

PDS Label Assistant for Interactive Design (PLAID): Simplifying PDS4 Label Template Building. S. S. Algermissen¹, J. H. Padams², C. Radulescu³, ¹Jet Propulsion Laboratory, California Institute of Technology, 4800 Oak Grove Dr, Pasadena, CA 91109, Stirling.S.Algermissen@jpl.nasa.gov, ²same, Jordan.H.Padams@jpl.nasa.gov, ³same, cradule@jpl.nasa.gov

Introduction: The AMMOS-PDS Pipeline Service (APPS) PDS Label Assistant for Interactive Design (PLAID) tool seeks to simplify and expedite the process of building a PDS4 label template with a simple step by step interface that does not require experience with XML, PDS4 Schemas and Schematrons, or knowledge of the specific requirements of a PDS4 label. By parsing the PDS4 common and discipline dictionaries, PLAID dynamically generates a set of steps that allow the user to specify the number of occurrences of a PDS4 attribute and class, and for attributes, a sample value.

PDS4 requirements such as the minimum and maximum occurrences allowed for an attribute or class, including which elements are required and which are deprecated are shown in the tool. This prevents users from generating invalid PDS4 label template XML structures. In addition, PLAID extracts the descriptions of attributes and classes from the PDS4 model and thereby provides inline documentation at each step.

Any change to the PDS4 schema is reflected in the steps the tool generates and users can specify which version of the PDS common dictionary they would like to use so as to support missions that have settled on a specific version of the common dictionary. A mission area section allows for the free form creation of mission-specific attributes and classes in a simple drag and drop interface. Once a template is completed, the user can send it directly from the tool to a PDS node for review.

The APPS PLAID tool has been open sourced and can be found on GitHub. [1]

References:

[1] <https://github.com/nasa-pds/PLAID>

PDS Label Assistant for Interactive Design (PLAID)

mission_label Preview

Product Type
Label Root
3. Identification Area
4. Observation Area
5. File Area Observational
6. Discipline Dictionaries
7. Mission Specifics
8. Export

What elements do you want to keep in 'Identification Area'?

logical identifier	Enter value (optional)	-	1	+
version id	Enter value (optional)	-	1	+
title	Enter value (optional)	-	1	+
information model version	Enter value (optional)	-	1	+
product class	Enter value (optional)	-	1	+
Alias List		-	0	+
Citation Information		-	0	+
Modification History		-	0	+

Previous Next

Please choose the applicable elements for your product.

Feel free to add or remove elements as you like. The quantity of each element bounded by the PDS4 Standard so you won't create an invalid label template

Min Occurrences: 0
Max Occurrences: 1
The Citation_Information class provides specific fields often used in citing the product in journal articles, abstract services, and other reference contexts.
Sub-attributes:
- author_list
- editor_list
- publication_year
- keyword
- description

PDS Label Assistant for Interactive Design (PLAID)

mission_label Preview

Label Root
Identification Area
Observation Area
Time Coordinates
Investigation Area
Internal Reference
Observing System
Observing System Component
Target Identification
File Area Observational
File
Array
Element Array
Axis Array
Discipline Dictionaries
Mission Specifics
18. Export

Label Template Preview

```

1 <?xml version="1.0"?>
2 <Product_Observational xmlns="http://pds.nasa.gov/pds4/1.0"
3 <Identification_Area>
4 <logical_identifier></logical_identifier>
5 <version_id></version_id>
6 <title></title>
7 <information_model_version></information_model_version>
8 <product_class></product_class>
9 </Identification_Area>
10 <Observation_Area>
11 <Time_Coordinates>
12 <start_date_time></start_date_time>
13 <stop_date_time></stop_date_time>
14 </Time_Coordinates>
15 <Investigation_Area>
16 <name></name>
17 <type></type>
18 <Internal_Reference>
19 <reference_type></reference_type>
20 </Internal_Reference>
21 </Investigation_Area>
22 <Observing_System>
23 <Observing_System_Component>
24 <name></name>
25 </Observing_System>

```

Filename: label_template.xml Export Submit to PDS for review

Previous Finish

Your label template is complete!

Before exporting your label, please review the preview to ensure your label template is accurate.

After that, please enter a valid filename for your label template and then click "Export". The file will be available in your Downloads folder.

*Filename may have characters, digits, underscores, and hyphens. It must start with a character and end with an .xml extension.