draft-ietf-cbor-cddl-control-02

Carsten Bormann, CBOR IETF110 meeting, 2021-03-08

draft-ietf-cbor-cddl-control-02

- New control operators for
  CDDL: `.cat/.plus, .abnf/.abnfb, .feature`

- Was waiting for implementation experience with `.abnf/.abnfb` —

  - ABNF is hard — thoughts about splitting it off

  - ABNF finally implemented in early March, no more waiting needed

  - One new observation: ABNF is indentation-sensitive

- Proposal: go ahead, but add `.det` for "dedenting cat" (PR #6)
  ➔ `.plus/.cat/.det, .abnf/.abnfb, .feature`

Proposed next steps

- (Status: Implemented in CDDL tool 0.8.21)

- ➔ Submitted trial balloon –03 with `.det`

- ? Get pre-WGLC reviews

- ➔ WGLC

draft-ietf-cbor-packed-02

Carsten Bormann, CBOR IETF110 meeting, 2021-03-08

draft-ietf-cbor-packed-02

- draft-ietf-cbor-packed-02:

  - Add Tag allocations for suffix packing

  - Add WoT example

- Missing: more details for table setup (and its extensibility)

- Issue: add circumfix packing? (compare draft-bormann-lpwan-cbor-template-02)

- **Next step**: Get the implementation out, further implementation work

- Heads-up for next thing: **Streaming** packing? (Can be added to this later.)

draft-bormann-cbor-time-tag-04

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draft-bormann-cbor-time-tag-04

- Tag 1001 has been around for a while and is in active use

- Add timescale key (UTC ~ NTP, TAI ~ GPS ~ PTP)

- Add clock quality (~ PTP [RFC8575], uncertainty [GUM] and guarantees [RFC3161])

- Add duration (delta, 1002), period (interval, 1003)

- Next steps:

  - ? Could live on as individual for more time (registrations have been made)

  - ? Could become WG document with a view of completion in 2021

draft-bormann-cbor-notable-tags-03

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draft-bormann-cbor-notable-tags-03

- Intention: hitchhikers' guide for the CBOR tag landscape

- Collect descriptive information that explains

  - Why sometimes there are multiple tags for one area of application, and

  - What distinguishes them

  - How to select between them

- Slow progress ➔ any day now [please send PRs!]

- Plan is to snapshot and publish after some time (2022?)

- Also *defines* some tags (e.g., 63 for encoded cbor seq, 65535 etc. for invalid tags)

draft-bormann-cbor-cddl-freezer-05

Carsten Bormann, CBOR IETF110 meeting, 2021-03-08

draft-bormann-cbor-cddl-freezer-05

- Essentially unchanged for a year now

  - last change: extracted computed literals and `.abnf` ➜ -control

- More controls (less urgent needs): .pcre, endianness, bitfields

- Alternative representations: CDDL in JSON (interface between tools!)

- Language extensions:

  - Module superstructure (export/import), namespacing

  - Co-occurrence constraints (hard to do right; piggyback on *what*?)

  - Literal syntaxes (regexes, literals for tags) (waiting for strong use cases)

draft-bormann-cbor-cddl-freezer-05

- Essentially unchanged for a year now

  - last change: extracted computed literals and `.abnf` ➔ -control✔

- More controls (less urgent needs): .pcre, endianness, bitfields

- Alternative representations: CDDL in JSON (interface between tools!)
                              ➔ could extract for informational

- Language extensions:

  - Module superstructure (export/import), namespacing ➔ highest perceived need

  - Co-occurrence constraints (hard to do right; piggyback on *what*?)

  - Literal syntaxes (regexes, literals for tags) (waiting for strong use cases)

ai=28 (128-bit integers/floats)?

ai=28

- Extension beyond 64-bit arguments (int/float, not meaningful for the rest)

- Can use tags to handle some of this now:

  - Tag 2/3 for uint128, nint128 (use one more byte, but can compact leading 0)

  - Tag 5 can handle float128 and more, but only with icky conversion work

  - Tag 83 is for **arrays** of float128, but can send one of them as well

  - Should we define specific tags (float128, float256???)?

- Or should we open Pandora's ai=28 box?