The Constrained RESTful Application Language (CoRAL)

draft-ietf-core-coral-04

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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% 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

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

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CoRAL

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