


[PDS-500] Transcoder: Parenthesis in descriptions causes issues when reading PDS3 labels


Created: 2017-05-04 Updated: 2018-07-26 Resolved: 2018-07-26


Status:	Resolved		
Project:	PDS4 Software		
Component/s:	Preparation		
Affects Version/s:	None		
Fix Version/s:	9.0.0		

Type:	Bug	Priority:	Major
Reporter:	Michael Cayanan	Assignee:	Steve Levoe
Resolution:	Fixed	Votes:	0
Labels:	None		
Remaining Estimate:	2 days		
Time Spent:	Not Specified		
Original Estimate:	2 days		

Attachments:

 OPTE_12.LBL

 OPTE_12_UPDATE.LBL

 generic-pds3_to_pds4.vm

Description

The example label, OPTE_12.LBL, attached to this ticket contains description fields that have the parenthesis characters in it. This appears to cause issues in the Transcoder when parsing the label. When trying to transform this into a PDS4 label using the Generate Tool, the resulting output is missing the data file name, offset, as well as the fields belonging to the table:

```
<File_Area_Observational>
  <File>
    <file_name>$dataFile</file_name>
  </File>
  <Table_Binary>
    <offset unit="byte">$dataFileOffset</offset>
    <records>173</records>
    <Record_Binary>
      <fields>5</fields>
      <groups>0</groups>
      <record_length unit="byte">36</record_length>
    </Record_Binary>
  </Table_Binary>
</File_Area_Observational>
```

However, if I remove the parenthesis characters from each description field (line 27 and line 38 in the example label), the label is correctly parsed and as a result, the transformation is successful:

```
<File_Area_Observational>
  <File>
    <file_name>OPTE_12.DAT</file_name>
  </File>
  <Table_Binary>
    <offset unit="byte">0</offset>
    <records>173</records>
    <Record_Binary>
      <fields>5</fields>
      <groups>0</groups>
      <record_length unit="byte">36</record_length>
      <Field_Binary>
        <name>spacecraft clock</name>
        <field_location unit="byte">1</field_location>
        <data_type>ASCII_String</data_type>
        <field_length unit="byte">16</field_length>
      </Field_Binary>
      <Field_Binary>
        <name>spacecraft event time</name>
        <field_location unit="byte">17</field_location>
        <data_type>IEEE754MSBDouble</data_type>
        <field_length unit="byte">8</field_length>
      </Field_Binary>
    </Record_Binary>
  </Table_Binary>
</File_Area_Observational>
```

The label, OPTE_12_UPDATE.LBL, is a modified version of the label with the parenthesis characters removed in order to generate a successful transformation.

Comments

Comment by Michael Cayanan [2018-07-26]

Resolved with an updated version of the VicarIO library (version 4.2)

```
$ ./generate -p ~/test-data/generate/PDS-500/OPTE_12.LBL -t ~/test-data/generate/PDS-500/generic-pds3_to_pds4.vm
New PDS4 Label: /Users/mcayanan/test-data/generate/PDS-500/OPTE_12.xml
```

```
$ more ~/test-data/generate/PDS-500/OPTE_12.xml
<?xml version="1.0" encoding="UTF-8" standalone="no"?>

<?xml-model href="https://pds.nasa.gov/pds4/pds/v1/PDS4_PDS_1A10.sch"
  schematypens="http://purl.oclc.org/dsdl/schematron"?>

<Product_Observational xmlns="http://pds.nasa.gov/pds4/pds/v1"
  xmlns:pds="http://pds.nasa.gov/pds4/pds/v1"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://pds.nasa.gov/pds4/pds/v1 https://pds.nasa.gov/pds4/pds/v1/PDS4_PDS_1A10.xsd">
  <Identification_Area>
    <logical_identifier>urn:nasa:pds:data:go-j-mag-2-raw-data-v1.0:opte_12</logical_identifier>
    <version_id>1.0</version_id>
    <title>go-j-mag-2-raw-data-v1.0 opte_12</title>
    <information_model_version>1.10.1.0</information_model_version>
    <product_class>Product_Observational</product_class>
    <Modification_History>
```

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