Handling Long Lines in Artwork in Internet-Drafts and RFCs

draft-kwatsen-netmod-artwork-folding-08

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What Do We Know?

- Internet-Drafts and RFCs have constraints
  - Maximum line length 72 characters
  - First character usually in column 4
- Line feeds have meaning in some source code
  - For example, XML and JSON encodings of YANG
- It is valuable to provide XML and JSON examples
  - Usually placed in <artwork> tags to prevent "smart" formatting
    - XML2RFCv3 will also have <sourcecode>
  - Desirable that these examples can be automatically validated
  - The reader must be able to determine valid YANG from the documents
- There are other items in YANG drafts that have problems with line length
  - Specifically tree diagrams (but see RFC 8340 for the solution to this)
- Different people use different tools to write drafts
  - Direct ASCII edit, XML, Word, markdown, …
  - Some people like to format their artwork by hand
  - Some people like tools to do the work
- Wrapping and indentation make the reader-experience better

Objectives

- Develop a common notation to denote a wrapped line so that it is not mistaken for a natural line break and to enable automated unwrapping

- Facilitate automated wrapping

- Support all corner cases involving spaces, indentation, and native back-slashes

Discussions/Changes Since Last Time

- At IETF-102 we were at -06
- Scope clarified
  - Now notes RFCs as well as I-Ds
  - Primary intent for formatted examples and code
- Clarify column indexing starts at 1
- Header line format change
  - No longer implies wrap length
- Move to "slash-end slash-start" notation
- Clarify handling (or not) of tabs
- Describe manual and automated unfolding
- Forward reference to xml2rfc v3 and <sourcecode>
- Better examples

Current Solution

- Automatic folding
  - Insert "\" (backslash) followed by "new line"
  - Start continuation line with "\" (backslash)
- Automatic unfolding
  - Join two lines as above
  - Delete any spaces on the second line before the "\"
    - Allows for manual folding with indentation
- Tricky cases result in failure to autofold
  - For example, a text with backslashes already in place

Tabs are a Source of Confusion

- Vertical tabs are probably not used
  - Fail to autofold if one is found
- Lots of debate about what to do with a horizontal tab
  - Ended up with…
    - The character encoding is the same as described in Section 2 of [RFC7994], except that, per [RFC7991], tab characters are prohibited.
      - "Tab characters (U+0009) inside <artwork> and <sourcecode> are prohibited."
    - Scan the artwork for horizontal tab characters. If any horizontal tab characters appear, either resolve them to space characters or exit, forcing the input provider to convert them to space characters themselves first.

Other Use Cases are Not Out of Scope

- We are NETMOD, we do YANG stuff
- Very probable there are other uses
  - Lots of code-like things where autofold may help
    - ABNF, RNBF, pseudocode, …
- Make sure these techniques are applicable
  - And don't prohibit them
- But focus on the task at hand
  - How to handle XML/JSON examples

Small Open Questions

- Some of the examples are a bit clunky
- Is the scripting in the Appendix sound?
- Precise format and use of header line
- How to tell autofolding tool how wide to fold
  - Currently defaults to 69
  - -c flag to set the value
- How to tell autofolding tool how much to indent
- Implications for xml2rfc v3

Next Steps

- Adoption poll ended 1st November
- A bit of tidying and polish
- Push ahead with WG last call soon
- Bounce it off other WGs that do a lot of YANG