europa.eu/resource/com/COM_2006_454</uri>
20      </binding>
21    </result>
22    <result>
23      <binding name="work_uri">
24        <uri>http://cellar-dev.publications.europa.eu/resource/oj/JOL_1970_223_R_0023_012</uri>
25      </binding>
26    </result>
27    <result>
28      <binding name="work_uri">
29        <uri>http://cellar-dev.publications.europa.eu/resource/celex/71967L0548ROU%2802%29</uri>
30      </binding>
31    </result>
32    <result>
33      <binding name="work_uri">
34        <uri>http://cellar-dev.publications.europa.eu/resource/oj/JOC_2008_022_R_0038_01</uri>
35      </binding>
36    </result>
37    <result>
38      <binding name="work_uri">
39        <uri>http://cellar-dev.publications.europa.eu/resource/oj/JOC_2008_123_R_0001_01</uri>
40      </binding>
41    </result>
42    <result>
43      <binding name="work_uri">
```

Submit Query



Why RDF?

- OWL: declarative datamodel
- Links: everything interconnected
- Open Data: RDF core standard
- → OP's data: a giant graph



The screenshot shows a software interface with two panels. The top panel is titled 'Arc Types' and contains a search box labeled 'type filter text'. Below the search box is a list of checked items, each with a colored line segment next to it: 'Case law originates in', 'Country implements n', 'Country initiates / is c', 'Directive implemented', 'National implementing', 'National implementing', 'National implementing', and 'National implementing'. The bottom panel is titled 'Node Types' and also contains a search box labeled 'type filter text'. Below the search box is a single checked item: 'class'.



Common Data Model (CDM)

The screenshot displays the Protégé ontology editor interface for the Common Data Model (CDM). The window title is "cdm (http://publications.europa.eu/ontology/cdm) - [H:MetaConv\cdm\cdm.rdf]". The main menu includes File, Edit, Ontologies, Reasoner, Tools, Refactor, Tabs, View, Window, and Help. The address bar shows the URL "cdm (http://publications.europa.eu/ontology/cdm)".

The interface is divided into several panes:

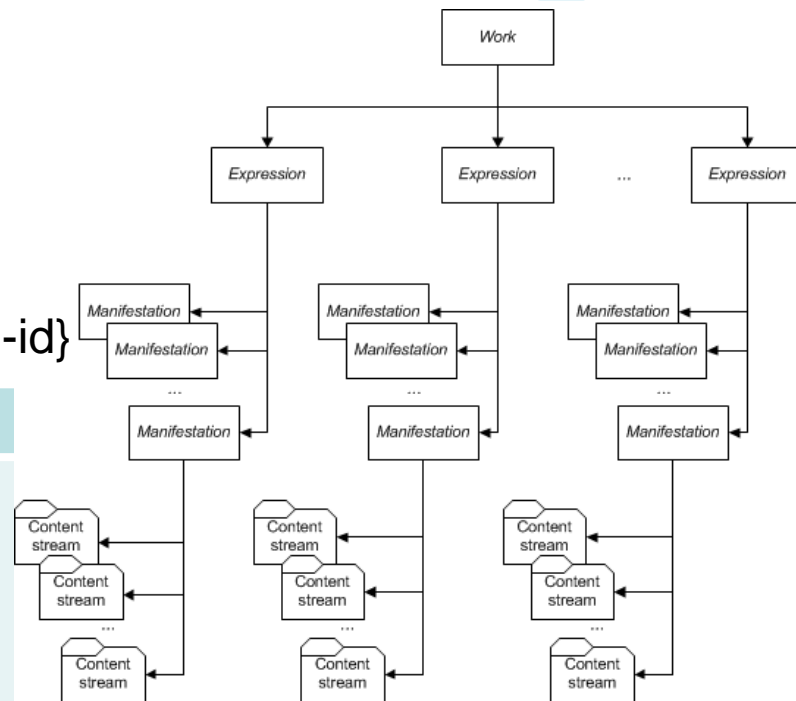
- Class hierarchy:** A tree view on the left showing the ontology structure. The "decision" class is highlighted in blue. Its superclasses include "legislation secondary", "work", "publication general", "publication other", "recueil-jurisprudence", "serials periodical", "series", "special-official-journal", and "table-of-contents".
- Usage:** A pane on the right showing the usage of the "decision" class. It lists four uses: "decision" (Class: decision), "decision SubClassOf legislation secondary", "decision service associated" (decision_service_associated Domain decision), and "decision service responsible" (decision_service_responsible Domain decision).
- Description:** A pane on the right showing the description of the "decision" class. It lists equivalent classes, superclasses, and inherited anonymous classes. The superclasses include "legislation secondary". The inherited anonymous classes include "work has expression min 1 expression", "work embargo max 1 Literal", "work table-of-contents max 1 Literal", "work date creation legacy max 1 Literal", "work date document exactly 1 Literal", "work created by agent min 1 agent", "resource legal has type act concept type act exactly 1 concept type act", "resource legal date vote max 1 Literal", "resource legal id celex exactly 1 Literal", "resource legal number corrigendum max 1 Literal", "resource legal number sequence celex max 1 Literal", "resource legal date request caducity max 1 Literal", "resource legal year exactly 1 Literal", "resource legal number natural celex max 1 Literal", "resource legal id sector exactly 1 Literal", and "resource legal in-force max 1 Literal".

The status bar at the bottom indicates "No Reasoner set" and "Show Inferences" is checked.



CELLAR URI templates

<http://publications.europa.eu/resource/{ps-id}/{obj-id}>



| Type | {ps-id} | Example |
|--------------------------|--------------------------------------|---|
| work dossier agent | {work-id} | 32006D0241 |
| expression | {work-id}.{expr-id} | 32006D0241.fra |
| manifestation | {work-id}.{expr-id}.{man-id} | 32006D0241.fra.FORMEX |
| content stream | {work-id}.{expr-id}.{man-id}.{cs-id} | 32006D0241.fra.FORMEX. L_2006088FR.01006402.xml |
| event | {work-id}.{event-id} | 11260.12796 |



11/т. 47 BG Официален вестник на Европейския съюз 147

22006A0801(01)

L 211/24 ОФИЦИАЛЕН ВЕСТНИК НА ЕВРОПЕЙСКИЯ СЪЮЗ

между Европейската общност и

ЕВРОПЕЙСКАТА ОБЩНОСТ,

от една страна, и

УКРАИНА,

от друга страна,

(наричани по-долу „страните“),

КАТО ОТБЕЛЯЗВАТ, че двустранните спорове между Европейската общност и Украйна, съдържащи се в настоящия Регламент,

КАТО ОТБЕЛЯЗВАТ, че Европейската общност и Украйна са се споразумели да бъдат включени в двустранните спорове и трети страни;

КАТО ОТБЕЛЯЗВАТ, че по силата на правото на Европейската общност и Украйна, държавите-членки на Европейската общност и трети страни;

КАТО ВЗЕМАТ ПРЕДВИД споразуменията между Европейската общност и някои трети страни, предвиждащи възможността граждани на тези трети страни да придобиват собственост във въздушни превозвачи, получили лицензия в съответствие с правото на Европейската общност;

КАТО ПРИЗНАВАТ, че някои разпоредби на двустранните споразумения за въздухоплавателни услуги между държавите-членки на Европейската общности и Украйна, които противоречат на правото на Европейската общност, трябва да бъдат приведени в съответствие с правото на Европейската общност;

Modify Headers

Headers Options About Help

Select action Header name (e.g. user-agent) Header value Descriptive comment Add Reset

| Action | Name | Value | Comment | Enabled/Disabled |
|--------|-----------------|--|---------|------------------|
| Modify | Host | cellar-dev.publications.europa.eu | | Enabled |
| Filter | Accept | | | Enabled |
| Add | Accept | application/xml?type=fxm3 | | Enabled |
| Add | Accept | application/xml?notice=branch | | Disabled |
| Filter | Accept-Language | | | Enabled |
| Add | Accept-Language | ron, bul, fin, slk, el, hun, pol, swe | | Enabled |
| Add | Accept | application/xml?notice=tree | | Disabled |
| Add | Accept | application/pdf?type=pdfa1a, applica... | | Enabled |
| Add | Accept | application/xhtml+xml | | Enabled |
| Add | Accept | application/xml?type=fxm4 | | Disabled |
| Add | Accept-Language | fra | | Disabled |
| Add | Accept-Language | eng | | Disabled |
| Add | Accept-Language | mlt | | Disabled |
| Add | Accept | application/rdf+xml | | Disabled |
| Add | Accept-Language | rld, deu | | Disabled |
| Add | Accept | application/xhtml+xml, text/html, text/... | | Disabled |
| Add | Accept-Language | lit | | Disabled |
| Add | Accept | text/plain | | Disabled |

OK

One work, multiple representations



Cellar in numbers

- > 3.5 million requests per day served on average
- > **950.000** different works & dossiers in > 9.3 million expressions and > 17 million manifestations
- **67** million files
- > **140** million persistent identifiers
- **1100** million triples in Oracle RDF store
- Ca. 3000 works added each day (most in 23 languages)
- Sizes:
 - EU law in **2,8** TB Oracle DB (compressed), other collections are being added
 - Content (in Fedora repository) ca. **5,25** TB
- Expandable set of dissemination nodes → fully scalable
- Two failover systems

State:2014-04-02



Back to result list

- Search
- Legally binding print editions
- Special edition

Document 32006L0121 > Save to My items Bookmark this item Download notice

About this document Text Procedure Linked documents All

Title and reference

Authentic language

Dates

Classifications

- EUROVOC descriptor:
marketing standard
chemical product
approximation of laws
dangerous substance
scientific report
packaging
European Chemicals Agency
labelling
- Subject matter:
Approximation of laws
Consumer protection
Technical barriers
Environment
Internal market – Principles



EUROVOC

<http://eurovoc.europa.eu/213053>

<http://eurovoc.europa.eu/2739>

<http://eurovoc.europa.eu/2897>

...

Descripteur EUROVOC:

norme de commercialisation
produit chimique
rapprochement des législations
substance dangereuse
expertise scientifique
emballage
Agence européenne des produits chimiques
étiquetage

FRA

Περιγραφέας EUROVOC:

κανόνες εμπορίας
χημικό προϊόν
προσέγγιση των νομοθεσιών
επικίνδυνη ουσία
επιστημονική πραγματογνωμοσύνη
συσκευασία
Ευρωπαϊκός Οργανισμός Χημικών Προϊόντων
επισήμανση

ELL

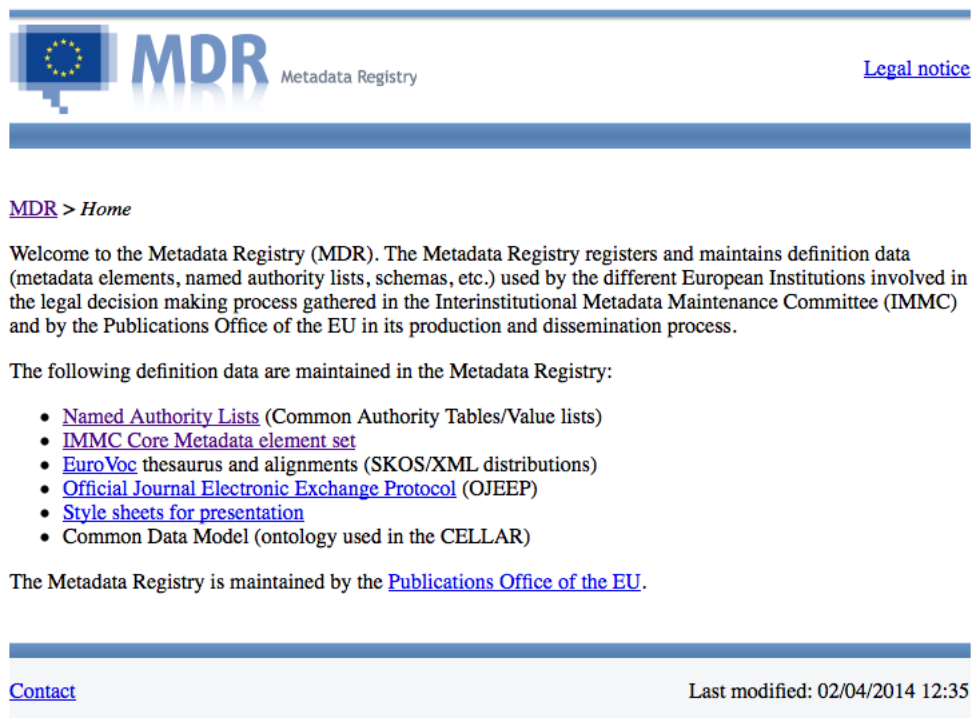
EUROVOC deskriptorius:

rinkodaros standartas
cheminis produktas
teisės aktų derinimas
pavojingoji medžiaga
mokslinė ataskaita
pakavimas
Europos cheminių medžiagų agentūra
ženklinimas etiketėmis

LIT

The Publications Office Metadata Registry (MDR)

- Reference Data Repository
 - Publications Office
 - Interinstitutional Metadata Maintenance Committee (IMMC)
- Framework for harmonisation and standardisation
 - Governance
 - Documentation
- Reuse of reference data
 - Human-readable formats
 - Machine-readable formats



[Legal notice](#)

[MDR > Home](#)

Welcome to the Metadata Registry (MDR). The Metadata Registry registers and maintains definition data (metadata elements, named authority lists, schemas, etc.) used by the different European Institutions involved in the legal decision making process gathered in the Interinstitutional Metadata Maintenance Committee (IMMC) and by the Publications Office of the EU in its production and dissemination process.

The following definition data are maintained in the Metadata Registry:

- [Named Authority Lists](#) (Common Authority Tables/Value lists)
- [IMMC Core Metadata element set](#)
- [EuroVoc](#) thesaurus and alignments (SKOS/XML distributions)
- [Official Journal Electronic Exchange Protocol](#) (OJEEP)
- [Style sheets for presentation](#)
- Common Data Model (ontology used in the CELLAR)

The Metadata Registry is maintained by the [Publications Office of the EU](#).

[Contact](#) Last modified: 02/04/2014 12:35



Reference data assets published today in MDR

■ Authority tables (value vocabularies/controlled lists)

- Authority code `<authority-code>LUX</authority-code>`
- Labels in up to 23-24 official EU languages
- Mappings to legacy codes/external standard:

■ IMMC Core Metadata exchange protocol

- Core Metadata schema used in exchanges between institutions in the legislative decision making
- Transmission protocol schema
- Institution specific schema extensions
- Associated authority tables

■ EuroVoc resources (XML and SKOS distributions)

■ Other OP specific reference data (css files, ...)

```

<name>
  <original.name>
    <lg.version lg="deu" gender.grammar="N">Luxemburg</lg.version>
    <lg.version lg="fra" gender.grammar="M">Luxembourg</lg.version>
    <lg.version lg="ltz">Lëtzebuerg</lg.version>
  </original.name>
  <code-3166-1-alpha-2>LU</code-3166-1-alpha-2>
  <code-3166-1-alpha-3>LUX</code-3166-1-alpha-3>
  <code-3166-1-num>442</code-3166-1-num>
  <lg.version lg="bos">Luksembourg</lg.version>
  <lg.version lg="bul" script="Cyrillic">Люксембург</lg.version>
  <lg.version lg="cat">Luxemburg</lg.version>
  <lg.version lg="ces">Lucembursko</lg.version>
  <lg.version lg="dan">Luxembourg</lg.version>
  <lg.version lg="deu" gender.grammar="N">Luxemburg</lg.version>
  <lg.version lg="ell" script="Greek">Λουξεμβούργο</lg.version>
  <lg.version lg="eng" gender.grammar="N">Luxembourg</lg.version>
  <lg.version lg="est">Luksemburg</lg.version>
  <lg.version lg="eus">Luxenburgo</lg.version>
  <lg.version lg="fao">Luksemburg</lg.version>
  <lg.version lg="fin">Luxemburg</lg.version>
  <lg.version lg="fra" gender.grammar="M">Luxembourg</lg.version>
  <lg.version lg="gle">Lucsamburg</lg.version>
  <lg.version lg="glg">Luxemburgo</lg.version>
  <lg.version lg="hrv">Luksemburg</lg.version>
  <lg.version lg="hun">Luxemburg</lg.version>
  <lg.version lg="isl">Lúxemborg</lg.version>
  <lg.version lg="ita">Lussemburgo</lg.version>

```



Authority tables available today in MDR

- Corporate bodies (EU institutions, agencies and other bodies, services etc.)

| Authority code | Class | Label | Long Label | Acronym | Date of event | Legal basis | Status | Predecessor | Successor |
|----------------|-------|--|--|---------|---------------|------------------|------------|---|-----------------------|
| ECSC | EU | Communauté européenne du charbon et de l'acier | | CECA | 1951 – 2002 | | deprecated | | |
| EEC | EU | Communauté économique européenne | | | 1958 – 1993 | | deprecated | | Communauté européenne |
| EAEC | EU | Communauté européenne de l'énergie atomique | | Euratom | 1958 – | | current | | |
| EC | EU | Communautés européennes | | | 1967 – 2009 | | deprecated | | Union européenne |
| EURCOM | EU | Communauté européenne | | | 1993 – 2009 | C 191, 29.7.1992 | deprecated | Communauté économique européenne | Union européenne |
| EURUN | EU | Union européenne | | | 2009 – | | current | Communautés européennes Communauté européenne | |
| COM | EU | Commission européenne | Commission de l'Union européenne | | 2009 – | | current | Commission européenne | |
| COM | EU | Commission européenne | Commission des Communautés européennes | | 1967 – 2009 | | deprecated | Haute-Autorité | Commission européenne |

- Places (locations relevant for EU domain)
- Resource types (types of documents, e.g. regulation, directive, judgment etc.)
- Roles (role an agent can play, e.g. president, member, defendant, etc.)
- Treaties



Dissemination and reuse

■ Authority tables

- Persistent URI (table + concepts)
 - Will be de-referencable soon
- Distribution formats
 - XML (source)
 - SKOS
 - HTML

■ Distribution as well through:

- Open Data Portal
 - Authority tables
 - EuroVoc
- Joinup (ADMS descriptions)
 - Authority tables
 - EuroVoc

<http://publications.europa.eu/resource/authority/country>
<http://publications.europa.eu/resource/authority/country/LIX>

Contact | Search | Glossary | Help | Partners | Analytics Disclaimer | English (en)

European Commission | **joinup** | Login or Sign up | Search

Share and reuse interoperability solutions for public administrations

European Commission > ISA > Joinup > Semantic assets > Federated repositories > Metadata registry

Semantic Assets | Software | News | Events | e-Library | People

Semantic Assets
 Share and reuse semantic interoperability assets.

MDR Metadata Registry
 Submitted by [Willem Van Gemert](#) on January 04, 2013
 Rating: 5/5 (based on 2 votes) | 1419 reads

Description

The Metadata Registry of the Publications Office of the EU is the central reference location where all metadata definitions and related authority data used in Publications Office and in the data exchange between the institutions involved in the legal decision making process.

[Additional information](#)

[Asset releases](#) | [Explore this repository](#)

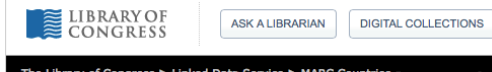
Countries Name Authority List 20140225-0
 The Countries name authority list (NAL) or Common Authority Table (CAT) is a controlled vocabulary listing countries with their authority code and label(s) in the 24 official languages of the EU (when available). The list is based on the ISO standard ISO 3166-1/alpha-3. The Countries NAL is part of the Core Metadata (CM) used in the data exchange between the institutions involved in the legal decision making process and the Publications Office of the EU.

Corporate bodies Name Authority List 20140225-0

MDR: Work in progress and plans for the future

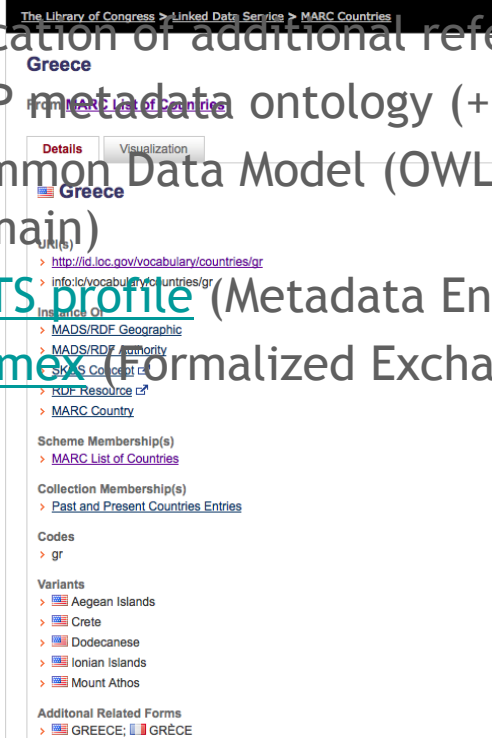
■ Making authority tables available as linked data

- Dissemination through CELLAR
- Dereferencing of tables and individual concepts
- Alignment with other vocabularies ([Library of Congress](#), [VIAF](#), ...)



■ Publication of additional reference data assets

- ODP metadata ontology (+ evolution towards [DCAT-AP](#))
- Common Data Model (OWL ontology describing EU publications domain)
- [METS profile](#) (Metadata Encoding & Transmission Standard)
- [Formex](#) (Formalized Exchange of Electronic Publications)



VIAF
Virtual International Authority File

Search

Select Field: Select Index: Search Terms: Search

DCAT APPLICATION PROFILE FOR EUROPEAN DATA PORTALS

Download (5 stars) Editor's choice

Submitted by [Stijn Goedertier](#) on March 08, 2013

Rating: 5 / 5 (based on 4 votes) | 1993 reads

12 people uses this project

Description

The **DCAT Application profile for data portals in Europe** (DCAT-AP) is a specification based on the Data Catalogue vocabulary ([DCAT](#)) for describing public sector datasets in Europe. Its basic use case is to enable cross-data portal search for data sets and make public sector data better searchable across borders and sectors. This can be achieved by the exchange of descriptions of data sets among data portals.

The DCAT-AP is used in the [Open Data Support](#) service initiated by the European Commission with the purpose of realising the vision of the pan-European Data Portal(s).



MDR clients/partners

- Interinstitutional level
 - CELLAR (Common Content & Metadata repository)
 - IMMC (EU institutions)
 - Dissemination sites (EUR-Lex, EU-Bookshop, TED, Cordis, Who is Who)
 - Open Data Portal (ODP)
 - ISA programme
 - JRC (Inspire)
 - COMREF
 - ELI (European Legislation Identifier)
 - ECLI (European Case Law Identifier)
 - EC Central Library (EAC)
 - ...
- Worldwide
 - ADMS (Joinup)
 - DCAT application profile
 - ...



EuroVoc, multilingual thesaurus of the EU

- Multilingual
 - 24 languages
 - 23 EU official languages and Serbian
- Multidisciplinary thesaurus
 - Strong EU coverage
 - Not specialised
- Current version (version 4.4)
 - Concepts: 6 800
 - ConceptSchemes:
 - 21 Domains, 120 Microthesauri
 - Published on 15 December 2012
- Alignments with other vocabularies
 - EuroVoc with Agrovoc
 - EuroVoc with Eclas
 - EuroVoc with Gemet
- SKOS, XML and alignments a
 - Free to use, reuse, link and for commercial purposes

LANGUAGE EQUIVALENTS

| | |
|----|-------------------------|
| BG | цифрово устройство |
| ES | retraso digital |
| CS | digitální propast |
| DA | it-kløft |
| DE | digitale Kluft |
| ET | digitaalne lõhe |
| EL | ψηφιακό χάσμα |
| EN | digital divide |
| FR | fossé numérique |
| HR | digitalna podjeljenost |
| IT | divario digitale |
| LV | digitālās atšķirības |
| LT | skaitmeninė atskirtis |
| HU | digitális megosztottság |
| MT | il-qasma digitali |
| NL | digitale kloof |
| PL | luka cyfrowa |
| PT | fosso digital |
| RO | divizare digitală |
| SK | digitálna priepasť |
| SL | digitalni razkorak |
| FI | digitaalinen kuilu |
| SV | digital klyfta |

Distribution – Alignment – EuroVoc and Agrovoc

[HTTP://PURL.ORG/NET/MEDIATYPES/APPLICATION/RDF+XML](http://purl.org/net/mediatypes/application/rdf+xml)

Distribution – Alignment – EuroVoc and ECLAS

[HTTP://PURL.ORG/NET/MEDIATYPES/APPLICATION/RDF+XML](http://purl.org/net/mediatypes/application/rdf+xml)

Distribution – Alignment – EuroVoc and Gemet

[HTTP://PURL.ORG/NET/MEDIATYPES/APPLICATION/RDF+XML](http://purl.org/net/mediatypes/application/rdf+xml)

CS

INTERNATIONAL RELATIONS

EUROPEAN UNION

ECONOMICS

DE

OPEN QUESTIONS

6 ECONOMICICS

606 economic policy

611 economic growth

616 regions and regional policy

621 economic structure

626 national accounts

631 economic analysis

70 TRADE

7006 trade policy

7011 tariff policy

2016 trade

2021 international trade

2026 consumption

2031 marketing

2036 distributive trades



European Union Open Data Portal



Other standardization activities

- Participation in standardisation efforts in public procurement domain
 - Collaboration with UN/CEFACT and CEN BII for establishment of e-procurement standards

■ ELI (European Legislation Identifier)

■ ISA action 1.1

- URL taskforce: Common approach for persistent identifiers in EU institutions
- Metadata alignment
- Metadata governance

The image shows two overlapping web pages. The background page is the Wikipedia article for 'European Legislation Identifier'. The foreground page is the ISA website, specifically the 'Actions' section for 'Improving semantic interoperability in eGovernment systems'.

Wikipedia Article: The article title is 'European Legislation Identifier'. It is categorized under 'The Europe' and 'European le'. The article content is partially visible, starting with 'Element' and 'State will be language re'. The article mentions 'Example: /eli/{ identi'.

ISA Website: The website is titled 'Improving semantic interoperability in eGovernment systems'. It is part of the 'European Commission' and 'Trusted Information exchange' initiative. The page content includes:

- Project core data:** Project start/finish: Q3/2010 to Q4/2015; Parties involved: European Commission (DG Informatics); ISA contribution: EUR 5 550 000.
- Search this page:** A search bar with a 'Search' button.
- Want to know more?:** A list of links:
 - Study on business models for Linked Open Government Data (BMALOGD) (3 MB)
 - Promoting Semantic Interoperability in Europe - 21 October 2013 (13 MB)
 - ECOV 2013 - ISA expert delivers opening keynote speech



Conclusion

- Open access to information resources (publications, datasets, ...)
- Promote access and reuse
- Improve interoperability
- IMMC/MDR: Framework for harmonisation and standardisation
- Commitment to ensure maintenance of reference data



Publications Office contact details/links

- Publications Office of the EU
<http://publications.europa.eu>
- Metadata Registry website
<http://publications.europa.eu/mdr>
- Metadata Registry e-mail address
OP-METADATA-REGISTRY@publications.europa.eu
- Publications Office datasets on the EU Open Data Portal
<http://open-data.europa.eu/en/data/publisher/publ>
- Metadata Registry on Joinup (ADMS descriptions)
<https://joinup.ec.europa.eu/catalogue/repository/metadata-registry>
- EuroVoc website
<http://eurovoc.europa.eu>
- EuroVoc e-mail address
eurovoc@publications.europa.eu
- EuroVoc on Joinup (ADMS descriptions)
https://joinup.ec.europa.eu/catalogue/asset_release/eurovoc



Relevant acronyms used

- [ADMS](#): Asset Description Metadata Schema
- [DCAT](#): Data Catalogue Vocabulary
- [DCAT-AP](#): DCAT application profile for data portals in Europe
- [ECLI](#): European Case Law Identifier
- [ELI](#): European Legislation Identifier
- [EU ODP](#): European Union Open Data Portal
- [Formex](#): Formalized Exchange of Electronic Publications
- [IMMC](#): Interinstitutional Metadata Maintenance Committee
- [MDR](#): Metadata Registry
- [OWL](#): Web Ontology Language
- [RDF](#): Resource Description Framework
- [SKOS](#): Simple Knowledge Organisation System
- [VIAF](#): Virtual International Authority File

