PDS4 Build 2a Data Product Prototype Exercise

Reports due: November 15, 2011

Please send input to Faith Vilas <fvilas@psi.edu>

This document is intended as a guideline for an exercise to prototype a data product that is compliant to the PDS4 Build 2a data standards. The objective is to apply the standards to develop a prototype product in order to: a) better 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 standards.

This task is geared towards PDS Discipline node staff. A single data product within the scope of the Build 2a data standards release should be chosen. The "standard" schemas are recommended for use in this task to minimize confusion and to allow meaningful comparison of the node results. The creation of an archive bundle with two or more data products and associated collections is also recommended.

It is important to note that the standards are a "work in progress". Therefore, some sections of documents provided in the Resources section below 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 us determine the best path forward as we are preparing a production release of PDS4.

The sections below provide a list of resources and example data products. It is followed by a set of questions to guide the input. Please provide those answers directly to Faith Vilas fvilas@psi.edu.

Section 1 – Resources

Build 2a 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 will be helpful in development of your prototype product.

Build 2a Assessment Website – this website contains links to the documents that support Build 2a. Links to all of the supporting materials required to assess Build 2a can be found at the following website (username: pdsmc, password: council):

> http://pds-engineering.jpl.nasa.gov/index.cfm?pid=145&cid=176

Examples:

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

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 develop a prototype product.

Section 2 – PDS4 Data Products

PDS4 is a data product-centric model. Within PDS4, both the XML label and the data itself have 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.   You can find sample data products at the following site (usename: pdsmc, password: council) under the Data Product Examples section:

http://pds-engineering.jpl.nasa.gov/index.cfm?pid=145&cid=176

Section 3 – Questions

Below is a set of questions to help guide provide your inputs.

1) What data product did you attempt to create specific schemas and PDS4 labels for?

2) What PDS4 data structure, product type, schema type, and tools did you choose for the exercise?

3) Were you able to create your data product label? If not, why not? What is missing?

4) What overall recommendations do you have? Do have you have suggestions for improvement?

Please itemize your final responses in the Build 2a prototype response spreadsheet that includes a sheet for issues and a sheet for responses to the above questions. In addition, please turn in all the schemas if you have created them for your prototype products.