

From: Debra Kazden <dkazden@igpp.ucla.edu>

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To: pds4ddwg

Subject:PDS DDWG Notes from 2016 09 15

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September 15, 2016

Notes by Debra Kazden

Known Attendees:

M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, J. Mafi, S. McLaughlin, L.

Nagdimunov, L. Neakrase, A. Raugh, R. Simpson and J. Stone

Meeting Agenda and Summary

1) SCRs Under Discussion:

-- CCB-131: Missing constraint on Special Constants attributes (A.Raugh)

-- 20150922: Open

-- 20160223: under DDWG discussion

-- 20160322: EN governance; will take lead

(Not Discussed)

- CCB-138: Mismatch between context object types and values of type in Observing System Component class (A.Raugh)

-- 20151202: Open; under DDWG review

-- 20151203: WG: Anne, Steve, Dick, Jordan, and RJ

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

****(Not Discussed)****

-- CCB-142: Create Data Quality Flags to hold metadata on Quality Flags (E.Shaya)

-- 20151229: Open;

-- 20160126: Under DDWG review

-- 20160322: Ed didn't like Simpson's CCB-142 implementation

-- Ed wants a lot of specifics embedded into XML

-- Simpson trying to figure out how to make it 'simpler'

-- 20160323: Simpson generated presentation for DDWG review / comment

-- tabled until next session (20160410)

-- 20160428: updates discussed by DDWG

-- requires IMG & others expertise to carry forward

-- 20160505: discussed by DDWG; E.Shaya led discussion; 2 competing implementations

-- address 2 issues:

-- bang for buck in terms of worth doing

-- implementation recommendation

-- WG: Steve, Anne, Jordan & Chris, Lev

-- 20160808: Packed Data issue presented / discussed at MC

-- pending MC decision

-- A.Raugh & R.Simpson to resolve and propose solution

****(Not Discussed)****

-- CCB-149: Should PDS4 allow packed data? (E.Shaya)

-- 20160309: Open & Under DDWG review

-- 20160310: Sent email to E.Shaya asking that he upload his version of the IM for packet data to JIRA

-- DDWG will review and provide comments

-- PPI has volunteered to attempt to convert a PDS3 product using the Packed_Data class

-- 20160322: dependency on CCB-153; and vice-versa

-- 20160428: sent email to J.Mafi for status on providing examples

-- 20160706: sent email to J.Mafi for status on providing examples

-- 20160808: Packed_Data issue presented / discussed at MC

-- pending MC decision

-- A.Raugh & R.Simpson to resolve and propose solution

****(Not Discussed)****

-- CCB-151: Bundle Member Entry and Internal Reference do not require either LID or LIDVID. (A.Raugh)

-- 20160309: Open & Under DDWG review

-- 20160322: EN governance; will take lead

****(Not Discussed)****

-- CCB-153: SR Needs Additional Description of Packed Data Fields. (E.Shaya)

-- 20160321: Open

-- 20160322: dependency on CCB-149; and vice-versa

-- 20160804: DDWG voted to send this to MC for discussion and possibly vote to either allow or

disallow packed-data in archive

--Votes from 20160804 DDWG:

-- vote to raise the question to MC should packed-data be supported in archive data (e.g., Product

Observational)

ATMOS - yes

EN - no

IMG - no

GEO - yes

PPI - yes

NAIF - not present

SBN - yes

RS - yes

RINGS - endorse (via email) - not present

IPDA - not present

-- 20160808: Packed Data issue presented / discussed at MC

-- pending MC decision

-- A.Raugh & R.Simpson to resolve and propose solution

****(Not Discussed)****

- CCB-155: Need "Example Set" to include program test data. (A.Raugh)
 - 20160323: came from discussion of CCB-144
 - 20160323: Open; request to provide additional examples; to include 'test data'
 - 20160526: discussed by DDWG; request for additional examples; if none, then vote to send to CCB
 - PPI will provide ARRAY example
 - request for color RGB image; check if IMG can provide
 - 20160601: sent email to Jordan & Chris asking if IMG has test PDS4 "RGB" image
 - image in the correct orientation and color instances – for example: red R, green G, blue B

where the letters are appear in normal text direction

****(Discussed)****

- CCB-156: Inconsistent Discipline Dictionary Technique for Local Internal Reference, et al. (A.Raugh)
 - 20160418: Open
 - 20160623: Under DDWG review
 - 20160818: Will address "exposure rules" at Tech Session; A.Raugh will put together PPT
 - e.g., LDD shall reference element and not type
 - 20160824: email to A.Raugh; addressing "exposure rules" at Tech Session -- was turned down
 - need alternate suggestion as how to proceed with resolving issues in SCR
 - 20160901: discussion with A.Raugh; how to push SCR forward
 - Anne to contact Steve to use <id> and <ref id> in XSD over schematron

****(Not Discussed)****

- CCB-159: Bug fixes for Version 1.7.0.0. (J.Hughes)
 - 20160426: Open & Under DDWG review
- **(Not Discussed)****
- CCB-162: Move <md5 checksum> from Object Statistics to Array (R.Simpson)
 - 20160622: Open & Under DDWG review
 - emailed Steve to TA
 - 20160629: TA'd; back to DDWG for discussion
 - 20160630: C.Isbell & Jordan & Dick to resolve issue(s); then back to DDWG

-- 20160829: email from R.Simpson with suggested implementation

-- back to DDWG for discussion

(Discussed)

-- CCB-164: Display Settings not required for images (A.Raugh)

-- 20160707: Open

-- 20160727: Under DDWG discussion

-- 20160818: Under DDWG discussion

-- A.Raugh to 'move' comments to body of the SCR -- ready for TA & vote ?

-- 20160829: email from R.Simpson to Jordan with suggested implementation

of promoting classes (e.g., Display Settings) in DISP LDD to common IM

(Discussed)

-- CCB-166: Deprecate bit mask from IM for new sample bits attribute (J.Padams)

-- 20160901: Open & Under DDWG review

-- See comments from R.Simpson & Lev

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

-- Jordan replied that the suggested changes are outside the scope of 166

(Very Brief Discussion)

-- CCB-167: Remove xmlns:pds recommendation from DPH (L.Nagdimunov)

-- 20160906: Discussed with Sean & Steve; Sean s/w team will ascertain impacts on removing 'pds' as namespace from XML labels

-- on leave until end of Sept.

(Not Discussed)

-- CCB-168: ASCII NonNegative Integer may or may not include + sign? (L.Nagdimunov)

(Not Discussed)

Notice sent before the telecon in email from R. Joyner - September 14, 2016 See enclosures:

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

CCB/SCR Statuses:

-- CCB-165: Ambiguity of ASCII Numeric Base* (L. Nagdimunov)

-- 20160908: DDWG to vote to send SCR to CCB

-- 20160914: CCB to e-vote

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

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

-- CCB-164: Display Settings not required for images (A.Raugh) -- please review email from A.Raugh for proposed implementation

-- 20160707: Open

-- 20160727: Under DDWG discussion

-- 20160805: A.Raugh added comment to address applicable set of objects

-- 20160818: Under DDWG discussion

-- A.Raugh to 'move' comments to body of the SCR -- ready for TA & vote ?

-- 20160829: R.Simpson added comment with suggested implementation

of promoting classes (e.g., Display Settings) in DISP LDD to common IM

-- 20160901: A.Raugh to propose new strategy to address: repeat local internal reference makes ugly labels

-- CCB-166: Deprecate bit mask from IM for new sample bits attribute (J.Padams) - please review emails from R.Simpson & Lev

-- 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

-- CCB-162: Move <md5 checksum> from Object Statistics to Tagged Digital Object (R.Simpson) -- please review updated SCR on suggested implementation

-- 20160622: Open & Under DDWG review

- emailed Steve to TA
- 20160629: TA'd; back to DDWG for discussion
- 20160630: C.Isbell & Jordan & Dick to resolve issue(s); then back to DDWG
- 20160706: email to C.Isbell & Jordan & Dick asking if issues within WG are settled
- 20160804: email to Jordan asking about status / progress
- 20160829: email from R.Simpson with suggested implementation
 - back to DDWG for discussion
- 20160901: R.Simpson retitled & rewrote SCR
- CCB-155: Need "Example Set" to include program test data. (A.Raugh)
 - 20160323: came from discussion of CCB-144
 - 20160323: Open; request to provide additional examples; to include "test data"
 - 20160526: discussed by DDWG; request for additional examples; if none, then vote to send to CCB
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DDWG Telecon

WebEx users in Florida continue to have trouble.

People will be discussing the Geometry LDD - to figure out how to test for 1.7 and to resolve issues.

~ Need to add ground based to the Geometry LDD before the end of the year.

~ Maybe this can be discussed next week or the following week.

CCB/SCR Statuses

Email went out for a CCB e-vote on CCB-165. We should hear something about that next week.

CCB-164 - Display Settings not required for images See <https://pds-jira.jpl.nasa.gov/browse/CCB-164>

Agenda should have told us to read emails from Anne and Ed. Ed's included an alternate implementation.

(See email from A. Rough, Image/Display CCB-164 - Additional Proposal, sent September 9, 2016 9:58 AM, and email from E. Guinness, RE: Image/Display CCB-164 - Additional Proposal, sent September 9, 2016 11:55 AM)

Question: Have people looked at the emails? Have they digested what they mean?

Answer: (Silence)

Ed's email includes an example with a 3-D cube and a bunch of back planes - sent a label that doesn't validate. Sent one that uses the current implementation - filling out local internal reference class for each object - and the other just repeating the class. So, this is what it would look like if display classes is required versus the idea of repeating the one attribute - not the full class. Could live with it, but not sure of the full impact.

~ A comment was sent that this loosens the constraint on something in the core, but LDD stewards need to add constraints to make single valued in LDDs. This might trigger changes, but can't think of any other follow on effects.

~ The comment was sent on to Steve and Sean - they were asked to comment. Sean said the new way has some impact, but not a big deal other than that it's non-backwards compatible with his code.

No response from Steve yet.

We should vote on what people prefer, than Steve can TA appropriately for 1.8. So, let's vote.

(Steve just joined the call. Not at a computer. Steph also just joined the call.)

Steve has not looked at the two implementations yet.

Suggestion that we vote anyway. We can vote for the two competing implementations.

~ Competing is the wrong verb. There are two alternate implementations - one which might have impact on stewards and namespace LDDs.

Question: Current implementation would still be valid and we would have the option to use the new one?

Answer: Say you have an LDD that uses local internal reference - that only points to one other thing - it can now point to several - if we need it to be singled valued then you would have to make sure of that actively.

~ But that wouldn't invalidate the one.

~ Right.

Someone made a comment in jira 12 hours ago. Don't understand it.

Question: What's the difference?

Answer: One requires you to duplicate the entire display class.

~ No - there is local internal reference within the display class.

~ Versus one class with one attribute.

Question: Is it worth our time to vote?

Answer: Yes. Deciding which way to allow multiple instances. Multiple instances of class or attribute within the class.

~ Someone thinks it's too soon to vote. Has been involved in this conversation. Thinks there will be significant impact. Too soon to vote.

~ Someone else disagrees. This is for display settings, but maybe you are right.

~ Concern. Not sure everyone understands the options.

Question: Is the new jira comment the issue?

Answer: It doesn't seem relevant.

~ Let's wait for an explanation from the person who made the comment. Not sure the case where you repeat an entire class has any change to the IM - the other option, where you repeat the local internal reference class and the local identifier attribute changes the concept of the class. Might have impact. We could have some philosophical discussions, but it won't change things - which way to opt is the philosophical discussion.

Question: Is this only for display class?

Answer: If you change the number of times a local identifier can appear in the local internal reference that would propagate to all classes.

~ So this affects a lot of things.

~ Yes. Anything with that class. Things are already different in 1.7 because the class has been exposed.

The main thing is how to specify. Three options - repeat display class for every displayable thing, limit changes to Display DD - one class points to as many as makes sense or clean the syntax - repeat the link in the class, but have to change something in the core. Has consequences.

~ Cleaner application. Takes the single valued attribute and changes it to one to many. Not a non-backwards compatible change.

Steve would like to TA all three approaches.

~ Not all of them are in the SCR write up.

Question: Is this only for display class or more? Really not sure what we could be voting on.

Answer: Someone thought it was to allow local identifier to be multivalued or to repeat local internal reference class N times in the Display DD.

~ Just saying - it seems to someone that we are trying to solve a problem for display but the choices on how to do it - if we change something in the core it has a bigger impact.

~ So you would want us to divide the question on how the local internal reference class should be structured and supported and then ask how to associate.

~ Yes. This could impact the entire model.

This isn't actually just about CCB-164 any more. Multiple object reference issue needs a new SCR. Then we can go back to CCB-164 after that's solved.

~ Agreement.

We had started a vote on CCB-164. Someone didn't like how it was laid out, we stopped the vote while we looked for an alternate implementation. We need to write all of that into the SCR and then TA.

~ No. That's the tail wagging the dog. A change to the core to fix a local problem. Not the right order. We need to consider the other issues where this will come up.

Question: Is there a task or project that is depending on CCB-164 now?

Answer: All of PDS. All LDDs need uniformity. The question of the local internal reference - if it's just for Display or all other LDDs - that's a more general case - should be supported. There will be missions and migrations where this will come up. Since the builds are every six months- we may need to wait. Maybe it's not crisis urgent, but we should do it properly. With speed, but not haste.

~ There's no urgent need, but InSight will start soon - not sure what IM version - eventually Mars 20/20 will also be doing label design.

CCB-164 is on display settings. It started with wanting schematron rule for images. Agree with the tail wagging the dog - seems there are many issues to resolve first.

~ Not many, but but a bigger issue than the one that generated the SCR. Need to make sure we have the right solution.

~ Someone has gotten more grief over local internal reference than any other class. Lots of impact. Likes local identifier cardinality unbound, but need to consider the impact. We need to study this.

~ So far, only email discussions - it's not even all in jira. There's not a complete documentation trail in jira.

We should put CCB-164 on hold. Do a new SCR for local internal reference. The new SCR can be TAed and we can see impacts - then we can go back to CCB-164.

~ Agreement.

~ We need to get the other problem solved first.

~ More agreement.

Someone never really understood local internal reference until now with these concrete examples.

~ Yes. Has significant impact.

Question: Will Anne re-write the SCR?

Answer: (Not Anne) Not rewrite CCB-164 - need to write a new one.

Answer from Anne: Will file a new SCR on local internal reference but doesn't want to take ownership of it. Doesn't have time.

~ Then this will have to be on hold - need someone to create the new SCR.

~ If Anne is initial author, but not the owner - maybe we could give it to Steve.

~ That's not fair. He didn't bring it up and he'll have to do all the work.

Let's move on. This will be on hold until someone creates a new SCR.

(Dick just joined the call)

CCB-166 - Deprecate bit mask from IM See <https://pds-jira.jpl.nasa.gov/browse/CCB-166>

Jordan/IMG is not on the call so we will not discuss this.

Someone has a comment - Regarding the presentation to the MC about packed data - it mentioned bit data, but those data are not packed. Seems there is a lot of confusion. IMG just wants to say what bits were active as transformed to product described.

~ Called out for MC cause not actual bit mask, but some checking needs to be done.

~ Just wanted to make sure people not confused.

~ Presenter tried hard not to misrepresent the data.

CCB-162 - Move <md5 checksum> from Object Statistics to Tagged Digital Object See <https://pds-jira.jpl.nasa.gov/browse/CCB-162>

The SCR was rewritten to make it more explicit. Move it out of object statistics to tagged digital object - can be inherited that way for use with a host of other things. (Speaker was breaking up) Still some implementation questions on how to isolate bytes in object from bytes in file. Listed all the places it would be inherited.

This has been TAed. It does have a lien. Can be worked off-line.

Question: Any other comments?

Answer: Md5 checksum is currently an attribute in file, but not inherited.

~ The SCR says to remove from file and object statistics.

~ So it won't change how it works, just where.

~ It wouldn't change anything working now - just add places you can use it.

~ It's a trivial change. The lien is that it exists.

~ Not sure of the inner workings of the model.

Question: Any problems with the trivial change?

Answer: (Silence) Then...

Another Answer and Question: Someone wants to take back their silence. Thought that someone had brought up an issue with order. Seems md5 would be first. Is that right?

Answer: Yes. First attribute in all classes. Yes, that is an impact. Sean said there would be no problem, but yes.

This is a non-backwards compatible change - which is what the TA says.

Someone likes the suggestion to put it in byte stream - leaves out file, but could put it back in, so it

would be after name and identifier.

~ Would also be backwards compatible.

~ Not first in byte stream.

~ No, puts it above other things, but under name and identifier Maybe it's not backwards compatible.

Unsure.

Someone would like to hear Steve's opinion.

~ Steve responds that he has no position on where it goes. No dog in this fight.

Someone says it could be done as in this SCR, but suggests we could put it in byte stream and file.

~ It could be done. Would like to test it before the team decides. Don't want to comment before the test. Initial test results didn't go to the entire team. Those can be sent to everyone if desired.

Question: Anyone else support moving it to byte stream?

Answer: Could go either way.

~ That's why we should test it.

Question: How many labels have used it already? How many pipelines would require recoding?

Answer Software should respond to the model.

~ It's hard to write software that changes automatically.

~ Missions that have locked into a version wouldn't care, but people who want to upgrade could have validation issues.

Question: The suggestion has no bigger change on backwards compatibility than the original suggestion in the SCR. Does it matter to people if name and identifier are first? It matters to speaker. If it matters to you - say yes.

Answer: Someone finds the order arbitrary anyway - so it doesn't matter.

~ Someone else agrees they would like to see name and identifier first. It would allow file to be left alone - backwards compatible for file.

~ Another person would like to see the testing.

Both will be TAed and we will discuss this again in two weeks. Md5 in tagged digital object and leave in file and put in byte stream. ****(Action Item - Steve)****

Question: Anything else?

Answer: (Silence)

CCB-155 - Need "Example Set" to include program test data See <https://pds-jira.jpl.nasa.gov/browse/CCB-155>

Someone wanted to know why this was on the agenda.

Addition examples were wanted - array example, sample test data, color RGB image. Sent requests - didn't get much back. Added table binary in MSB and LSB and some additional test data - Hello World stuff. Would like to close this SCR out. About to close out the examples for 1.7. Closing this SCR is really to withdraw it. The CCB isn't really interested.

Withdrawing it negates that work was done. Sounds like a mistake.

Question: Can we add a note to the SCR that the CCB is not going to look at this so there's no reason to keep it - just document it in jira?

Answer: Could add comment - partially satisfied and call it a day.

Question: Closed status?

Answer: Yes. Would have to check resolutions.

~ Someone is concerned about the wording.

The examples were for the DPH. There could be an infinite number of examples. There's never enough

to test everything. In practical terms it would be open forever.

~ We don't want it open forever. Hand edit every example for each new IM so ready to be done.

~ If people see a missing example they can add it.

~ Would really like an array example from PPI. That would be helpful. ****(Action Item - Joe)**** ~ DPs need examples.

Question: Can we close this?

Answer: Okay.

Another Question: Any Objections?

Answer: I can always open a new SCR.

PPI will try to get an array example in ver 1.7 to Ron.

Question: When? The build is in two weeks.

Answer: Before the meeting next week. This will be closed.

Question: This affects the build?

Answer: No, but we always update the examples.

We are at the end of the agenda and no one is dead. We will meet again in two weeks.

~ Lev and Joe are unavailable in two weeks.

We basically have three SCRs left. If people have more issues please let Ron know.

Question: Bit mask?

Answer: Yes. There has been email with Jordan.

~ Someone thought it was going to move to the IMG DD.

~ Yes, but nothing is official yet. It's a good example of how the DDWG doesn't always work. Not happy.

~ It seems this is 99.9 percent for IMG and MIPL. We shouldn't discuss this without Jordan. There's an issue with primary stakeholder not getting what they need from this group.