The Constrained RESTful Application Language (CoRAL)

`draft-ietf-core-coral-04`

Christian Amsüss, Thomas Fossati

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CoRAL

A data model and language for talking about resources and interactions with them, suitable for constrained devices

Potential users

- Problem details

- PubSub topic descriptions

- OSCORE Group Manager administration

- SDF

- ...and anything that uses link-format (e. g. discovery)

In contrast to ..., CoRAL is:

RDF Compact (numeric pre-arranged or ad-hoc shorthands for predicates), parsable using CBOR, no URI processor required.

RFC6690 Less string parsing, more depth to information, clear semantics.

CBOR Semantic keys over ad-hoc ones. High-level terminology for derived specs. Interaction model provided. Reuse of terminology.

But CoRAL can be used with them:

RDF can be round-tripped to unstructured CoRAL almost completely.

RFC6690 can be round-tripped to CoRAL, provided the common CoRE attributes are used to describe the targets.

CBOR's literals can be used in CoRAL.

Work areas

90%[1] **Information model**
Sea of triples, with optional structuring into a tree-like shape.

70% **Interaction model**
User agent searches document, decides which link (or form) to follow.

70% **Dictionary setup**
Packed CBOR now does the heavy lifting. Variations being discussed:
Per-document-format; ad-hoc (Basic Packed); importing named dictionary.
Document format can guide tree-like shape.

30% **Binary serialization**
To be revisited with corpus of use case examples.

? **Text serialization**
Currently using binary serialization with EDN (or Turtle when details like the optional structuring or which parts are compressed do not matter).

10% **Queries, patches, provenance**

[1]Don't read too much into these numbers, they are for comparison between the items at best

Next steps

- Coordinate with users to validate current state against their models.

- Get corpus of examples for further dictionary and serialization work.

- What needs to be in for an initial usable version?

Thanks

Comments?

Questions?

Design team for CoRAL and CRIs meets roughly every 2 weeks.