Standards Change Request

Bad formation rule in *_DATE keywords   **SCR3-1117.v2**

Provenance:

Date: 2008-05-30
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Date: 2007-05-07
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Title: Bad formation rule in MISSION_START/STOP_DATE description (SCR3-1117.v1)

Problem:

There are twenty-three keywords in the Planetary Science Data Dictionary (PSDD) with a class word of DATE. The majority of these keywords do not have their FORMATION_RULE_DESC attribute populated. Several of the keywords have incorrectly specified formation rules within their descriptions.

According to section 2.2.2, "Class Words", of the PSDD, the DATE class word constitutes a "representation of time in which the smallest unit of measure is a day. The value is expressed in one of the standard forms."

Section 2.3.5, "TIME Data Type", of the PSDD defines only the two forms:

YYYY-MM-DD and YYYY-DDD

as valid, where:

YYYY   Represents the year (0001 to 9999)
-         Is a required delimiter between date fields
MM   Represents the month (01 to 12)
DD   Represents the day of month (01 to 28,29,30 or 31)
DDD   Represents the day of year (001 to 365 or 366)

Section 7.2.1 of the PDS Standards Reference states the following:

"Conventional dates are represented in ISO/DIS 8601 format as either year (including century), month, day-of-month (CCYY-MM-DD), or as year, day-of-year (CCYY-DDD). The hyphen character ('-') is used as the field separator in this format. The former is the preferred format for use in PDS labels and catalog files and is referred to as *PDS*

standard date format, but either format is acceptable."

The following table provides the list of keywords, along with their formal FORMATION_RULE_DESC values, any formation rules mentioned in the description, and their general data type.

Keyword	Formal Formation Rule	As Specified in Description	Gen Data Type
ARCHIVE_STATUS_DATE		YYYY-MM-DDThh:mm:ss[.fff]	DATE
BUILD_DATE			DATE
CHANGE_DATE			DATE
COMMENT_DATE			DATE
CREATE_DATE		YYYYMMDD	DATE
DATA_SET_RELEASE_DATE	YYYY-MM-DD	YYYY-MM-DD	DATE
LAUNCH_DATE		YYYY-MM-DD	DATE
MISSION_START_DATE	YYYY-MM-DD	YYYY-MM-DDThh:mm:ss[.fff]	DATE
MISSION_STOP_DATE	YYYY-MM-DD	YYYY-MM-DDThh:mm:ss[.fff]	DATE
ORDER_DATE			DATE
ORDER_STATUS_DATE			DATE
PEER_REVIEW_START_DATE		YYYYMMDD	DATE
PEER_REVIEW_STOP_DATE		YYYYMMDD	DATE
PRODUCT_RELEASE_DATE		YYYY-MM-DD	DATE
PUBLICATION_DATE	YYYY-MM-DD	YYYY-MM-DD	DATE
REGISTRATION_DATE	YYYY-MM-DD	YYYY-MM-DD	DATE
RELEASE_DATE	YYYY-MM-DD		DATE
SOFTWARE_RELEASE_DATE		YYYY-MM-DD	DATE
START_JULIAN_DATE		integer	INTEGER
SUPPORT_REQUEST_DATE			DATE
SYSTEM_BULLETIN_DATE			DATE
SYSTEM_EVENT_DATE			DATE
TEMPLATE_REVISION_DATE		Ex. 11/22/88	DATE

Priority:

Medium. The primary urgency to this SCR is clean up the PSDD prior to the move to PDS4.

Proposed Solution:

1. Change the formation rule for all of the keywords in the list (except START_JULIAN_DATE) to: "YYYY-MM-DD (preferred) or YYYY-DDD"

2. Remove formation rules from description fields, where they are present.

3. Update the sample date value provided for the TEMPLATE_REVISION_DATE keyword to "1988-11-22".

4. Direct that the "Formation Rule" attribute on the "PDS Data Dictionary Lookup Detail" window of the online PSDD be moved up to directly beneath the "Description" attribute.

5. Add a note to the Description field of the START_JULIAN_DATE keyword indicating that the keyword has been superseded by the START_JULIAN_DATE_VALUE keyword (already in the PSDD) and should no longer be used and change the STATUS_TYPE attribute to "OBSOLETE".

6. Drop the time portion of the date/time value of the keyword PRODUCT_RELEASE_DATE in the sample label shown on page A-21 of the Standards Reference.

Potential Issues for Discussion:

1. Within the sample GAZETTEER_TABLE description shown on page A-52 of the Standards Reference is a table column entitled "APPROVAL_DATE" with a data type of "INTEGER" and a format of "I4". Given that this is a column name rather than a keyword, this isn't technically a problem. Is this confusing enough for users that the column name should be changed to "APPROVAL_YEAR"?

2. The three keywords, START_JULIAN_DATE_VALUE, MID_JULIAN_DATE_VALUE, and STOP_JULIAN_DATE_VALUE might appear problematic in that they apparently use the class word DATE as a descriptor word. However, there is no explicit prohibition against this usage in the PSDD. Also, since "Julian date" is a well established phrase outside the PDS, and the

VALUE class word is correctly used to indicate an "amount or quanitity" (of days, in this case), these keywords do not invalidate the rules for keyword formation.

Impact Assessment:

Documentation changes
- One or two minor updates to the Standards Reference.
- Twenty-three keywords in the PSDD will have minor changes made to FORMATION_RULE_DESC, DESCRIPTION, and / or STATUS_TYPE.

Public Interface changes
- The interface to the online PSDD will need a minor modification (a chunk of ColdFusion code will need to be moved slightly within one page, and the page re-delivered).

Software changes
- None known.

External Agencies
- None known

Recommended Actions:

1. Ingest the attached twenty-three element definition objects.
2. Drop the time portion of the date/time value of the keyword PRODUCT_RELEASE_DATE in the sample label shown on page A-21 of the Standards Reference.