

WD for 627 63rd SIG meeting October 2026

Explicitly document cross-references btw family models

Issue link: <https://cidoc-crm.org/Issue/ID-627-explicitly-document-cross-references-btw-family-models>

Background

This issue was created in 2023-01-18 with the basic goal to explicitly document the dependencies of cidoc-crm family models with crmbase and other ontologies.

The issue evolved with the decision to create gitlab repositories for each fm in order to:

- Document the dependencies / cross references of each stable family model version
- Apply semantic validation
- Create and maintain xml, html, rdf, owl etc. Encodings for each fm version.
- Provide HTML and RDF URI resolution for fms

Updates

- A. Applied the automatic generation of PC module whenever applicable according to the decisions of 60th SIG (redefinition of the unresolvable common basic classes for .1 properties and use of the extension suffix) ([Irmoo](#) [crmarchaeo](#))
- B. Extended the rdfs:comment for all encodings following ecrm owl format. i.e. include all the declaration information of the model specification i.e. examples for quantification etc instead of just the scope note.

```
3 <rdfs:Class rdfs:about="E3 Condition State">
  <rdfs:label xml:lang="en">Condition State</rdfs:label>
  <rdfs:label xml:lang="de">Zustandsphase</rdfs:label>
  <rdfs:label xml:lang="el">Κατάσταση</rdfs:label>
  <rdfs:label xml:lang="fr">État matériel</rdfs:label>
  <rdfs:label xml:lang="pt">Estado Material</rdfs:label>
  <rdfs:label xml:lang="ru">Состояние</rdfs:label>
  <rdfs:label xml:lang="zh">条件状态</rdfs:label>
  <rdfs:comment xml:lang="en">Scope note:
This class comprises the states of objects characterised by a certain condition over a time-span.
An instance of this class describes the prevailing physical condition of any material object or feature
during a specific instance of E52 Time-Span. In general, the time-span for which a certain condition can
be asserted may be shorter than the real time-span, for which this condition held.
The nature of that condition can be described using P2 has type. For example, the instance of E3
Condition State "condition of the SS Great Britain between 22(nd) September 1846 and 27(th) August 1847"
can be characterized as an instance "wrecked" of E55 Type.

Examples:
- the "reconstructed" state of the "Amber Room" in Tsarskoje Selo from summer 2003 until now (Owen, 2009)
- the "ruined" state of Peterhof Palace near Saint Petersburg from 1944 to 1946 (Maddox, 2015)
- the state of my turkey in the oven at 14:30 on 25(th) December 2002 [P2 has type: E55 Type "still not
cooked"] (fictitious)
- the topography of the leaves of Sinai Printed Book 3234.2361 on the 10(th) July 2007 [described as: of
type "cockled"] (fictitious)

In First Order Logic:
- E3(x) => E2(x)
  </rdfs:comment>
```

```

3 <rdf:Property rdf:about="P1_is_identified_by">
  <rdflabel xml:lang="en">is identified by</rdflabel>
  <rdflabel xml:lang="de">word bezeichnet als</rdflabel>
  <rdflabel xml:lang="el">αναγνωρίζεται ως</rdflabel>
  <rdflabel xml:lang="fr">est identifié par</rdflabel>
  <rdflabel xml:lang="pt">é identificado por</rdflabel>
  <rdflabel xml:lang="ru">идентифицируется</rdflabel>
  <rdflabel xml:lang="zh">被标识为</rdflabel>
  <rdflabel xml:lang="en">Quantification: many to many (0,n;0,n)
  <rdflabel xml:lang="en">Quantification: many to many (0,n;0,n)

Scope note:
This property describes the naming or identification of any real-world item by a name or any other
identifier.
This property is intended for identifiers in general use, which form part of the world the model
intends to describe, and not merely for internal database identifiers which are specific to a technical
system, unless these latter also have a more general use outside the technical context. This property
includes in particular identification by mathematical expressions such as coordinate systems used for
the identification of instances of E53 Place. The property does not reveal anything about when, where
and by whom this identifier was used. A more detailed representation can be made using the fully
developed (i.e. indirect) path through E15 Identifier Assignment.
This property is a shortcut for the path from E1 CRM Entity through P140i was attributed by, E15
Identifier Assignment, P37 assigned to E42 Identifier.
It is also a shortcut for the path from E1 CRM Entity through P1 is identified by, E41 Appellation,
P139 has alternative form to E41 Appellation.

Examples:
- The capital of Italy (E53) is identified by "Rome" (E41). (Leach, 2017)
- Text 25014-32 (E33) is identified by "The Decline and Fall of the Roman Empire" (E35). (Gibbon, 2013)

In First Order Logic:
- P1(x,y) ⇒ E1(x)
- P1(x,y) ⇒ E41(y)
- P1(x,y) = (∃z) [E15(z) ∧ P140i(x,z) ∧ P37(z,y)]
- P1(x,y) = (∃z) [E41(z) ∧ P1(x,z) ∧ P139(z,y)]
</rdflabel>
<rdflabel xml:lang="en">Quantification of the inverse property: many to many (0,n;0,n)

Scope note of the inverse property:
This property describes the naming or identification of any real-world item by a name or any other
identifier.
This property is intended for identifiers in general use, which form part of the world the model

```

- C. All encodings that refer to draft implementations include a clear notation of their status (including crm base draft versions) e.g.
- Crmsci 3.0 draft <https://cidoc-crm.org/extensions/crmsci/3.0/>
 - CRMbase 3.2 draft <http://www.cidoc-crm.org/cidoc-crm/7.3.2/>
- D. URI resolution for extensions has been harmonised with crmbase uri resolution pattern. E.g. replaced
- <http://www.cidoc-crm.org/extensions/crmsci/versions/2.0/> with
 - <http://www.cidoc-crm.org/extensions/crmsci/2.0/>
 - Or <http://www.cidoc-crm.org/extensions/crmsci/2.0/owl/> for owl encoding
- E. Applied semantic validation and reported back issues that require attention to the relevant working groups for CRMinf, CRMdig, CRMarchaeo, LRMoo
- F. Added a section with the Classes and Entities used from each dependency model. Additionally added a section with statements specified in the model that are not included in the Classes & properties declarations
- E.g. https://cidoc-crm.org/extensions/crmgeo/html/CRMgeo_v2.0.1.html
 - Some statements are already defined e.g. Point `rdfs:subClassOf` SP6 Declarative Place is already mentioned by SP6 Declarative Place `supreClassOf` Point

Current status

<https://cidoc-crm.org/extensions/>

- LRMoo (Official 1.1.1)
 - Depends on CRMbase 7.1.3
 - Currently in preparation phase of 1.2.2
- CRMInf (Stable 1.2.1)
 - Depends on CRMbase 7.1.3, CRMsci 3.2
- CRMarchaeo (Stable 2.1.1)
 - Depends on CRMbase 7.1.2, CRMsci 2.0
 - needs updating and alignment with 7.1.3 and most recent stable CRMsci 3.2.x
- CRMsci (Stable 3.2)
 - Depends on CRMbase 7.1.3
 - Currently in minor updates mode
- CRMgeo (Stable 2.0.1)
 - Depends on CRMbase 7.1.3, Geosparl 1.1, WGS84
- CRMdig (Stable 5.0)
 - Depends on CRMbase 7.1.3, CRMsci3.2
 - Currently in preparation of next version
- CRMt看 (Stable 2.0)
 - Depends on CRMbase 7.1.2, CRMsci 2.0, CRMInf 0.7b, FRBR 2.4
 - needs updating and alignment with 7.1.3 and most recent stable extensions
- **No recent progress with** PRESSoo, CRMba, CRMsoc, CRMact

Related Issues

[647](#) automatically detect incompatibilities between CRM extensions and the CIDOC CRM

- Refers to a service for semantic validation of each proposed extension
- Not ready yet as a service but it has progressed and is currently being applied during parsing and encoding generation. Produced its first results for CRMInf, CRMdig, CRMarchaeo, LRMoo

[457](#) harmonization of graphical documentation about CRM

- This issue refers mostly to the documentation guidelines provided by CHIN's library
- FORTH & CHIN have agreed to collaborate so that drawio libraries can also be created for all extensions

[678](#) towards-crm-owl

- These 2 issues had one common task, to include examples, FOL, quantification etc in the rdfs:comment of the rdf and owl encoding instead of just the scope note

Proposal

Current mechanism for explicitly documenting cross-references btw family-models is stable using public gitlab group <https://gitlab.isl.ics.forth.gr/cidoc-crm/compatible-models> and will be continuously evolving with new extensions and features such as

- Full class and property hierarchy including dependencies
- Graphs generation (similar to crmbase)
- show all properties including dependency model properties
- Create drawio libraries in collaboration with CHIN
- etc.

But since all listed goals have been achieved the issue can be marked as resolved.