

# Standards Change Request

Add Sub-Objects to FILE Object in PSDD

SCR3-1089.v1

## Provenance:

Date: 2007-04-04

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Revised: TBD

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## Problem:

The current PDS Data Dictionary does not list any sub-objects for the FILE object and this causes the validation tool, VTOOL, to incorrectly throw validation errors when VTOOL encounters any sub-object in a PDS label. Data providers are requesting that VTOOL correctly identify which sub-objects are and are not permitted within the FILE object.

Note that the error is strictly an omission within the data dictionary and is not a coding problem within VTOOL.

## Current Urgency:

Priority is high. This change is needed so EN can meet the current scheduled release of VTOOL (20070430). MC does not want to slip the scheduled release date of VTOOL due to liens levied by this SCR.

## Proposed Solution:

Amend the FILE object definition in the data dictionary to include the appropriate set of sub-objects.

## Impact Assessment:

Overall impact is low to moderate.

## Documentation

The definition of the FILE object must be modified in the "Planetary Science Data Dictionary" and the "Planetary Data System Standards Reference". No changes

are required to the "Proposer's Archiving Guide" or the "Archive Preparation Guide".

#### Interface

The changes to the data dictionary will automatically be propagated to the next revisions of the pdsdd.full file. Only the FILE object is affected.

#### Legacy Data and Software

Legacy data should not be affected, since all existing PDS compliant labels using the explicit FILE object should have referenced valid sub-objects. Validation tools that validate against the metadata from the pdsdd.full file should require no modification apart from the update to pdsdd.full. Legacy node and user software, that does not validate against the metadata from the pdsdd.full file, may require modification to specifically validate against the set of sub-objects.

#### Interagency

Working groups concerned with interoperability between PDS labels and other archive/search systems should be informed that an explicit set of sub-objects has been specified for the FILE object.

#### **Additional Information:**

N/A

#### **Requested Changes:**

##### Planetary Science Data Dictionary

Amend the current element definition for the FILE object, which currently has no sub-objects (either optional or required), to include the following optional sub-objects:

- ARRAY
- COLLECTION
- GAZETTEER\_TABLE
- HEADER
- HISTOGRAM
- HISTORY
- IMAGE
- PALETTE
- QUBE
- SERIES
- SPECTRAL\_CUBE

- SPECTRUM
- SPICE\_KERNEL
- SPREADSHEET
- TABLE

Note that there are no proposed changes to the required sub-objects for the FILE object (i.e., the FILE object has no required sub-objects). Also, there are no proposed changes to the set of element names specified in the FILE object.

### PDS Standards Reference

In Section A.15.4 “Optional Objects”, replace “No sub-objects” with the following list of sub-objects:

1. ARRAY
2. COLLECTION
3. GAZETTEER\_TABLE
4. HEADER
5. HISTOGRAM
6. HISTORY
7. IMAGE
8. PALETTE
9. QUBE
10. SERIES
11. SPECTRAL\_CUBE
12. SPECTRUM
13. SPICE\_KERNEL
14. SPREADSHEET
15. TABLE

### PDS Element Data Base and PDSDD.FULL file

The changes to the data dictionary will automatically be propagated to the next revisions of the pdsdd.full file. Only the optional sub-objects of the FILE object are affected.