

Standards Change Request

Update REFERENCE_DESC Format to Handle DOIs

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Provenance:

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Problem:

The original problem was reported when REFFIND, a routine used in validating REFERENCE objects before they are ingested into the EN central catalog, failed to find the year of publication because it did not appear at the end of the reference. A Digital Object Identifier (DOI) was listed at the end instead.

Subsequent research has determined that there are conflicting reference formatting standards listed in the Standards Reference and the PSDD entry for the REFERENCE_DESC element: The former requires the date of publication at the end, the latter could lead a reasonable user to place the year immediately following the author list.

It is also true that inclusion/placement of DOIs in the REFERENCE_DESC text is not mentioned in our current Standards Reference.

Current Urgency:

Low.

Proposed Solution:

- Remove all references to “JGR format” from the PSDD description of REFERENCE_DESC.
- Remove all reference to “AGU format” from the Standards Reference (because AGU format no longer places the year of publication at the end). I believe this is limited to Section B.32.
- Add DOI to the description of reference formats in Section B.32 of the Standards Reference, placing it before the year of publication in all cases.

Additional Considerations:

The REFFIND software provides some useful sanity-checking on REFERENCE objects, and so it is preferable that we maintain the existing PDS reference format, which places the year of publication at the end where it can be reliably located and parsed. This no longer corresponds to the AGU style sheet.

Consequently, the DOI should be located prior to the year of publication. To help in identifying DOIs when they exist, we recommend preceding DOIs with the tag “doi:”, and placing them immediately before the year of publication.

Since DOIs are unique, permanent identifiers, we should encourage users to provide them where they are available; but DOI generation is not yet at a stage where we can require them in all REFERENCE objects.

Impact Assessment:

PDS Standards Reference – 1 hour to edit text

Archive Preparation Guide – No change

Proposer’s Archive Guide – No change

Planetary Science Data Dictionary – 1 hour to edit

PDS tools – No impact to effect the change. REFFIND failures should be decreased, at least among conscientious data preparers. The proposed placement of DOIs is designed to avoid unintended REFFIND failures when DOIs are included.

Additional Information:

None at this time.

Itemized Changes:

PDS Standards Reference

- Section B.32.5 – Remove references to AGU citation formats, leaving this:

The following examples show how to cite various types of information in REFERENCE catalog objects for PDS archive products. For assistance in determining the proper format for a citation that does not fit within one of the categories described here, contact a PDS Data Engineer.

- Section B.32.5.5.1 – Add DOI prior to year of publication; include in example:

1. Name(s) of author or authors
2. Title of article
3. Name of periodical
4. Volume and/or issue
5. First and last pages occupied by article
6. Digital Object Identifier (DOI), if any, preceded by the tag “doi:”
7. Year of publication

Example:

```
OBJECT                = REFERENCE
REFERENCE_KEY_ID      = "SCARF&GURNETT1977"
REFERENCE_DESC        = "
    Scarf, F.L., and D.A. Gurnett, A plasma wave investigation for the
    Voyager Mission, Space Sci. Rev., Vol. 21, No. 1, pp. 289-331, doi:
    10.1007/BF00211543, 1977."
END_OBJECT            = REFERENCE
```

- Section B.32.5.5.2 – Add DOI and replace second example:

9. Publisher's name
10. City of Publication
11. Digital Object Identifier, if any, preceded by the tag “doi:”
12. Year of publication

Examples:

```
OBJECT                = REFERENCE
REFERENCE_KEY_ID     = "STARCK&MURTAGH2006"
REFERENCE_DESC = "
    Starck, J.-L and F. Murtagh, Astronomical Image and Data Analysis, 2nd
    Edition, Springer Berlin, Heidelberg, doi: 10.1007/978-3-540-33205-7,
    2006."
END_OBJECT           = REFERENCE
```

- Section B.32.5.5.3.1 – Add DOI to the numbered list of fields prior to the year of publication, as in the previous cases.
- Section B.32.5.5.3.2 – Add DOI to the numbered list of fields prior to the year of publication, as in the previous cases.
- Section B.32.5.6.2 – Remove the reference to the AGU:

PDS uses the guidelines established by the *Chemical Abstract Service Source Index* in abbreviating the names of serial publications and reports. ...

- Add Section B.32.4.6.3:

B.32.5.6.3 Digital Object Identifiers (DOIs)

The Digital Object Identifier (DOI) system, managed by the International DOI Foundation, provides a means for creating a permanent identifier for tagging information content in a digital environment. As of this writing (July 2009), the International Standards Organization is actively reviewing the proposed DOI standard, and DOIs are appearing in databases such as the ADS Abstract Service. For more information, consult the DOI system web site:

<http://www.doi.org/>

When DOIs are available, they should be included in the REFERENCE_DESC text, always preceding the year of publication, and always preceded by the tag "doi:".

PDS Data Dictionary Data Base

- Replace current definition with the following:

The REFERENCE_DESC element provides the bibliographic citation for a published work. The format is described in detail in the REFERENCE object description in Appendix B of the PDS Standards Reference.