Structured Representations in Standards Documents: Discussion Questions

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1 Existing Structured Representations in IETF Documents

1.1 Examples

ABNF

XML

ASN.1

C code

JSON

CBOR

TLS 1.3 Presentation Language

To do – Add example snippets

1.2 Questions

Q: *Have you encountered any of the above structured description formats in IETF documents?*

Q: *If so, did they improve the utility of the document? In what way?*

Q: *Have you authored documents that include any of the above?*

Q: *If not, why not?*

Q: *Do you think that the current level of adoption of these formats in standards documents is sufficient?*

Q: *If not, what do you see as the barriers to adoption?*

2 Parsable Protocol Standards

In most standards documents, the syntax of the protocol is specified using an ASCII art packet header diagram, showing the alignment and order of the fields, followed by a prose description of each field.

One of the key limitations of the existing approach is that it limits the use of tooling, where the parsing of English prose is non-trivial. Tooling would be viable with the use of a more formal, structured approach to syntax specification. The benefits of tooling vary with the amount of information that can be captured, but at its simplest, would allow for a parser to be generated for the specified protocol.

Q: *What are the benefits of the existing approach?*

Q: *What are the limitations (beyond parsability)?*
To do – Get at the balance between formal specification and usability/adoption: need something people can/will use, but that allows for at least some tooling to be developed

References