Documenting JSON in Protocols

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Problem statement

- JSON syntax is defined in ABNF

- Other documents defining JSON objects need to specify their formats

- They tend to use ABNF

- We'd rather have them use JSON primitives

Example with reputons: before

reputon = "{" [reputon-object *(value-separator reputon-object)] "}"

reputon-object = "reputon" name-separator response-set

response-set = "{" reputon-element *(value-separator reputon-element) "}"

reputon-element = rater-value / assertion-value / rated-value / rating-value / conf-value / normal-value
            / sample-value / gen-value / expire-value / ext-value
   ; these can appear in any order, but MUST appear at most once each

rater-value = %x22 "rater" %x22 name-separator string

assertion-value = %x22 "assertion" %x22 name-separator string

rated-value = %x22 "rated" %x22 name-separator string

Example with reputons: after

reputation-object: an OBJECT containing a MEMBER reputation-context and a MEMBER reputon-list

reputation-context: a MEMBER with MEMBER-NAME "application" and MEMBER-VALUE a STRING
    (see Section 3)

reputon-list: a MEMBER with MEMBER-NAME "reputons" and MEMBER-VALUE a reputon-array

reputon-array: an ARRAY, where each ARRAY-VALUE is a reputon

reputon: an OBJECT, where each MEMBER is a reputon-element

reputon-element: one of the following, defined below: rater-value, assertion-value, [...etc...]

rater-value: a MEMBER with MEMBER-NAME "rater" and MEMBER-VALUE a STRING
    (see "rater" in Section 3.1)

assertion-value: a MEMBER with MEMBER-NAME "assertion" and MEMBER-VALUE a STRING
    (see "assertion" in Section 3.1)

The preamble to "after"

6.2.1. Imported JSON Terms

OBJECT: a JSON object, defined in Section 2.2 of [JSON]

MEMBER: a member of a JSON object, defined in Section 2.2 of [JSON]

MEMBER-NAME: the name of a MEMBER, defined as a "string" in Section 2.2 of [JSON]

MEMBER-VALUE: the value of a MEMBER, defined as a "value" in Section 2.2 of [JSON]

ARRAY: an array, defined in Section 2.3 of [JSON]

ARRAY-VALUE: an element of an ARRAY, defined in Section 2.3 of [JSON]

NUMBER: a "number" as defined in Section 2.4 of [JSON]

INTEGER: an "integer" as defined in Section 2.4 of [JSON]

STRING: an "string" as defined in Section 2.5 of [JSON]

6.2.2. Reputon Structure

Using the above terms for the JSON structures, the syntax of a reputation object is defined as follows:

What we need…

- …is a document that specifies how to use the primitives to specify JSON objects, as in the preamble.

- There's another approach to it:
  draft-newton-json-content-rules

- I think that's a more cryptic approach, but uses a formal language specification.

- We should pick the kind of approach we want to use, and write a specification soon, so other specs can be consistent.