

Title: PDS4 Project

Proposed by: Steering Committee

Project Status: Active

Team Leader: Santa Martinez (ESA), Steve Hughes (PDS/JPL)

Team Members:

Thomas Roatsch	DLR
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Jesus Salgado David Heather	ESA
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Field: System Engineering

Introduction:

At the 6th International Planetary Data Alliance (IPDA) Steering Committee Meeting held September 2011 in Caltech, Pasadena, the Steering Committee recognised the importance of continuing to follow the evolution and development of the PDS4 standards with the purpose of identifying concerns and potential areas of incompatibility with regards to IPDA needs and standards.

A fundamental part of this project will be dedicated to carry on with the PDS4 prototyping efforts started in 2010. One of the areas identified for improvement is ensuring that the validation rules for PDS4 compliance are consistent. This has been an on-going issue on international missions. It has been suggested that this project (or subproject within it) could include discussions on the requirements on validation to ensure consistent validation tools are developed.

Other aspects to be addressed by this project will be defined based on:

- a) The PDS4 development schedule and status.
- b) The outcome from the 2010-2011 PDS4 Prototype project.

This project will allow IPDA to develop recommendations that will support the PDS4 development in order to ensure PDS4 standards can (and will) be internationally accepted and used.

The PDS4 project is a continuation of previous projects:

- 2010-2011 - PDS4 Prototype (Team Leader: Steve Hughes).
- 2009-2010 - PDS4 Design/Assessment (Team Leader: Steve Hughes).

Description:

The following exercises have been identified for the development of this project:

- **PDS4 Prototyping:** Since the PDS4 prototyping exercise performed by IPDA in 2011, there have been significant changes to the schemas. This exercise will cover the reassessment of the PDS4 information model and schemas. The main objective is to ensure that the critical issues identified and reported last year have been addressed (or are being considered by future deliveries).

- Preparation Tools (Generation and Validation): This exercise will evaluate the generation and validation tools that support the PDS4 build2b delivery. The main objective is the generation of PDS4 labels from PDS3 labels and the assessment of the completeness and clearness of the results. This exercise will complement the results from the prototyping exercise.
- Validation Issues/Requirements: As already mentioned, this has been an on-going issue on international missions for PDS3. Ensuring consistent and robust PDS4 requirements is critical to ensure consistent validation tools are developed. The main objective is the identification of potential issues related to the validation of PDS4 compliance.

PDS4 build2b will be used for the purpose of this project. Details about PDS4 build2b, supporting documents and resources, and expected results will be provided in the introductory telecom. The three aspects of the project described above will be distributed among the project members in the introductory telecom.

Requirements:

The list of applicable requirements is given below:

- IPDA Level 1/2 Requirements.
- IPDA Information Model and Data Dictionary Requirements.

This project may provide recommendations for these requirements if needed.

Risks: High - IPDA data standards

Timescale:

October 2011 - March 2012	Discuss with PDS representatives (interface: Steve Hughes) what activities can be supported from their side and analyse the final report from the 2010-2011 PDS4 project to identify potential activities for this project. Write a detailed project plan proposal with a few focused activities, goals and expected results based on the previous information.
March 2012	Send the proposal to the Steering Committee and to the team members for comments. Prepare needed material for the project.
March - May 2012	Introduce the final plan to the team members by telecom and distribute described tasks among project members. Exercise starts.
June 2012	Write a project report and distribute to the team members for comments. Send report to the Steering Committee and Technical Experts Group.
July 2012	Present project results to the Steering Committee.

Deliverables:

1. Set of recommendations to support the PDS4 development.
2. Suggestions for tools (or features in current tools) and resources to support the archive, search and management of planetary science data in PDS4 format.
3. Set of recommendations to ensure consistent validation tools can be developed for PDS4.

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