

# D3- Integration of RRMV ontology in AKN

D3: Design template regulatory reporting clauses marked-up with RRMV

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## Introduction

The goal of the task D3 is to design a template of regulatory reporting clause in RRMV serialization RDF/XML capable to be integrated in the AKN4EU scenario, and moreover to be used in LEOS editor. The main objectives are:

1. to prevent the linguistic variants in the regulatory reporting clause, to have more harmonization in the sentences;
2. to support the automatic detection since the legal drafting phase of the regulatory reporting clauses and their elements;
3. to serialize the RDF/XML using RRMV in an authoritative way in order to provide an interoperable AKN4EU XML file between the European institutions.

For coping with these objectives, we have selected to host the fragment of the RRMV RDF/XML inside of AKN structure in the <meta> parts. Following the AKN design principle the authoritative content is not annotated with subjective annotation. The content of the legal text must be clean to any code instructions (e.g., off-set), legal interpretation metadata (e.g., obligation), and semantic annotation (e.g., derogation). For this knowledge, we have designed in AKN a <meta> block where many multiple interpretations could be possible according to the jurisdiction, the temporal parameters, and the institutions. For this reason, each <meta> includes the attribute @source that specifies the author of the metadata for tracking the provenance (see the PROV-O ontology for the concept of provenance). In particular, we use the block of metadata <analysis>

We have taken as an example the document Directive 2006/43/EC – consolidated on 2023-01-05  
<http://data.europa.eu/eli/dir/2006/43/2023-01-05>  
Document 02006L0043-20230105

In this consolidated text the art. 48 was amended on the following dates.

<ul style="list-style-type: none"><li>• ▼M1 - 20.3.2008</li></ul>
<ul style="list-style-type: none"><li>• ▼M3 - 27.5.2014</li></ul>

“CHAPTER XII  
TRANSITIONAL AND FINAL PROVISIONS  
Article 48  
Committee procedure

▼M3

1. The Commission shall be assisted by a committee (hereinafter referred to as ‘the Committee’). That committee shall be a committee within the meaning of Regulation (EU) No 182/2011 of the European Parliament and of the Council ( 13 ).

2. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

▼M1

2a. Where reference is made to this paragraph, Article 5a(1) to (4) and Article 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

▼M1

3. By 31 December 2010 and, thereafter, at least every three years, the Commission shall review the provisions concerning its implementing powers and present a report to the European Parliament and to the Council on the functioning of those powers. The report shall examine, in particular, the need for the Commission to propose amendments to this Directive in order to ensure the appropriate scope of the implementing powers conferred on the Commission. The conclusion as to whether or not an amendment is necessary shall be accompanied by a detailed statement of reasons. If necessary, the report shall be accompanied by a legislative proposal to amend the provisions conferring implementing powers on the Commission.”

The request is located in the paragraph 3, and in particular we find:

31 December 2010	starttime,PeriodOfTime
at least every three years	Frequency, value=3, TemporalEntity=year
Commission	Addresser, AgentRole
European Parliament	Addressee, AgentRole
Council	Addressee, AgentRole
report	RequestResult
shall review the provisions concerning its implementing powers and present a report	Action

```
<analysis source="#cirsfid">
```

```
<otherAnalysis source="#cirsfid">
```

```
<!-- https://gitlab.com/palmirani/rrvm/-/raw/main/docs/current/rrmv-v2.rdf#Request4 -->
```

```
<owl:NamedIndividual rdf:about="https://gitlab.com/palmirani/rrvm/-/raw/main/docs/current/rrmv-v2.rdf#Request4">
```

```
<rdf:type
```

```
rdf:resource="http://www.semanticweb.org/monica.palmirani/ontologies/2024/rrmv#Request"/>
```

```
<dterm:isPartOf rdf:resource="https://gitlab.com/palmirani/rrvm/-/raw/main/docs/current/rrmv-v2.rdf#2006-43"/>
```

```
<rrmv:produces rdf:resource="https://gitlab.com/palmirani/rrvm/-/raw/main/docs/current/rrmv-v2.rdf#Request4Action"/>
```

```
<rrmv:hasAnnotation>By 31 December 2010 and, thereafter, at least every three years, the Commission shall review the provisions concerning its implementing powers and present a report to the European Parliament and to the Council on the functioning of those powers. The report shall examine, in particular, the need for the Commission to propose amendments to this Directive in order to ensure the appropriate scope of the implementing powers conferred on the Commission. The conclusion as to whether or not an amendment is necessary shall be accompanied by a detailed statement of reasons. If necessary, the report shall be accompanied by a legislative proposal to amend the provisions conferring implementing powers on the Commission.</rrmv:hasAnnotation>
```

```
<rrmv:hasUri
```

```
rdf:datatype="http://www.w3.org/2001/XMLSchema#anyURI"/>/akn/eu/act/directive/2006-05-17/06-43/eng@2008-03-21/!main~art_48__para_3</rrmv:hasUri>
```

```
<rrmv:hasFrequency rdf:resource="https://gitlab.com/palmirani/rrvm/-/raw/main/docs/current/rrmv-v2.rdf#Request4Frequency"/>
```

```
</owl:NamedIndividual>
```

```
<!-- https://gitlab.com/palmirani/rrvm/-/raw/main/docs/current/rrmv-v2.rdf#Request4Action -->
```

```
<owl:NamedIndividual rdf:about="https://gitlab.com/palmirani/rrvm/-/raw/main/docs/current/rrmv-v2.rdf#Request4Action">
```

```
<rdf:type
```

```
rdf:resource="http://www.semanticweb.org/monica.palmirani/ontologies/2024/rrmv#Action"/>
```

```
<rrmv:atTime rdf:resource="https://gitlab.com/palmirani/rrvm/-/raw/main/docs/current/rrmv-v2.rdf#Request4PeriodOfTime"/>
```

```
<rrmv:hasAgentRole rdf:resource="https://gitlab.com/palmirani/rrvm/-
```

```
/raw/main/docs/current/rrmv-v2.rdf#Request4AgentRole1"/>
  <rrmv:hasAgentRole rdf:resource="https://gitlab.com/palmirani/rrvm/-
/raw/main/docs/current/rrmv-v2.rdf#Request4AgentRole2"/>
  <rrmv:hasAgentRole rdf:resource="https://gitlab.com/palmirani/rrvm/-
/raw/main/docs/current/rrmv-v2.rdf#Request4AgentRole3"/>
  <rrmv:hasResult
rdf:resource="http://www.semanticweb.org/monica.palmirani/ontologies/2024/rrmv#report"/>
  </owl:NamedIndividual>

  <!-- https://gitlab.com/palmirani/rrvm/-/raw/main/docs/current/rrmv-
v2.rdf#Request4ActionResult -->

  <owl:NamedIndividual rdf:about="https://gitlab.com/palmirani/rrvm/-
/raw/main/docs/current/rrmv-v2.rdf#Request4ActionResult">
  <rdf:type
rdf:resource="http://www.semanticweb.org/monica.palmirani/ontologies/2024/rrmv#ActionResult"/
>
  </owl:NamedIndividual>

  <!-- https://gitlab.com/palmirani/rrvm/-/raw/main/docs/current/rrmv-
v2.rdf#Request4AgentRole1 -->

  <owl:NamedIndividual rdf:about="https://gitlab.com/palmirani/rrvm/-
/raw/main/docs/current/rrmv-v2.rdf#Request4AgentRole1">
  <rdf:type
rdf:resource="http://www.semanticweb.org/monica.palmirani/ontologies/2024/rrmv#AgentRole"/>
  <rrmv:forAgent rdf:resource="https://gitlab.com/palmirani/rrvm/-
/raw/main/docs/current/rrmv-v2.rdf#EUCommission"/>
  <rrmv:withRole
rdf:resource="http://www.semanticweb.org/monica.palmirani/ontologies/2024/rrmv#addressee"/>
  </owl:NamedIndividual>

  <!-- https://gitlab.com/palmirani/rrvm/-/raw/main/docs/current/rrmv-
v2.rdf#Request4AgentRole2 -->

  <owl:NamedIndividual rdf:about="https://gitlab.com/palmirani/rrvm/-
/raw/main/docs/current/rrmv-v2.rdf#Request4AgentRole2">
  <rdf:type
rdf:resource="http://www.semanticweb.org/monica.palmirani/ontologies/2024/rrmv#AgentRole"/>
  <rrmv:forAgent rdf:resource="https://gitlab.com/palmirani/rrvm/-
/raw/main/docs/current/rrmv-v2.rdf#EUParliament"/>
  <rrmv:withRole
rdf:resource="http://www.semanticweb.org/monica.palmirani/ontologies/2024/rrmv#addresser"/>
  </owl:NamedIndividual>

  <!-- https://gitlab.com/palmirani/rrvm/-/raw/main/docs/current/rrmv-
v2.rdf#Request4AgentRole3 -->

  <owl:NamedIndividual rdf:about="https://gitlab.com/palmirani/rrvm/-
/raw/main/docs/current/rrmv-v2.rdf#Request4AgentRole3">
  <rdf:type
```

```

rdf:resource="http://www.semanticweb.org/monica.palmirani/ontologies/2024/rrmv#AgentRole"/>
  <rrmv:forAgent rdf:resource="https://gitlab.com/palmirani/rrmv/-
/raw/main/docs/current/rrmv-v2.rdf#EUCouncil"/>
  <rrmv:withRole
rdf:resource="http://www.semanticweb.org/monica.palmirani/ontologies/2024/rrmv#addresser"/>
  </owl:NamedIndividual>

  <!-- https://gitlab.com/palmirani/rrmv/-/raw/main/docs/current/rrmv-
v2.rdf#Request4Frequency -->

  <owl:NamedIndividual rdf:about="https://gitlab.com/palmirani/rrmv/-
/raw/main/docs/current/rrmv-v2.rdf#Request4Frequency">
  <rdf:type
rdf:resource="http://www.semanticweb.org/monica.palmirani/ontologies/2024/rrmv/Frequency"/>
  <rrmv:hasTemporalEntity rdf:resource="https://gitlab.com/palmirani/rrmv/-
/raw/main/docs/current/rrmv-v2.rdf#year"/>
  <rrmv:value rdf:datatype="http://www.w3.org/2001/XMLSchema#float">3.0</rrmv:value>
  </owl:NamedIndividual>

  <!-- https://gitlab.com/palmirani/rrmv/-/raw/main/docs/current/rrmv-
v2.rdf#Request4PeriodOfTime -->

  <owl:NamedIndividual rdf:about="https://gitlab.com/palmirani/rrmv/-
/raw/main/docs/current/rrmv-v2.rdf#Request4PeriodOfTime">
  <rdf:type rdf:resource="https://semiceu.github.io/CCCEV#PeriodOfTime"/>
  <cccev:starttime rdf:datatype="http://www.w3.org/2001/XMLSchema#date">2010-12-
31</cccev:stattime>
  </owl:NamedIndividual>

  <!-- https://gitlab.com/palmirani/rrmv/-/raw/main/docs/current/rrmv-
v2.rdf#Request4TemporalEntity -->

  <owl:NamedIndividual rdf:about="https://gitlab.com/palmirani/rrmv/-
/raw/main/docs/current/rrmv-v2.rdf#Request4TemporalEntity">
  <owl:sameAs rdf:resource="https://gitlab.com/palmirani/rrmv/-
/raw/main/docs/current/rrmv-v2.rdf#year"/>
  </owl:NamedIndividual>

  <!-- https://gitlab.com/palmirani/rrmv/-/raw/main/docs/current/rrmv-v2.rdf#year -->

  <rdf:Description rdf:about="https://gitlab.com/palmirani/rrmv/-/raw/main/docs/current/rrmv-
v2.rdf#year"/>

  </otherAnalysis>
</analysis>

```

In the <references> we have the intermediary connection between text and metadata:

```

<references source="#cirsfid">
  <TLCOrganization eId="cirsfid" href="/akn/ontology/organizations/eu/cirsfid"
  showAs="CIRSFID"/>
  <TLCOrganization eId="europenCommission"

```

```

href="/akn/ontology/organizations/eu/rrmv/EUCommission"
  showAs="European Commission"/>
<TLCOrganization eId="europeanParliament"
href="/akn/ontology/organizations/eu/rrmv/EuParliament"
  showAs="European Parliament"/>
<TLCOrganization eId="europeanCouncil"
href="/akn/ontology/organizations/eu/rrmv/EuCouncil"
  showAs="European Council"/>
<TLCEvent eId="request4PeriodOfTime"
href="/akn/ontology/organizations/eu/rrmv/Request4PeriodOfTime" showAs="31 December
2010"/>
<TLCEvent eId="request4TemporalEntity"
href="/akn/ontology/organizations/eu/rrmv/Request4TemporalEntity" showAs="at least
every three years"/>
<TLCOBJECT eId="report" href="/akn/ontology/organizations/eu/rrmv/report"
showAs="report"/>
</references>

```

Inside of the text we markup the inline element for annotating the neutral information like event, organization, date, etc.

```

<alinea eId="chp_XII__art_48__para_3.__al_1" refersTo="#reportingRequest">
  <content>
    <p>By <date date="2010-12-31" refersTo="#request4PeriodOfTime">31 December
2010</date> and, thereafter, <event eId="event_1" refersTo="#request4TemporalEntity">at least
every three years</event>, the <organization eId="organization_1"
refersTo="#europeanCommission">Commission </organization>shall review the provisions
concerning its
    implementing powers and present a <object eId="objective_1"
refersTo="#report">report</object> to the <organization eId="organization_2"
refersTo="#europeanParliament">European Parliament</organization> and to the
    <organization eId="organization_3"
refersTo="#europeanConcil">Council</organization> on the functioning of those powers. The
report shall examine, in
      particular, the need for the Commission to propose amendments to this Directive in
order to ensure the appropriate scope of the implementing powers conferred on the
Commission. The conclusion as to whether or not an amendment is necessary shall be
accompanied by a detailed statement of reasons. If necessary, the report shall be
accompanied by a legislative proposal to amend the provisions conferring
implementing powers on the Commission.</p>
  </content>
</alinea>

```