Standards Change Request

Use of Format Effectors Within Attribute Assignment Statements   SCR3-1071.v1

Provenance:

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Problem:

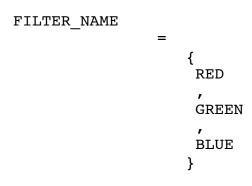Section 12.3.5 of the Standards Reference states:

> ODL is a simple language and it is usually clear where one lexical element ends and another begins. Spacing characters or format effectors may appear before a lexical element, between any pair of lexical elements, or after a lexical element without changing the meaning of a statement.

Furthermore, section 12.4.1 states:

> There should be at most one statement on a line, although a statement may be more than a single line in length. As noted in Section 12.3.5 above, format effectors may appear before, after or between the lexical elements of a statement without changing the meaning of the statement. For example, the following statements are identical in meaning:

```
FILTER_NAME     =  {RED, GREEN, BLUE}
FILTER_NAME     =  {RED,
                    GREEN,
                    BLUE}
```

Note that according to section 12.2.5, "format effectors" are defined as the following four characters: carriage return, line feed, form feed, and vertical tabulation. Section 5.1.2 precludes the use of the vertical tab and form feed characters within PDS labels, so for PDS purposes, "format effectors" in the above two sections can be considered to be equivalent to the carriage return and line feed characters.

While the above examples of equivalent statements are relatively mundane, an equally equivalent example could be the following:

```
FILTER_NAME
                    =
                      {
                       RED
                       ,
                       GREEN
                       ,
                       BLUE
                      }
```

ODL does not contain statement delimiters. Without these, while it may be simple for humans to recognize the end of one statement and the beginning of the next, it is not as simple to write code to recognize this. In particular, this is making it difficult to write clean code to recognize individual attribute assignment statements within the new "vtool" validation program.

Current Urgency:

The Development Team of the Engineering Node is awaiting the results of this SCR to determine how to code the recognition of individual attribute assignment statements in the new "vtool" program, currently under development.

Proposed Solution:

This SCR proposes new restrictions on the use of format effectors within attribute assignment statements in PDS labels. The following restrictions are suggested.

No format effectors may appear:

1. between a keyword and its ensuing equal sign
2. between a value and its ensuing units
3. between a value and its ensuing comma within a set or sequence
4. within a value that is not in double quotes, is not a set, or is not a sequence

Impact Assessment:

A review will have to be conducted on existing data sets to determine if these new rules will conflict with past practice.

The only impact on software development should be to decrease the effort required to recognize and correctly parse attribute assignment statements within PDS labels.

Requested Changes:

The following change will be made to the PDS Standards Reference:

Section 12.4.1.1 will be added at the end of section 12.4.1:

12.4.1.1   PDS Implementation of Lines and Records

(Note that this text will follow the text introduced in SCR 3-1070, if that SCR is approved.)

Within attribute assignment statements in a PDS label, no format effectors may appear:

1. between an element_identifier (see section 12.4.2) and its ensuing equal sign
2. between a value and its ensuing units
3. between a value and its ensuing comma within a set or sequence
4. within a value that is not in double quotes, is not a set, or is not a sequence