

From: Ron Joyner

To: DDWG

Subject: FW: PDS4 Data Design Working Group - Telecon Announcement - Nov 9, 2016 - 9:30

Date/Time: 2016-11-09T07:55 PST

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BIG NOTE ON NEW ACCESS CODE -- this is the new access code that should work without fail each week:

-- enter access code: 997 868 825

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Attendees: Gordon, Guinness, Huber, Hughes, Joyner, Mafi, McLaughlin, Morgan, Nagdimunov, Padams, Raugh, and Simpson. Kazden was unavailable to take minutes, so Simpson filled in.

See enclosures:

-- a list of the full topics under discussion by the DDWG

CCB/SCR Statuses:

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-- CCB-162: Move <md5\_checksum> from Object\_Statistics to Tagged\_Digital\_Object (R.Simpson)

-- 20161109: Queued\_for\_Implementation:

-- E-vote Consent Item PASSED: 6 Yes (ATM, GEO, IMG, IPDA, RMS, SBN); 1 Failed to vote (PPI)

This week's agenda will focus on the following topics.

(1) Please review and be prepared to discuss and possibly vote:

-- **CCB-166: Deprecate bit\_mask from IM for new sample\_bits attribute (J.Padams) - please review SCR and be prepared to vote**

-- 20160901: Open & Under DDWG review

-- See comments from R.Simpson & Lev

-- 20160829: email from R.Simpson to Jordan on suggested changes

-- 20160908: many emails between Jordan, R.Simpson, and Lev

-- 20160929: Jordan to re-write the SCR to only deprecate <bit\_mask>

-- all other issues will be handled in IMG LDD

-- 20161107: Jordan updated SCR per Steve request; Steve provided TA

-- ready for vote

The SCR has been reduced to deprecation of <bit\_mask> from Object\_Statistics.. Joyner asked whether <bit\_mask> has anything to do with packed data; Guinness said no, but Raugh didn't seem entirely convinced. Nagdimunov said the original definition allowed for mixes of set and

unset bits. Padams said Imaging has never used mixed bits, and deprecation would have no effect on IMG data. There seemed to be consensus that this was not a packed data issue, so Joyner called for a vote on the SCR as written.

Yes: Gordon, Simpson, Raugh, Mafi, Guinness, Padams, Joyner, and Huber

No: none

Absent: NAIF, IPDA

-- **CCB-131: Missing constraint on Special\_Constants attributes (A.Raugh)**

-- 20150922: Open; under DDWG discussion

-- 20160310: until someone volunteers to lead the effort -- on hold

-- 20160929: back to DDWG to form WG; candidate for sunset clause

-- 20161010: from Anne: Jess Stone ([jstone@psi.edu](mailto:jstone@psi.edu)) will be the SBN rep for this

-- need participants to form WG

-- 20161013: WG formed: J.Stone (Chair); Lev & me (participants)

sent email to Dick & Jordan to ask if they will participate on WG

-- 20161026: sent email to Dick to see if discussions between Dick and J.Stone are solid enough to update SCR

-- 20161026: Dick to update SCR; will split off NaN & INF (to be addressed in separate SCR)

-- 20161109: Dick has made extensive updates to SCR; needs Steve to TA

Simpson has revised the SCR focusing on numerical values for existing special constants. Raugh said SBN regular uses character strings for <missing\_constant> so there needs to be accommodation for that use.

Nagdimunov said the rewrite says white space will be preserved for string comparison, and that is contrary to what most people would expect — ASCII\_Short\_String\_Collapsed would remove leading and trailing zeroes. Lev then asked whether comparison would be numerical; Simpson said yes, but then Lev said the SCR says only that binary object values will be compared numerically.

Simpson invited Nagdimunov to edit the SCR; but Lev declined. Lev added that he didn't think the rewrite represented the agreement reached between Jesse Stone and Simpson; Dick disagreed.

After some additional discussion, Simpson suggested that SBN form a new working group to edit the SCR, since only SBN people seem to be participating in the discussion.

Raugh asked what others in DDWG want in Special\_Constants, but there was limited response. Guinness said GEO has only seen Special\_Constants in some image data sets; no one has ever asked what would be reasonable values for Special\_Constants. Simpson said some radio science data include special values (only in PDS3 so far); but the special values are defined in the field description and not in a special constants object. Mafi said the same is generally true for PPI data, where most occurrences are in ASCII files. Padams said Imaging uses special constants all the time (in PDS3); some values are ASCII\_Real, others are given in hex. Gordon

said RMS has only ASCII special constants. Joyner asked whether there should be a new working group; but there was little interest in volunteering.

Raugh said there are three viable approaches; we should pick one and run with it. She recommended a white paper explaining the choices and having DDWG vote on which approach to follow. Lev volunteered to write the white paper; Raugh will explain the choices to him. The white paper is due to DDWG before the next telecon (in three weeks).

(2) Email exchanges and other stuff

-- **ASCII\_REAL (L.Nagdimunov)**

-- 20161012: Requested Lev provide cogent statement of the issue to be resolved; send to DDWG to start email exchange & discussion

-- lots of email discussion; inconclusive as to whether issue is converging or diverging ?

-- 20161026: Can a problem statement be written into an SCR where there is some measure of certainty that this is the issue to be resolved ?

-- at least one email questioning whether this issue is worth the time / effort to discuss / resolve

-- 20161109: Lev requested another week to work issue; before additional DDWG discussion

No further discussion today.

(3) **Product\_Update (M.Gordon)**

-- 20161109: Mitch sent out Product\_Update email; send to DDWG to start email exchange & discussion

Gordon discussed this with Hardman. ATM is already using Product\_Update for LADEE data, so Hardman would like to have resolution of the open issues. There are two scenarios: (1) an update to existing parts of a label or (2) new attribute(s) and their value(s). A single Product\_Update could be used for either scenario but not both. The current proposal envisions that corrections would be provided to users but that the label itself would not be rewritten.

There are two possible implementations: (1) multiple fields (LIDVID in the first field and as many fields as necessary to convey attribute-new\_value pairs, or (2) three fields (LID/LIDVID, attribute, and new value with each record containing the change to a single attribute).

Mitch used an example from the NH/LORRI Pluto encounter to illustrate. Raugh asked how the update works if there are two instances of a geometry area in a label; how does the system know which geometry to update? Mitch said Hardman's input is needed on questions like this.

Mafi is concerned about changing existing information in a label; Guinness shared that concern and would encourage data providers to rewrite labels if existing information is being changed.

Guinness also questioned use of 'slot' names; Raugh said she would not expect anyone outside of a DN to use Product\_Update. In response to a question from Simpson, Anne explained that slot name is the address of an attribute and its value in the Registry. Hughes added that the Search engine also uses slot names, which are different from Registry slot names.

Joyner has already asked Hardman for impact, but Sean has not responded yet. Ron will follow up.

PDS Data Design Working Group (DDWG) website and Wiki

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PDS Version 4 (PDS4): <http://pds.jpl.nasa.gov/pds4/about/>

**Next DDWG in 3 weeks (1 December).**

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