cbor

2019-08-28 virtual interim

CBOR WG Meeting - Interim 14
Wednesday, August 28, 2019, 15:00 - 16:00 UTC
Chairs: Francesca Palombini, Jim Schaad

Webex: https://ietf.webex.com/ietf/j.php?MTID=m1237a98124111de3a4c4e61dfaca05d5
Etherpad: https://etherpad.tools.ietf.org/p/notes-interim-280819-cbor

— tag 42 report

— CBORbis –07, remaining issues

Tag 42 report

Conflict with Tag 42 squatters IPLD/IPFS handled:

— they consider themselves slapped

— YANG-CBOR moved off 42 to 47 instead

— IPLD/IPFS tag registration for 42 went through (after sitting in their github repo for two years)

CBORbis status

–07 submitted based on Tag terminology update (#109)

Outstanding pull request:
#112 negative test vectors (#93):
• What is the motivation for inclusion?
vs. #16: Test suite (could be ~complete)

Issues: See below

Tag terminology update (#85)

Containers: Arrays, Maps, Tags
(include their content)

— Array: element
— Map: member (key/value pair)
— Tag: "enclosed item"

Tag = Tag number + enclosed item

To do: Finish #107 (find remaining weasel-wording)

Terminology Issues: Well-Formed, CBOR-Valid, Application-Valid (#45)

Well-Formedness handled reasonably now
Separate CBOR-Valid from Application-Valid (terms?)

Split CBOR validity into basic validity and tag validity
#86, #90 ("strict1"): Add explanatory text
#71: Ensure validity is defined everywhere (mostly done)
#63: Handling map validity

Terminology Issues: Data model vs. Encoding

#64: terms for "data item" and "encoded data item"
The latter is too long (146 times total)

Technical/Editorial Issues: Protocol Advice

#68: small integers as map keys

#67: Handling unknown tags/simple values

#63: Handling (map) validity
#91: Handling dups ➔ security considerations

#NNN: Tags vs. unwrapped, context-dependent processing

Technical Issues: Tag processing model

#92: Wording that deprecates, but does not disallow Tag 25/29 style processing

#67: Handling unsupported tags/simple values in a generic encoder/decoder

(#90:) Strict1ness in Tag handling
\#MMM: explain structural vs. semantic validity model
#LLL: Which tags should not be used for discriminators

— bignums

— bigfloats?

— typed arrays???

Editorial Issues:

#KKK: Clean up preferred, deterministic, strict2

Technical Issues: Floating Point

#94: Signaling NaNs
sNaN: Stepchild, not used much in IEEE 754
Avoid setting up traps for ourselves
Enable use of all of IEEE 754 if desired (sNaNs, payloads)
Default to one qNaN only

#77: JSON→CBOR: Integer detection threshold
Go for $|x| < 2^{53}$ as default threshold