

IPDA Assessment for PDS4 Build 1c

Reports due: May 15, 2011

Please send input to steve.hughes@jpl.nasa.gov

This assessment worksheet is intended as a guideline for assessing build 1c of the emerging PDS4 data standards. Version 1c will be the version used for the International Planetary Data Alliance (IPDA) review. The objective is to ensure that the documents and content are appropriate so that data engineers and providers a) understand the emerging data standards at their current level; b) have an opportunity to provide input before this is set in stone and c) provide comments on how to improve the documentation/communication of the standard.

The IPDA review is geared towards members within IPDA who are familiar with PDS standards. The output of the review will be used to improve and prepare for a broader external review.

It is important to note that the standards are a “work in progress”. Therefore, some sections of documents are incomplete. For example the next principal focus in the PDS4 development cycle is identifying the discipline-specific extensions such as coordinate systems and camera models. Gathering input will help PDS determine the best path forward during 2011 as PDS prepares a production release of PDS4.

The information below provides a guideline of documents to review and example data products. It is followed by a set of questions to guide the input. Please provide those answers directly to Steve Hughes (steve.hughes@jpl.nasa.gov).

Section 1 – Resources (Standards, User Guides and Glossary)

Build 1c includes a number of supporting documents that define the structure and usage of a PDS4 data product. The following provides links to the critical resources that you are requested to review. Under each section are a set of criteria that would be useful to consider when answering the questions in section 3.

Build 1c Assessment Website – this website contains links to the documents that support Build 1c. Links to all of the supporting materials required to assess Build 1c can be found at this website; including, the PDS4 Data Standards Concepts, the Data Providers Handbook (DPH), Data Dictionary (PDSDD), Standards Reference (PDSSR), Glossary, Jumpstart, and sample products.

<http://pds-engineering.jpl.nasa.gov/index.cfm?pid=145&cid=168>

PDS4 Data Standards Concepts – Introduction to PDS4 key concepts — the view from 10000 feet, avoiding gory details.

As an assessor of Build 1c, review the document for its ability to:

- Serve as a good introduction, background and overview of the data standards.
- Illustrate basic PDS requirements, structures and definitions of the data standards.

Data Providers Handbook (DPH) – A cookbook to guide data providers step-by-step through the process of developing an archive.

As an assessor of Build 1c, review the document for its ability to:

- Guide / coach novice PDS4 data providers towards designing and producing PDS4 compliant products.
- Illustrate PDS4 concepts and building blocks and the data structures into which PDS4 products can be assembled.
- Provide meaningful, well-formed examples of PDS4 products.

Standards Reference – One of the two fundamental reference documents for PDS4. You will need this as you work your way through the Data Provider’s Handbook and as you prepare an archive.

As an assessor of Build 1c, review the document for its ability to:

- Serve as a reference document detailing PDS4 Standards used in the preparation of PDS4 compliant data.
- Provide definitive, concise guidance to the preparation of a PDS4 compliant archive.
- Describe PDS4 principles and concepts and the data structures into which PDS4 products can be assembled.

Data Dictionary - The other fundamental reference for PDS4. It comes in two versions, abridged and unabridged. Use the abridged version unless you encounter a specific instance in which the information in the more detailed unabridged version is required. The abridged version has been abstracted from the unabridged version with the needs of data providers and data end users in mind. It contains full definitions but not all the fine detail or repetition necessary to support the underlying Information Model.

As an assessor of Build 1c, review the PDSDD document for its ability to:

- Serve as a reference document that defines the set of data elements within PDS4 (Build 1c).
- Define the organization and components of PDS4 product labels. (e.g., classes, attributes, and data types).
- Define the engineering terminology that describes the various structures / components involved in the organization of PDS4 product labels.

Glossary – A concise set of definitions for key PDS4 terms. Although primarily intended as a quick reference, the Glossary is organized functionally, presenting terms in the approximate order in which you are likely to encounter them.

As an assessor of Build 1c, review the document for its ability to:

- Provide meaningful definitions that explain the terms used in the data standards documents.

Jumpstart Guide – Optional – A brief introduction to PDS4 in terms of analogous PDS3 vocabulary. Experienced PDS3 users should read it once, noting both the parallels and the differences; then set it aside. People not familiar with PDS3 should skip it; concentrate on the Concepts Document.

As an assessor of Build 1c, review the document for its ability to:

- Help learn PDS4 for those users that are familiar with PDS3.

Section 2 – PDS4 Data Products

PDS4 is a data product-centric model. Within PDS4, both the XML label and the data itself have specific rigidly defined structures that are governed by the standard and implemented in the PDS4 Information Model. The principal function of the XML label is to provide a concise definition of the structure and format of the underlying PDS4 product being described by the label. Please review the sample products below:

The sample data products to be reviewed can be found at the build 1c review site as follows:

<http://pds-engineering.jpl.nasa.gov/index.cfm?pid=145&cid=168>

As an assessor of Build 1c, review the generated XML labels for the PDS4 products:

- To assess the XML label structure (e.g., the definition and content) and how well the label accurately defines the structure and format of the underlying PDS4 product.

- To assess the various functional components (e.g., <Product_Identification_Area>, <Observation_Area>, <File_Area>, etc) and how these area form a fully functional definition of the PDS4 product.
- Note that the XML labels conform to Version 0.3.0.0.e of the PDS4 product schemas.

Part 3 – Assessment Questions

Below are a set of questions to help guide the assessment. Given that PDS4 is a development project, your input will be very valuable in helping to set priorities in the future.

- 1)** Do the document provide sufficient background for the review? If not, how could they be improved?
- 2)** Assess the four fundamental structures. Are they useful? Will they support your needs? Do you have products that you believe will not fit into the structures?
- 3)** Assess the PDS4 product types. Do they provide an adequate set of baseline templates for constructing new templates and new PDS4 products? What is missing?
- 4)** Assess the structure and layout of the PDS4 product examples? How can it be improved?
- 5)** What overall recommendations do you have for the team? Do have you have suggestions for improvement?

Where possible, please itemize your final responses in the build 1c spreadsheet which includes a sheet for both issues and responses to the above questions.