

## **Meeting Minutes from the DDWG-2 telecons:**

DDWG Notes 2018-01-04

DDWG Notes 2018-01-11

DDWG Notes 2018-01-18

DDWG Notes 2018-01-25

DDWG Notes 2018-02-01

DDWG Notes 2018-03-01

DDWG Notes 2018-03-15

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DDWG Notes 2018-04-12

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DDWG Notes 2018-12-06

DDWG Notes 2018-12-20

DDWG Notes 2018-01-04

title: DDWG Notes 2018-01-04

layout: default

date: 2018-01-04

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# January 04, 2018

Notes by Debra Kazden

Known Attendees:

M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, T. Lim, S. McLaughlin, J. Padams, A. Raugh, B. Semenov and R. Simpson

Observers: M. Banks and C. De Cesare

## DDWG Agenda

(Included in email sent January 2, 2018, from M. Gordon, DDWG agenda telecon - 1/4/18)

1) Discuss and possible vote. Please review the SCRs and example files before the telecon.

· CCB-174 Composite Structure, TT Lead Steve.

\*\*(Discussed)\*\*

· CCB-177 Source Product Identification, TT Lead Jordan

\*\*(Discussed)\*\*

2) Brief updates from the Tiger Teams

· CCB-188 Allow GML Jordan

· CCB-190 Add 'space' as field delimiter Joe · CCB-194 Add Target ID types Joe **\*\*(Very Brief Updates)\*\***

# DDWG Telecon

## CCB-174 - Add the Composite Structure class See <https://pds-jira.jpl.nasa.gov/browse/CCB-174>

Emailed agenda said we would discuss this and possibly vote.

Question: Where are we on the issues that were posted in jira?

Answer: There were two comments - one with a list of technical issues and the other about documentation. The technical issues have been commented on. Assumes the documentation issues will be dealt with by the document writing team.

~ The document team is waiting for this to be resolved.

~ Tried to address all the technical concerns.

Question: Why new classes for local ID reference and relation instead of what we already had? Not local internal reference.

Answer: Specifying relationship type, allowing multiple elements to participate.

Another Question: We considered that for local internal reference. There's local ID relationships that you can reference to or from. Is this the way to map relationships between individual components?

Answer: Exactly. Similar to local internal reference. Different because TT thought we should make things symmetric. Didn't want to complicate things with a change to local internal reference.

Principal, primary.

~ Not sure these are appropriate in an archive.

~ Not required. It's the only real clue for what the "real" data is. When there are multiple objects in a file it's nice to tell the user what is data and what is supplemental.

~ This is primarily for software.

~ But software doesn't care what's important. Primary should come from type. If composite structure is a spectral cube software will know it has to deal with a cube.

Question: Yes, but how would software know?

Slow down.

So, in an image product with four images, one being the important one, we have to have a way to say which is the main one. The one to have first.

~ The word "primary" only matters to humans. Knowing it's primary doesn't tell software what to do with it. Still need more knowledge.

~ The first question was why local ID and local ID reference. This is the knowledge.

~ Okay, so say a composite structure describes a spectral cube with side plane and back plane - "primary" won't tell me this is a spectral cube. Would need more information in order to find the core.

~ Class name and parent class name should tell you it's a spectral cube. It would be documented and you would look for primary. If you do more than that you need more classes - extensions in the structures.

~ People wanted a simple way to describe structures. That's where composite structure comes in.

Someone is very uncomfortable with this. Sees big gaping holes that DPs can fall in to. Issues with validation. You can very easily do something very wrong that could get in the archive.

~ There's a suggestion that there be schematron rules. You can validate the parent class name.

~ But parent class name isn't required.

~ Documentation, schematron rules - we can tighten this up. The reference types are tightly controlled. Designer just needs to define the schematron rule.

~ That doesn't solve all the problems. Class name element is required. If we had a enumerated permissible value list in the core would be more comfortable with this design.

~ Thought we planned to have an enumerated list.

~ Lev had this same issue.

~ We didn't give him all he needed. We are missing a chain of evidence. This is why I would prefer a DD solution. This is a giant loop hole. People can really mess up with this. Worried about Rosetta, CDF and others. Could all meet requirements as a composite structure and say they are compliant. It's a very slippery slope.

~ We can control a lot of it in composite structure. If we put in in a DD we have less control. IPDA wants to keep products simple.

~ IPDA is very concerned. Users can do what they want and we'll have very little control.

~ So this is better in the core.

Question: If this were available today - how many distinct structures would you expect in the archive in three years and ten years?

Answer: Don't know. First structures we have handle 85 percent of our structures. This is a mechanism for handling the rest.

~ That fifteen percent in PDS3 will never be compliant in PDS4. Spectral cube is interleaved. Question is to people with DPs who want to use this. Wants the best guess about this is three years and ten years. If we can expect six in three years and maybe ten in ten years, then maybe it's fine in the core, but if the numbers are going to be way larger maybe it should be in LDDs.

Rings plans to use composite structure for 2D array images. This is a great tool for Rings to say what's important and what's supplemental. Yes, there could be abuse, but this would work for Rings. At some point, yes, it is potentially dangerous, but we have peer reviews. Don't see this as going in a DD.

~ Someone doesn't have any strong feelings on this. Understands both arguments. In the examples with a 2D array and the associated side or back planes or arrays and tables to associate - those are what I'm thinking about. Understand the concern that this could make PDS4 compliant structures that are glued together with composite structure.

When there's a potential for abuse - people abuse. PPI's peer review for MAVEN is a good example. Reviewers were all CDF people. Mike Martin was the only one with PDS4 experience. They could have done it with 1D vectors.

~ (Speaker A) That's a lot of work for a work around for something that can be done. 1D vectors would have been ridiculous. Yes, abuse is possible when there's a potential for abuse, but this is ridiculous. Plus, putting it in a DD just pushes it to a different place. It's absurd to say that would prevent abuse.

~ It's not to prevent abuse - it's for flexibility. It might be easier to avoid abuse in a DD.

~ Speaker A nailed it. We're not replacing local internal reference. What would be in common will be strictly defined. People can abuse at any level. Agree with Speaker A.

Someone is lost on the way forward. This should be on progress, not design.

~ We did put it in the DD early on - moved away from that.

~ One reason for that was the XML code was much simpler not in a DD. It's easier to find the relationships.

So - Trying to summarize: People have some concerns, especially about the potential for abuse. Limited automatic control to prevent that. Also the idea that all objects are equal but one is more equal.

~ The biggest concern is there's not enough information in here to be used programmatically.

Question: You can't use software?

Answer: No. If I send a program to find all the spectral cubes - it can't. No controlled list of class names for composite structure types and no relationship for each type.

Question: Does the TT have that? Does it make sense?

Answer: Yes. TT is working on it. That's why there are so many examples. Correct that we want well defined relationships, but the question is if we can start small and see where it leads.

~ There are some really good examples. If we could fully implement those - write some software and demonstrate proof of concept, and have a way to define new structures - that would be very satisfying.

Question: Is that likely to be done in a week? The enumerated list for class names?

Answer: We have a list for candidate reference types in jira. Can make a list of class names.

~ In time for the tech session.

Another Question: Was hoping this would go to the CCB before the tech session. Pushing this - are we close enough to close out by the end of the month? Is that too optimistic?

Answer: TT can update the SCR.

Another Question: Do we need draft entries for the SR or DPH?

Answer: The document people would really like that. Will need to work through the examples and show the document team how to use them.

~ The document team has to write the documents. Need to figure out how to use this. TT will help, but they will be the editors.

~ Susie volunteered to help with some of this. Maybe we should send her some bullet points.

~ She's not on this telecon.

Back to the concern with use of the word "primary" - maybe "principal" would be better.

~ Yes.

~ Spelled with an "al"

~ What is needed is a definition. We need it for the glossary.

~ People are leaning towards "principal". The TT will work on that.

Question: Any other comments on this?

Answer: Someone has been off-line for five weeks - so not sure. Might need another week still.

~ We might vote next week or the week after. Rings needs this in the build. Rings has a pipeline ready to produce products.

##CCB-177 - Missing ability to specify source products and processing history See <https://pds-jira.jpl.nasa.gov/browse/CCB-177>

Jira was updated last night. TT has iterated a few times - no consensus yet. Still needs more work.

Question: Someone sees the core and a Process DD?

Answer: That would be the DD for processing history, but really more concerned with the core. Proposed updates are in jira. Just search. Basically, wanted to update the reference definition and add some new reference types - also have a schematron rule to make sure a LIDVID is used - and a reference type for a table of source products - which is useful for things like mosaics. It would be able to specify in documentation what the table should look like (LIDVIDs). And to create external source product class - which includes primary ID and secondary ID for legacy and non-PDS archives. Informational - for tracking down where these things are - working on narrowing this down - will be one-offs.

~ Someone has some suggestions and a question. External reference source product should have a DOI. Primary ID should be the dataset ID or path if it's not PDS3. It's possible to get a DOI for PDS3. The question is related to the new reference types - raw, partially processed, etc., what if people use raw and that is incorrect? Does that matter? Will it validate?

Answer: Unclear. It could be data to source product.

~ Can see reasons for raw or calibration or others.

~ We have data to calibration reference type. Open to data source product - doesn't really matter.

Another Question: Validated on registration?

Answer: Not sure who would do that.

~ Not added yet.

~ We have a few - not sure if any validation going on.

Another Question: What's the difference between data to raw product versus data to raw source product?

Answer: Associated product - doesn't tell you it's a source product for this.

~ Maybe the definitions need to be more specific.

~ TT is open to changing the definitions.

~ When you get a derived product - often you flip the switch and get two things - source and a calibrated product. Need a distinction between calibrated and calibration that was a source product.

A product that is made and a product that is used to create something.

~ Yeah. In favor of keeping them unambiguous.

~ Redundant. If the relationship is source product that isn't raw - that makes sense. Concerned these are very specific meanings. Could be hard to search.

Question: Are you proposing that we have a generic data to source product?

Answer: No, worried that people will assume that it means it's raw.

~ Source raw is the most specific.

~ Yes, source product versus raw product. Would like to define all the relationships to be different so people don't accidentally use the wrong one. Need to go back to all reference types - data to whatever - and define them all. See where things already exist and make sure new things aren't ambiguous.

~ Okay. Maybe we should make new class for reference list - something like source product PDS4. A new class that would be very explicit. That was the original proposal. A new class right next to internal and external reference. It would stand alone. Could send it out.

Another Question: Not sure, so no more data to raw for internal reference?

Answer: Source products would be in a source class.

~ But data to raw is a source definition. There's no other reason to point to a raw product, except that it's the source.

~ Could include in source product. Not inherent that data to raw is always a source product. Won't have data to source values - would put in a class and make sure no one is using it without the class.

There's a legacy issue too.

~ The reason to add source products is to be explicit. No one will ever find the legacy ones.

~ Up until now, in a million labels you have data to raw relationship. It doesn't affect search, but it will affect validation. Seems like a major impact.

~ Okay. This is a problem. Proposing to be more concise. We could just document where to put source products and call it a day. Trying to be explicit.

~ Would like to hear from Sean on this. Would like to know if registries could be updated. Concerned about implementation. Worst case scenario would be to rewrite all the labels.

**\*\*Action Item - Jordan\*\*** will email Sean on this. Will cc Anne.

The SCR needs to say that software will need a way to correct legacy data in the registry.

~ Needs to be part of tech assessment to look at the impact, ect.

~ Talking to Sean is a good idea. Probably do need something in the TA.

Report to the MC next week will say that we believe composite structure and source product can be implemented by the end of the month.

## ## Brief Updates

CCB-188 - Update IM to allow GML as acceptable Product Observational data format - not ready

CCB-190 - Add 'Space' delimiter to field delimiter permissible values - Joe isn't here to report. Team member says that there have been some emails, but no consensus yet.

CCB-194 - Add Boundary and Region to list of allowed values for Target Identification/type - unlikely to make the next build.

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Question: Anything else?

Answer: Jordan's time with PDS is decreasing dramatically. Christine De Cesare will be taking over for him. Source product will be his last hurrah with the DDWG.

Question: Will Christine be the lead on CCB-188?

Answer: Yes.

Question: Will Jordan be at the tech session?

Answer: Should be, at least for part of it.

Question: Anything else?

Answer: (Silence)

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title: DDWG Notes 2018-01-11

layout: default

date: 2018-01-11

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# January 11, 2018

Notes by Debra Kazden

Known Attendees:

M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, J. Padams, B. Semenov and R. Simpson

Observers: M. Banks

## DDWG Agenda

(Included in email sent January 9, 2018, from M. Gordon, DDWG agenda telecon - 1/11/18)

1) Discuss CCB-177 Source Product Identification, TT Lead Jordan. JIRA was updated this week, so please review and add any comments you have prior to the telecon. We will not vote since the draft document updates need document team review. That won't happen until the DDWG agrees in principle on the proposed solution – the primary objective of the discussion this week.

\*\*(Discussed)\*\*

2) Brief updates from the Tiger Teams

· CCB-190 Add 'space' as field delimiter Joe · CCB-194 Add Target ID types Joe **\*\*(Brief Update)\*\***

# DDWG Telecon

## CCB-177 - Missing ability to specify source products and processing history See <https://pds-jira.jpl.nasa.gov/browse/CCB-177>

This has been updated in jira with a new proposed solution and required changes. The changes create new source product internal and external in reference class - to avoid confusion of overloading reference types. This creates a blatantly obvious class. Easy to see what it's trying to do. Only difference is source product internal/external and reference types. Need LIDVIDs.

Question: Any comments?

Answer: Someone wants to know people's thoughts on the table.

~ There are two options. One is a table of LIDVIDs. The only problem is it might be confusing to users. The idea would be to use internal references. Not sure of the best place to put it.

~ Someone still doesn't understand why there's a table.

~ Say in the future you have a mosaic - you won't want to have to put all the source products in a label.

~ So it's a substitute. Maybe it's better to always do a table. Easier.

~ But if there's only one source product that would be a huge waste of time to have to make a separate table and label for every one. Multiple options are fine.

~ Someone would just have table option.

Question: Are there other issues besides this?

Answer: Naming of attributes, primary ID, secondary ID. Comments are in jira. New name suggestions in jira. Internal source product identifier.

~ Someone disagrees. Primary and secondary were suggested. Agree with that suggestion. Prefers both identifiers - fine re-naming, but need both.

Question: If we had different name or cardinality of one to many would that solve this?

Answer: Primary and secondary have distinct meanings. Internal source product - primary and secondary. Understands the concern, but making them ridiculously long.

Another Question: Is primary required and secondary optional?

Answer: Good question.

~ That's how I would do it.

~ Only for secondary products.

~ TT will make sure the primary identifier is required and the secondary is optional.

~ If the class is source product external, not sure why you would have an internal source product identifier.

~ That was a mistake. Should be external. Just wanted to narrow down what kind of identifier this is. Don't care how long it is - we won't see them often.

~ This will be used a lot for PDARTs, MSL etc.

~ Someone thinks it's good to have the option of a table or including them in a label.

~ Someone agrees.

~ We need to think through the process of how to use the table and where it would go.

Question: Could we make the identifier multi-valued?

Answer: They have different descriptions for primary and secondary.

Another Question: Forget that. Could we use one line per product?

Answer: For internal that would mean several repetitions.

~ Fine. Than a class for external. One class per curating entity. Easier than building.

~ LIDVID would be multi-valued if the same reference type - with a comment for the group.

~ Doesn't do away with the need for a table.

~ It's not hard to do. Just one more thing to keep track of.

Question: Can you search on products yet?

Answer: Not yet, but intent is so we can. The capability will come.

~ There could be a bunch of tables.

~ Someone is strongly opposed to the idea of tables. It's basically a PDS3 include file. Doesn't matter if the label has it all.

~ Someone agrees about not wanting include files, better to have everything in one place.

~ Better to have one thing - all in one label.

~ Another person agrees.

~ Include files had a different purpose. This is ancillary metadata.

~ Fair.

Question: Other topics, questions or issues?

Answered with Another Question: For the external use case, say for a PDART restoration effort. That might be derived from NSSDCA. Could NSSDCA utilize those fields? Maybe put NSSDCA in the file names? Collection IDs are registered, not specific products. Would that be a problem? Could submit this in Jira.

Answer: Yes, that would be great. We could augment the definition to include the NSSDCA use case.

Another Question: Is early next week okay?

Answer: Yes.

**\*\*Action Item- Steph\*\*** will document the NSSDCA use case in Jira.

Question: Other comments, questions, concerns?

Answer: (Silence)

In the email it said we wanted to reach some sort of agreement for going forward. Other than names, I think the issues are mostly answered - and other than the label versus table issue. Let's do a quick vote on that.

**\*\*Vote** - yes or no to allow source product table for large list of names:



NAIF - Yes  
RS - No  
GEO - Yes  
EN - No  
SBN - Abstain  
IMG - Yes  
ATMOS - No  
PPI Yes  
Rings - Yes  
IPDA - Yes\*\*

Three No votes for the use of table, so the SCR should have a lot of detail on why we might want to use a table. Would like this ready for a vote next week. Including looking at changing the name.

~ Naming conventions in SR. Description for DPH should include a lot of guidance and examples.

Question: Other questions on CCB-177?

Answer: (Silence)

## ## Brief Updates

CCB-190 - Add 'Space' delimiter to field delimiter permissible values - Nothing has been done in awhile.

Question: So CCB-190 won't make the build?

Answer: Will try to do it by next week.

CCB-194 - Add Boundary and Region to list of allowed values for Target Identification/type - Will try to get this through.

Question on CCB-190 - in the example with the .obj file the line lengths vary. Is there any way software can be told to write fixed width?

Answer: It would need to be re-processed. This is an option.

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Question: Any additional questions, comments or topics for today?

Answer: (Silence)

We will meet next week and the week after.

Tiger team members for CCB-174 will stay on to meet after this call.

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title: DDWG Notes 2018-01-18

layout: default

date: 2018-01-18

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# January 18, 2018

Notes by Debra Kazden

Known Attendees:

M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, J. Padams, A. Raugh, B. Semenov and R. Simpson

Observers: M. Banks, C. De Cesare and J. Stone

## DDWG Agenda

(Included in email sent January 16, 2018, from M. Gordon, DDWG agenda telecon - 1/18/18)

1) CCB-194 – Joe plans to withdraw CCB-194 and replace it with a new SCR incorporating a different approach. He's asked for a few minutes to discuss the new approach. Here they are.

\*\*(Discussed)\*\*

2) Discuss and maybe vote on:

a. CCB-174 Composite Structure, TT lead Steve. JIRA has been updated; please review. However, I still owe two updated examples. Assuming my pain meds kick in, I'll get them into JIRA and send them to all of you later today or early tomorrow.

\*\*(Discussed)\*\*

b. CCB-177 Source Product Identification, TT Lead Jordan. JIRA has not been updated yet. If the updates are in by mid-day Wednesday (PST), we'll discuss. Otherwise we'll look for a brief update from Jordan please.

\*\*(Brief Update)\*\*

# DDWG Telecon

Emails with attachments for the telecon today were sent prior to the meeting. See the following:

RE: DDWG agenda telecon - 1/18/18, from M. Gordon, January 16, with two attachments: Cassini-VIMS-Re...vity-20180116.xml and Cassini\_ISS\_Cal...Image\_20180116.xml

Heliosheath presentation for DDWG telecon, from J. Mafi, January 16, with attachment: scr-heliosheath.pptx

## Heliosheath

Starting with the second slide (presentation sent by Joe - see above) - Background - the issue is that Voyager has arrived at the region of the heliosphere with edges. We want to be able to capture this. CCB-194 was an initial attempt at that, but PPI realized that CCB-194 wasn't the best way to handle it. Came up with a new, better approach. It meets the concerns expressed in the comments to CCB-194. This replaces CCB-194. As far as we can tell, this will only affect fields and particles data. Heliosphere is bounded by the termination shock and has supersonic solar wind.

Heliosheath is bounded by the termination shock and heliopause. Has subsonic solar wind. The heliosheath is technically part of the heliosphere. Heliopause is furthest extent of solar wind. The plasma can pass beyond the heliopause. The region is dominated by sub-solar wind. Sub-solar space doesn't cross inside the heliopause - dominated by supersonic winds. Bow shock may have formed.

Not clear if it exists. Voyager is not there yet. It might be that the heliosphere's velocity in the interstellar medium isn't strong enough to make a bow shock. Need additions in version 1.9.0.0 - primary results summary domain target identification name with associated attributes. Primary results summary domain Interstellar, with no targets, and inside heliosphere need domain heliosphere with targets solar wind and solar system. The proposal to add the values is in bold italics on slide 8. The last slide is a list of specific changes with primary results summary values. Requires a new target identity type of magnetic field. We would also create context products and document this in the DPH. Wanted to run this by the group and get feedback.

Someone likes this. Points out there is a difference between the bow shock and heliopause.

~ The heliopause is a sphere or bubble of solar plasma. You get a bow shock when super stellar object runs into it.

Question: So are they the same thing? Caused by the solar wind? Where the subsonic flow ends - where it meets the solar wind?

Answer: If it exists isn't clear. The proposal doesn't include bow shock yet. No data from that region yet.

~ There are bow shocks around planets. Glad you aren't proposing to do that.

This proposal seems very reasonable. For the SCR please check the definition of heliosphere.

## CCB-177 - Missing ability to specify source products and processing history See <https://pds-jira.jpl.nasa.gov/browse/CCB-177>

Email was sent, but there are no changes worth discussing. There's not much to say. Work has begun with the document writing team.

## CCB-174 - Add the Composite Structure class See <https://pds-jira.jpl.nasa.gov/browse/CCB-174>

There have been good comments and action on jira. Good messages. TT is responding and addressing concerns.

Question: What are the outstanding concerns now?

Answer: Someone was concerned regarding the impact with DDs. It was originally part of the SCR and then taken out because they are not under the purview of the CCB. But yes, CCB-174 does suggest that if you want to reference an LDD it needs a local reference ID. An action item will be to add that.

~ That's not how I remember it. Seems that in the example you have to make sure the DDs are consistent. Can't implement without Display DD being updated.

~ Attachment 190A in jira addresses that.

~ Not far enough. Display and Spectral DDs both need updates to local identifier and updates to other classes potentially. Need to see what could support composite structure. Puts pressure on us to support the DDs.

~ Not worried about adding local identifier for display, but other worries. Not concerned about referencing entire class. Very concerned about referencing very specific subsets of those classes.

Takes them out of intended context.

~ In Display DD we need to add local identifier. Additions in Spectral too.

~ That's what someone objects to - it's meaning changes.

~ We need to take this discussion off-line.

Part of the issue is you haven't seen the new drafts of the DDs. Another concern, from email within the tiger team, seems that if we change Display DD we would now have two methods to relate display settings to an object you want to display. If not composite structure need a local internal reference and more. If using composite structure class you can use local relation class and local identifier. Not sure if that's too complicated for DPs, users, software, etc. Not sure TT has given it much thought.

~ Probably wouldn't. It's redundant. We're forced for now because of how DDs are set up, but don't see any reason for the redundancy. In the example there's a unidirectional relationship back and forth to composite structure. Redundant. Needs to be sorted out. Shouldn't do it.

Question: If using composite structure, how do you reference display settings?

Answer: Local internal reference. Has cardinality of one. Composite structure allows multiple associations. If not using composite structure you can't make it required. You have to have local internal reference in the Display DD.

Another Question: What does the software do? How is it displayed?

Answer: Start in the file area. If it's a composite structure it should give you the associations.

~ No. Composite structure should be rare. Should only be for complex data structures. The primary purpose of display settings class is to tell you how to display. That should be in the label.

Needs to be there.

~ We're in the weeds here. Don't think having a schematron rule is unreasonable. This is not hard to deal with.

~ The point is setting precedence for the next thirty years.

~ So first look for display settings and then composite structure.

~ If there's a composite structure. It's built on top of PDS basic structures, so you would have display settings to tell you how to display.

~ There's no requirement for that.

~ There should be. Composite structure is undermining what should be there. We should be making this easy to find. Too early in the game to undermine.

~ We're not all on the same page. In the example, display settings are in the label. The issue is redundant references. Of one image, fine, if twenty images have to put twenty instances of display settings. Could change the cardinality of local reference in display settings or use composite structure to make the associations.

~ It would fail validation if display settings are not there.

~ No.

~ If you want to do multiple references use composite structure - but it might not be a composite structure.

Question: How about a proposal of cardinality zero to many?

Answer: No, it should be one.

~ If we require display settings points to one instead of many, still want that in composite structure, but then it points in both directions.

~ Logically different to point backwards. Worried about software interpreting the relationships. Composite structure might redefine what direction is defined.

Question: Is it that big of a deal to be redundant? Is it that big a deal?

Answer: Not logically redundant.

~ So yeah, higher level not really, just extra explicit.

~ It implies it's not necessarily the same for composite structure.

In the example in display settings class there is a reference pointing to the composite structure.

~ Shouldn't point to anything other than array 1D or 2D structure.

Question: What if there are 15 or 20 arrays?

Answer: That's the question. Change cardinality or directionality. An outstanding issue. CCB-164. Development hangs on that.

~ Not sure how to move forward.

This could be a tech session topic. We could look at procedures and policies on how references should go. Relationships between DDs versus composite structures - find a general approach to use.

The issue was redundant relationships. Not sure it is really redundant. The point was made that it's okay to be redundant, but some subtle meanings may need to be provided.

~ Missed the point. In the example, display settings points to composite structure.

~ Not logically meaningful.

Question: In display settings just point to the primary component?

Answer: Yes.

~ That's a kludge. You could want to display the back planes and the label would get very complicated when you include all the classes over and over.

~ We need to deal with CCB-164.

~ Still think this is a kludge. All arrays should be displayed.

~ Yes, display class should be there for every one. Label needs to be completely functional without composite structure class. That's for the archive. The archive needs the unique info for the archival, primitive forms.

~ Putting too much importance on display settings, relationships are important.

~ Yes, display settings is just the simplest one. Will happen with other DDs. Need a long term solution that will work for archival pieces.

CCB-164 was a question of if we would change the cardinality of local internal reference.

~ No, it was to make display settings required if you have an array.

~ So the issues are if display settings are required for any array, the cardinality is one and should be one to many, and there's redundancy now if we use composite structure - maybe. So there are three issues.

~ More.

Keep saying there's a basic archival data file. Not sure how display settings got that privilege. Not sure what composite structure is destroying.

~ Composite structure is an overlay that undermines the basic structures.

~ No.

~ So we don't need composite structure to archive the bytes.

~ You can't archive a spectral cube without a spaghetti of references. Composite... (interrupted) ~ Spectral cube can't be labelled for PDS4. Multiple interleaved. It can be labelled as a series of images. Perfectly possible to do, and still useful in 100 years.

~ Text in label is what we are trying to preclude so software will understand.

~ So, composite structure over basic products so software can use it.

~ Someone disagrees. Composite structure provides information we need. Text descriptions isn't the answer.

~ Composite structure is not generic.

~ You keep arguing that composite structure is an overlay, I'm saying the basic structures are incomplete.

~ Composite structure doesn't allow undefined data structures. ISIS cube won't be compliant. This example is for a DP who is holding data because we don't know how to submit it without a composite structure. No keywords. Composite structure makes the associations. Software needing to look in two places doesn't bother me. I have a DP ready to deliver.

Question: Any more comments? At a loss on the way forward. Maybe we can discuss this at the tech meeting, but it would be pushed to the next build.

Answer: There might be some advantage to taking a breather.

~ There is concern about this.

~ The question is if there's any constraint on directions objects defined or if could go both directions. Composite structure could go either way, without composite structure would do it a different way.

If we consider CCB-164 and allow cardinality of one to many for local internal reference, then we have relationships in two directions. Software can use either. Also - if display settings is required then we can make a validation requirement. Can add local ID to DDs that are going to be referenced. Would like to move forward. Redundancy seems to be the only issue for the next thirty years. Relationships and directions. Started with a kludge. Now we're trying to come up with solutions. Think we need to discuss this at the tech session, but think redundancy is okay.

Not sure if we want to complete this and vote or do the other SCR first.

~ Concern is that stop gaps become the solutions we build architectures around. Concerned we are not moving forward. We need this.

Question to Dick: You seem to have some comments on this...?

Answer: No. I read jira for four hours and still don't understand it. Need more time. Hate spending lots of time on things that aren't going anywhere. Document writing isn't going anywhere - can't explain this yet.

~ Something was drafted for the SR.

~ It needs some work. We also need a DPH entry.

Not calling for a vote yet. We seem to be at a philosophical impasse.

~ It might be possible to see composite structure as only something in a label.

~ Confusion. If object or class.

~ No confusion. It's an informing object. Everything is digital, physical, conceptual. Composite structure doesn't add any new concepts. It's a tagged digital object.

~ Fine. Maybe the proposal won't fly. Not getting this.

~ Someone is concerned over the idea of philosophical differences. Really doesn't see that. Sees implementation issues.

~ Yes. We just want to say what's related and how. Relating to metadata classes is the issue.

Question: The Cassini-VIMS example didn't have a local identifier reference. It wasn't there. Was that a mistake?

Answer: Yes.

~ Okay, then the question is why it is optional, the relationship.

~ In the spec it's optional, but relationships should be required.

~ The existence of composite structure could be very specific or more flexible. So far, keeping it flexible. The steward decides if something is required.

Another Question: There doesn't seem to be any governance over these special cases. Who is in charge of making sure things are included?

Answer: Not sure. We can make requirements but only validate with a peer review. It's all provided in descriptions.

~ Used to have class name, but the TT took it out. Class name as an enumerated list would have allowed for validation.

~ The critical issue in the examples is that both had back planes that weren't specified.

~ Could add a has back plane relationship.

~ So, we're going to implement the flexible structure without governance. See lots of possibilities for abuse.

~ Yes, but set of enumerated values list of reference types is what's allowed. That's a reasonable approach. We have control through the reference types.

~ It will take a while to absorb this.

~ This is leading edge stuff. Hard problem to develop a model and control how people use it.

**\*\*Action Item - Mitch\*\*** will send out an updated example.

We will call it for today. Hopefully we can vote on CCB-177 next week.

DDWG Notes 2018-01-25

title: DDWG Notes 2018-01-25

layout: default

date: 2018-01-25

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# January 18, 2018

Notes by Debra Kazden

Known Attendees:

M. Gordon, E. Guinness, S. Hughes, R. Joyner, D. Kazden, T. Lim, A. Raugh, B. Semenov and R. Simpson

Observers: M. Banks, C. De Cesare, L. Neakrase (Alternate for L. Huber) and J. Stone

## DDWG Agenda

(Included in email sent January 24, 2018, from M. Gordon, DDWG agenda telecon - 1/25/18)

Discuss and maybe vote on:

CCB-174 Composite Structure, TT lead Steve.

\*\*(Discussed)\*\*

CCB-177 Source Product Identification, TT Lead Jordan.

\*\*(Brief Update)\*\*

There are several new SCRs, but I don't plan for us to address them until this build cycle is closed.

# DDWG Telecon

Email with attachments for the telecon today was sent prior to the meeting. See the following:

RE: DDWG agenda telecon - 1/25/18, from M. Gordon, January 24, with attachment: composite-struc...e-dph-20180119.docx

We are missing several people today.

## CCB-177 - Missing ability to specify source products and processing history See <https://pds-jira.jpl.nasa.gov/browse/CCB-177>

Jordan is not on the call today.

New entries were made in jira in the last fifteen minutes before this call began. People haven't seen the changes yet. Documentation has yet to be written. Design is in jira. Feedback is welcome. Documents are being worked on.

## CCB-174 - Add the Composite Structure class See <https://pds-jira.jpl.nasa.gov/browse/CCB-174>

There has been some movement in jira.

Mitch sent an email with an attachment for this discussion (see above). It's a rough first draft of what could go in the DPH or wiki. Wanted it so people could see what the team is trying to do.

Someone looked at the email. No comments, but wants more agreements before we write the SR entry.

~ There is concern that the SR attempts are not quite right yet.

Question: Thought we said if a product observational in multiple files the composite structure still had to be in one data file. Was that the intent?

Answer: Can't span multiple files if under file area observational.

~ Logically agrees.

~ I know we keep saying that, but it isn't documented.

~ If we agree that composite structure will only involve a single file, that needs to go in the SR. I think that's how we want it, even if the data is in multiple files.

~ Someone is okay with that. Think that was pushed based on something already in the SR, but I don't see it. Fine with composite structure being constrained.

A wrinkle. Most active missions are thinking about migrating. Prism has EDR and calibrated (image cubes) and separate back planes in separate files that apply to the EDR and calibrated. There is wavelength information that changes with time and other parts also in separate files. So these could be considered composite structures, parts are spread out over different files. In PDS3 they are different products. Other missions could also have these sorts of issues. This constraint would make it impossible to use composite structure. Just throwing this out there. Thinks it is logical if composite structure is in a file that we should be talking about that file.

~ Someone thought composite structure could have handled that, but agrees. Now wondering if that's the right place for it.

~ Not sure if Prism is a mainstream example or a unique case.

~ Looking at IM, if we don't want the single file restriction we would have to take this out of file area observational.

Would need to put it in the observation area or make a discipline class. Still unsure if it was in observation area if we would allow it to stretch across products. Makes me nervous. It's like include files. The tiger team should discuss this.

In the email, seeing references to things like headers for tables and columns being defined as composite structure. Not comfortable with this. Using it for ISIS cubes seems different from making labels extra complicated for data objects of the same product. Not comfortable for using it for tables, comfortable using it for ISIS cubes.

~ Fits header with Fits product is not a composite structure. There was a suggestion that we drop some of the possibilities. Excluding things becomes difficult. More concerned about making this simple to use and understand.

Question: Any comments?

Answer: Seems like using them would be easier if it was very limited what they could be used for. No weird, unimagined relationships. We have lots of things that can't be validated.

~ Trying to avoid that. Tiger team needs to look at this and what is in Jira and the SR and have a telecon. We could do it Friday or Tuesday.

~ Someone is unavailable on Friday. Working on the rover birthday - fourteen years old.

~ Tuesday is okay.

**\*\*Action Item - Mitch\*\*** will email the tiger team to possibly meet on Tuesday. Will add Jesse to the conversation.

Question: Are the SR drafts on Jira? Available to the people meeting on Tuesday?

Answer: They will be attached to the meeting email **\*\*(action item)\*\***

The tiger team is Ed, Jordan, Joe, Ron, Lyle and Mitch. Will add Jesse and Dick and cc Lynn, in case Lyle is still sick.

Question: Anyone else want in?



Answer: (Silence)

---

Question: Anything else?

Answered with another question: I was late to the telecon - what happened with source product CCB?

Answer: Jordan added stuff to jira. Everyone needs to review the additions and changes.

**\*\*Action Item - Christina\*\*** please ask Jordan to email everyone when he posts the documents.

DDWG Notes 2018-02-01

title: DDWG Notes 2018-02-01

layout: default

date: 2018-02-01

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# February 1, 2018

Notes by Debra Kazden

Known Attendees:

M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, J. Mafi, S. McLaughlin, A. Raugh, B. Semenov and R. Simpson

Observers: M. Banks, C. De Cesare and J. Stone

## DDWG Agenda

(Included in email sent January 31, 2018, from M. Gordon, DDWG agenda telecon - 2/1/18)

Topics for this week:

Discuss and vote on:

CCB-174 Composite Structure, TT lead Steve.

We're nearing the deadline for inclusion in the next build, and the tiger team feels pretty strongly that this has matured enough, so I fully plan to call for a vote. If during the telecon we identify more required modifications which cannot be fixed in real time, we'll probably have an electronic vote once those changes are in.

Clarifications since last week:

- The Composite Structure class specifies relationships between pairs of digital objects (components) in a single file of observational data using their local identifiers in the corresponding label.
- The Composite Structure class additionally may specify relationships between components and classes in the corresponding label.
- One component must be declared the primary component.
- Each component must have at least one explicitly declared relationship with another component.
- There is no requirement that every digital object in the file be a component.

I'm pressed for time this morning, so won't update JIRA with new attachments until later today. I've attached the new files.

The attached files are:

composite-structure-sr-20180131.docx    revised proposed SR entry

composite-structure-dph-20180130.docx    a revised draft DPH entry. This still needs work. The CCB does not review DPH changes, so we have some additional time to work with the documents team to clean it up.

Cassini-VIMS-Reflectivity-20180130.xml updated example label

table-header-example-2018-01-30.xml A new example label

\*\*(Discussed)\*\*

More email was sent before the telecon:

-From M. Gordon, sent Feb 1, 2018, RE: DDWG agenda telecon - 2-1/18 - with WebEx info

Includes another attachment: Cassini\_ISS\_Cal...Image-20180201.xml

-From M. Gordon, sent Feb 1, 2018, RE: DDWG agenda telecon - 2-1/18 - added agenda items

1) brief discussion of need to identify potential new SCRs to support the coming year's migration effort which would be sufficiently urgent to merit a point build.

2) Policy - Use of current and older Information Models.

"Proposed Policy Statement

Data providers, when establishing an initial agreement with the PDS for the delivery of data, must use the latest release of the Information Model. This includes the Common dictionary, any required Local Data Dictionaries (LDDs) and the PDS4 Standards Reference.

All LDDs must be consistent with the released version of the PDS4 Common Dictionary.

A data project can upgrade to a newer version if one becomes available during the project."

EN would like a vetting of the proposal before presenting it to MC, so probably just an informal – does anyone object or have a proposed revision. Discussion should be minimal.

\*\*(Discussed)\*\*

# DDWG Telecon

Earlier today there was email from PPI saying that they need to add an SCR to add DOIs. It is necessary for their migration work. They need a point build for it. CCB-177 will probably also fall into that. Will alert EN node that we need a point build. Other nodes should consider if there's something they need in a point build - assuming that EN allows it.

## Proposed Policy

Generally okay, but NAIF needs an exception for SPICE.

~ Would also like that for radio science, although it isn't needed yet.

SPICE is locked in at a particular IM.

Question: Why is this coming up now?

Answer: This came up at the last MC. The idea is that new DPs can't use an old IM if a new one is available.

~ It forces people to do things they don't need to do. Not everyone needs 1.10.

~ We can write an exception for SPICE.

~ Others may not need 1.10 either.

We now have a policy that doesn't allow packed data. We don't want a DP to come along and use an earlier IM that allows it. That and other possible abuses if the model has moved forward.

~ Expect there will be possibilities to get waivers from nodes if necessary.

EN will add the NAIF exception to the proposed policy. **\*\*(Action Item- Steve)\*\*** ~ Add radio science too. Not in a position to customize for everyone. Using 1.8 now.

~ EN will redo the policy with those exceptions. It will be sent to NAIF and RS for review and then sent to the MC. This is a proposal for the MC.

~ The MC had an action item to produce a policy on this.

## CCB-174 - Add the Composite Structure class See <https://pds-jira.jpl.nasa.gov/browse/CCB-174>

Jira is not fully up to date yet. We will do an evote in a few days. There are a few questions left to help clarify what to put into jira.

(Note taker contacted Mitch for help with the next portion of the notes. Mitch's additions are in quotes)

In relationships - the decision was to require that every component must have at least one relationship with another component. "There was some unresolved discussion relating to the definitions for the ID relation types - use of 'object', 'digital object', 'label class', 'metadata class', or 'class' were mentioned as possible options."

Wording for the SR - "We worded it that components of composite structure must be digital objects in the same file. Must be in the same instance of the file area class as composite structure class."

About cardinality - we need to decide if we want to restrict how many times it's in the file area. Not sure why we would have more than one. Not sure if we want that restriction.

~ It's in schema now, probably good to put it in the SR. We can loosen that if necessary in the future. Easier to loosen things than to tighten them up.

Question: Is it reasonable to limit primary objects to one? What if something has three filters? We might need three primary objects. Is one the maximum or do we want at least one?

Answer: Primary is singular in the dictionary. Would prefer to call it prime if there's more than one.

Another Question: Do we want to restrict it to one?

Answer: Prism dataset has product types that are back planes that can be associated with multiple other products that are image cubes - if only one can be prime, not sure what would be prime.

Another Question: Are you sure you need composite structure for that?

Answer: Unclear how best to do it.

So the issue is at least one, exactly one or more than one.

~ Someone thinks exactly one.

~ We can change it in the future if necessary.

~ We need the SR to have a reasonable explanation of what makes something primary.

~ Sticking with one. SR also says every digital object must be involved in at least one relationship with another component. If composite structure references A, B, and C - then each has to have one relationship with one of the others.

~ A reason to have each one in there.

~ So each component must be involved in at least one relationship with one other component.

Question: Are there cases where there are two relationships between components?

Answer: It could happen.

~ Each component has relationship has component. Could also have relationship has back plane. Could be more than one relationship. Has to be at least one. In VIMS example, it has primary and also has components. To and froms. Also another relationship - has back planes. There could be more. No advantage to restricting that.

~ But one of those relationships is from component structure to it's element. Wouldn't duplicate that relationship.

~ Has both - local ID reference and local ID relation.

- ~ Image array, back plane, access vectors - can have relationships between them.
- ~ Yes, image with back planes primary, but wouldn't say is back plane member of composite structure, but can see back plane relationship is back plane for. Is back plane only introduces possibilities for error.
- ~ No backwards references now.
- ~ Would have local ID reference that says primary is a component - each other component listed would have relationships to back planes etc. Multiple relationships. All has, not is. Could add new relationships in future. Single composite structure component can be in multiple relationships.
- ~ Thought only one type of relationship.
- ~ Peer review will catch problems.

Question: Anyone else?

Answer: Nothing to add.

~ Nothing.

~ We are down to the coin toss. Inclined not to have the additional restrictions. Will update jira and send email.

Another issue was adding value meanings for references. Some were plural. That makes things awkward. Relationships are one to one. A nit.

~ Make them singular.

Question: What's the status of the LDD local identifier issue?

Answer: Off topic. Only makes examples invalid for now. Not part of this SCR.

Another Question: So there could be no LDDs in composite structure if this goes through?

Answer: DDs don't go to CCB - it's a separate issue.

The draft SR document is in pretty good shape. The DPH is a soft draft - needs work.

Question: Who works on that?

Answer: The tiger team along with the document writers.

~ Ed is willing to work with Susie to get it done.

We need to remove the parts explosion example from jira. Not permitted.

~ Okay.

We need to update section six too.

~ Will be done.

Question: Anything else on CCB-174? Evote in the next few days?

Answer: Some definitions still need changes. Composite structure uses little pieces throughout the label with local IDs to tie them together. Less ambiguous if we call them description objects.

~ Worried that that's a very subtle thing.

~ Yes.

~ Components point to class.

~ Yes.

~ When we think about this, still fine making primary point to digital object.

~ Description objects definition is already in the glossary. There are deep levels of detail that still need clean up.

Question: When is the vote? Will be unavailable until Monday.

Answer: This can go through Tuesday.

Another Question: The CCB meets Tuesday the week after next. Will this make the build?

Answer: It should.

~ So we need approval on the 13th.

~ We need to get Tom involved.

~ Worried that if the new proposal still has holes, it still might be too soon to vote.

The vote will be an evote. Yes/no. If no, please say why.

---

Mitch will be stepping down as the head of the DDWG at the end of this build cycle. Believes that MC has approved his replacement.

Intent is for Ed to be the next DDWG lead.

Tom Morgan will be asked to make it formal. **\*\*(Action Item - Maria)\*\***

Tom Stein will be stepping down from lead of CCB. His term is up.

Ed is okay with the change, since Tom's term is ending.

Seems reasonable for the deputy to step up - then a new deputy can be found.  
~ Okay.

The rest will be done by email. Probably no meeting next week. Watch your email. Possible meeting February 22 - maybe.

Probably our next DDWG meeting is March 1.

DDWG Notes 2018-03-01  
title: DDWG Notes 2018-03-01  
layout: default  
date: 2018-03-01

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# March 1, 2018  
Notes by Debra Kazden

#### Known Attendees:

C. De Cesare, M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, A. Raugh, B. Semenov and R. Simpson  
Observers: M. Banks, M. Liukis and J. Stone

#### ## DDWG Agenda

(Included in email sent February 27, 2018, from E. Guinness, DDWG telecon agenda for March 1)

The email stated: "The agenda will be to prioritize our work for the next several months. We will review the attached spreadsheet that lists the open SCRs and the inputs from the team on their priority and estimated level of effort."

#### # DDWG Telecon

This is the first meeting with Ed as the new DDWG chair. Mitch has retired. If anyone is interested in being the deputy chair, and next chair, let Ed know. Unclear what the term length is.

Approval by Tom Morgan is necessary.

~ Typically, the term for the CCB is two years. We'll try to do a year for DDWG chair.

~ CCB term is supposed to be a year.

~ There isn't a definite length of time for DDWG chair. Mitch stepped down after a year.

Housekeeping details are that the DDWG will meet every other week this month. March 1, 15 and 29.

The goal for today is to get organized on what we'll be working on. That's why we had the exercise on the open SCRs.

See email sent March 1, 2018, from L Huber, RE:DDWG telecon agenda for March 1, attachment DDWGOpenSCR-compile4.xlsx for this discussion.

Tried to assign numeric scores for priority. We might want to vote to close obsolete SCRs. Also need to decide if some of this should be moved to the software group.

There are a number of new SCRs. EN typically reviews them and reports on their merit. Got different answers on merit depending on who at EN was answering.

~ One EN reviewer thought all five new SCRs had merit, but wasn't sure that they needed discussion by the DDWG.

Seems like some of them should possibly go to another group.

~ Another EN reviewer said something similar.

If you have the spreadsheet open, you can see we were drawing lines to try to set priorities. We will start by going down the list. Need to decide if the highest rated SCRs on the spreadsheet are what we want to work on first and if other things might need to move up in priority.

The meeting today has a hard deadline to end at half past the hour. We can continue by email or next meeting, if necessary,

The top two SCRs on the spreadsheet are 177 and 131. We have worked on them and they have tiger teams. They might be close to complete.

## CCB-177 - Missing ability to specify source products and processing history See <https://pds-jira.jpl.nasa.gov/browse/CCB-177>

Jordan passed the lead on this to Cristine.

Documentation is being worked on - DPH ,etc. Should be ready by our next meeting.

If that can be posted and people have time to review it, we can vote on March 15.

\*\*Action Item - Cristine\*\* will let everyone know when CCB-177 is ready.

## CCB-131 - Missing Constraints on Special Constants Attributes See <https://pds-jira.jpl.nasa.gov/browse/CCB-131>

This is the next highest priority. It has been languishing a long time. Was waiting on CCB-187 (Null values), but people don't remember why. A comment was sent that this is close to being ready for a vote.

The question is how to specify special constants. Originally this was submitted by Lev. The tiger team did some work, but haven't looked at it since April. There are some open issues on strings and how to handle white space. Also an issue with arrays of complex numbers. Need to come up with a solution for that. The issues are sort of outliers, but think we can have something to vote on ready by March 15.

~ Sounds good.

\*\*Action Item - Tiger Team members Dick and Jesse\*\* will communicate so that hopefully there can at least be a discussion on March 15.

---

We have approximately thirty open SCRs. It would be nice to make some progress. We can pick off the easy or old ones. We want a more manageable list. We'll continue with the spreadsheet, but will skip around a bit.

## CCB-194 - Add Boundary and Region to list of allowed values for Target Identification/type See <https://pds-jira.jpl.nasa.gov/browse/CCB-194>

This was submitted by PPI awhile ago. Thought it was going to be withdrawn and a new SCR would be submitted.

\*\*Action Item - Joe\*\* will do it today.

This one seems like low hanging fruit.

It was highly rated by many, but would mainly be used by PPI.

## CCB-206 - Add "doi" to Citation Information See <https://pds-jira.jpl.nasa.gov/browse/CCB-206>

Another highly rated SCR from PPI is to add DOI. Everyone considered it fairly high priority.

Question: Do we still agree with that?

Answer: Yes. Very high priority and we need a tiger team.

~ Someone agrees.

~ If we are just adding it to the citation information we might not need a tiger team.



Question: Can we assign someone to take an action item to see what is in jira?

Answer: Someone agrees that it might not need a tiger team.

**\*\*Action Item - Anne\*\*** will take a look at it in jira.

## ## LDDs

There are a number of issues all related to LDDs. Three SCRs were put in recently, there already were a few others. Some of them might actually be software issues. Seems like this is high priority and will be a lot of work.

Question: Are people willing to put in the effort on this?

Answer: They are high priority. We need them for migration.

Would like to have a F2F in conjunction with the April MC for LDD stewards to address issues, possible approaches and to map out a plan to address the SCRs. Planning to email all stewards.

Would like to leave these SCRs until after that meeting, and then divide up how to handle them.

Question: Put all six SCRs on hold?

Answer: Yes.

Someone thought we were trying to get to a point where LDD tool could generate the LDDs without any extra editing necessary. Thought a steward would just submit the ingest LDD. We would need

CCB-211 (Add XML as an option for some non-label files), and CCB-212 (Add Modification History to Ingest LDD) and CCB-210 (Add the Product Ingest class to the IM) need to be started.

CCB-212 is needed quickly. Ingest LDD is in ops. Unsure if it being in ops is an issue. Think we need to work on it, but doing so is a change to how the process document says we should work because not ops or CCB.

~ We can query the MC if necessary. No problem having tiger teams before the April F2F meeting.

**\*\*Action Item - Mitch and Ron\*\*** will look at the process document.

If there are necessary changes to ops, not sure who's purview.

~ Suggesting they put it in the DDWGs purview.

~ So we need to wait for Mitch and Ron to look at the process document.

Going back to the list of stewards, EN has been working on that. Issue is that in the namespace registry we have stewards listed as things like geometry. What we really need is a point of contact.

Question: Is there an action to take?

Answer: Points of contact for LDDs need to email Steve and Anne to let them know that they are the point of contact. For LDDs without a point of contact we'll need to assign them.

~ People who might later be stewards or are otherwise interested should also participate.

Question: Including stewards of mission DDs?

Answer: The focus will be on discipline DDs, but mission DD stewards could come for information.

**\*\*Action Item - DD stewards\*\*** need to let Anne and Steve know who they are by email.

Question: What's the planned date for this meeting?

Answer: There will be a survey - day before or after the April MC meeting.

Question: Any comments?

Answer: The point of contact list is needed ASAP.

~ We should be in touch with NRESS to make sure they can support the meeting.

**\*\*Action Item - Maria\*\*** will mention it to Annie.

**\*\*Action Item - Anne\*\*** will send a poll out for a date and let Annie know what is preferred on Monday.

---

Question: Okay, we have the first bunch of SCRs talked about. Talked about the first cut. Is there anything else that should be on our radar in the short term?

Answer: Yes. From the tech session. CCB-202 (Amend the Instrument Class Context Product) and CCB-200 (Amend the Target Class Context Product) both deal with context products. IPDA considers them to be very important. They need to be looked at early on.

~ Thought there were three SCRs.

~ Just talking about CCB-202 and CCB-200 now.

~ Target context keeps getting kicked down the road.

~ Yes, we need to discuss these. The proposals seem reasonable.

This telecon is to review status.

~ Yes, to figure out what we will be working on.

~ These telecons are for status, not extended discussions.

CCB-200 needs way more than fifteen minutes. The proposal can't be implemented.

~ We need tiger teams for these SCRs. We need to start the discussions.

~ Alright.

Volunteers for CCB-202 tiger team - to amend the instrument class:

Steve - will be lead

Tanya, Lyle and Joe will be on the team

We need someone with an interest in ground based.

~ Lyle.

That's four people on the team.

Volunteers for CCB-200 - to amend target Steve Anne - wants to be on it, but can't lead until May.

Tanya and Joe

**\*\*Action Item - Ed and Steve\*\*** Ed will go over the templates for milestones and will send them to Steve to fill out.

---

Question: Other SCRs to consider for tiger teams?

Answer: CCBs 210, 211 and 212 soon. Probably CCB-208 too.

~ Maybe we should wait to figure out the process document first.

We want everyone to have a voice.

There were some SCRs that people thought should be closed.

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Ron is the person who can close SCRs. Send him email.

**\*\*Action Item - Ed\*\*** will send Ron email to close CCB-156.

Another one people wanted closed was CCB-142 (Create Data Quality Flags to hold metadata on Quality Flags) from Ed Shaya that went with packed data.

~ Someone thinks the MC policy makes this moot.

~ Not true. That's for observational data. Not sure if this is observational data. It could be ancillary.

Question: So, you think CCB-142 should stay open?

Answer: Sees nothing to prohibit a data quality flag.

~ This is our lowest rated priority. It can stay on the list.

~ Think it's okay, would favor closing it, it would just clutter up the list.

Another Question: You think we can create them now?

Answer: Nothing prohibits it. Would call it an array 2D or something.

~ We will all look at this and comment on it next time. Decide if it should stay open or be closed. \*\*(Action Item for all)\*\*

Someone would like to move to close CCB-187 (Null values) for lack of merit.

Question: Is there documentation?

Next speaker: Kinda agree. Vague memory. This is the table delimited with two commas.

~ The question is what's the interpretation of a missing value programmatically. In delimited table you can't define a missing constant. Not logically covered by the documentation - unless it's there now.

~ Someone agrees it should be closed, but people should look at it first . It's far down on the list.

~ Would like to close it - get rid of the clutter.

~ Someone else would also like to close it.

Question: Even if it's not documented?

Answer: Maybe this needs to be transferred to the tools group.

Would like everyone to vote on this based on a recent review. We will vote to keep it on the list, remove it from the list or to move it to the software group.

\*\*(Action Item to everyone to review this)\*\* We will vote on this March 15.

Question: Anything else?

Answer: Action item review.

## ## Action Item review

CCB-177 - Christine will get the documentation done and then everyone will review it when it is available. We will vote next time.

CCB-131 - Dick and Jesse will review their notes and let the DDWG know if we can vote next time.

CCB-206 - Anne will look at jira and see if DOI just needs one attribute for the citation information class.

Mitch and Ron will look at the process document - possible revisions to ops classes so we can deal with LDDs.

Every point of contact for an LDD needs to email Anne and Steve to let them know who they are.

Ed will email Ron to close SCRs.

CCB-142 - everyone review it to see if we can close it

CCB-187 - everyone review it

Tiger teams formed for CCB-200 and CCB-202

---

Question: Any comments?

Answer: People who aren't a DD point of contact, but want to participate in the F2F, should let Anne know.  
~ The plan is to work the LDD issue through the stewards.

Question: Other things?

Answered with Another Question: To clarify, LDD developers in IPDA - tell them?

Answer: Yes. Let them know. We can do a web-ex for them.

~ Okay.

Next meeting in two weeks.

-----Original Message-----

From: Joyner, Ronald (398G) [<mailto:ronald.joyner@jpl.nasa.gov>]

Sent: Monday, March 05, 2018 12:30 PM

To: Edward A. Guinness <[guinness@wunder.wustl.edu](mailto:guinness@wunder.wustl.edu)>

Subject: RE: Notes from PDS DDWG 2018-03-01

Howdy,

In the past, Mitch has edited before the Notes are posted. U, as new Chair, can elect to never ever edit and I will simply post the Notes when I get them from D.Kazden. The DDWG Notes are posted to: <https://pds-engineering.jpl.nasa.gov/content/ddwg>

RJ

-----Original Message-----

From: Edward A. Guinness [<mailto:guinness@wunder.wustl.edu>]

Sent: Monday, March 05, 2018 10:27 AM

To: Joyner, Ronald (398G) <[ronald.joyner@jpl.nasa.gov](mailto:ronald.joyner@jpl.nasa.gov)>

Subject: RE: Notes from PDS DDWG 2018-03-01

R U asking me? I can't get to these until tomorrow. Where R they posted?

-----Original Message-----

From: Joyner, Ronald (398G) [<mailto:ronald.joyner@jpl.nasa.gov>]

Sent: Monday, March 05, 2018 12:11 PM

To: Mitch Gordon ([mgordon@seti.org](mailto:mgordon@seti.org)) <[mgordon@seti.org](mailto:mgordon@seti.org)>; Edward A. Guinness <[guinness@wunder.wustl.edu](mailto:guinness@wunder.wustl.edu)> ([guinness@wunder.wustl.edu](mailto:guinness@wunder.wustl.edu)) <[guinness@wunder.wustl.edu](mailto:guinness@wunder.wustl.edu)>

Subject: FW: Notes from PDS DDWG 2018-03-01

Howdy,

U editing or am I posting ?

RJ

-----Original Message-----

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

Sent: Monday, March 05, 2018 10:09 AM

To: [pds-ddwg2@list.jpl.nasa.gov](mailto:pds-ddwg2@list.jpl.nasa.gov)

Subject: [pds-ddwg2] Notes from PDS DDWG 2018-03-01

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title: DDWG Notes 2018-03-01

layout: default

date: 2018-03-01

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# March 1, 2018

Notes by Debra Kazden

Known Attendees:

C. De Cesare, M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, A. Raugh, B. Semenov and R. Simpson

Observers: M. Banks, M. Liukis and J. Stone

## DDWG Agenda

(Included in email sent February 27, 2018, from E. Guinness, DDWG telecon agenda for March 1)

The email stated: "The agenda will be to prioritize our work for the next several months. We will review the attached spreadsheet that lists the open SCRs and the inputs from the team on their priority and estimated level of effort."

# DDWG Telecon

This is the first meeting with Ed as the new DDWG chair. Mitch has retired. If anyone is interested in being the deputy chair, and next chair, let Ed know. Unclear what the term length is.

Approval by Tom Morgan is necessary.

~ Typically, the term for the CCB is two years. We'll try to do a year for DDWG chair.

~ CCB term is supposed to be a year.

~ There isn't a definite length of time for DDWG chair. Mitch stepped down after a year.

Housekeeping details are that the DDWG will meet every other week this month. March 1, 15 and 29.

The goal for today is to get organized on what we'll be working on. That's why we had the exercise on the open SCRs.

See email sent March 1, 2018, from L Huber, RE:DDWG telecon agenda for March 1, attachment DDWGOpenSCR-compile4.xlsx for this discussion.

Tried to assign numeric scores for priority. We might want to vote to close obsolete SCRs. Also need to decide if some of this should be moved to the software group.

There are a number of new SCRs. EN typically reviews them and reports on their merit. Got different answers on merit depending on who at EN was answering.

~ One EN reviewer thought all five new SCRs had merit, but wasn't sure that they needed discussion by the DDWG. Seems like some of them should possibly go to another group.

~ Another EN reviewer said something similar.

If you have the spreadsheet open, you can see we were drawing lines to try to set priorities. We will start by going down the list. Need to decide if the highest rated SCRs on the spreadsheet are what we want to work on first and if other things might need to move up in priority.

The meeting today has a hard deadline to end at half past the hour. We can continue by email or next meeting, if necessary,

The top two SCRs on the spreadsheet are 177 and 131. We have worked on them and they have tiger teams. They might be close to complete.

## CCB-177 - Missing ability to specify source products and processing history See <https://pds-jira.jpl.nasa.gov/browse/CCB-177>

Jordan passed the lead on this to Christine.

Documentation is being worked on - DPH ,etc. Should be ready by our next meeting.

If that can be posted and people have time to review it, we can vote on March 15.

**\*\*Action Item - Christine\*\*** will let everyone know when CCB-177 is ready.

## CCB-131 - Missing Constraints on Special Constants Attributes See <https://pds-jira.jpl.nasa.gov/browse/CCB-131>

This is the next highest priority. It has been languishing a long time. Was waiting on CCB-187 (Null values), but people don't remember why. A comment was sent that this is close to being ready for a vote.

The question is how to specify special constants. Originally this was submitted by Lev. The tiger team did some work, but haven't looked at it since April. There are some open issues on strings and how to handle white space. Also an issue with arrays of complex numbers. Need to come up with a solution for that. The issues are sort of outliers, but think we can have something to vote on ready by March 15.

~ Sounds good.

**\*\*Action Item - Tiger Team members Dick and Jesse\*\*** will communicate so that hopefully there can at least be a discussion on March 15.

---

We have approximately thirty open SCRs. It would be nice to make some progress. We can pick off the easy or old ones. We want a more manageable list. We'll continue with the spreadsheet, but will skip around a bit.

## CCB-194 - Add Boundary and Region to list of allowed values for Target Identification/type See <https://pds-jira.jpl.nasa.gov/browse/CCB-194>

This was submitted by PPI awhile ago. Thought it was going to be withdrawn and a new SCR would be submitted.

**\*\*Action Item - Joe\*\*** will do it today.

This one seems like low hanging fruit.

It was highly rated by many, but would mainly be used by PPI.

## CCB-206 - Add "doi" to Citation Information See <https://pds-jira.jpl.nasa.gov/browse/CCB-206>

Another highly rated SCR from PPI is to add DOI. Everyone considered it fairly high priority.

Question: Do we still agree with that?

Answer: Yes. Very high priority and we need a tiger team.

~ Someone agrees.

~ If we are just adding it to the citation information we might not need a tiger team.

Question: Can we assign someone to take an action item to see what is in jira?

Answer: Someone agrees that it might not need a tiger team.

**\*\*Action Item - Anne\*\*** will take a look at it in jira.

## ## LDDs

There are a number of issues all related to LDDs. Three SCR's were put in recently, there already were a few others. Some of them might actually be software issues. Seems like this is high priority and will be a lot of work.

Question: Are people willing to put in the effort on this?

Answer: They are high priority. We need them for migration.

Would like to have a F2F in conjunction with the April MC for LDD stewards to address issues, possible approaches and to map out a plan to address the SCR's. Planning to email all stewards.

Would like to leave these SCR's until after that meeting, and then divide up how to handle them.

Question: Put all six SCR's on hold?

Answer: Yes.

Someone thought we were trying to get to a point where LDD tool could generate the LDDs without any extra editing necessary. Thought a steward would just submit the ingest LDD. We would need

CCB-211 (Add XML as an option for some non-label files), and CCB-212 (Add Modification History to Ingest LDD) and CCB-211 (Add the Product Ingest class to the IM) need to be started.

CCB-212 is needed quickly. Ingest LDD is in ops. Unsure if it being in ops is an issue. Think we need to work on it, but doing so is a change to how the process document says we should work because not ops or CCB.

~ We can query the MC if necessary. No problem having tiger teams before the April F2F meeting.

**\*\*Action Item - Mitch and Ron\*\*** will look at the process document.

If there are necessary changes to ops, not sure who's purview.

~ Suggesting they put it in the DDWG's purview.

~ So we need to wait for Mitch and Ron to look at the process document.

Going back to the list of stewards, EN has been working on that. Issue is that in the namespace registry we have stewards listed as things like geometry. What we really need is a point of contact.

Question: Is there an action to take?

Answer: Points of contact for LDDs need to email Steve and Anne to let them know that they are the point of contact. For LDDs without a point of contact we'll need to assign them.

~ People who might later be stewards or are otherwise interested should also participate.

Question: Including stewards of mission DDs?

Answer: The focus will be on discipline DDs, but mission DD stewards could come for information.

**\*\*Action Item - DD stewards\*\*** need to let Anne and Steve know who they are by email.

Question: What's the planned date for this meeting?

Answer: There will be a survey - day before or after the April MC meeting.

Question: Any comments?

Answer: The point of contact list is needed ASAP.

~ We should be in touch with NRESS to make sure they can support the meeting.

**\*\*Action Item - Maria\*\*** will mention it to Annie.

**\*\*Action Item - Anne\*\*** will send a poll out for a date and let Annie know what is preferred on Monday.

---

Question: Okay, we have the first bunch of SCRs talked about. Talked about the first cut. Is there anything else that should be on our radar in the short term?

Answer: Yes. From the tech session. CCB-202 (Amend the Instrument Class Context Product) and CCB-200 (Amend the Target Class Context Product) both deal with context products. IPDA considers them to be very important. They need to be looked at early on.

~ Thought there were three SCRs.

~ Just talking about CCB-202 and CCB-200 now.

~ Target context keeps getting kicked down the road.

~ Yes, we need to discuss these. The proposals seem reasonable.

This telecon is to review status.

~ Yes, to figure out what we will be working on.

~ These telecons are for status, not extended discussions.

CCB-200 needs way more than fifteen minutes. The proposal can't be implemented.

~ We need tiger teams for these SCRs. We need to start the discussions.

~ Alright.

Volunteers for CCB-202 tiger team - to amend the instrument class:

Steve - will be lead

Tanya, Lyle and Joe will be on the team

We need someone with an interest in ground based.

~ Lyle.

That's four people on the team.

Volunteers for CCB-200 - to amend target Steve Anne - wants to be on it, but can't lead until May.

Tanya and Joe

**\*\*Action Item - Ed and Steve\*\*** Ed will go over the templates for milestones and will send them to Steve to fill out.

---

Question: Other SCRs to consider for tiger teams?

Answer: CCBs 210, 211 and 212 soon. Probably CCB-208 too.

~ Maybe we should wait to figure out the process document first.

We want everyone to have a voice.

There were some SCRs that people thought should be closed.

~ CCB-156 (Inconsistent Discipline Dictionary Technique for Local Internal Reference, et al) is fine to close because of the later SCRs.

Ron is the person who can close SCRs. Send him email.

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~ Someone thinks the MC policy makes this moot.

~ Not true. That's for observational data. Not sure if this is observational data. It could be ancillary.

Question: So, you think CCB-142 should stay open?

Answer: Sees nothing to prohibit a data quality flag.

~ This is our lowest rated priority. It can stay on the list.

~ Think it's okay, would favor closing it, it would just clutter up the list.

Another Question: You think we can create them now?

Answer: Nothing prohibits it. Would call it an array 2D or something.

~ We will all look at this and comment on it next time. Decide if it should stay open or be closed. **\*\*(Action Item for all)\*\***

Someone would like to move to close CCB-187 (Null values) for lack of merit.

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Next speaker: Kinda agree. Vague memory. This is the table delimited with two commas.

~ The question is what's the interpretation of a missing value programmatically. In delimited table you can't define a missing constant. Not logically covered by the documentation - unless it's there now.

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Would like everyone to vote on this based on a recent review. We will vote to keep it on the list, remove it from the list or to move it to the software group.

**\*\*(Action Item to everyone to review this)\*\*** We will vote on this March 15.

Question: Anything else?

Answer: Action item review.

## **## Action Item review**

CCB-177 - Christine will get the documentation done and then everyone will review it when it is available. We will vote next time.

CCB-131 - Dick and Jesse will review their notes and let the DDWG know if we can vote next time.

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Mitch and Ron will look at the process document - possible revisions to ops classes so we can deal with LDDs.

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CCB-187 - everyone review it

Tiger teams formed for CCB-200 and CCB-202

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Question: Any comments?

Answer: People who aren't a DD point of contact, but want to participate in the F2F, should let Anne know.

~ The plan is to work the LDD issue through the stewards.

Question: Other things?

Answered with Another Question: To clarify, LDD developers in IPDA - tell them?

Answer: Yes. Let them know. We can do a web-ex for them.

~ Okay.

Next meeting in two weeks.

## DDWG Notes 2018-03-15

title: DDWG Notes 2018-03-15

layout: default

date: 2018-03-15

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# March 15, 2018

Notes by Debra Kazden

Known Attendees:

C. De Cesare, M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, A. Rough, B. Semenov and R. Simpson

Observers: M. Banks, J. Padams and J. Stone

## DDWG Agenda

(Included in email sent March 13, 2018, from E. Guinness, DDWG agenda, March 15)

1) Status report from new tiger teams

-202 Amend the Instrument class context product

-200 Amend the Target class context product

-215 Allow PDS3 as a parsing standard id for Stream Text **\*\*(Discussed - work is in progress)\*\***

2) Possible 'withdraw by author'

-142 Create Data Quality Flags to hold metadata on quality flags

-187 Null values in Table Delimited

**\*\*(Discussed)\*\***

3) Tiger team needed? Probably

-206 Add DOI to Citation Information

**\*\*(Briefly Discussed - Tiger Team will be formed next time)\*\***

4) New SCRs

-216 and 217 marked as urgent from PPI

-213 and 214 marked as urgent from SBN at PSI

Are these really urgent and if so do we need to form tiger teams now?

**\*\*(Discussed)\*\***

5) Status of SCRs near ready to review and maybe vote

-177 Missing ability to specify source products and processing history

-131 Missing constraints on Special Constants attributes (Please review JIRA for this one)

Note that SCRs 190 and 188 have tiger teams. Anything to report?

**\*\*(Discussed 177 and 131)\*\***

6) Other business?

**\*\*(Brief Update about the LDD F2F in April)\*\***

# DDWG Telecon

# Item 1 - Status report from new tiger teams

## CCB-200 and CCB-202

CCB-200 - Amend the Target Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-200>

CCB-202 - Amend the Instrument Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-202>

Not much has happened yet. The milestone spreadsheets are prepared and the tiger teams are reviewing them. CCB-202 will be done first - probably ready in May. A doodle poll will be sent to team members for a time to meet.

~ Ed requests to be included.

## CCB-215 - Allow "PDS3" as a parsing standard id for Stream Text See <https://pds-jira.jpl.nasa.gov/browse/CCB-215>

Susie agreed to lead a tiger team for this issue. This is to add an enumerated value to the existing list. A parsing standard ID for string text - for migration - to preserve labels.

The team is formed and began work. Some comments have been made on jira. Susie hopes to complete this quickly.

Comments should be posted to jira or emailed to Susie.

# Item 2 - Possible 'withdraw by author'

Last meeting we discussed possibly withdrawing some SCRs that might be obsolete or are not worth more discussion - even though they were originally deemed to have merit.

## CCB-142 - Create Data Quality Flags to hold metadata on Quality Flags See <https://pds-jira.jpl.nasa.gov/browse/CCB-142>

One of the possible SCRs to withdraw. This created data quality flags from packed data. There has been discussion and email indicating that this can be withdrawn.

Question: Any comments?

Answer: Fine with SBN. The person who put this in no longer works there. Happy to withdraw it.

~ Fine.

Question: Anyone object to telling Ron that this can be marked 'withdrawn by author'?

Answer: (Silence)

**\*\*Action Item - Ed\*\*** will send a confirmation email to Ron to do this.

## CCB-187 - Null values

See <https://pds-jira.jpl.nasa.gov/browse/CCB-187>

Someone read the SR and has the opinion that we think we know what we want but the documentation is limited. If this SCR is not withdrawn we need to clean up the documentation.

We need to distinguish between null value and empty field. Think the issue is if there are two commas with no value there's nothing there. Not at a point where I want to tell people how to interpret that. It's just empty.

Question: Other comments?

Answer: Would like to keep it open because of CCB-131 awhile. Probably just needs documentation.

~ It doesn't hurt to leave it until we get to it. It's not high priority.

# Item 3 - Tiger team needed? Probably

## CCB - Add "doi" to Citation Information See <https://pds-jira.jpl.nasa.gov/browse/CCB-206>

Anne did some research on this in jira and sent email to the group.

~ The main conclusion was that there should be a tiger team for this to deal with a few issues.

Question: Didn't say that in jira - should it be added?

Answer: Yes. Go ahead. **\*\*(Action Item - Anne)\*\***

We will pick a tiger team next time.

# Item 4 - New SCRs

There are four new SCRs. Two from PPI are both marked urgent.

## CCB-216 and CCB-217

CCB-216 - Change Uniformly Sampled units from an element to an attribute See <https://pds-jira.jpl.nasa.gov/browse/CCB-216>

CCB-217 - PDS4 Metadata for Identifying Data from the Heliosheath See <https://pds-jira.jpl.nasa.gov/browse/CCB-217>

Question: Are these really urgent?

Answer: PPI should have them by the October build. Not sure of the status on the point build. The heliosheath one is for Voyager migration, but Cassini and Messenger are higher priority right now.

Question: Could you change them to normal on jira?

Answer: Yes. **\*\*(Action Item - Joe)\*\***

~ PPI has another SCR to submit for the same time range.

## CCB-213 and CCB-214

CCB-213 - Leading zeroes required in ASCII Real see <https://pds-jira.jpl.nasa.gov/browse/CCB-213>

CCB-214 - Optional trailing zeroes in ASCII Real for Table Character see <https://pds-jira.jpl.nasa.gov/browse/CCB-214>

Both submitted by Jesse. Issues uncovered by validation tools.

The issue is that in SBN data there are a lot of ASCII tables that often have leading zeros and are getting objected by the validation tool.

~ In legacy tables. No number to the left, but required now. This is proposing to allow decimal point to be the first character.

~ And the other SCR has to do with trailing zeros.

~ Want the option to have no digit to the left of the decimal point on CCB-213. For CCB-214 if it's ASCII real with format wants trailing zeros. So 3.5 would become 3.50. In SBN migrations don't want trailing zeros because they create a false precision.

~ This is a big issue for SBN's ground based data. Don't want to overstate the precision.

Question: Is this a bug fix? Table in SR says trailing zeros are not required and CCB-171 (Split hardware-compatible ASCII numeric types from the unbounded) dealt with ASCII reals - had a formation rule that was passed. That's what is in the schema, but it's not in agreement with the SR. And there's a new formation rule proposed, right?

Answer: Yes. Proposed new formation rule for xs:double in latest schema.

~ CCB-171 had proposed a formation rule. It was implemented in our schema. Requires leading and trailing zeros.

~ Leading digit.

Another Question: Is this a bug fix? SR doesn't agree with schema.

Answer: Could take the view that required trailing zeros is a bug. Leading zeros is a philosophical argument we can have. Doesn't affect perception of precision the way trailing zeros do. It's a big change from PDS3.

~ In the SR the decimal point is optional for whole numbers. Confused about the intent for PDS4 - SR versus what's in the schema. Not sure anyone knows the history.

~ The SR and schema were developed independently. Would keep what's in the SR. Document writers spend a lot of time on Table 5 - would take the SR as the starting point.

Question: Comments from others?

Answer: Missed some of the discussion, but what's in the IM is the requirement and the SR should follow that.

~ IM had precedence. Schema should follow the SR.

~ We just have to decide what the requirement is.

~ Looking at permitted values in the SR - leading digit seems like it is required.

We are not solving this now. We need a tiger team to form and make a proposal. Jesse can think about a team leader.

~ Jesse volunteers to be the team leader.

**\*\*Action Item - Jesse\*\*** will send email to the DDWG to get volunteers to form a team. It can be node people, doesn't have to be DDWG members.

# Item 5 - Status of SCRs near ready to review and maybe vote

## CCB-177 - Missing ability to specify source products and processing history See <https://pds-jira.jpl.nasa.gov/browse/CCB-177>

This is needed for InSight - we need to finish it soon.

Tiger team has recently uploaded the documents to jira. Ready for DDWG review.

~ **\*\*Action Item - Everyone\*\*** Before the next telecon we all need to read it, submit comments, etc.

This is basically adding two new classes - source product internal and source product external. No significant changes were made to the attributes of internal. Added a few reference types, like data to source product table. External has identifier instead of LID/LIDVID. Rewrote the documentation for this attribute to make it clearer. Written up in the documentation.

Other attributes are pretty self explanatory. Documentation is in jira overview. Included a few different use examples.

Two newest things are proposed changes to the DPH and SR.

Working with Susie on those. SR - not much - need to update the reference list documentation. Small changes for DPH - also just updating areas with reference list, and a few examples.

New section to describe how to use the classes. Has brief xml snippet examples.

Everybody needs to look at it and post comments in jira so everyone can see, but also email comments to Christine.

**\*\*(Action Item\*\*)**

Question: Any comments?

Answer: Someone would like to simplify it. It might be easier to digest.

~ Okay, work with Christine and Jordan.

~ Was already given the okay to edit it. People should wait to comment until after it's edited.

There was an issue with the documents.

~ The title is wrong, but the content is correct. It will be fixed.

The goal is to hopefully vote on this next time. Please be prepared.

If we could have the updates (edits) on jira before the end of the week that would be great.

~ Not sure it can be done that quickly.

~ Work will be done by a week from today. Want people to have plenty of time to review it.

~ Edits by a week from today should be enough time.

Question: Should I make a new SCR?

Answer: No. We are close on this so we should just finish it.

## CCB-131 - Missing Constraints on Special Constants Attributes See <https://pds-jira.jpl.nasa.gov/browse/CCB-131>

There has been action on this in the last few weeks.

Special constants are defined to be ASCII strings. We thought people would use them in reasonable ways. CCB-131 appeared about a year ago and was recently picked up again. Proposing some new special constants. Mainly they are numbers. Hard to know how to specify binary special constants, so decided the values have to be expressed in ASCII. Everything in label has to be ASCII real - that covers numbers in character and binary tables. If you have a string, then special constant has to also be the same length string. Eight character field needs a special constant with eight characters. Other case is if delimited table with varied field length - will require that they match. Could use a dash if one character, but only if special constant doesn't have more than one special constant. A lot of detail, but it covers all the issues.

Question: Any questions?

Answer: Rebuttal for strings. It's completely unworkable for SBN. Have comments, so it's completely unreasonable to require DPs to count bytes. Also an issue with UTF-8. SBN data type is based on the token type - normalizes white space, so no. Character handler can't be as described.

Another question: If the comment is a name why a special constant if it's missing? Why would you need a special constant if it's not there?

Answer: To indicate unknown at the time the data was prepared.

~ Someone would never bother with that.

~ It's a big issue for SBN.

Question: Are you proposing that for strings it should be collapsed?

Answer: It should be the same data type as the data. Gives some basis for comparison. Easier to have special constant names like string maximum, string minimum. What's been proposed is not backwards compatible.

Another Question: Not worried about numeric fields?

Answer: No. The solution for them is fine.

Another Question: So the data type has to match what's in the data field?

Answer: No.

Another Question: You want UTF-8 string, which will normalize white space, for all character special constants?

Answer: Yes.

~ It might work, but concerned about normalizing the white space. Not sure all tables have the same requirements.

This should be discussed more off-line and then jira can be modified.

~ Team would like SBN to work on it - out of gas on this.

~ Fine.

**\*\*Action Item - Anne and Jesse\*\*** will work on this.

~ Suggestion: Sean should look at this too - before we vote.

~ Fine.

- ~ We don't want to break Sean's tools.
- ~ Heed the warning that many don't typically use UTF-8 in table.
- ~ UTF-8 would cover ASCII String in data files.
- ~ The special constants class will have an attribute for string. We need a data type.

**\*\*Action Item - Anne and Jesse\*\*** will re-evaluate non-numeric special constants, check with Sean and let the DDWG know when it's ready. We'll try to finish it with an evote.

- ~ Hopefully this will be off the books soon.

#### # Item 6 - Other business?

Question: Any new business? Everyone happy?

Answer: (Silence)

- ~ If people think of anything let Ed know.

Question: Anything on the pre-MC meeting?

Answer: Yes: People are coming and calling in. Still accepting agenda topics. Will send out an agenda soon. Shaping up to be a good one day meeting. Beginning at 8:00a.m. Coordinating meeting needs with Annie.

- ~ If anything else is needed contact Maria, Annie or Ginny.

Next DDWG meeting in two weeks.



DDWG Notes 2018-03-29

From: guinness@wunder.wustl.edu  
To: pds-ddwg2@list.jpl.nasa.gov  
Subject: Telecon agenda for Thursday, March 29

Date/Time: 2018-03-27T11:22:00 AM

Dear all,

We will have a DDWG telecon this Thursday, March 29 at the usual time. The call-in information is list below.

### **Participants:**

Maria Banks, Cristina DeCesare, Mitch Gordon, Ed Guinness, Lyle Huber, Steve Hughes, Debra Kazden, Joe Mafi, Stef McLaughlin, Jordan Padams, Anne Raugh, Dick Simpson, and Jesse Stone.

### **Housekeeping:**

Called to order by Guinness at 9:33 PDT. Ed said he would use today's agenda as a template for future meetings. He is concerned about the increasing number of new SCRs relative to the number being closed.

### **Agenda**

#### **1. Status of SCR ready to review and maybe vote**

-177 Missing ability to specify source products and processing history

I believe that Dick has finished revising the JIRA entry and this SCR is review for the DDWG to review and hopefully vote on at the telecon. **(Please review JIRA for this one)**

Cristina said there have been changes since the last telecon. She and Jordan cleaned up the SCR with help from Dick. There will only be a source product table for internal references; a table for external sources can be added by another SCR. Anne had questions about the changes to the SR; is it the intent to give data providers the choice of using a source product table? Yes. Does this complicate the software support? Probably, but Jordan said users want the option for both tables and in-line references.

Mitch has several product lines that are ready to go and need the ability to identify source products; he will need this capability before the next build. Some of his Cassini mosaicked products have 60-200 external (PDS3) source products. Jordan said it would take another month to add external source product tables back into this SCR. InSight launch is in another month; not having CCB-177 is holding up peer reviews. Guinness wants to finish what we have and not delay approval by delaying over the table questions.

Ed also noted that the InSight example in JIRA shows many LIDVIDs in a single Source\_Product\_Internal class, which is not consistent with the proposed specification. Simpson said he thinks source products can be specified using a single type of table; but the table needs to be defined as a new class. We could also have multiple LIDVIDs in a single instance of Source\_Product\_{Internal,External}, as in the InSight example.

Jordan is agreeable to moving the table option (for both internal and external products) to a separate SCR and allowing multiple LIDVIDs for a single reference type. Simpson said he could go along with this.

On the subject of the ESPID, Hughes asked about the [1,2] cardinality; discussion showed that this was confusing in several ways. Simpson said there should only be a single ID for each external product; Hughes agreed. But Steve could see several attributes (based on PDS keywords DATA\_SET\_ID, VOLUME\_ID, PRODUCT\_ID, etc.) combining to make a single PDS4 ID. Mitch suggested limiting one construction rule to PDS3 products in which the unique ID would be DATA\_SET\_ID plus VOLUME\_ID plus PRODUCT\_ID, where field delimiters were colons. He would then like an enumerated list for <curating\_facility\_id>. Padams agreed with Mitch's construction.

Jordan and Cristina will make the changes (including to documentation), then Ed will request a TA from Hughes.

## 2. Status report from tiger teams

-215 Allow PDS3 as a parsing\_standard\_id for Stream\_Text (finish by 4/26/18; possible point build)

Slavney is on vacation. The proposal is to add "PDS3" as a new enumerated value. Send comments to JIRA or Susie.

-214 Optional trailing zeroes in ASCII\_Real for Table\_Character

Stone is assembling a tiger team; he has Neese and Joyner. Hare is willing.

-213 Leading zeros required in ASCII\_Real

Stone is assembling a tiger team; he has Neese and Joyner. Hare is willing.

-202 Amend the Instrument class context product (1.11.0.0)

No report.

-200 Amend the Target class context product (1.11.0.0)

No report.

-190 Add 'space' delimiter to field\_delimiter permissible values

Ed has no spreadsheet for CCB-190. Joe doesn't think the current proposal will work; it will impact too many other uses of the DSV standard. Joe suggests adopting a new standard that will allow spaces.

-188 Update IM to allow GML as acceptable Product\_Observational data format

No report.

-131 Missing constraints on Special\_Constants attributes (Close to ready for a vote?)

Anne has concerns that she will discuss with Ed in Las Cruces next week.

## 4. New SCRs (short discussion)

-218 Allow more than 2 Observing\_System components

There is an error in the definition of Observing\_System\_Component; Steve can fix this as a "bug". Without needing an SCR. CCB-218 would also add a new enumerated value "compute\_element". Rough would prefer to think of the computer as part of the instrument. Bob Dean asked for the new value; Ed asked Bob why it is necessary to know the computer, and he didn't get a very good answer. Cristina will collect more background information.

Product\_Browse does not have a Context Area; Joe wonders why not. Rough has requested a Context Area for Product\_XML\_Schema (CCB-119); it was approved and implemented. Hughes believes there may have been an explicit decision not to have Context Areas for all products. Steve will consult notes to see whether there was any past decision.

## 5. New tiger teams?

Ed invited people to volunteer to start new tiger teams. Rough said she would be happy to serve on the CCB-218 tiger team. Cristina will lead; Ed will send her a spreadsheet. Hughes will join.

There was an action item from the Tech Session to consider data formats that are not presently supported — such as XML files as "data" and GIS files. Mitch and Anne are happy with what we have. Simpson asked whether GIS is part of the GML SCR; Ed said yes, but whether the data format could be added to Product\_Observational is separable.

## 6. Other business?

- Dictionary workshop next week (Anne)

Rough is working on an agenda; she will send something by the end of today. She will include PSA topics before lunch. Presentations will be built around bullets that she circulated previously. She wants to focus the discussion on actionable items, so there will be measurable progress when the Workshop is completed. Anne will schedule WebEx through UMD if NRESS isn't planning to provide it. The workshop starts at 8 AM MDT; she wants to wrap up by 4-4:30 PM. The list of attendees is about a dozen; others may connect via WebEx.

The next DDWG telecon will be 12 April. One discussion will be dates for the following meetings (there is a possible conflict on 26 April). Huber is not available on 12 April; Simpson is not available on 19 April.

Meeting adjourned 10:38 PDT.

If you can't attend this Thursday, please let me know and pass this message to your backup person.

Thanks,  
Ed

[Join WebEx meeting](#)

Meeting number (access code): 905 812 392

Join by phone  
**+1-510-210-8882** USA Toll

## DDWG Notes 2018-04-12

title: DDWG Notes 2018-04-12

layout: default

date: 2018-04-12

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# April 12, 2018

Notes by Debra Kazden

### Known Attendees:

C. De Cesare, M. Gordon, E. Guinness, R. Joyner, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, A. Raugh and R. Simpson

Observers: L. Neakrase (alternate for L.Huber), S. Slavney and J. Stone

### ## DDWG Agenda

(Included in email sent April 10, 2018, from E. Guinness, DDWG agenda for April 12)

#### 1) Status of SCR ready to review and maybe vote

-177 Missing ability to specify source products and processing history

-219 Add Context Area to Product Browse

Also if TA is completed:

-215 Allow PDS3 as a parsing standard id for Stream Text

Discussion item for CCB-212 - Add Modification History to Ingest LDD (Note from Mitch) ~ Ron pointed out there is a problem with version id. Modification History.Modification Detail.version id only allows IDs of the form n.m whereas we allow dictionary IDs using n.m.o.p.

Ron and I have discussed the options: a) change ldd version id to only allow two places, or b) change version id in Modification Detail to allow up to four places. Ron and Mitch prefer the latter even though it means this SCR will now need to go to the CCB for approval.

\*\*(Voted to pass 177, 219 and 215. Discussed 212)\*\*

#### 2) Status report from tiger teams

-218 Allow more than 2 observing system components

-214 Optional trailing zeroes in ASCII Real for Table Character

-213 Leading zeros required in ASCII Real

-210 Add the Product Ingest class to the IM

-202 Amend the Instrument class context product (1.11.0.0)

-200 Amend the Target class context product (1.11.0.0)

-190 Add 'space' delimiter to field delimiter permissible values (Need to decide what to do with this – close and open new SCR or something else)

-188 Update IM to allow GML as acceptable Product Observational data format (USGS-Flagstaff is working on possible substitutes to GML – report in August)

-131 Missing constraints on Special Constants attributes

**(Discussed)**

3) New SCRs (short discussion)

-220 Add ability to specify many source products via table **(Brief Mention)**

4) New tiger teams?

Please review open SCRs that are not being worked. Below are items indicated as high priority:

-206 Add DOI to Citation Information

-217 PDS4 metadata for identifying data from the Heliosheath

**(Discussed)**

5) Other business?

Summary of dictionary workshop and action on SCRs 203, 204, 205 (Anne) **(Brief Mention)**

# DDWG Telecon

Huber sent email. Won't be here today, but sent his votes. Neakrase will be here for him.

Hughes will not be here today. Joyner will vote for him.

Someone has to leave after an hour.

NAIF isn't here.

# Status of SCRs ready to review and maybe vote

##CCB-177 - Missing ability to specify source products and processing history See <https://pds-jira.jpl.nasa.gov/browse/CCB-177>

It is believed that all of the required changes are made. There was a small comment on wording for definitions in jira.  
~ Someone would like to streamline the definitions. Really two sets of comments. That and a minor grammatical issue.

Would like to vote. We can have a lien to address those comments.

Question: What exactly are we voting on?

Answered with Another Question: Confused. Why wouldn't we be voting on what's in the SCR?

Answer: We could be voting with liens or without.

Checking the comments in jira... Didn't realize there was another new comment.

~ It's not new. Was put in again.

Question: Should we allow an optional DOI attribute? I don't think we want to go there at this point... Reading jira...Don't understand the second part.

Answer: We allow multiple LIDs, but they all have to have the same curator, reference type, etc. Would put that in an external class. Reviewers should catch it, but might not see that level of detail.

We will vote with lien to clean up definition for source product external.

~ Thought Jordan would be here. Had feedback on the update of the definition. Basically, doesn't want people to have to go to another document to understand this. Not everyone agrees.

~ Someone else has issues too. Oddly worded. Plus, NSSDCA is an external archive. Want the language cleaned up. No acronyms.

~ Exactly. This needs cleaning.

~ But not sure that's a reason to hold up voting.

~ Voting with a lien is fine. We can determine what we're going to clean up later.

Someone is more confused now by reading the comments.

~ So you can reference multiple products in one instance of the class if all the same reference type. A clean up was proposed last time.

We are voting with a lien to clean up the documents relative to the comments.

~ Someone is confused.

~ Tiger team needs to work with the document writing team and the IMG node.

~ Document writing team isn't right.

Question: What do we want to do? It's been a year.

Answer: Need to approve the wording changes.

~ Two changes.

~ Someone finds the new text to be as bad as the text being proposed to be revised. If that means this won't pass....we should be able to get this passed.

~ Maybe we're not ready to vote.

~ We should vote with liens on two documentation issues.

~ There's disagreement on what the clean up should be.

Revised text for source product internal and external - would have separate entries for them.

Question: What are you looking at?

Answer: The bottom of the SCR on jira. Last thing on the page. The comments. Highlighted word "both" in red. Still some problems - legacy data, NSSDCA, acronyms. This should be broken up some. No "and." Internal is for things in the PDS4 registry system. Spell out examples for external. That should solve the problems.

~ Sounds good. Agree with the logic.

~ Regarding the optional DOI - agree with person who said let's not do that, LIDVID should be sufficient. On external there are multiple problems with common reference type, curating facility and description. I thought it was just reference type.

~ Curating facility and description have to be one and only one for the whole list.

~ Someone thinks that's fine.

A comment was just added in jira - a suggestion for the revised text.

~ People see it.

~ Good. It addressed the comments from six days ago.

~ Can't use RELAB as an example, it will become part of PDS4. Use NSSDCA.

~ Editing jira in real time now.

~ People see it. Hopefully everyone is okay with it. It seems to address the concerns.

~ Okay. Someone would be ready to vote yes on this.

Question: Are people ready to vote?

**\*\*The Vote on CCB-177**

ATMOS - Yes

IMG - Yes

EN - Yes

GEO - Yes  
IPDA - Yes  
NAIF - Not here  
PPI - Yes\*\* (comment: With the change) \*\*Rings - Yes RS - Yes SBN - Yes\*\*

That passes. Will be sent to Ron, Emily and Steve Joy. Nine yes and one not here.

## CCB-219 - Add Context Area to Product Browse See <https://pds-jira.jpl.nasa.gov/browse/CCB-219>

In our last discussion we weren't sure if this was left out on purpose. EN checked. It was not left out purposefully. Propose we vote on this. It should be backwards compatible.

\*\*The Vote on CCB-219

ATMOS - Yes  
IMG - Yes  
EN - Yes  
GEO - Yes  
IPDA - Yes  
NAIF - Not here  
PPI - Yes  
Rings - Yes  
RS - Yes  
SBN - Yes\*\*

Great - two down, one more.

## CCB-215 - Allow "PDS3" as a parsing standard id for Stream Text  
See <https://pds-jira.jpl.nasa.gov/browse/CCB-215>

We have a TA. As we do migrations and have detached PDS3 labels, we want to be able to reference them in a file area supplemental. The proposed value to do that is PDS3. Not many comments.

The TA thought maybe PDS3 ODL. In the header class we have PDS3. That's why PDS3 was picked for this value. Two different values might be confusing.

Question: Any comments?

Answer: We could expand the SCR to fix header.

~ The tiger team talked about that. Don't think it's a good idea. Some products also have embedded label that aren't valid PDS3 ODL. It's cleaner to call it PDS3. Nobody knows what ODL is anyway.

~ Would be a non-backward compatible change.

~ We're still in version one.

~ PPI has attached PDS3 labels that look like PDS3 but they are not. Call them header.

Someone thinks adding ODL in the mix is confusing.

~ There are ODL2 labels out there too. TA suggests we add both or just PDS3. We could use PDS3 or ODL2.

Question: If you wrote software and came upon ODL2 would you know what to do?

Answer: Not sure I understand the two. Think I would go with the simpler option because people will know what it means. We can put more text in the SR.

~ Just use the value PDS3 and wait. Later if someone wants to use ODL2 we can put it in.

~ PDS3 standards ought to be in PDS4 registry so people can look them up if necessary.

Will assign an \*\*Action Item to Steve\*\* to figure out how to do that.

Question: Other Comments?

Answer: (Silence)

**\*\*The Vote on CCB-215**

ATMOS - Yes

IMG - Yes

EN - Yes

GEO - Yes

IPDA - Yes

NAIF - Not Here

PPI - Yes

Rings - Yes

RS - Abstain

SBN - Yes\*\*

That passes with eight yes votes.

That was all the ones we were ready to vote on.

**## CCB-212 - Add Modification History to Ingest LDD** See <https://pds-jira.jpl.nasa.gov/browse/CCB-212>

Mitch had sent email on this, but changes have been overtaken by events. There have been small exchanges on this. Think we are going to - in ingest LDD class - we want to add modification history. We have version ID. Goes back to CCB-210 (Need to preserve the Ingest\_LDD file as part of a PDS4 Product - see <https://pds-jira.jpl.nasa.gov/browse/CCB-210> ).

Question: What? The modification history version should be internal version of the namespace.

Answer: Yes. At the top of an LDD there is an LDD version ID of the product. We need to add one for product and one for namespace. ID goes in XMLs. We want to make sure we have a pair. We are at 1.16 for version 10. This is real straight forward. Need to update jira. Think we can fix ingest LDD and schema.

~ So, we need to fix higher version of modification history, which is forbidden in labels but required in ingest LDD.

~ Something like that.

Another Question: It's hard to follow what you are saying. Could you provide an example?

Answer: Yes. Sent one to a couple people to review. Will put it in jira. Expect a jira update early next week. **\*\*(Action Item - Mitch)\*\***

We will discuss this again next time.

~ Makes sense. Would like it in a point build if possible.

~ Not clear if this needs to go to the CCB or not yet.

Question: Any comment for Mitch on this?

Answer: (Silence)

~ We did discuss this at the F2F last week.

~ Not everyone was there.

**# Status report from tiger teams**

**##CCB-218 - Allow more than 2 Observing System Components** See <https://pds-jira.jpl.nasa.gov/browse/CCB-218>

This is partly a bug fix. New standard value.

~ Just needs a TA. Basically adding "computer" to the list of enumerated values.

~ Definition would be cleaned up. Add value. There was a comment in jira.

~ Just wanted the word product out of the definition.



~ "Subsystem" is also problematic. It has a very specific meaning that has nothing to do with observing system component. Definition in IM was cut from PDS3. Wouldn't call it subsystem.  
Fine with saying it's a piece of hardware. The idea to convey is it's one piece that has characteristics you want to discuss.

We still need a definition clean up.

~ Don't think it's been looked at very closely.

~ This is still a bug fix if we're just changing the definition.

~ We're also adding "computer"

~ This is complicated because it's two topics. The definition needs cleaning up. Will be done as a bug fix. Other comments on this should be put in jira. The other part doesn't have a TA yet. We could possibly do an evote. In the IM, the change is to add a new type of observing system component reference type.

Question: Any comments on doing it this way?

Another Question: Anything we could use instead of computer?

~ Type would be other. We would need to add computer. Internal reference type would be other.

~ Got it.

Question: Are people okay with this? We can get the TA. Evote or vote. Not hearing objections.

Answer: Schedule the vote for our next meeting.

## CCB-214 - Optional trailing zeroes in ASCII Real for Table Character

##CCB-213 - Leading zeroes required in ASCII Real See <https://pds-jira.jpl.nasa.gov/browse/CCB-214> and <https://pds-jira.jpl.nasa.gov/browse/CCB-213>

Team lead sent milestones. Being worked. Team should present something in about two months.

## CCB-210 - Need to preserve the Ingest LDD file as part of a PDS4 Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-210>

This is kind of wrapped up with CCB-212.

## CCB-200 - Amend the Target Class Context Product

## CCB-202 - Amend the Instrument Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-200> and <https://pds-jira.jpl.nasa.gov/browse/CCB-202>

No updates. Team lead isn't here.

## CCB-190 - Add 'Space' delimiter to field delimiter permissible values See <https://pds-jira.jpl.nasa.gov/browse/CCB-190>

Not sure of the status.

~ Team leader needs to follow up with people who had expressed interest and the tiger team.

Question: We might want to close this?

Answer: Yes, so we can figure out what we want to do.

~ Reporter doesn't want this closed.

~ It will break things for other DSV things. The idea is to call it some other type of delimited field. Need to do some homework.

~ Maybe a different parsing standard.

~ We need to support the data this was aimed at, but we don't want to break things. Will send email to people.

##CCB-188 - Update IM to allow GML as acceptable Product Observational data format See <https://pds-jira.jpl.nasa.gov/browse/CCB-188>

Lisa Gaddis and USGS people are thinking about possible substitutes for GML. Can be back burner for now.

##CCB-131 - Missing Constraints on Special Constants Attributes See <https://pds-jira.jpl.nasa.gov/browse/CCB-131>

No progress on this yet. Can discuss it at the next telecon.

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We need to take a moment to talk about when we'll have our next meeting.

The 26th is the conference in St. Louis. Some of us will be there.

The issue is that Ed will be out of the country for two weeks in May. It might not be good to meet on the day of the conference. That pushes us to May 3. We could substitute for May 10 and 31.

Question: Are people okay with May 3 for our next telecon?

Answer: Someone says it's fine. Could meet next week.

~ That's off the table. Can't do the 19th.

Thinking we can do some evotes.

Our next meeting will be May 3.

# New SCRs

## CCB-220 - Add ability to specify many source products via table See <https://pds-jira.jpl.nasa.gov/browse/CCB-220>

This is the result of splitting CCB-177 into two pieces. Not sure we need a tiger team yet. Think we can hold off and work if off-line.

# New tiger teams?

## CCB-206 - Add "doi" to Citation Information See <https://pds-jira.jpl.nasa.gov/browse/CCB-206>

PPI feels that this needs to be done sooner rather than later. Anne did some work.

Question: Anyone want to work on this?

Answer: Anne will serve on the team.

Another Question: Is Todd willing to serve?

Answer: Someone from PPI - Joe or Todd - will serve.

~ Let Anne know who.

~ Ed will be on the team too.

## CCB-217 PDS4 Metadata for Identifying Data from the Heliosheath See <https://pds-jira.jpl.nasa.gov/browse/CCB-217>

Last one on the list. Rated fairly high.

Question: Does PPI want to get work happening?

Answer: Other things are higher priority right now. Definitely want it in by the next release.

Question: Is this just low hanging fruit?

Answer: Maybe.

# Other business?

Question: Is there any other low hanging fruit? We are making progress. Okay to not start more today.  
(No answer)

Notes have been posted from the F2F. Anne can send the link to the Google drive to the DDWG.  
~ Let people look at it.

See the three SCRs that we are leaving in, but don't plan to deal with yet.

Something not on the agenda:

~ Mitch provided comments on the process document. Did a best practices on migrating context products. Will follow up on that.

Question: Any other comments?

Answer: (Silence)

DDWG Notes 2018-05-03

title: DDWG Notes 2018-05-03

layout: default

date: 2018-05-03

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# May 3, 2018

Notes by Debra Kazden

Known Attendees:

M. Gordon, E. Guinness, S. Hughes, R. Joyner, D. Kazden, J. Mafi, S. McLaughlin, A. Raugh and B. Semenov

Observers: L. Neakrase (alternate for L. Huber) and J. Stone

## DDWG Agenda

(Included in email sent May 1, 2018, from E. Guinness, DDWG agenda for May 3)

**\*\*Deadline for next build is that SCRs must be approved by CCB by Aug. 16, 2018.\*\***

Agenda

1) Status of SCR ready to review and maybe vote:

None ready at this time.

**\*\*(Brief mention)\*\***

2) Status report from tiger teams:

-218 Allow more than 2 observing system components (De Cesare)

-214 Optional trailing zeroes in ASCII Real for Table Character (Stone)

-213 Leading zeros required in ASCII Real (Stone)

-212 Add Modification History to Ingest LDD (Gordon)

-210 Add the Product Ingest class to the IM (Gordon)

-206 Add DOI to Citation Information (Raugh)

-202 Amend the Instrument class context product (Hughes)

-200 Amend the Target class context product (Hughes)

-190 Add 'space' delimiter to field delimiter permissible values (Mafi) (Need to decide what to do with this – close and open new SCR or something else)

-188 Update IM to allow GML as acceptable Product Observational data format (De Cesare) (USGS-Flagstaff is working on possible substitutes to GML – report in August)

-131 Missing constraints on Special Constants attributes (Raugh)

**\*\*(Discussed)\*\***

### 3) New SCRs (short discussion):

-222 Add citation text to Citation Information

-221 Add "Laboratory Analog" to target type in Target Identification

-220 Add ability to specify many source products via table

\*\*(Discussed)\*\*

### 4) New tiger teams?

Please review open SCRs that are not being worked. Below are items indicated as high priority:

-217 PDS4 metadata for identifying data from the Heliosheath **\*\*(Brief Mention)\*\***

### 5) Other business?

- Revision of context products for migration purposes

\*\*(Discussed)\*\*

### # DDWG Telecon

Email is going around about a possible point build. It would help with InSight and the Cassini and Messenger migrations.

We do not have people from IMG, RS or IPDA today. Maria also will not be on the call today.

The top of the agenda says "Deadline for next build is that SCRs must be approved by CCB by Aug. 16, 2018." Anyone wanting SCRs in the Fall build needs to get stuff through the CCB by mid-August. Need to be proactive to get things through the system.

~ There are a bunch of SCRs from the LDD stewards meeting to add.

~ People at the workshop had a lot. Wanted feedback on best practices.

### # Status of SCR ready to review and maybe vote

None to vote on today. Maybe we'll have some evotes in the near future. A bunch of SCRs have tiger teams working on them.

### # Status report from tiger teams

## CCB-131 - Missing Constraints on Special Constants Attributes See <https://pds-jira.jpl.nasa.gov/browse/CCB-131>

The team has been discussing the SCR, trying to figure out where it went off the rails. Looked at the history and found that the first issue was that the initially reported problem had been changed. Wanted a sanity check in the original SCR - reporter didn't think it was complicated. When the problem statement was changed it changed everything. Ended up with new classes that aren't backwards compatible. The problem that was originally reported still isn't addressed by all of this. Would like a policy that you can't change problems in jira without the consent of the person who put it in.

There are two issues here - who can change SCRs and what to do with this now. We could write a new SCR to cover the original issue.

~ We need to separate these.

Question to Ron: On the first issue, how do we do that? Is it just a policy statement?

Answer: Not clear on this.

Another Question: How do we avoid this in the future?

Answer: We can't. A lot of people were involved.

- ~ The TT found the problem - reporter wasn't originally on the team, thought the issue was pretty straightforward.
- ~ We should go off-line, but maybe the person who reports a problem should be on the team.
- ~ No. We can't be on all of them.
- ~ Clearly this is an issue we need to find a way to address. Will go off-line.
- ~ Before we move on to the next part of this, the reporter controls the problem statement. Reporter needs to make sure the problem statement is correct. Then we need a policy that problem statements won't be changed.
- ~ Issue is that the problem statement was changed by someone other than the original reporter. Now it's a different problem.
- ~ This needs to go off-line.
- ~ We need to make sure we have some control over who can change a problem statement.
- ~ We need to take steps to make sure this doesn't happen again. It was an honest mistake, made in good faith, we just don't want it to happen again.

**\*\*Action Item - Ed and Ron\*\*** will work on this.

Question: What do we do with CCB-131? It can be withdrawn or we can change the problem statement back and start over.

Answer: Most of the debate was between two people - very deep in the fine details. Didn't think that detailed a level of discussion was necessary, but maybe I'm wrong.

- ~ We should leave this one as it is to work on later and the reporter should put the original in again as a new SCR.
- ~ Reporter is fine with that.

So, we will leave CCB-131 as is - maybe Anne, Dick and Jesse can discuss it.

- ~ Ron wants to be included. Thinks this can be discussed on a telecon - not an email discussion.

Question: Should the team defer to programmers?

Answer: Thought we would have rules and then programmers would make them work.

- ~ Programmers know what to do - don't want to make it difficult for DPs to know what to put.
- ~ This is typically in imaging data.
- ~ Maybe the team needs an IMG person.

**\*\*Action Items:**

Anne will submit the original problem statement as a new SCR and There will be a telecon to hash out the existing CCB-131. Ron will get the players together.\*\*

**## CCB-218 - Allow more than 2 Observing System Components** See <https://pds-jira.jpl.nasa.gov/browse/CCB-218>

Thought we could vote on this soon. Someone has already agreed to do the definition changes in the IM. We only need to decide if we want to add the value computer as an observing system component type. Still need a TA, but hope to have an evote soon.

Question : Is that a reasonable approach?

Answer: Concerned about adding this to the core. Think it should be in a mission area. If it's common maybe that's fine, but it sounds like a mission thing.

- ~ It could apply to multiple missions.

Question: Do we need a context product for each computer?

Answer: Context products are not required. Could put your concerns in jira for the tiger team to address and then we can decide how to proceed.

**## CCB-213 - Leading zeroes required in ASCII Real**

##CCB-214 - Optional trailing zeroes in ASCII Real for Table Character See <https://pds-jira.jpl.nasa.gov/browse/CCB-213> and <https://pds-jira.jpl.nasa.gov/browse/CCB-214>

Question: Has there been any progress?

Answer: CCB-213 is straight forward, should be resolved soon. Having discussions about CCB-214. Need to interpret the documentation.

## CCB-212 - Add Modification History to Ingest LDD See <https://pds-jira.jpl.nasa.gov/browse/CCB-212>

The tiger team is working on this. Hope to get something for people to review for the next DDWG. Need to do this before we can do CCB-210 (Need to preserve the Ingest LDD file as part of a PDS4 Product - see <https://pds-jira.jpl.nasa.gov/browse/CCB-210>)

## CCB-206 - Add "doi" to Citation Information See <https://pds-jira.jpl.nasa.gov/browse/CCB-206>

Anne is the tiger team lead. Hasn't done anything yet. Unsure who else is on the team.

\*\*Action Item - Ed\*\* will send the list to her.

## CCB-202 - Amend the Instrument Class Context Product ## CCB- 200 - Amend the Target Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-202> and <https://pds-jira.jpl.nasa.gov/browse/CCB-200>

Steve is leading the tiger teams.

For CCB-202 the team was planning a telecon in April, but weren't able to have it. Hopefully, next week. Working on it.

Mitch wants to be added to the team for CCB-200.

## CCB-190 - Add 'Space' delimiter to field delimiter permissible values See <https://pds-jira.jpl.nasa.gov/browse/CCB-190>

Last time we met team leader said he would think about this. Was concerned about the possible changes affecting the DSV standard.

~ Team leader recommends that we close this and start a new SCR. IMG had ideas about alternatives. Not sure on the status.

IMG is the reporter. \*\*Action Item - Ed\*\* will talk to the reporter about this.

## CCB-188 - Update IM to allow GML as acceptable Product Observational data format See <https://pds-jira.jpl.nasa.gov/browse/CCB-188>

The Flagstaff folks are looking at this. They will have something in August.

# New SCRs

## CCB-222 - Add citation text to Citation Information See <https://pds-jira.jpl.nasa.gov/browse/CCB-222>

New one from Joe. The main issue is that we want people to reference our data sets, but there's no recommended formation for how to use what we do provide. We need a formation rule and a place for it.

~ We had it in PDS3.

~ No equivalent in PDS4.

Question: How urgent is this?

Answer: Would like it in the next build.

~ There is citation text in ops - not sure how we would handle that. Something for a team to look at. In citation area we have author list and editor list. Overlap. Not sure if the whole area should be looked at. CCB-207 (Refine formation rule for "author list" and "editor list" - see <https://pds-jira.jpl.nasa.gov/browse/CCB-207>) wants formation rules for author and editor list. Maybe these should be worked together.

~ Would hope with automated DOIs - seems like combining these and that should be more forward looking.

~ Don't want them conflicting.

~ Citation text is to add a full citation. Each publication has it's own format.

Question: Don't publishers tell us how to reference their work?

Answer: They say when you reference us, it should look like this.

~ It's very controlled, so it's unlikely our formation rule would be acceptable. There is a coding language that can create a specific publishers citation, but that's a hell of a burden for PDS. Tagged fields in citation information might be the best approach - can be retrieved programmatically.

~ In any case, we need to give direction and add some of those fields. Need to give direction on what these elements are.

~ We need to decide what we want required. Need a team to work these issues. Will bring this up again next time. Urges folks to think about this and decide if you want to participate.

## CCB-221 - Add "Laboratory Analog" to target type in Target Identification See <https://pds-jira.jpl.nasa.gov/browse/CCB-221>

New one from Lynn. This would add an enumerated value for target type. It has a TA. Not sure we need a team for this.

~ ATMOS ran into issues with PDARTs archiving lab data. Want to add laboratory analog as a target. Looking for a way to let people know the data is from a lab doing simulated stuff.

It's not an analog of a lab. It should be environmental analog.

~ But it happens in a lab.

~ Seems the key concept is creating an environment - think having that word in search would help people searching.

~ People call them lab analogs. Key is that it's from a lab. Can add the word environment, but want lab analog in there.

**\*\*Action Item - Anne\*\*** will write a comment in jira.

When there's consensus we can vote.

Question: Why do we have to have a consensus?

Answer: Just want Anne to document her comment and ATMOS to consider it.

## CCB-220 - Add ability to specify many source products via table See <https://pds-jira.jpl.nasa.gov/browse/CCB-220>

This is a spin off from CCB-177 (Missing ability to specify source products and processing history - see <https://pds-jira.jpl.nasa.gov/browse/CCB-177>)

IMG isn't here today.

The question is how urgent this is.

~ Rings is withdrawing their support for this. The projects they needed it for are going to list individual source products. Need this before the next build.

**\*\*Action Item - Ed\*\*** will check urgency with IMG.

# New tiger teams?



CCB-217 (PDS4 Metadata for Identifying Data from the Heliosheath - see <https://pds-jira.jpl.nasa.gov/browse/CCB-217>) is listed as needing a team. We should start work on it if we want it for the next build.

~ Fine.

~ It will be left on the list as a reminder.

Question: Are there any SCRs people are wanting to start work on?

Answer: Kind of. CCB-210, which is part of the LDD stuff. Archive the ingest xml file. The question is if we handle it in the context of CCB-210 or if we need another SCR to handle xml.

~ There is an SCR, CCB-211, to add xml as an option.

~ Missed that.

In CCB-210 (Need to preserve the Ingest LDD file as part of a PDS4 Product - see <https://pds-jira.jpl.nasa.gov/browse/CCB-210>) one label for schematron and schema. One of the solutions was to include the ingest.

~ Probably will. Will need naming convention.

Question: Should we do CCB-211 (Add XML as an option for some non-label files - see <https://pds-jira.jpl.nasa.gov/browse/CCB-211>) first?

Answer: The issue with CCB-211 is that it has an impact on software. We need Sean involved.

~ We need a software person involved.

~ Believe that IMG and GEO will need xml for the rovers.

~ There will be data sets that are xml like, but not xml in the file extension. InSight will have some xml files for seismometer.

~ Several issues to consider. Probably not a simple problem. Unclear if the solution will affect the solution for CCB-210.

Software currently assumes xml is a label. If that's addressed in CCB-211, then it should be okay for CCB-210. CCB-211 should be worked first so CCB-210 can work off the CCB-211 solution.

~ Mitch is willing to be on the tiger team, but not to lead.

~ **Action Item** - Ed will send out email to begin to form a team for CCB-211. Ed is willing to be on it.

Question: Who from software side is a good person to target?

Answer: Ask Sean and let him decide.

Question: Anything else?

Answer: (Silence)

## # Other Business

At the tech session in February the DDWG had an action item to come up with best practices for context products. It was assigned to Mitch. He wrote a document. We could circulate it. Didn't understand the section on LIDs for context products. Didn't think we were doing that.

~ Not everyone remembers what was written, but it was discussed with Richard Chen. His preference is big to small. Just a best practice guide.

~ Not sure it's worth changing the scheme for LIDs. There's a whole appendix in the DPH on them.

**Action Item** - the document will be sent out for people to review.

~

Another thing to bring up is from a Washington University conference. We have a problem with context products. Some bodies have two context products with different LIDs. For example, the moons of Mars - Phobos and Deimos. Email was sent to Ron, Emily and Richard to alert them to the issue. Other targets have up to three LIDs for the same thing. Moons of Neptune have an issue and there's a moon of Saturn that has had a name change and has 3 LIDs. Sent all of this to EN. They suggest we have a name and alternate names. We need to catch all of these. We have one from Cassini with a spelling mistake.

SBN has been dealing with this in PDS for 28 years.

~ A problem that needs to be fixed. Can't have multiple LIDs for the same thing.

~ The problem needs to be resolved.

~ Dan has been alerted about this.

SBN is concerned that this will only help moons and planets and that there will still be name collision issues for SBN.

~ We can prevent that. Need to go off-line, but we need unambiguous name for every target.

Question: Is there a possibility of having a tiger team clean up this stuff?

Answer: Definitely need review of a lot of these things. Need to do clean up.

~ Concerned about doing this piecemeal across the nodes.

~ That's how we got here.

~

The month of May

We need to figure out the month of May. Ed will be out of the country May 13-27 (Thursdays 17 and 24).

Question: Do we want to meet next week? Wait until May 31? Comments?

Answer: We have until early August to get things in for the next build. Have to work even if we don't have a telecon. There's a lot we can do before May 31.

~ Ed will have email.

Not sure enough will be done for next week.

We want the tiger teams to make progress. Hopefully we can have one or two evotes in May.

Let's get together again on May 31.

Question: Are people okay with that?

Answer: (Silence)

Question: Other comments?

Answer: (Silence)

title: DDWG Notes 2018-05-31

layout: default

date: 2018-05-31

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# May 31, 2018

Notes by Debra Kazden

Known Attendees:

C. De Cesare, M. Gordon, E. Guinness, S. Hughes, R. Joyner, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, A. Raugh and R. Simpson

Observers: M. Banks and J. Stone

## DDWG Agenda

(Included in email sent May 29, 2018, from E. Guinness - DDWG telecon agenda, May 31 at 9:30 PT)

Deadline for next build is that SCRs must be approved by CCB by Aug. 16, 2018.

## Agenda

1) Status of SCR ready to review and maybe vote

-221 Add "Laboratory Analog" to target type in Target Identification

-218 Allow more than 2 observing system components (De Cesare)

-131 Missing constraints on Special Constants attributes (Joyner) \*\*(Discussed all, Voted to pass CCB-221)\*\*

2) Status report from tiger teams

-214 Optional trailing zeroes in ASCII Real for Table Character (Stone)

-213 Leading zeros required in ASCII Real (Stone)

-212 Add Modification History to Ingest LDD (Gordon)

-211 Add XML as an option for some non-label files (???)

-210 Add the Product Ingest class to the IM (Gordon)

-207 Refine formation rule for author list and editor list (Raugh)

-206 Add DOI to Citation Information (Raugh)

-202 Amend the Instrument class context product (Hughes)

-200 Amend the Target class context product (Hughes)

-190 Add 'space' delimiter to field delimiter permissible values (Mafi)

(Need to decide what to do with this – close and open new SCR or something else)

-188 Update IM to allow GML as acceptable Product Observational data format (De Cesare)  
(USGS-Flagstaff is working on possible substitutes to GML – report in August)  
\*\*(Discussed)\*\*

3) Recently added SCRs (short discussion)

-223 Attributes of Special Constant class

-222 Add citation text to Citation Information

-220 Add ability to specify many source products via table (Is this still needed?) \*\*(Discussed CCB-220)\*\*

4) New tiger teams?

Please review open SCRs that are not being worked. Below are items indicated as priority for the next build:

-217 PDS4 metadata for identifying data from the Heliosheath

-138 Mismatch between context object types and values of type in Observing System Component class  
\*\*(Discussed)\*\*

5) Other business?

August F2F meeting for LDD working group  
\*\*(Discussed)\*\*

# DDWG Telecon

No one from ATMOS or NAIF is on the call today.

Ed is back. This is our first meeting in several weeks. Hopes we can vote on some things.

# Item 1 - Status of SCRs ready to review and maybe vote

## CCB-221 - Add "Laboratory Analog" to target type in Target Identification See <https://pds-jira.jpl.nasa.gov/browse/CCB-221>

This one is from ATMOS, but they are not here today. The status was discussed a bit at our last telecon. Comments were made in jira - and they were responded to. There is a TA.

Question: Are people ready to vote? Any objections?

Answer: (Silence)

The vote will be a simple addition of a standard value. ATMOS and NAIF will be polled separately.

\*\*The Vote for CCB-221

IMG - Abstain

EN - Yes

GEO - Yes

IPDA - Yes

PPI - Yes

Rings - Yes

SBN - Yes

RS - Yes\*\*

Seven yes votes - that's enough to pass.

## CCB-218 - Allow more than 2 Observing System Components See <https://pds-jira.jpl.nasa.gov/browse/CCB-218>

This one also has a TA and adds one standard value (computer), reference type, LID. The TA says it's a minor change. No comments.

~ Not true. Comments were edited this morning. Not big changes, could be two small things. Could be liens.

~ A comment was also added after the last DDWG.

Question: A summary of the comments?

Answer: First was to trim the definition to just the first sentence. Second is that we are adding the value computer, but we need a definition for it.

~ Comment after last DDWG provided a revised definition in April. It's three sentences. Today's comment says to drop two of them, but there's no definition if you drop those sentences.

~ We need to make sure we are all talking about the same thing.

~ We are talking about the requested changes. Will bring up jira now.

~ Definition is in a comment from April 12.

~ Under requested changes - two enumerated. First has definition - the objection is to the word "product" and would drop the second sentence.

~ The April 12 comment was added to address that.

~ Someone sees it now.

~ Another comment was added May 8 that says this should be included in the mission area.

Last time we met the reporter wasn't here for the discussion - the idea was that they would see the comments in jira and address them.

~ Computers are involved in everything, but we don't list them as observing system components. Wants to understand why this is more than "this is the pencil that recorded the data."

~ This is a case where spacecraft has many computers to track data all the way to the storage area.

~ Unclear if the computer affects the data.

**\*\*Action Item - Everyone\*\*** needs to look at the proposed definition in jira and let Ed and Christina know so changes can be made to jira, we can address it, and we can take a vote.

~ We still need a definition of computer that says it's part of the data acquisition path.

**\*\*Action Items:\*\***

**\*\*Christina\*\*** - Address the comments from May 8 and provide definitions.

**\*\*Dick\*\*** - Look over what Christina does - maybe come up with an edited version for others to look at.

If we can converge, hopefully we can vote next time.

Question: Other comments?

Answer: (Silence)

## CCB-131 - Missing Constraints on Special Constants Attributes See <https://pds-jira.jpl.nasa.gov/browse/CCB-131>

There was a telecon on this - unsure what happened at the telecon. Email was sent that it's ready for a vote. We need a summary of what the group discussed. Email sender wasn't on the telecon, but believes CCB-131 reached a plateau months ago. Thinks this can be voted on as written, but says there are still remaining issues to do with XML parsing. Thinks we can vote on this and deal with the rest separately.

Question: What was the group discussion?

Answer: The team agreed it was good enough.

~ NO.

~ The team thinks this is ready for a vote.

~ NO. The set of required changes under bullet two is all bad. Absolutely cannot support this.

~ There's one vote. The rest of us should vote now.

~ It could fail.

~ Then either we bring in a new tiger team or we table it, but the first step is to have a vote.

~ People have concerns about how it's written. Seems to be a stalemate.

~ We should vote.

Question: Any comments?

Answer: (Silence)

Question: A thought. Basically, can we drop the objectionable part and vote on the rest? Does that make sense? If the objectionable part is bullet two?

Answer: People don't see how that can be done.

~ Others also have concerns with bullet two.

~ Concern over special constants.

Question: Confused. If we're talking about a table with ASCII string twenty characters long, then the special constants need to be padded...?

Answer: Can't do that in the current IM. It's impossible.

~ Okay, I see the concern. Can't pad the label value with white space.

~ If approaching this as a programmer - would compress the white space and do conversions. Seems like a programming problem more than a SR issue.

~ Yes, it's a problem for programmers.

Question: It seems we are trying to solve a problem no one actually presented to us since the SCR deviated over time. Hate keeping this on the books. What should we do?

Answer: The proposal addresses it.

~ If we vote, I would vote against and so would others.

~ Willing to deep six it and have a new SCR.

~ There is a new SCR. It covers the original problem this SCR was supposed to address.

~ Reporter could withdraw this.

**\*\*Action Item - Anne\*\*** will send email to Ron to withdraw this SCR.

Question: Is the tiger team okay with that?

Answer: Yes.

~ What an absolute waste of a lot of people's time.

# Item 2 - Status report from tiger teams

## CCB-213 - Make leading zero optional in ASCII Real and CCB-214 - Optional trailing zeroes in ASCII Real for Table Character

See <https://pds-jira.jpl.nasa.gov/browse/CCB-213> and <https://pds-jira.jpl.nasa.gov/browse/CCB-214>

Changes were uploaded to jira. They had a TA. The liens for CCB-214 have been addressed. Liens for CCB-213 are for the systems development people.

Question: Okay, so we think CCB-214 is done?

Answer: It is to change the definition of precision for real numbers to maximum number to the right of the decimal point.

Another Question: Have people digested this? Are there any comments?

Answered with Another Question: There are tables where the data varies in precision from one to the next?

Answer: Yes. Can post examples to jira.

~ Someone has never seen this before.

~ It's a side effect of data compiled from literature.

~ Okay. Now concerned that data collected by the same instrument precision could be truncated. Want to make sure validation would catch varying precision. It could be an optional attribute.

~ It would make it obvious for users. Optional in field character for ASCII real fields.

Sounds like there's still some work to do. Would be good to see examples.

~ Might check ASCII integer field too. If we're doing this for reals we should think what we want for integers too.

~ With integers you can do exact math.

~ Let's not try to solve this in real time. Just consider that.

Question: Changes in CCB-213?

Answer: It's a matter of making the leading zeros optional for real values. Used definition of double - converted regular expression to prose and used it. Also added to IM, with some restrictions.

Another Question: These are values less than one? This change allows a couple of options.

Answer: Someone has an issue with the wording. Sounds like zero is plural. Should only be one leading zero.

~ It could be modified for a single leading zero for less than one. Not difficult. Wondering why we are constraining ASCII reals with a pattern and not just using the schema definition and not allowing what we don't want. Seems like that would be easier.

Another Question: So put in a reference to xs double with disallowed values?

Answer: Wasn't clear why we are doing it this way.

Another Question: Schema based on xs double with a formation rule?

Answer: Yes.

~ Yes. It has a pattern. Not sure if that's the pattern that was modified.

~ Yes. From W3.

Question: Trying to understand where the pattern came from. Not from the IM specification? We need to go to the original specification.

Answer: Looking at the IM specification. Double has stuff we don't want. We can say not infinity, not NAN, just exclude what we don't want from the pattern.

~ A link was added to the standard in the SCR.

~ It's 1600 pages.

Another Question: Still confused. So the pattern in the IM specification and pattern in the schema are identical? So there is a pattern for xs double from W3 standard? And that is what was used?

Answer: Yes, but modified.

Question: What's our approach here? This is close.

Answer: \*\*Action Item - Anne\*\* will add a comment about efficiency of patterns in jira.

\*\*Jesse\*\* will respond when he sees it. He will also let the DDWG know. Hopefully we can vote next time.

Our hour is almost up.

## CCB-212 - Add Modification History to Ingest LDD and CCB-210 - Need to preserve the Ingest LDD file as part of a PDS4 Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-212> and <https://pds-jira.jpl.nasa.gov/browse/CCB-210>

Jira isn't updated yet, but the tiger team has reached a consensus on CCB-212. Turns out the solution would work in the common DD too. Looking at adding a class - DD identification Area. It might only be in ops. Will get more feedback from the tiger team. No movement on CCB-210 yet.

## CCB-211 - Add XML as an option for some non-label files See <https://pds-jira.jpl.nasa.gov/browse/CCB-211>

We asked people last time who could work on this. Only Mitch and Jesse have volunteered so far. No leader.  
~ Ron will work on it too.

This will be a hard one.

We didn't hear back about a software person for the team.

We will come back to this.

## CCB-206 - Add "doi" to Citation Information See <https://pds-jira.jpl.nasa.gov/browse/CCB-206>

The tiger team had a telecon. Leader wrote down a bunch of actions.  
~ Leader has begun work on their actions - hasn't chased others down. Not as much progress as team would have liked, but some.

CCB-207 (Refine formation rule for "author list" and "editor list" - See <https://pds-jira.jpl.nasa.gov/browse/CCB-207>) is tied in with this too. A bunch of follow up and SR reading to do still.

## CCB-202 - Amend the Instrument Class Context Product and CCB-200 - Amend the Target Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-202> and <https://pds-jira.jpl.nasa.gov/browse/CCB-200>

There have been emails and a lot of discussion on the target class. The tiger team had a meeting on the instrument class. Planning to get prototypes out.

Question: The tiger team is confused about the target class - is the issue of preferred names included in this SCR?

Answer: Hopefully not.

~ Don't want to go there.

~ The team will keep moving slowly on their small part of this.

Anne is unsure how she got on this team.

~ People are interested in the name resolver that was discussed four years ago.

~ This can be discussed next week at AOGS over an umbrella drink.

~ Mark should be invited to participate too. He'll also be there.

Someone has a comment on item three of the target class. Will send it to the team. A guideline. Has to have target type included in target. There are still more types to add.

~ Targets can have multiple types.

~ The LID formation rule includes type. Have to use values from the list. Only one type for the LID. Just for observations and stuff that's in PDS archive.

Question: If there's a case when something is an asteroid and a comet - two LIDS?

Answer: No. One LID. This has been an issue with PDS3 conversion - accidentally having multiple LIDs for the same object. Should be flushed.

~ Should work with Tanya on flushing.

~ There will be some exceptions - including one for OsirisRex.

Let's move on.

# Item 3 - Recently added SCRs

## CCB-220 - Add ability to specify many source products via table See <https://pds-jira.jpl.nasa.gov/browse/CCB-220>

This one comes from CCB-177 (Missing ability to specify source products and processing history - see <https://pds-jira.jpl.nasa.gov/browse/CCB-177>)



Rings was an advocate for this then changed mind. The question is if we need to work on this.  
~ SBN has a possible use for this - with images. Could see it for shape models in the future too. Unsure for now.  
~ If you have a solution.  
~ Reporter thinks we still need this and should keep the SCR.  
~ Okay. That's all we needed to know. If there's interest we will keep it.

#### # Item 4 - New tiger teams?

## CCB-217 - PDS4 Metadata for Identifying Data from the Heliosheath See <https://pds-jira.jpl.nasa.gov/browse/CCB-217>

This is supposed to be in the next build. We need to do it in the next few months. This is a friendly reminder to the team leader.

~ Leader will get it together.

## CCB-138 - Mismatch between context object types and values of type in Observing System Component class See <https://pds-jira.jpl.nasa.gov/browse/CCB-138>

Email was sent to Ed to point out that there are no values for lander or rover components. An SCR was submitted a long time ago about a type mismatch. Unclear if we should have a new SCR or work on CCB-138.

This came up because of Hayabusa 2.

GEO has been using a generic spacecraft even when it becomes a lander or a rover. We need to decide how much precision we want. We're also missing orbiter and others. Want people to think about this.

~ This is the bane of data management. Duplicating types is an issue. This is not surprising.

#### # Item 5 - Other business

Question: Other comments?

Answer: The Spectral LDD is ready to deliver. There is no procedure for delivering it. Want to deliver 1.7, 1.8 and 1.9 versions. Want to know the official delivery procedure for LDDs.

~ EN will get back on this.

Our next telecon will be June 14. Planning two in June - the 14 and 28.

~ Anne is not available on June 14.

In July we may need to go to weekly meetings. Have a deputy in case of vacations and such.

Question: Are we still planning an LDD stewards F2F?

Answer: NRES folks reserved the 28th for us for tech stuff.

~ We can prepare something for August.

~ It's a good time to review for the build in the spring.

Question: Any last comments?

Answer: Someone sent an invitation for an LDD tool.

~ Susie is planning to attend that.

People on tiger team for CCB-218 will stay on the line.

Ed is making agendas based on what he thinks - feel free to send him email on what you think should be on the agenda.

Dear all,

We will have a DDWG telecon this Thursday, June 14 at 9:30 PT (12:30 ET). The call-in information is list below.

**Deadline for next build is that SCRs must be approved by CCB by Aug. 16, 2018.**

Attendees:

Maria Banks, Cristina De Cesare, Mitch Gordon, Ed Guinness, Lyle Huber, Ron Joyner, Tanya Lim, Joe Mafi, Steph McLaughlin, Boris Semenov, Dick Simpson, and Jesse Stone.

Guinness called the meeting to order at 9:35 PDT. Notes from the meeting are interleaved with the agenda and are highlighted in red. Action items are **bolded**.

## Agenda

### 1. Discussion of SCRs nearly ready and maybe vote

#### -218 Allow more than 2 observing system components (De Cesare)

Ed reminded participants that Rough had submitted a late comment on CCB-218 to JIRA; De Cesare had not seen it.

There have been suggestions to JIRA on redefining Observing\_System\_Component, which could be handled as a bug fix. Guinness asked whether there were any objections to Simpson's proposed terse definition; there were none. **Cristina will update JIRA to show the change to the new definition.**

Huber wondered whether there was a reason for making this a context product rather than just a new attribute value.

Cristina has been discussing justification for the SCR with Bob Deen; she has been considering whether the issue is worth pushing as a formal SCR. **She will continue negotiations with Bob regarding addition of "computer" as an observing system component and, if so, what its definition should be.**

#### -217 PDS4 metadata for identifying data from the Heliosheath (Mafi)

Mafi believes CCB-217 is ready for a DDWG vote except for the technical assessment.

The SCR would add new domains under Primary\_Results\_Summary — "interplanetary magnetic field" and "interstellar medium"; these would allow proper labeling of data taken at great distances from the Sun. **Joe needs to add some detail to and make edits to JIRA** — for example, JIRA includes no Requested Changes. Ed wondered whether CCB members need to review new Context products, which would be prompted by approval of CCB-217; Joyner said most of the changes are not in areas that the CCB would normally review. Ed reminded DDWG that the Document Writing Team likes to have documentation included in SCRs. There were no objections to the SCR as it presently stands; Gordon requested some clarification of the work to be done, and Mafi agreed to the clarifications.

#### -214 Optional trailing zeroes in ASCII\_Real for Table\_Character (Stone)

Stone has added examples of variable precision that are already in the PDS3 archive to CCB-214. He has proposed that precision in a format attribute would indicate the *maximum* precision. Gordon had proposed adding a flag that would indicate variable precision in a field; but Stone said the Tiger Team didn't like that idea because the definition of precision would be more complicated. Gordon countered that the result would be much less validation.

Guinness wondered whether this is a 3- $\sigma$  problem — are we spending a lot of time on something that doesn't matter much? Gordon and Simpson both said that most of the data they see in tables has constant precision, but they acknowledged that tables of aggregated values, such as are created by SBN and its scientists, are important to that

community. Gordon added that some software, such as IDL, will truncate trailing zeroes whether they are significant or not. There was consensus that any change will affect the validation software. **Stone will try to find an alternative solution to the SBN problem — something that might work for SBN but that does not have the negative impacts that others see in changing the definition of precision.**

-213 Leading zeros required in ASCII\_Real (Stone)

Stone has proposed a new pattern that would allow absence of leading zeroes. Gordon had previously suggested that PDS prohibit multiple leading zeroes, but that is somewhat different; Mitch is not strongly concerned about this possibility.

Simpson asked whether we allow an arbitrary number of digits in exponents. If we're changing patterns and formation rules, we should include this at the same time. **Jesse will look at this.**

## 2. Status report from tiger teams

-212 Add Modification\_History to Ingest\_LDD (Gordon)

Gordon sent an e-mail to DDWG Tuesday on where CCB-212 is heading. There were responses from the Tiger Team, but there was nothing from anyone else. TT members are thinking along the same lines and are looking toward a future that is somewhat different for LDDs than currently. All future LDDs will be created using LDDTool; the input file to LDDTool will need a label with an Identification Area and Modification History, and the product will be archived.

-211 Add XML as an option for some non-label files (???)

-210 Add the Product\_Ingest class to the IM (Gordon)

CCB-211 and CCB-210 are linked to CCB-212; see report above for their status.

-207 Refine formation rule for author\_list and editor\_list (Rough)

-206 Add DOI to Citation\_Information (Rough)

Guinness reported that Rough has not had time to work on CCB-207 and CCB-206.

-202 Amend the Instrument class context product (Hughes)

Hughes has added a mock-up of the proposed CCB-202 to JIRA; the Tiger Team is reviewing this with a due date tomorrow.

-200 Amend the Target class context product (Hughes)

The CCB-200 Tiger Team is reviewing the current proposal. Gordon said that a fair amount of attention is being paid to LID formation with the goal of having a systematic way of identifying targets uniquely. A few legacy non-conforming LIDs would be retained. Lim noted that some targets are not astronomical targets — for example, there can be blank sky and calibrators; those should be addressed as part of the effort. Gordon said one future practice may be to withhold assigning LIDs and writing context products until they are actually needed.

## 3. Recently added SCRs (short discussion)

-226 A request to add microseconds capability to date/time formats

This is needed by BepiColombo. **Guinness asked for preliminary reviews by DDWG members by next Thursday so that he can chart a course of action.**

-225 Add a new Units\_of\_Power class (Stein)

A Phoenix TEGA bundle in preparation includes delimited tables with columns of power in watts. **Guinness asked for preliminary reviews by DDWG members by next Thursday so he can chart a course of action.**

-224 Add more values to reference\_type for facilities (Neakrase)

This would support data submissions from PDART investigators. **Guinness asked for preliminary reviews by DDWG members by next Thursday so he can chart a course of action.**

4. New tiger teams?

Let's finish that ones we are working on.

5. Other business?

Meeting adjourned at 10:35 PDT.

The next DDWG telecon will be June 28.

August F2F meeting for LDD working group

If you can't attend on Thursday, please pass this message to your backup person.

Thanks,

Ed

[Join WebEx meeting](#)

Meeting number (access code): 905 812 392

Join by phone

**+1-510-210-8882** USA Toll

DDWG Notes 2018-06-28

title: DDWG Notes 2018-06-28

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date: 2018-06-28

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# June 28, 2018

Notes by Debra Kazden

Known Attendees:

C. De Cesare, M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, A. Raugh, B. Semenov and R. Simpson

Observers: R. Chen, L. Neakrase and J. Stone

## DDWG Agenda

(Included in email sent June 26, 2018, from from E. Guinness, DDWG agenda for June 28)

1) Discussion of SCRs that are ready for a vote - Please review material in JIRA

-226 Date time format precision – bug fix.

-217 PDS4 metadata for identifying data from the Heliosheath (Mafi)

-213 Leading zeros required in ASCII Real (Stone) \*\*(Voted to pass all three)\*\*

2) Status report from tiger teams

-202 Amend the Instrument class context product (Hughes)

-224 Add more values to reference type for facilities (Neakrase)

-218 Allow more than 2 observing system components (De Cesare)

-214 Optional trailing zeroes in ASCII Real for Table Character (Stone)

-212 Add Modification History to Ingest LDD (Gordon)

-211 Add XML as an option for some non-label files (???)

-210 Add the Product Ingest class to the IM (Gordon)

-207 Refine formation rule for author list and editor list (Raugh)

-206 Add DOI to Citation Information (Raugh)

-200 Amend the Target class context product (Hughes)

\*\*(Discussed)\*\*

3) Recently added SCRs (short discussion) – Please review material in JIRA

CCB-231 Document Edition object has hidden identifier-type

CCB-230 Missing Constraints on Source Product Internal/External

CCB-229 Spurious Local Internal Reference in Array objects

CCB-228 Bad reference in definition for external source product id

CCB-227 Missing Requirements in Source Product External **\*\*(Brief mention)\*\***

4) New tiger teams?

Let's finish that ones we are working on.

**\*\*(No Discussion)\*\***

5) Other business?

August F2F meeting for LDD working group

**\*\*(Discussed)\*\***

# DDWG Telecon

In order to give latecomers a chance to dial in we will start with Item 2 on the agenda.

## CCB-200 - Amend the Target Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-200>

The SCR is in limbo. Wrestling with what the team wants to do with it by email. A separate issue is LIDs for target objects in general. Ready to go forward with flushing LIDs from the registry and replacing them, but don't want to replace ones that have been used. Don't want to duplicate LIDs again.

Question: How will you figure out what LIDs have been used?

Answer: Richard at EN has been in on all PDS4 reviews. He filtered results and Sean got all the registered ones. So, the publicly available or registered ones have been found.

Another Question: What happens if we miss some?

Answer: There will be LIDs out there without context products.

~ This is something we need to think through.

~ Nodes could look through all of their XMLs and see what targets they have and see if they are on the list.

~ ATMOS, SBN and PSI are known to have nonconforming LIDs. They have been notified. This is being driven because we have a lot of targets with multiple LIDs. The driver is to fix that. All of the context products need cleaning up anyway. Rings is the lead on HST and are working on getting all their observations in PDS. Working on an algorithm for getting all the target types in. Can live with a small number of nonconforming LIDs. Complaints are expected to only be on ones that are grandfathered and registered. Richard has generated new context products for the new LIDs. The registry will be flushed of old LIDs and new ones will be added. Want the nodes to check for ones that have been missed.

Question: Is there a notification method for PSA for people using LIDs that might go away?

Answer: Tanya.

~ No one has been informed yet. Will do it by email.

~ Tanya is an advocate of fixing these.

Question: What about people doing PDARTs, etc?

Answer: All LIDS should be checked by the node they are working with and cleared by EN.

The real question is where we are publishing the rules. We need to decide.

~ An appendix in the DPH has the current rules.

~ So we need to contact the DPH writing team.

Question: Is the context product for the moon going to change?

Answer: It's grandfathered because it's so deep in LADEE.

~ LADEE has other changes that need to be made. This would be a good time.

~ So many bundles include the moon.

~ SBN can check what they have.

**\*\*Action Item for the team\*\*** - We need to identify existing LIDS that have been archived that don't conform. Check what you have and tell Mitch before Wednesday of next week. The third of July. Trying to get this closed out.

If Lynn and Joe think we can change moon, maybe we don't want to grandfather it.

~ MAVEN is all Mars. Mars hasn't changed. Don't think the moon is included.

~ Carol at SBN might be affected for a small amount of data.

**\*\*Action Item\*\*** is for everyone to look at target LIDs and see if there are any conflicts with the list Mitch sent. Send conflicts to Mitch and Richard. Sounds like the moon is in play too.

# Discussion of SCRs that are ready for a vote

There are three SCRs to consider for a vote today. Hopefully, there are no outstanding issues.

## CCB-226 - DATE TIME formats do not allow microseconds precision (YYYY-MM-DDTHH:MM:SS.SSSSSS) See <https://pds-jira.jpl.nasa.gov/browse/CCB-226>

This is for more precision in date time format. It was pointed out that it appears that there is no limit on precision in the SR - and that was our intent. This sounds like a bug fix, but we still have to vote on it.

Question: Any comments?

Answer: We should modify the wording in the SR. A new suggestion was put in jira last night.

~ Makes sense.

~ EN wanted a list of data types that would be affected. That was put in jira too. EN also wanted patterns, but that wasn't put in jira.

~ Patterns are hard for people to understand.

Question: What do people think? Vote on it as a bug fix and let EN figure out the correct pattern?

Answer: (Silence)

Another Question: Anyone disagree?

Answer: (Silence)

Calling for a vote. The idea is to change the pattern in schema to reflect what the SR says. If you approve, vote yes.

**\*\*The Vote for CCB-226**

ATMOS - Yes

IMG - Yes

EN - Yes

GEO- Yes

IPDA Yes

NAIF - Yes

PPI - Yes

Rings - Yes

RS - Yes

SBN - Yes\*\*

A tally of the vote will be sent to Ron so this can move forward.

## CCB-217 - PDS4 Metadata for Identifying Data from the Heliosheath See <https://pds-jira.jpl.nasa.gov/browse/CCB-217>

This is the heliosheath one from PPI. Joe has done some work on jira and there is a TA.

Question to Joe: Any comments?

Answer: No.

Question to the team: Any comments?

Answer: One definition says "is" and the rest says "is a." Not sure if that's a typo.

~ Yes, it is. Will update that.

Question: Are we ready to vote?

Answer: (Silence)

**\*\*The Vote on CCB-217**

ATMOS - Yes

IMG - Yes

EN - Yes

GEO - Yes

IPDA - Yes

NAIF - Yes

PPI - Yes

Rings - Yes

RS - Yes

SBN - Yes\*\*

Ron will be told the vote tally.

##CCB-213 - Make leading zero optional in ASCII Real See <https://pds-jira.jpl.nasa.gov/browse/CCB-213>

The team has been working on this.

Question: Any last comments?

Answer: Team doesn't think we need the length restriction.

~ Just hope people don't turn in ten value exponents.

~ This data type is a restriction. Can't have exponents larger than 308. Validation seems problematic - more efficient to exclude what we don't want. Concerned about how long validation takes. Looking at schema.

~ That's what's being done in the suggested changes.

~ Not sure, practically speaking, what we can do. Double is an implementation.

~ Buy that, but min and max of the data type would exceed stuff.

Someone didn't follow all that, but the essence is using xs double and excluding stuff.

~ Yes.

The SCR has a TA.

Question: Does anyone object to voting?

Answer: (Silence)

**\*\*The Vote on CCB-213**



SBN - Yes  
RS - Yes  
Rings - Yes  
PPI - Yes  
NAIF - Abstain  
IPDA - Yes  
GEO - Yes  
EN - Yes  
IMG - Yes  
ATMOS - Yes\*\*

Again, will let Ron know the tally and it will go to the CCB.

Back to Item 2.

# Status report from tiger teams

##CCB-224 - Add more values to reference type to accommodate facility relationships See <https://pds-jira.jpl.nasa.gov/browse/CCB-224>

This seems simple - just adds some reference types, but some comments on jira suggest otherwise. Seems there might be issues with the whole context organization. This seems bigger than this SCR. Suggests we deal with this SCR as is and discuss the rest at the F2F.

Question: Any comments?

Answer: Let's do the TA rapidly.

~ Back at the February F2F we agreed we need to scrub the whole system. We probably need a team to do it.

~ Someone agrees. We need to do it so we don't keep getting these types of SCRs.

Question: Any comments?

Answer: (Silence)

Another Question: Any comments on the values, definitions, suggested changes?

Answer: People haven't looked at it yet.

\*\*Action Item for everyone\*\* - review this SCR.

Context objects usually have documents associated.

~ Someone is concerned. The initial approach was to name things class to class with a hierarchy. The issue is how specific we are going to get. It's a baseline for what we have.

Arbitrary names cause us to lose control.

~ Yes. There was a suggestion we check for obvious ones we are missing.

## CCB-202 - Amend the Instrument Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-202>

Raising the issue of instrument type again. Proposing product context of instrument class - move enumerated list into discipline DD, let provider choose the DD with the list they prefer. The team has two camps - need list versus we don't need a list. PSA has a reasonable list. Could allow a text field. Trying to manage the list by moving it to a discipline area or allowing the use of a text field. Comments added in jira nail what needs to be discussed. The team wants to continue moving forward. Getting the PSA list for an example.

Someone looked at the material and is confused. Not sure about the actual implementation. It would be helpful to have an LDD and see how context product would look. Not a big fan of this yet, but encourages the team to keep working.

~ There are two examples of what it would look like, but no DD. Waiting for PSA.

~ Sebastian's list is ready. Will send it to the tiger team and they can create the LDD.

People should put their comments in jira.

##CCB-212 - Add Modification History to Ingest LDD See <https://pds-jira.jpl.nasa.gov/browse/CCB-212>

This has been updated in jira. Pretty close. A schema is being worked on. Started at the top - added a new product and went down. All in ops. Doesn't go to the CCB, just the DDWG. Want people to look at it. Might be ready for a vote next time.

Question: So it would be a product DD that would use the ingest class?

Answer: Product DD with XML label that basically includes files from LDD tool. Adding DD identification area.

**\*\*Action Item for the group\*\*** - to look at this in jira and enter any comments.

Question: Will CCB-211 and CCB-210 be worked on after CCB-212?

Answer: Yes.

##CCB-218 - Allow more than 2 Observing System Components See <https://pds-jira.jpl.nasa.gov/browse/CCB-218>

A few changes were proposed to the team. There can be a discussion. Might be able to let it go as a bug fix. Maybe call it "on-board computer" instead of "computer" if that makes it more acceptable to people. Changes were made in jira. Open to suggestions. Have a number of justifications for this. Frustrated by other values not having any justification for being there. Most have little information at all, so struggling with what this definition should be.

Question: Is on-board significant because it does some processing and need to keep track of what computer did that?

Answer: Yes. And also pairings of instrument with computer need to be recorded.

Question: Why not use a simple attribute?

Another Question: In a mission DD? We keep coming back to that.

Another Question: Why not use an attribute in mission DD?

Answer: There are other similar things in the observing system component.

~ If this is common - in many missions - than it belongs in the observing system.

~ Someone supports putting it in the mission DD. In observing system component we would still need an attribute to identify the computer used.

~ Someone else understands the logical argument that makes computer part of the observing system. Context object has value too - describes the specifics. We could do it in the mission DD. Not sure there's an advantage to that.

~ Here it puts all the pieces together in one spot.

Question: Who is this for? Is it urgent?

Answer: Mars 20/20.

~ MSL and two PDARTs with MSL data. Unsure about InSight. Unsure how common in the future.

One advantage for observing system is documentation LID could be used more easily to find it.

Question: So, either approach has advantages. Does anyone have real heartburn against putting this in the observing system component?

Answer: Just waiting for a good definition of computer.

~ Proposed one. Got push back.

~ Please add ideas for a better definition in jira. **\*\*(Action Item to all)\*\***

##CCB-214 - Optional trailing zeroes in ASCII Real for Table Character See <https://pds-jira.jpl.nasa.gov/browse/CCB-214>

No real progress yet. Still in discussion.

##CCB-206 - Add "doi" to Citation Information See <https://pds-jira.jpl.nasa.gov/browse/CCB-206>

Team members continue to work, leader is waiting to hear back. Todd is on vacation.

~ Team needs a new action item list.

~ Original list didn't have actions for Ed because he was going on vacation.

~ People are still working on their part.

~ Request that the list is recirculated so team work on it. We want this in the next build.

# Recently added SCRs

Several new SCRs were added on Monday and then another was added. There are six more. CCB-227 to CCB-232.

**\*\*Action Item for everyone\*\*** - please look at the new SCRs and make comments.

We still need to hear about merit from EN.

Hopefully some of these are simple fixes.

# Other business?

We need to start thinking about the F2F get together and what we want to discuss. Maybe LDD issues, context products in the model. Ed is willing to capture ideas for discussion at a later time.

Question: Our meeting schedule?

Answer: Our next meeting is July 12. That's a month from freezing. We can assess how close we are to wrapping up the SCRs and what needs to be done, and decide if we might want to go to weekly meetings. Plan for July 12 for sure, then we can decide where we stand.

Question: Any comments?

Answer: (Silence)

## DDWG Notes 2018-07-26

title: DDWG Notes 2018-07-26

layout: default

date: 2018-07-26

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# July 26, 2018

Notes by Debra Kazden

Known Attendees: C. De Cesare, M. Gordon, E. Guinness, S. Hughes, R. Joyner, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, A. Raugh and R. Simpson

Observers: M. Banks, L. Neakrase (alternate for L. Huber) and J. Stone

### ## DDWG Agenda

(Included in email sent July 24, 2018, from from E. Guinness, Agenda for July 26 DDWG)

#### 1) Open Action Items from previous telecon (please try to complete these by the telecon)

1.1 CCB-229 – Anne to check with Steve whether the spurious Local Internal Reference in Array objects was left over from an early design.

1.2 CCB-228 – Comments on Requested Changes, in particular the updated definition of external source product identifier.

1.3 Suggest topics for agenda of F2F in August (see list below).

\*\*(Discussed)\*\*

#### 2) Brief discussion of recent SCRs – Please review in JIRA.

CCB-229 Spurious Local Internal Reference in Array objects (Raugh)

CCB-228 Bad reference in definition for external source product id (Raugh)

\*\*(Discussed)\*\*

#### 3) Status report from tiger teams

-207 Refine formation rule for author list and editor list (Raugh)

-206 Add DOI to Citation Information (Raugh)

-214 Optional trailing zeroes in ASCII Real for Table Character (Stone)

-212 Add Modification History to Ingest LDD (Gordon)

-211 Add XML as an option for some non-label files (???)

-210 Add the Product Ingest class to the IM (Gordon)

-202 Amend the Instrument class context product (Hughes)

-200 Amend the Target class context product (Hughes) \*\*(Brief Discussion)\*\*

#### 4) Other business?

August F2F meeting for LDD working group – we need to start planning this.

- Establishing and documenting best practices for discipline dictionaries (user guide for LDDtool).
- Updates needed for LDDtool.
- Documentation for discipline dictionaries (user guides and best practices).
- Reference types in context products.
- Coordination of context products revisions to support migrations.

**\*\*(Discussed)\*\***

#### # DDWG Telecon

#### # Open Action Items from previous telecon

## CCB-229 - Spurious Local Internal Reference in Array objects See <https://pds-jira.jpl.nasa.gov/browse/CCB-229>

The action item was that the the issue with this was going to be investigated to see if it might have been left over from an earlier design.

Array object has a local internal reference inside the data structure. It's the only one like this. Belief is that it is a holdover from an earlier design. It is still there, but not being used. It can probably go away, but we should at least think about it still being there.

~It appeared in version 1.1, very early in development. The issue is if anyone has used it. Non-backwards compatible. Not even a reference type name list.

~ It looks like a stub - never flushed out.

Question: Should we add a requested change to deprecate this?

Answer: Someone would agree to that.

~ That would be the requested change. People should double check before we vote.

**\*\*Action Item - for everyone\*\*** Have all the teams check to see if this has ever been used.

Hopefully this can get a TA and be ready for a vote in short order.

Question: When is our next telecon?

Answer: Next week. Hope to vote on this next week.

~ And then this has to go to the CCB.

**\*\*Action Item - Anne\*\*** will update jira to make the requested change to deprecate this from array.

We need a TA before next week. **\*\*(Action Item - Steve)\*\*** ~ It will be done immediately.

~

We are only discussing open action items.

~

## CCB-228 - Bad reference in definition for external source product id See <https://pds-jira.jpl.nasa.gov/browse/CCB-228>

A typo was noticed in the IM for the source product attribute. It's been discussed. The action item last time was to update jira - and there was a suggestion that we add additional text for the proposed solution.

Question: Are there other comments or can we do a TA and vote and move on? Comments?

Answer: It's a bug fix. Not in the IM proper, not to produce schema.

Another Question: Anyone disagree?

Answer: The CCB doesn't want to have to vote on this.

~ We can edit it and add the proposed text in the proposed solution. Then a TA can be done and we can vote in short order.

~ Okay.

# Status report from tiger teams

## CCB-206 - Add "doi" to Citation Information See <https://pds-jira.jpl.nasa.gov/browse/CCB-206>

This one is important. Believe that regarding tiger team work that it is done and it's ready for a DDWG discussion.

The changes are added in jira. The details are completely straight forward.

CCB-207 (Refine formation rule for "author list" and "editor list" see <https://pds-jira.jpl.nasa.gov/browse/CCB-207>) is languishing. We need to correct citation information. Pretty simple.

Someone is unsure if we specified where it would go.

~ See the example.

~ That's reasonable.

The SCR does still need a TA.

Question: Any questions or comments?

Answered with Another Question: So review this for next week?

Answer: Yes, and there will be a TA done. \*\*(Action Item- Steve)\*\*

We still need to clean up details with the author list.

~ It can be done in real time if EN can give access.

~ Go ahead.

## CCB- 214 - Optional trailing zeroes in ASCII Real for Table Character See <https://pds-jira.jpl.nasa.gov/browse/CCB-214>

Team reports no progress at this time.

## CCB-210 - Need to preserve the Ingest LDD file as part of a PDS4 Product and CCB-212 - Add Modification History to Ingest LDD See <https://pds-jira.jpl.nasa.gov/browse/CCB-210> and <https://pds-jira.jpl.nasa.gov/browse/CCB-212>

Will not be ready for the next build.

## CCB-202 - Amend the Instrument Class Context Product and CCB-200 Amend the Target Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-202> and <https://pds-jira.jpl.nasa.gov/browse/CCB-200>

CCB-200 is going to be withdrawn. Holding off for now. Team thought CCB-202 was ready, but there's a new issue for the team to discuss.

## CCB-213 - Make leading zero optional in ASCII Real See <https://pds-jira.jpl.nasa.gov/browse/CCB-213>

There has been some email between people on this one. They tried to implement it and found they need to revise the pattern.

- ~ Basically, the technique that was used doesn't work for regular expressions. Trying to find a different solution.
- ~ You can have several patterns tested separately in schema.
- ~ Good to know.
- ~ There are many patterns for date/time.

The question was asked if we need to discuss this. Seeing this as an implementation issue, not sure it needs further discussion.

- ~ There are changes to the proposed solution. We shouldn't always not discuss just because it's implementation.
- ~ That's why it was brought up.
- ~ The formation rules made sense.
- ~ Don't think we need to re-vote since this is not changing the intent.

### ## A requested discussion

There was a request that we add a type in observing system component for lander. It sounds a lot like CCB-138 (Mismatch between context object types and values of type in Observing System Component class see <https://pds-jira.jpl.nasa.gov/browse/CCB-138>) which was brought up years ago. In the context product, lander type is there. Not in observing system component. Think this is related to this SCR. Concerned with adding lander here because we usually just say spacecraft, not orbiter, rover, lander, etc.

- ~ Someone agrees. We could be going down a rabbit hole without an end.
- ~ But someone might want to know lander, rover, etc. for search. There's also an issue with naming the context object - think types are included - might affect that. Plus, there's the issue of validation. Nothing checks.

Don't think this is a simple problem.

- ~ Especially if CCB-138 is still outstanding.
- ~ We shouldn't make bandaids for missions.

Question: Someone was thinking of a new SCR to add lander. Team thoughts?

Answer: We have the same issue with instrument type. Seems to be an issue with the context objects and naming because issues keep coming up. That tells us there's an unresolved problem. We can stop patching, but don't think we should patch some and not all.

It's a fundamental problem. The type instrument host has name and type info. This is where we describe the host, but it seems people are trying to duplicate it in observing system component. It should be fixed in context products first.

- ~ The real link is the LID. The internal reference links back to the context product.
- ~ Yes, but we've been copying some of that into the label. Run into problems when we duplicate.
- ~ Yes, we run into problems with validation this way too.

There was a robust tool proposed years ago to serve up the context objects.

- ~ Should get a harvest error if you don't get the context product and LID, but that's not validation.

GEO has several MER rover bundles that use spacecraft in the label for the type. Also using spacecraft for InSight.

Some thought should be given to if we want an SCR on this.

~

Question: Are there other SCRs that people want to discuss?

Answer: The text for CCB-207 will be revised for next time.

~

Question: Dan said that we want to freeze by August 16. Is that date accurate?

Answer: Yes. That's the cut off date for CCB and implementation. August 16.

## CCB-224 - Add more values to reference type to accommodate facility relationships See <https://pds-jira.jpl.nasa.gov/browse/CCB-224>

Question: Is anything left to do to get this through?

Answer: Haven't heard from the CCB on it.

~ It hasn't gone to the CCB yet.

The only comment was about to versus with. The change was made so it would all be consistent.

We voted on this last time.

~ Need to email the CCB saying that we approved this but you don't have to vote.

~ We voted nine to zero to approve this.

Steve Joy's CCB email this week didn't include this.

~ EN thought they sent it. Will figure it out.

# Other business?

We have time reserved before the MC meeting for F2F. We exchanged emails on possible topics. Need to decide if we have the right list. Need to decide the right people to invite and decide who will lead the topics.

Question: Any comments on the list?

Answer: A suggestion for an exercise was sent. It's not included here.

~ Wasn't sure how to parse that into a topic.

~ It's more of an activity.

Our last F2F we had a good discussion. Had action items.

Someone has the minutes for the February F2F, possibly the power points for the last one - not sure if there were minutes.

Maybe we want to concatenate the context product discussion.

~ Yes, a top down review. Decide what we want to do.

~ There are two different issues to discuss - context products and reference types.

~ The context products issue is important.

We need a better process for adding reference types.

~ Need to know how they are really used.

~ We need a top down approach on context products too.

We have the minutes from the February meeting at JPL, the three day F2F. No action item list.

~ There's a google drive that has everything from other F2F.

~ SCRs came out of that meeting.

~ Many SCRs for LDDs were discussed. Scrubbed the list. Wanted larger group buy-in.

~ We are making progress and will be able to report on that.

Question: Will there be someone from EN to answer how reference types and context products are used?

Answer: Sean uses them, but his list of reference types is less than ours. He's merging them. We should see what he is doing.



~ We could be groupers or splitters.

Someone is concerned with interoperability issues. If we have to track down the context products it becomes an interoperability issue. Concerned about the archive long term.

**\*\*Action Item - Ed\*\*** will try to revise the topic list.

Heard Steve say that he will lead a LDD discussion.

Question: Will anyone else lead something?

Answer: (Silence)

~ Mitch will probably lead a discussion on LDD best practices.

We should review the material from the last F2F meetings before this meeting.

**\*\*Action Items - Mitch\*\*** will send the February notes to Ed and the group. **\*\*Anne\*\*** will send the google drive for the April meeting and a summary of the suggested activity to Ed and the group. **\*\*Ed\*\*** will try to expand the list.

Question: Ideas on who should be invited?

Answer: Susie and Ed will be there from GEO.

~ Sean should be there.

~ We have WebEx for this. Assuming most DDWG people.

~ Steve and Joe will be there from PPI.

~ Dick won't be there. Low interest in LDDs.

~ Tanya won't be there, hopes others from PSA could attend.

Question: Should Tanya invite IPDA?

Answer: We don't want to exclude people.

~ But this isn't a tutorial.

~ Tanya will just extend an invite to PSA - and Yukio.

Christina won't be there, but Jordan and Paul Ramirez from IMG will be there.

**\*\*Action Item - for each node representative\*\*** send a list of people they think are attending. Ed will send the headcount to NRES for stuff like breakfast and lunch.

Question: Do we want to invite Kate Crombie?

Answer: She used PLAID.

Another Question: And Daniella?

Answer: She's a PSA person Tanya was planning to invite.

**\*\*Action Items - Ed\*\*** will make a revised list of topics and people can say if they want to lead discussions. **\*\*Nodes\*\*** will send a headcount.

~

Back to CCB-224...

Steve Joy is sending out email to the CCB. Didn't realize that any further action was necessary.

Question: Anything else?

Answer: (Silence)

DDWG Notes 2018-08-02

title: DDWG Notes 2018-08-02

layout: default

date: 2018-08-02

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# August 2, 2018

Notes by Debra Kazden

Known Attendees: C. De Cesare, M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, T. Lim, J. Mafi, A. Raugh and R. Simpson

## DDWG Agenda

(Included in email sent July 31, 2018, from from E. Guinness, DDWG telecon, August 2)

1) This will be our last telecon before the cutoff for the next build. I will be on travel during the 08/09 time slot. We may be able to evote, if necessary, after the 08/02 to be in time for the build.

\*\*(Discussed)\*\*

2) Items for final discussion and vote:

CCB-229 Spurious Local Internal Reference in Array objects (Raugh)

CCB-228 Bad reference in definition for external source product id (Raugh)

CCB-206 Add DOI to Citation Information (Raugh) \*\*(Discussed and voted to pass all three to the CCB)\*\*

3) CCB-233 New reference types for browse products

This change request was not passed by CCB. We need to discuss how to respond to their comments.

\*\*(Discussed)\*\*

4) Other active CCBs

-207 Refine formation rule for author list and editor list (Raugh)

-214 Optional trailing zeroes in ASCII Real for Table Character (Stone)

-212 Add Modification History to Ingest LDD (Gordon)

-211 Add XML as an option for some non-label files (???)

-210 Add the Product Ingest class to the IM (Gordon)

-202 Amend the Instrument class context product (Hughes)

-200 Amend the Target class context product (Hughes)

\*\*(Discussed)\*\*

5) August F2F meeting planning. Suggested agenda and possible leads

-Establishing and documenting best practices for discipline dictionaries (complete work from previous F2F; Anne's suggestion for an exercise of label/dictionary design) – Mitch/Anne

-Updates needed for LDDtool (user's guide) – Steve

-Re-evaluate the context products model (what changes are needed?)

-Reference types (how are they used in the 'system'? How specific should the values be?)

-Data dictionary tools – SBN-PSI, others?

**\*\*(Discussed)\*\***

# DDWG Telecon

# Item 1

No one is here today from NSSDCA or NAIF.

Ed will be on vacation next week. This will be our last meeting before the freeze. It's possible we can do e-votes. We can meet August 16 to see what the tall tent poles are for the spring build.

~ No one is available to meet in two weeks from Rings.

Question: Any comments?

Answer: (Silence.)

# Items for final discussion and vote

SCRs that we discussed at our last meeting have been TAed. People were asked by email to review. Hoping we can vote now.

## CCB-229 - Spurious Local Internal Reference in Array objects See <https://pds-jira.jpl.nasa.gov/browse/CCB-229>

We discussed deprecating this for the next build at our last meeting. Jira has been updated.

Question: Do we need any more discussion?

Answer: (Silence)

Question: Any objections to voting for the proposed solution?

Answer: (Silence)

**\*\*The Vote for the proposed solution for CCB-229:**

ATMOS - Yes

IMG - Yes

EN - Yes

GEO - Yes

IPDA - Yes

NAIF - Not Here

PPI - Yes

Rings - Yes

RS - Yes

SBN - Yes**\*\***

## CCB-228 - Bad reference in definition for external source product id See <https://pds-jira.jpl.nasa.gov/browse/CCB-228>

This one is about typos for the an attribute in external source product. The fix would be to update the definition in the DPH, not listing a specific section.

Question: Any discussion?

Answer: (Silence)

Question: Any objections to voting?

Answer: (Silence)

**\*\*The Vote for CCB-228:**

ATMOS - Yes

IMG - Yes

EN - Yes

GEO - Yes

IPDA - Yes

NAIF - Not Here

PPI - Yes

Rings - Yes

RS - Yes

SBN - Yes\*\*

**## CCB-206 - Add "doi" to Citation Information** See <https://pds-jira.jpl.nasa.gov/browse/CCB-206>

This is an important one. DOI as an attribute in citation information class. Comments have been added in jira.

Three comments:

1) Definition says it's ASCII short string collapsed, not ASCII DOI.

2) Changes proposed for chapter 8 should go in chapter 9.

3) DOI user's guide outlines a cumbersome process - draft - shouldn't hold us up.

Would vote in favor of this SCR if we can have another SCR to fix these.

~ Absolutely.

So, two easy liens.

Question: Would changing the data type affect the TA?

Answer: No, that would be a bug.

Next SCR would change the data type to ASCII DOI.

Question: Is that already a data type?

Answer: Yes. A bug fix.

We could do a quick e-vote on the SCR.

~ Could do it today.

Section K.2.1.1 still has a reference to a brief description. Thought we wanted to remove that.

~ Someone doesn't remember that...looking now...

~ Said it should be removed, but it wasn't.

~ Someone is confused. Wants to know if people are looking at the CCB-206 change list.

~ Yes. It's been commented on K.2.1.1. - seems we wanted to remove the brief description, but it wasn't removed.

~ Someone's memory is that the description is not required, so we want to remove it from the example.

~ Section K.2.1.1. wasn't updated. Section K.3.1.1. has re-written paragraph. That text should be substituted for K.2.1.1.

Question: Can that be a lien?

Answer: Yes.

Another Question: And putting it in section 9? Two liens? They don't really change the scope, we can vote with two liens.

Someone moves for a vote.

~ Someone seconds.

(Liens are being fixed in real time)

There was a lien on the TA that can be removed.

**\*\*The Vote for CCB-206 with two liens -**

ATMOS- Yes

IMG- Yes

EN - Yes

GEO - Yes

IPDA - Yes

NAIF - Not Here

PPI - Yes

Rings - Yes

RS - Yes

SBN - Yes**\*\***

# Item 3 - New reference types for browse products

We voted on CCB-233 a few weeks ago and sent it to the CCB. (See CCB-233 - Need the capability to associate Browse products to other types of products - <https://pds-jira.jpl.nasa.gov/browse/CCB-233>).

It was sent back to us by the CCB. Steve Joy sent a message.

~ The message should go in Jira.

~ **\*\*Action Item - Ed \*\*** will copy the message into jira after this meeting.

The message had three points:

1) Add browse to browse association at the request of Rings.

2) CCB wanted a better definition of browse to associate. If we want to back off on including it, could, and could put in a new SCR for it later if we need it.

3) No browse to document.

Some edits were made in jira. Took out associate, added browse to browse, added a better definition.

Question: Comments?

Answer: The definition for browse to browse in jira doesn't satisfy what Steve Joy wanted. Association between two different, but equal, products.

~ Tom Stein said Mark would be willing to submit a definition.

~ Rings will take responsibility for that. **\*\*(Action Item)\*\***

Question: Comments on there no longer being browse to associate? If we have a better definition for browse to browse we could review it and do an e-vote.

Answer: The definitions are usually boiler plate.

~ We want to satisfy the CCB. Rings will fix it, but need permission to write to jira.

~ Someone has a comment on the definition - it says equal. Thinks equal opens up a lot of discussion. Not sure where the idea came from. Not sure of the word equal.

- ~ Rings will drop the word equal.
- ~ Don't include the word thumbnail. This is only for browse to browse.

Question: Is there a browse to thumbnail?

Answer: Yes. Browse to browse doesn't cover browse to thumbnail.

- ~ Rings will say it's an association to a different browse product... doing it now...

Question: Can we close this or do people need time to think about it?

Answer: Someone will abstain - needs time to read it.

- ~ Rings needs this for the build.

**\*\*Action Item - Ed\*\*** will send an explicit note to e-vote on August 7.

Question: Is that enough time to read it?

Answer: Yes.

- ~ Don't want to rush people, but it should be in time for the CCB to pass it.
- ~ Jira fixes have been made in real time.
- ~ We will get it back to the CCB in time for the next build.

# Other active CCBs

## CCB-207 - Refine formation rule for "author list" and "editor list"

See <https://pds-jira.jpl.nasa.gov/browse/CCB-207>

Question: How are we doing on this one?

Answer: Tiger team lead thinks it's good. Wrote new definitions - sent them to team members. Went through it all and made updates. Think it's pretty straightforward. No one has made comments. Maybe we can do an e-vote.

People should review it and we need a TA.

**\*\*Action Items - Steve\*\*** will do the TA and **\*\*everyone\*\*** will review it an e-vote.

The CCB needs a week. Best to give it to them by Tuesday.

Question: To plug a possible hole in the CCB discussion, the original description says it's only documented in the IM. Is there somewhere else it should be documented?

Answer: We don't document every class in the SR.

- ~ Not sure where the formation rule would go.
- ~ DPH. It sounds like a best practice.
- ~ Someone doesn't see an alternative to the DPH.
- ~ One of the complaints is that it's only in the IM. If we want it in the DPH we should edit the changes.
- ~ Suggestion - we could add something very specific about how you form these in the SR. In the DPH it's only done if reasonable folks - not all IM or DPH validated. Should go in 9I miscellaneous restraints.
- ~ It will be added as a requested change **\*\*(Action Item - Anne)\*\***

Someone is uncomfortable with this. It's in schema. If this is guidelines, we would be changing the schema.

- ~ Yes.
- ~ So it's not just in the IM, it's in schema.
- ~ Don't think we should assume where people would look and concerned about having a definition in two places.
- ~ In all builds the schema and IM are both changed.
- ~ But if it's also in the SR that's independent. Not sure how to go here.
- ~ We don't provide detailed descriptions of every attribute everywhere.

~ Multiple places from a single source.

Question: Does that answer putting it in the SR?

Answer: Formation rule in SR should be propagated. Need to make sure the reviewers aware it might not be validated.

~ We don't need this in the SR. It's accessible elsewhere - IM, schema, dictionary. All of that doesn't have to be in the SR.

Question: Specifics in the IM?

Answer: It will tell you what to do.

~ Fine if there's that level of detail in the IM.

We will e-vote on CCB-233 and 207. No clean up needed, just a TA. Will get our votes to the CCB by end of business on August 7.

Question: Can we get a reminder to vote?

Answer: Yes.

## CCB-214 - Optional trailing zeroes in ASCII Real for Table Character See <https://pds-jira.jpl.nasa.gov/browse/CCB-214>

Will be in the next build.

## CCB-210 - Need to preserve the Ingest LDD file as part of a PDS4 Product, CCB-211 - Add XML as an option for some non-label files and CCB-212 - Add Modification History to Ingest LDD

See <https://pds-jira.jpl.nasa.gov/browse/CCB-210>, <https://pds-jira.jpl.nasa.gov/browse/CCB-211> and <https://pds-jira.jpl.nasa.gov/browse/CCB-212>

These will be for the next build.

## CCB-200 - Amend the Target Class Context Product and CCB-202 - Amend the Instrument Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-200> and <https://pds-jira.jpl.nasa.gov/browse/CCB-202>

These are progressing. The tiger team voted on an issue with CCB-202 - working on making changes.

CCB-200 is going to be withdrawn.

Someone thinks we've already done what we wanted - overcome by events.

\*\*Action Item - Steve\*\* needs to send an official email to Ed and Ron to withdraw CCB-200.

~

The CCB had a discussion about what a bug fix is. To be conservative, the DDWG will send them everything we vote on and tell them if we think something is a bug fix.

Question: Schematron rules?

Answer: We will send them everything and say what we think something is.

~ Makes sense, but not how I understood it before. Thought a schema change was a bug fix.

~ The one where the rule didn't work was a bug fix. Had a typo in the definition, so bug fix. We'll give them everything until they tell us otherwise.

~

Back to CCB-207

CCB-207 says it will affect 1.10, it should say 1.11.

That was just fixed in real time.

EN is usually on top of that stuff.

# August F2F meeting planning

The bottom of the agenda has a list of topics that we want to discuss and possible discussion leaders.

Ed heard from some nodes who all is going, but not all.

Question: The list of topics at the end of the agenda - are those the topics we want to discuss? Seems that LDD best practices and rules is an important topic. There's also a suggestion to do a label and DD exercise. Are we willing to take that on?

Answer: Yes.

~ Steve said he would lead a discussion on LDD tool updates.

~ Yes - on a user's guide or tool.

~ Useful. Also other enhancements and the plan to document progress for people trying to make LDDs.

~ Steve will lead the discussion and collect action items for the group.

A new item - LDD ingest process has been drafted. A spectral DD was submitted. Emily wants to attend the meeting and have an overview of the process - what was done, what worked, what needs to change.

~ It fits with the milestones for LDDs. Needed for migration.

There was also a feeling that we need to understand context products better. Not sure if we want to discuss this and who would lead.

~ We need a system person to discuss it. We need to understand what's actually needed.

Question: Is Lynn going to be there?

Answer: Not physically. Lyle neither. Lyle and Lynn have been working on updating context products. Steve Joy is starting to work on them too.

~ Lynn could call in.

Hearing from Sean how this works with the system would be good. We can capture a list of action items of things to work on in the DDWG. Some of it applies to reference types too. Hearing how they are used by the system would help us a bunch.

Question: Will Sean be there?

Answer: Unsure. Steve and Emily will be there.

Ed would like to give NRES an approximate head count.

Jesse volunteered to talk about visualization tools for LDDs. He said he would attend (not here today).

~ Someone has looked at his tool. It's helpful, but not sure what there really is to say about it. Unsure.

Note-taking will be very important for this.

~ Ed will take notes.

Not filling the agenda would allow time to really discuss the real issues. We only have one day.

~ Yes.

ATMOS spent much of last week creating an LDD, so lots of opinions on what's needed. LDD tool didn't do it.



The list will be kept to the first few items. It would be nice if Sean could talk to us about context products.

Ed has heard from most nodes on attendance.

~ For Rings it will just be Mitch.

~ For SBN - Anne and Jesse and probably Conner and Mike Drum.

~ IPDA will attend by WebEx. Will contact Kate.

Okay, the agenda is filled and we have good leads.

Question: Any other comments?

Answer: (Silence)

DDWG Notes 2018-09-06

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date: 2018-09-06

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# September 6, 2018

Notes by Debra Kazden

Known Attendees: C. De Cesare, M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, A. Rough, B. Semenov and R. Simpson

Observers: S. Slavney and J. Stone

## DDWG Agenda

(Included in email sent Sept. 4, 2018, from E. Guinness, DDWG telecon, this Thursday, September 6, 2018)

1) Status review of SCRs the DDWG is working on.

CCB-237 Change attribute doi to data type ASCII DOI

CCB-227 Missing Requirements in Source Product External

CCB-214 Optional trailing zeroes in ASCII Real for Table Character

CCB-212 Add Modification History to Ingest LDD

CCB-210 Add the Product Ingest class to the IM

CCB-209 Correct definitions of Tagged \* Object

CCB-202 Amend the Instrument class context product

CCB-195 Update IM to improve international interoperability **\*\*(Discussed - voted to pass CCB-237)\*\***

2) Withdrawal of CCB-188 (Use GML for GIS data)

The Imaging Node will withdraw this SCR.

**\*\*(Brief Discussion)\*\***

3) Other business?

Maybe Anne can distribute her presentation about the Dictionary Meeting. If so, we can spend a few minutes to discuss.

**\*\*(Brief Discussion)\*\***

# DDWG Telecon

Susie sent out the minutes from the F2F. She is on the call today in case anyone has any questions about the notes.

Today we will quickly touch base on open SCRs we are working on and see if there has been any progress. A lot of people were on travel last week, so maybe not much progress.

## CCB-237 - Change Attribute doi to Data Type ASCII DOI See <https://pds-jira.jpl.nasa.gov/browse/CCB-237>

We discussed this last time. It's to change the data type for DOI. There is a TA with one lien, which we discussed last time. Believes this is not backwards compatible, but old labels will still be okay for past IMs. We should use this data type for the obvious data type. There was an action item for everyone to review this.

~ Someone is ready to vote. Thinks it would be nice to vote and get this one done.

~ Someone else would also like to vote.

**\*\*The Vote for CCB-237**

ATMOS - Yes

IMG - Yes

EN - Yes

GEO - Yes

IPDA - Yes

NAIF - Yes

PPI - Yes

Rings - Yes

RS - Yes

SBN - Yes\*\*

The vote is unanimous.

**## CCB-227 - Missing Requirements in Source Product External See <https://pds-jira.jpl.nasa.gov/browse/CCB-227>**

There is no team for this one yet.

Question: Any comments on this one? Anyone want to take the lead?

Answer: (Silence)

~ We will let this one set.

When this SCR was filed, reporter hoped the original team would have some input. Didn't expect this to be a whole new effort.

~ Christina says she is happy to work on it, since she was in the original work group. Has to look at it again.

**\*\*Action Item - Ed and Christina\*\*** will exchange email on this.

**## CCB-214 - Optional trailing zeroes in ASCII Real for Table Character See <https://pds-jira.jpl.nasa.gov/browse/CCB-214>**

There have been no updates to this one.

A comment from SBN - Lev reported an issue with using field format we have when we are validating data - not sure if you need to add stuff before validation. Can't validate binary. In ASCII need to validate format. This is related to this SCR because SBN plans a new SCR in approximately a week - one to validate ASCII numeric field for format and others for display purposes. If anyone is interested in this, please email Anne to let her know. **\*\*(Action Item)\*\***

It seems like we have had this discussion before.

~ Yes. Hopefully, this is it.

**## CCB-210 - Need to preserve the Ingest LDD file as part of a PDS4 Product and CCB-212 - Add Modification History to Ingest LDD See <https://pds-jira.jpl.nasa.gov/browse/CCB-210> and <https://pds-jira.jpl.nasa.gov/browse/CCB-212>**

This was discussed at the F2F. Mitch is waiting for feedback from EN.

~ EN will give feedback. **\*\*(Action Item- Steve)\*\***

**## CCB-209 - Correct Definitions of Tagged \* Object See <https://pds-jira.jpl.nasa.gov/browse/CCB-209>**

The team looked at this. Made updates, mainly to figure out what needs to be changed in the IM. Turns out there are lots of small changes needed. There's a long list. People can look at them in jira.  
See the attachments - look for the tagged digital object one. Has block diagrams. For non-digital objects it's a lot more complicated.

Question: Did the rest of the team see what has been posted?

Answer: Yes. Very impressed with what's been done. All the changes that would have been made by Protegee are done. There is lots of ripple effect.

Question: So a prototype can be done in Protegee?

Answer: Not so much a prototype as just fixing things.

~ A lot came up with composite structures. There are some real issues.

Question: Does this need to be passed by the CCB before it can be implemented?

Answer: There should be no impact on released schemas. Should just be documentation, but if there is an impact it will be brought forward.

~ Someone sees it as a fairly big bug.

~ If there is an impact, will let people know. Thinks it will just be a big clean up.

Another Question: Can a sample build be built to test it?

Answer: Yes.

~ It could maybe be queued up for a point build.

~ We will wait to hear.

## CCB-202 - Amend the Instrument Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-202>

No updates for this. Tiger team will work on it this week.

## CCB-195 - Update Information Model to Improve International Interoperability See <https://pds-jira.jpl.nasa.gov/browse/CCB-195>

Several people volunteered to work on this last time.

Question: Any comments?

Answer: Someone thinks this is another case of looking for details. Lots of nits.

~ And wondering about software and tools outside of PDS.

~ That's more tricky. Maybe another SCR.

The team will try to work on it soon.

## CCB-238 - Need the capability to associate Thumbnail products to other types of products See <https://pds-jira.jpl.nasa.gov/browse/CCB-238>

There was email this morning informing Ed that this one now has a TA asking to add standard values. Thinks there were no reference types defined for this context.

~ It's common to find that.

People are reluctant to vote now.

**\*\*Action Item for Everyone\*\*** to look at CCB-238 in jira and add comments. If people don't make comments - email Ed to know you looked. We will either discuss concerns at the next DDWG or have an e-vote if there are no issues.

## CCB-188 - Update IM to allow GML as acceptable Product Observational data format See <https://pds-jira.jpl.nasa.gov/browse/CCB-188>

Trent discussed this at the F2F. He talked about an approach to archiving GIS data using a table delimited object. It satisfies only part of the GIS need. Trent will send a formal proposal.

IMG folks proposed we withdraw CCB-188.

**\*\*Action Item - Christina\*\*** will talk to Jordan and send an official email to withdraw the SCR - so we have a paper trail.

## ## Dictionary Meeting

The meeting included people from the DDWG and others. Susie sent out notes. She is on the call today if people have any questions.

Anne made a presentation. It will be distributed to the group and uploaded to the google drive.

~ We need to come up with some action items.

Not everyone got the notes from Susie.

~ It was sent to the DD stewards list.

Susie will send it to the DDWG.

## ## New business from ATMOS

In February, we talked about context objects. Someone sent a document on it. Lynn has been working on revisions. Would like to send it around and have a discussion soon at a DDWG meeting.

Lynn hasn't been getting tech group emails or DDWG emails.

~ When DDWG2 started there was no tech group email list. It didn't happen then, can probably happen now.

Question: This list is from @jpl.nasa.gov - will it need to be reformed?

Answer: JPL email addresses are changing. Not sure if email lists will have to change.

~ **\*\*Action Item - Anne\*\*** will ask Emily and forward the answer to us all.

There will be changes. Having Emily coordinate them will be good.

Someone can't see much possibility of anything going wrong with this.

---

The next DDWG meeting will tentatively be September 20, but watch email - maybe it will be the week after that.

Question: Not next week?

Answer: Not sure how much progress we would have made.

~ Try for two weeks, maybe three.

Some of us are involved in new IM testing.

Question: Does anyone have any questions for Susie?

Answer: (Silence)~ People can let her know if they have any questions.

Ed will email an official vote tally to Ron. **\*\*(Action Item)\*\***

title: DDWG Notes 2018-09-27

layout: default

date: 2018-09-27

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# September 27, 2018

Notes by Debra Kazden

\*\*Version 2 - October 4, 2018

~ These Version 2 notes include a correction to the discussion for Agenda Item 3. CCB-214 was incorrectly listed as CCB-215 in the original notes. \*\*

Known Attendees: C. De Cesare, M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, J. Mafi and A. Raugh  
Observers: C. Kingston, L. Neakrase and J. Stone

## ## DDWG Agenda

(Included in email sent Sept. 25, 2018, from E. Guinness, DDWG telecon -Thursday, Sept 27)

1) There is one new SCR for adding a file area document supplemental to product document so that PDS3 labels can be referenced in migrated documents. If you have comments on this, please add them to JIRA.

\*\*(Briefly Discussed)\*\*

2) SCR-238 (associate thumbnail products to other types of products) needs value meanings for the proposed reference types before we can vote on this SCR. I ask that Imaging add these and let me know.

\*\*(Briefly Discussed)\*\*

3) I would like status updates on the following SCRs that we are working on.

CCB-227 Missing Requirements in Source Product External

CCB-214 Optional trailing zeroes in ASCII Real for Table Character

CCB-212 Add Modification History to Ingest LDD

CCB-210 Add the Product Ingest class to the IM

CCB-209 Correct definitions of Tagged \*-Object

CCB-202 Amend the Instrument class context product

CCB-195 Update IM to improve international interoperability

Steve has noted that we uploaded some prototype files to JIRA for CCB-202. Please review them.

\*\*(Discussed)\*\*

4) Lyle distributed a document from Lynn on context products and possible changes. Please review the document.

\*\*(Discussed)\*\*

# DDWG Telecon

Today we will mainly go over status on open SCRs that are being worked on. Hopefully, we can close some out. There hasn't been much feedback on any of them.

We will go a little out of order.

# Item 2

## CCB-238 - Need the capability to associate Thumbnail products to other types of products See <https://pds-jira.jpl.nasa.gov/browse/CCB-238>

Email was sent to Ed to say that definitions have been added.

Question: Has anyone looked at them?

Answer: They look fine.

~ Not everyone has seen them yet.

\*\*Action Item - Ed\*\* will send email to \*\*everyone\*\* to read this before we have a vote. Ed will say they are in jira and ask people to leave comments. If there are no comments we will have an e-vote.

Question: Is this plan okay?

Answer: Yes.

There are people missing today so an e-vote is the way to go.

## CCB-227 - Missing Requirements in Source Product External See <https://pds-jira.jpl.nasa.gov/browse/CCB-227>

Team leader hasn't had a chance to work on this yet. Will add it to the pile.

## CCB-214 - Optional trailing zeroes in ASCII Real for Table Character See <https://pds-jira.jpl.nasa.gov/browse/CCB-214>

Team leader hasn't had time for this yet.

Last time DDWG met a new SCR was proposed to change how the format works. Team leader will work with reporter of new SCR. Not sure when yet.

~ New SCR reporter will be on travel the next few weeks.

## CCB-212 - Add Modification History to Ingest LDD and CCB-210 - Need to preserve the Ingest LDD file as part of a PDS4 Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-212> and <https://pds-jira.jpl.nasa.gov/browse/CCB-210>

EN sent team leader several files to review - schema, model, collection. Team leader has been on travel and hasn't gotten to it all yet.

Waiting for CCB-212 to be concluded to work on CCB-210.

## CCB-209 - Correct Definitions of Tagged-\*Object See <https://pds-jira.jpl.nasa.gov/browse/CCB-209>

Team leader sent a note to Ed that this is waiting on input from EN.

~ EN has been focused on getting the build out.

~ Many of us have been busy with testing.

## CCB-202 - Amend the Instrument Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-202>

Tiger team has met several times, made updates in jira. It keeps evolving. Team is reviewing solutions. Plans to make them available to DDWG to look at. There are some attachments in jira. People can see attachment "product context instrument" to see what this will look like in a context label. What the team has evolved to within the instrument class is to use an LDD to insert your type from a list. It will validate based on schema and schematron from the LDD. See the attachments in jira for all the examples. There's a very simple class to add to the list of identifiers/types. There are two things to still think about: 1) this is still evolving, the team wants feedback, but thinks the insertion is the best solution, and 2) this might be a solution for the others too.

Question: Comments?

Answer: People should look at it and make their comments in jira.

~ Jira is good so the team can see the comments.

Question: How do we make sure that different disciplines aren't calling the same instruments different names and destroying the ability to search across disciplines?

Answer: Even if the same name is in two lists they might not be the same thing.

~ We've been trying to have a list for years. It didn't work. Now we are having lists across discipline and it will have to be coordinated, but at least it is down to the discipline level and won't have to impact the common DD each time.

Another concern is that users might not have the LDDs and misunderstand the definitions when looking at the data.

~ These are context products.

**\*\*Action Item - Everyone\*\*** look at this in jira. If there are no comments then we will move forward to the next level - TA and vote. We will see if there are comments in the next two weeks and where this goes.

**## CCB-195 - Update Information Model to Improve International Interoperability** See <https://pds-jira.jpl.nasa.gov/browse/CCB-195>

Not sure who is working on this.

Question: Any comments?

Answer: (Silence)

**#Item 1 - New SCRs**

There are two new ones.

**## CCB-239 - PDS4 doesn't allow PDS3 ODL label to be migrated as part of a Document product**  
See <https://pds-jira.jpl.nasa.gov/browse/CCB-239>

This seems straight forward. It's to add a class in documents so PDS3 labels can be included in migration to PDS4.

**\*\*Action Item - Everyone\*\*** - please look at this and add comments in jira.

**## CCB-240 - Add Units of Energy as a unit of measure** See <https://pds-jira.jpl.nasa.gov/browse/CCB-240>

Requests new units of measure class.

People are a little confused about how this works. There was a past SCR that was withdrawn. This was submitted by Conner, who is on the call. He can briefly explain.

~ Working with the Grand team on migration and identified a need for an LDD. Some of their data is energy measurements. There's no unit they can use. We need to add one so that an adequate LDD ingest file can be produced.

Question: These would be in the label?



Answer: Yes.

Another Question: The last SCR had units in a table, that's not what you are proposing?

Answer: No.

Doesn't seem like there's a modeling problem. Not sure about science.

Someone thinks this still needs some work on the requested changes and the actual unit values. Surprised this hasn't come up already from PPI.

~ It hasn't.

~ Grand team saw labels in MAVEN that used the particle LDD. Didn't quite fit what they needed.

You don't need units of energy to describe data. Not sure.

~ Someone can see labels needing this, and minimum/maximum. Should be more than just electron volts.

Question to Conner: Can you add an example to jira so people can understand the need?

Answer: Yes.

**\*\*Action Item - Everyone\*\*** look at this in jira and add comments. If there are no comments maybe we can move forward on this one too.

---

Question: Are there any comments or things people want to bring up?

Answer: (Silence)

---

# Item 4

Lyle sent Lynn's document on context products to everyone to review. People are not sure what to do with it.

The paper is a result of the February F2F discussion about improving context products so they will work and we will have a consistent way to define LIDs. ATMOS thinks this is very important. They have four SCRs ready to submit based on this.

It started with a document that Mitch wrote and the inconsistencies in the current context products. Most of the stuff in the document is as-is in black. Red text stuff needs fixing. Would like consensus on naming and hope we can have rules and a small tiger team that can move forward with this. It would be helpful to Richard Chen to have some rules to follow when people submit new context products.

Lynn did a good job on this. People need to read this.

~ It also emphasizes things that haven't happened yet - like PDARTs. Introduces ways to include some of this together, like for multiple facilities. Investigation can also have facility, and instrument host could include things like labs.

~ The statement about bidirectional pointing isn't good.

~ Bidirectional pointing should only be used for unique cases. Most should be single directional. But there are unique situations that might be bidirectional. General purpose is not a good idea.

**\*\*Action Item- Everyone\*\*** review the paper and send comments to Lynn.

The paper could still have more examples, but it's a good start. We want a consistent way to handle this.

**\*\*Deadline by end of October to review the document and send comments to Lynn.\*\***

It's fine to have people outside the DDWG review the document too.

~ Anyone who has a stake in it can review it.

~ Go ahead and show it to node people, but try to coordinate your comments.

---

Question: Anything else?

Answer: (Silence)

Our next meeting will be in two weeks - October 11.

~ Anne won't be available, but Jesse will call in.

DPS is the week of October 22. Maybe we will meet again on October 18th. Maybe we will skip the 25th because of DPS.

## DDWG Notes 2018-10-18

title: DDWG Notes 2018-10-18

layout: default

date: 2018-10-18

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# October 18, 2018

Notes by Debra Kazden

Known Attendees: C. De Cesare, M. Gordon, E. Guinness, L. Huber, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, A. Raugh and B. Semenov

Observers: J. Stone

### ## DDWG Agenda

(Included in email sent Oct. 16, 2018, from E. Guinness, DDWG telecon agenda, Thursday, October 18)

1) There were several action items from our last telecon that are listed below. Please try to work on them in preparation for our telecon on Oct 18. Note that the first action item is calling for an evote and I am still waiting on a few voters.

#### Action Items for DDWG

A. Evote on CCB-238 – Need capability to associate thumbnail product to other product types.

Please send me a vote on CCB-238 by October 18. Yes – pass to CCB, No – no pass.

B. Review CCB-239 – Allow PDS3 label to be migrated as part of a document product; and CCB-240 – Add units of energy as unit of measure.

Review these two new SCRs and add any comments in JIRA.

C. Review and comment the proposed solution / requested changes on CCB-202 – Amend the instrument class context product.

D. Review the document previously distributed by Lyle and Lynn on context products. Send comments to Lynn by October 31.

\*\*(Discussed)\*\*

2) Status review of SCRs the DDWG is working on.

CCB-227 Missing Requirements in Source Product External

CCB-214 Optional trailing zeroes in ASCII Real for Table Character

CCB-212 Add Modification History to Ingest LDD

CCB-210 Add the Product Ingest class to the IM

CCB-209 Correct definitions of Tagged-\*Object

CCB-202 Amend the Instrument class context product

CCB-195 Update IM to improve international interoperability \*\*(Brief Discussion)\*\*

3) Are there other SCRs in the queue that we should start working on?

**\*\*(Brief Discussion)\*\***

# DDWG Telecon

Several people are late or missing today.

## Action Items

There were several action items from our last telecon.

##CCB-238 - Need the capability to associate Thumbnail products to other types of products See <https://pds-jira.jpl.nasa.gov/browse/CCB-238>

We are almost done with the e-vote for this one. Waiting on one vote...  
(Person voted in real time now)

~

We had an action item to review a few change requests in 1B. There have been comments.

##CCB-239 - PDS4 doesn't allow PDS3 ODL label to be migrated as part of a Document product See <https://pds-jira.jpl.nasa.gov/browse/CCB-239>

Three comments have been made in jira. All have concerns.

Question to Christina: Are you the one advocating for this?

Answer: Thinks it's from Ron.

~ If this is staying in the queue there needs to be some work on it.

**\*\*Action Item - Ed\*\*** will email Ron about this.

Question: Other comments on this SCR?

Answer: The comments in jira reflect the issues. Not sure everyone is familiar enough with PDS3 to know that there wasn't always a one to one relationship for PDS3 to PDS4 documents. This SCR might be useless. Might make migration more confusing than necessary.

~ We need a clear justification for this. Deep archive will still have everything. Not sure we have a need for this.

Question: Any more comments?

Answer: Silence.

##CCB-240 - Add Units of Energy as a unit of measure See <https://pds-jira.jpl.nasa.gov/browse/CCB-240>

There were some comments added in jira. The author is not on the call today.

Question: Does anyone know if Grand still needs this?

Answer: Not sure, but it might be useful for nuclear spectroscopy in general. Don't want to drop it, just in case.

Someone made comments just before this call. Thought no specific units defined in LDD - which wouldn't be valid. Do need this for Grand.

~ Don't think that's what's being done. Think there's something in descriptions.

~ The proposal is to include this in the common DD.

~ Good. Think we need this.

Question: What do we need to do to complete this? Would like to have Steve check it from a modeling perspective.

Answer: Made comment in jira that Steve should check this.

Another Question: Saw two things in jira - is the base unit electron volts or something else? Also, the definitions of some units had base factors, but not all. Can people check if there are other aspects of this that need to be updated?

Answer: Someone is planning two related SCRs. Not filed yet. (Note-taker did not catch all of this comment)

Unit IDs - electron volt is rather an acceptable value for energy with the abbreviation eV. There's nothing here about that.

~ Someone saw that, a similar pattern for others.

~ It's parallel to what's been done, but not correct.

We need to clean up units of measure in unit classes. We need a new SCR.

~ Not sure we need a tiger team, hopefully it can be wrapped up in an email.

##CCB-202 - Amend the Instrument Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-202>

Tiger team has proposed a solution and included some examples. We will wait for Steve to be on the call to discuss this. People are encouraged to comment in jira.

## Context Product Document

Action item is to have comments to Lynn at ATMOS by the end of the month. The document is long. Reading it will take time.

Question: Does anyone need the document?

Answer: People have it.

# Item 2 - Updates

## CCB-227 - Missing Requirements in Source Product External See <https://pds-jira.jpl.nasa.gov/browse/CCB-227>

No updates. Hopefully by the next DDWG.

## CCB-214 - Optional trailing zeroes in ASCII \_Real for Table Character See <https://pds-jira.jpl.nasa.gov/browse/CCB-214>

No updates yet.

## CCB-212 - Add Modification History to Ingest LDD and CCB-210 - Need to preserve the Ingest LDD file as part of a PDS4 Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-212> and <https://pds-jira.jpl.nasa.gov/browse/CCB-210>

No progress expected for a few weeks.

\*\*Action Item - Mitch\*\* let Ed know when to put this on the agenda again.

## CCB-209 - Correct Definitions of Tagged-\*Object

See <https://pds-jira.jpl.nasa.gov/browse/CCB-209>

The last action item for this was for Steve, and he is not here today.

## CCB-195 - Update Information Model to Improve International Interoperability

See <https://pds-jira.jpl.nasa.gov/browse/CCB-195>

Dick is not here to discuss this today.

---

Question: Any comments on any of these?

Answer: CCB-195 is becoming more urgent for Rosetta. There will be additional SCRs for this topic. Not critical yet, but rising in importance.

Question: Are there other SCRs that we need to start working on?

Answer: Yes, CCB-211 (Add XML as an option for some non-label files, see <https://pds-jira.jpl.nasa.gov/browse/CCB-211>). Working with Catalina Sky Survey. They have xml data to archive.

~ It would be good to get that in.

This one is complicated. It was discussed at the F2F. Data file with the same extension as the label file. We need people to work on this. We might need software people.

Question: Who will be at DPS next week? Steve?

Answer: A month or so ago Eric put out an email to see who could help at DPS. Not sure where that ended up.

# Item 3

GEO is still looking at LDD best practices and will summarize them. Hoping to get to that soon.

---

Question: Anything else?

Answer: (Silence)

Our next meeting will be in two weeks, on November 1. That's a week before the MC. Hopefully, we can close a few SCRs.

\*\*\*Action Item - Ed\*\* will send a note to Ron the CCB-238 can go to the CCB.

DDWG Notes 2018-11-01

title: DDWG Notes 2018-11-01

layout: default

date: 2018-11-01

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# November 1, 2018

Notes by Debra Kazden

Known Attendees: C. De Cesare, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, A. Raugh and R. Simpson

Observers: C. Kingston and J. Stone

## DDWG Agenda

(Included in email sent October 31, 2018, from E. Guinness, DDWG telecon agenda for Nov 1 telecon)

1) Review open CCB status

CCB-240 Add units of energy as unit of measure.

CCB-227 Missing Requirements in Source Product External

CCB-214 Optional trailing zeroes in ASCII Real for Table Character

CCB-209 Correct definitions of Tagged-\*Object

CCB-202 Amend the Instrument class context product

CCB-195 Update IM to improve international interoperability

\*\*(Discussed)\*\*

2) Review the document previously distributed by Lyle and Lynn on context products. Comments were due to Lynn by October 31.

\*\*(Brief Discussion)\*\*

# DDWG Telecon

Mainly we will be going over SCRs that we have been discussing to see if there's anything we can wrap up quickly.

## CCB-241 - Spectral Dictionary does not support tabulated spectra See <https://pds-jira.jpl.nasa.gov/browse/CCB-241>

This one is not on the agenda.

This is the newest SCR and people are confused by it. Not sure which Spectral DD it refers to.

~ Anne's Spectral DD.

Usually the DDWG doesn't get involved.

~ Reporter needed a tracking mechanism and thought it would be useful for others to have a communication point.

Question: Is anything specific needed from the DDWG?

Answer: No. Just want to see how useful jira is for tracking.

~ Fine. Maybe someday there can be a separate area for LDDs.

## CCB-240 - Add Units of Energy as a unit of measure See <https://pds-jira.jpl.nasa.gov/browse/CCB-240>

Jesse and Conor are on the line. There was email on this one.

No comments yet - team is waiting to hear from Steve. Steve has an action item to respond to Jesse.

Question from Steve: What was the action?

Answer from Jesse: Need answers to questions regarding units in the IM and conversion factors and if they are supposed to be there.

~ Steve will take the action.

~ And do a TA.

\*\* Action Item - Steve\*\* - answer the questions and do a TA

Then maybe we can vote soon.

## CCB-227 - Missing Requirements in Source Product External See <https://pds-jira.jpl.nasa.gov/browse/CCB-227>

Comments were added to jira late last night. Agrees we should use schematron rules - which haven't been written yet - will be written. Also proposed a new definition for source product external.

Folks should read the comments in jira and leave their own comments. We will probably also need to update the DPH. Should suggest changes for that too. \*\*(Action Item for Everyone\*\*)

The proposed solution also needs work. Team will update that and changes for the DPH. \*\*(Action Item - Christina\*\*)

This shouldn't need extensive discussion.

## CCB-214 - Optional trailing zeroes in ASCII Real for Table Character See <https://pds-jira.jpl.nasa.gov/browse/CCB-214>

There are no updates for this one yet. The team will start work soon.

Question: Been running into tables with different entries that have different precision..?

Answer: That's the whole point of the SCR. The question is how to implement. Maybe redefine the format or add a flag to say there's variable precision.

~ It's still up in the air.

~ People have been seeing this.

~ Can't just pad with zeros because that gives the wrong answer.

## CCB-209 - Correct Definitions of Tagged-\*Object See <https://pds-jira.jpl.nasa.gov/browse/CCB-209>

Someone remembers that this one is mainly definitions in the model. Steve was going to check on that.

~ Member of the tiger team did an excellent job seeing what would be affected and then Steve was going to validate. It seems straight forward. Still needs to be done. Hopefully by the next build.

Question: Are there any actions for the DDWG?

Answer: Only if there are issues found during the validation.

Another Question: So what do we do? Need to vote?

Answer: The action item is to Steve - to validate what was found. Then we go from there. If it's straight forward, the changes can be made, if it's not, it will be brought back to the DDWG.

Changes would be at the abstract level - not in schema or in operations.



The big question is composite structures and how they fit.

Changing something in the IM should still go through the normal process.

~ If it's just a bug, it can be fixed, but if changes to the model are necessary it needs to go through the steps.

~ Good. We want to keep the normal procedure. We will be told the results after the testing.

## CCB-202 - Amend the Instrument Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-202>

Question: Did anyone comment in jira? What do we need to do to wrap this up?

Answer: No new comments in jira.

**\*\*Action Item - Everyone\*\*** put comments in jira (before our next meeting.)

There is a TA. If no comments by next meeting we will bring this for a vote.

Question: The proposal includes node specific instrument types - where are they defined?

Answer: At the discipline level.

~ So references...

~ Instrument type problem would be solved by putting enumerated lists in the discipline DDs. The real question is shouldn't all enumerated lists be out of the common DD. It would be easier to add new things. This is a possible solution for other problems too long term.

~ Someone is concerned that this requires discipline DDs to be built quickly, before the next build.

~ It's already defined and attached to the SCR.

Question: Wouldn't nodes have to do it?

Answer: One was defined for Sebastian for PSA to use. How many we would need is not determined yet. People could use Sebastian's list or nodes could do their own thing.

~ So, if a DP was preparing, he could use the PSA definitions now.

~ Yes. It subsumes the list currently in the IM.

People have two weeks to review this before we vote. **\*\*(Action Item)\*\***

## CCB-195 - Update Information Model to Improve International Interoperability See <https://pds-jira.jpl.nasa.gov/browse/CCB-195>

This one has a TA and no liens.

Question: Are we ready to vote?

Answered with more questions: Thought this would affect LDD tool. Is that accounted for? Defined namespaces there?

Answer: Related to the LDD update mentioned by IPDA. The answer is yes. This will affect LDD tool. Change will go first in namespace registry and then in LDD tool.

~ The TA only talks about the IM, not the PDS tools.

~ Good point.

~ This SCR is specifically regarding internal reference class and LIDs, not formation rules for namespaces.

Question: Is that a different SCR?

Answer: Believe Jordan had an action item to submit an SCR on that.

~ We need that other SCR.

~ Not there yet. Let's keep the focus on this as-is. It has a TA. Maybe it can be reviewed for a possible vote.

**\*\*Action Item - Steve\*\*** to review the TA.

**\*\*Action Item - Everyone\*\*** review the SCR. If no comments by next meeting we will vote to close it out.

## CCB-211 - Add XML as an option for some non-label files See <https://pds-jira.jpl.nasa.gov/browse/CCB-211>

This one is to allow XML files as a product. There's no one leading this yet, but several people need it. If anyone has any brilliant solutions to this, please post them in jira so we can get this going.

---

CCBs 210 and 212 are not on the agenda today. Hopefully, next time.

---

## CCB-208 - Add GeoTIFF as a permissible value for the attribute Encoded Image.encoding standard id See <https://pds-jira.jpl.nasa.gov/browse/CCB-208>

This was submitted by Steve for Emily.

~ There's no news on this from Emily.

Someone thought no TIFF allowed in PDS4 because it's a non-standard format, a wrapper.

~ It's allowed in encoded image.

~ Thought we argued about this and eliminated it because it's so non-standard.

~ This is not for product observational. At various reviews IMG has said TIFF is okay.

~ It's non-standard.

This is in jira. We need to deal with it.

The MC list of supported, approved formats includes TIFF.

Question: Do people want to discuss this?

Answer: (Silence)

# Context Product Document

Comments were due to Lynn/ATMOS yesterday.

~ One comment was received.

People are still reading the document - will get comments in ASAP.

ATMOS is planning to put SCRs in since they received no objections.

**\*\*Action Item - Everyone\*\*** get comments to Lynn/ATMOS ASAP.

---

DOI comments are due today.

~ Only one comment received.

~ EN needs to report on this at MC. Please get comments in ASAP. **\*\*(Action Item - Everyone)\*\***

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Question: Any other business to discuss?

Answer: (Silence)

Next meeting in two weeks.

~ Anne can't be there, but hopefully Jesse can.

DDWG Notes 2018-11-15

title: DDWG Notes 2018-11-15

layout: default

date: 2018-11-15

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# November 15, 2018

Notes by Debra Kazden

Known Attendees: C. De Cesare, M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, B. Semenov and R. Simpson

Observers: D. Hollibaugh Baker, C. Kingston and J. Stone (alternate for A. Raugh)

## DDWG Agenda

(Included in email sent November 13, 2018, from E. Guinness, Agenda for DDWG telecon on Nov. 15)

1) Vote on CCB-240 and CCB-195 unless someone raises an issue. Please review these two and be ready to vote.

\*\*(Voted to pass both to CCB)\*\*

2) Review open CCB status

CCB-227 Missing Requirements in Source Product External

CCB-214 Optional trailing zeroes in ASCII Real for Table Character

CCB-212 Add Modification History to Ingest LDD

CCB-211 Add XML as an option for some non-label files

CCB-210 Need to preserve the Ingest LDD file as part of a PDS4 product

CCB-209 Correct definitions of Tagged \* Object

CCB-208 Add GeoTiff as a permissible value for Encode Image.encoding standard id

CCB-202 Amend the Instrument class context product

\*\*(Discussed)\*\*

3) Other business. My guess is that the deadline for the Spring 2019 build will be mid-February.

\*\*(Discussed)\*\*

# DDWG telecon

## Item 1

We will vote on two SCRs if there are no major issues.

## CCB-240 - Add Units of Energy as a unit of measure See <https://pds-jira.jpl.nasa.gov/browse/CCB-240>

This had an update. Definitions of standard values were updated. People might want to take a look in jira.

~ There is a TA and the SCR looks pretty good.

~ It's one of the better ones for adding units to the IM.

Question: Are there any issues with 240 or are we ready to vote?

Answer: Someone is worried about unit being limited to eV types of things.

~ Someone else also has concerns and doesn't think it should be required.

~ eVs were just changed to joules.

~ There's no way to specify when adding to the DD. We need something. Implementation is complicated. We need a team.

eV is no longer the specified unit. It's been changes to joules.

~ Hopefully that has been noted for future discussions.

Question: Are people ready to vote? Not ready?

Answer: (Silence)

**\*\*The Vote for CCB-240**

ATMOS - Yes

IMG - Yes

EN - Yes

GEO - Yes

IPDA - Yes

NAIF - Yes

PPI - Yes

Rings - Yes

RS - Yes

SBN - Yes\*\*

The vote tally will be sent to Ron. **\*\*(Action Item - Ed)\*\***

**## CCB-195 - Update Information Model to Improve International Interoperability** See <https://pds-jira.jpl.nasa.gov/browse/CCB-195>

This is the other SCR to vote on. It has a TA. No updates were made. Importance of this is rising.

Question: Any comments?

Answer: (Silence)

Question: Ready to vote? Not ready?

Answer: (Silence)

**\*\*The Vote for CCB-195**

ATMOS - Yes

IMG - Yes

EN - Yes

GEO - Yes

IPDA - Yes

NAIF - Yes

PPI - Yes

Rings - Yes

RS - Yes

SBN - Yes\*\*

Again, it's unanimous. The tally will be sent to Ron to let the CCB know. **\*\*(Action Item)\*\***

# Item 2

## CCB-227 - Missing Requirements in Source Product External See <https://pds-jira.jpl.nasa.gov/browse/CCB-227>

No work since the previous telecon.

## CCB-214 - Optional trailing zeroes in ASCII Real for Table Character See <https://pds-jira.jpl.nasa.gov/browse/CCB-214>

Question: Have the team members talked yet?

Answer: Not yet, but working on a summary of all the options. Will post that to jira later today. **\*\*(Action Item - Jesse)\*\***

## CCB-212 - Add Modification History to Ingest LDD See <https://pds-jira.jpl.nasa.gov/browse/CCB-212>

Team is going to discuss this on Monday.

CCB-210 (Need to preserve the Ingest LDD file as part of a PDS4 Product - See <https://pds-jira.jpl.nasa.gov/browse/CCB-210>) is on hold until CCB-212 is done.

## CCB-211 - Add XML as an option for some non-label files See <https://pds-jira.jpl.nasa.gov/browse/CCB-211>

People have expressed interest in this one, but no one has offered to lead yet. Hopefully, someone can find the time.

Jesse volunteers to lead.

~ Ed offers to be on the team. Has some XML products to migrate.

Will have to talk to the software folks to see what the issues are for tools, like the validation tool.

## CCB-209 - Correct Definitions of Tagged \* Object See <https://pds-jira.jpl.nasa.gov/browse/CCB-209>

The suggested changes still need to be validated by EN with a tool. Doesn't affect anything generated, more for philosophical completeness.

When testing is done EN will report to DDWG, but it's unclear if there's anything for the DDWG or CCB to approve.

~ Need to see what the testing finds first.

~ It would change the model. We should discuss that, even if no one will understand it.

## CCB-208 - Add GeoTIFF as a permissible value for the attribute Encoded Image.encoding standard id See <https://pds-jira.jpl.nasa.gov/browse/CCB-208>

We discussed this last time. There is a proposal to allow GeoTIFF in encoded image from Emily.

~ Emily needs it for one of her projects.

Question: Can that be said in jira?

Answer: Yes. Will get information from Emily. **\*\*(Action Item - Steve)\*\***

We need to know the exact context where this would be used. IMG says TIFF is okay, but we need to clear up how this will work. Sees them in proposals a lot.

It's a MC policy for ancillary.

~ Not ancillary, documents.

~ From a file area.

We need to know what context Emily is talking about. DDWG might want constraints.

## CCB-202 - Amend the Instrument Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-202>

There have been a few comments.

~ Think we're ready to vote if people are done commenting. Surprised we have converged so fast.

~ Not everyone has reviewed it yet.

~ Maybe this is an amazing solution or maybe it's too complicated to understand. This allows the enumerated list in discipline DDs - takes it out of the PDS DD. Two nodes, GEO and ATMOS, are very interested in using this. The issue is that some amount of control is being lost. Some oversight is necessary. Maybe by the CCB. This will impact search. That's the ten thousand foot view.

~ Someone wouldn't push it to the CCB.

Someone has comments. 1) Disagrees there's any loss of control. The control belongs where this SCR puts it. 2) The CCB is not the appropriate place for control. ATMOS tried to put one in years ago and it was rejected by the CCB for no good reason.

A few months ago, someone was yelled at by the CCB cause they didn't see something. Think we should show them everything and they can decide what they want to see.

~ That was about an SCR. This is for an enumerated list for an LDD.

There's an issue of allowing more than one discipline DD, there's a possibility an instrument could have more than one name. Someone should make sure there's no overlap.

~ Not objecting to potential control, just to the potential controller.

Late to this conversation, but maybe we should have an instrument LDD.

~ Issue is the formal enumerated list. PSA didn't like the list. Made their own. Issue is not everyone likes enumerated lists. We need two lists - instruments and descriptions.

~ Someone likes the instrument LDD idea. The enumerated list can just be added to.

~ This proposal shifts a lot into multiple discipline DDs.

This is a good idea and discussion. We've had arguments in the past by purists who wanted no overlap. Think they wanted two lists. Name and description.

~ The biggest problem with enumerated lists is the time it takes to get a value added, and if we have to have a list we need to know all of the values. With instruments there will always be new types. Putting it in a separate DD cuts off the first problem - can just add a value.

So, the path forward is that maybe the team should discuss the options. The question is if we want a universal DD.

~ Team lead is willing to revisit the SCR. The question is if we want one list or multiple lists. Need to resolve that. One or more than one and oversight.

Let's have the tiger team reconvene to consider this new suggestion.

~ Okay.

**\*\*Action Item - Steve\*\*** will get the tiger team to discuss and resolve this.

# Item 3

The fall build is not out yet, but the deadline to freeze for spring is likely to be mid-February. No official date yet. If SCRs are necessary for the next build bring them forward to the group to get going. Don't delay.

Question: Other business?

Answer: Yes. The context document has been revised based on the comments. Not everyone has commented yet. Would like input from SBN. ATMOS will be putting in 4-6 SCRs. At some point probably need a thumbs up from this group that this document represents best practices.

**\*\*Action Item - Jesse\*\*** will look the document over.

Suggestion for ATMOS - send it to the document writing team and see if they have any suggestions.

---

Question: Do we want to have a tech F2F in the coming year?

Another Question: Who normally sets those up?

Answer: EN, but it wasn't discussed at the MC.

~ Ed can bring it up to Emily, Jordan and Dan in an email. See if they think there's a need for it and what it might entail and who might participate.

~ They usually ask why a tech meeting is needed. We need to decide if there's anything we need to discuss.

~ Discipline level DDs need some control over them, how you do that isn't clear. Probably discussing it in person would be better.

If anyone else has ideas about issues to hash out send Ed a note. **\*\* (Action Item - Everyone) \*\*** Ed will send email on Monday or Tuesday. He'll check with folks not here today too. **\*\* (Action Item - Ed) \*\***

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Question: Anything else:

Answer: (Silence)

Our next meeting could be November 29 if people are available.

~ People are available.

## DDWG Notes 2018-11-29

title: DDWG Notes 2018-11-29

layout: default

date: 2018-11-29

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# November 29, 2018

Notes by Debra Kazden

Known Attendees: C. De Cesare, M. Gordon, E. Guinness, L. Huber, S. Hughes, R. Joyner, D. Kazden, T. Lim, J. Mafi, S. McLaughlin, A. Raugh and R. Simpson

Observers: M. Cayan and J. Stone

### ## DDWG Agenda

(Included in email sent November 27, 2018, from E. Guinness, DDWG agenda for Nov 29)

#### 1) Review open CCB status

CCB-227 Missing Requirements in Source Product External

CCB-214 Optional trailing zeroes in ASCII Real for Table Character (see comment from Jesse)

CCB-212 Add Modification History to Ingest LDD

CCB-211 Add XML as an option for some non-label files

CCB-210 Need to preserve the Ingest LDD file as part of a PDS4 product

CCB-209 Correct definitions of Tagged \* Object

CCB-202 Amend the Instrument class context product

\*\*(Discussed)\*\*

2) What other SCRs do we need to finish for build 9b? Here are the open SCRs. Please review the list and be ready to advocate for ones needed for build 9b.

SCR	SCR Description	Created
235	Add data type ASCII BibCode	27-Jul-18
231	Document Edition object has hidden identifier-type	24-Jun-18
230	Missing Constraints on Source Product	24-Jun-18
227	Missing Requirements in Source Product External	24-Jun-18
223	Attributes of Special Constant class	1-May-18
222	Add citation text to Citation Information	24-Apr-18
220	Add ability to specify many source products via table	31-Mar-18



216	Change Uniformly Sampled units from an element to an attribute	1-Mar-18
214	Optional trailing zeroes in ASCII Real for Table Character	27-Feb-18
212	Add Modification History to Ingest LDD	14-Feb-18
211	Add XML as an option for some non-label files	14-Feb-18
210	Add the Product Ingest class to the IM	14-Feb-18
209	Correct definitions of Tagged-*-Object	24-Jan-18
208	Add GeoTiff as a permissible value for the attribute Encoded Image.encoding standard id	18-Jan-18
205	Additional constraints/best practices for discipline and project dictionaries	20-Dec-17
204	Define and enforce best practices and discipline and project dictionaries	20-Dec-17
203	Define and enforce constraints on local dictionaries to avoid confusion with key pds: namespace attributes	20-Dec-17
202	Amend the Instrument class context product	25-Nov-17
196	Restrict use of non-printing control characters in Field Character	4-Aug-17
187	Null values in Table Delimited	3-May-17
186	ASCII String and UTF8 String whitespace handling	3-May-17
170	Deprecate IEEE 754 NaN and Inf in favor of PDS4 Special Constants	27-Oct-16
167	Remove xmlns:pds recommendation from DPH	2-Sep-16
164	Display Settings not required for images	29-Jun-16

138 Mismatch between context object types and values of type in Observing System Component class 24-Nov-15  
\*\*(Not Discussed)\*\*

### 3) Other business

a. When do we meet again?

b. Possible tech session and topics.

\*\*(Discussed)\*\*

### # DDWG Telecon

The freeze for 9b is February 15, 2019. That's the deadline for the CCB. It will be upon us before we know it.

~ There was email from Jordan wanting to know the high priority items that the DDWG wants in the build.

## CCB-227 - Missing Requirements in Source Product External See <https://pds-jira.jpl.nasa.gov/browse/CCB-227>

Changes have been made in jira. Changes to schema, schematron. Won't validate if source product external doesn't have either a doi or curating facility. Documents were reviewed. SR is fine, updated DPH. Also reviewed example from the previous SCR - fine.

Question: Have people had a chance to look? Have any comments?

Answer: Someone looked, but didn't have a chance to study it.

~ Someone else says it's fine, but the proposed solution section needs to be edited to include the proposed solution.

~ Requested changes too.

~ Changes in schematron, IM and DPH.

\*\*Action Item - Christina\*\* - will make the updates.

People can review and comment over the next week. If there are no issues we can move to a vote.

~ Once the changes are made emails should be sent to the DDWG to look and there needs to be a TA.

Question: Anything else?

Answer: We need to discuss the December meeting schedule.

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### The December Meeting Schedule

AGU is the week of December 10, so no meeting on December 13. We could meet on December 6 or wait until December 20. Several people will be at the AGU. Many not available on the 6th.

There is a concern about not getting SCRs through in time for February 15.

Question: What about December 20?

Answer: Christina will be gone after December 15.

~ We need to do the 6th or 13th. Can't afford to wait later than that.

Let's try for December 6. Even if we have a reduced group. We won't vote, maybe we will call for evotes. Maybe we can also do December 20. That would be okay.

~ That works for someone.

~ We may have to do some work by email.

Question: Meetings on the 6th and 20th?

Answer: Definitely the 6th. We'll see about the 20th.

~ That's reasonable. Evotes are fine.

~ There is concern that people might not be able to evote from vacation.

~ They can try to designate someone to vote for them.

~ It's hard this time of year. We still have January to close stuff off.

## CCB-214 - Optional trailing zeroes in ASCII Real for Table Character See <https://pds-jira.jpl.nasa.gov/browse/CCB-214>

Comments have been posted in jira. The main thing was that originally there seemed to be two possibilities - redefining the 'f' format, or adding a flag indicating variable precision. There wasn't a good consensus on either option. Have come up with two more options - adding an option for multiple formats or using the 'g' format. Team thinks these could be good, if anyone likes them.

It seems that the original issue was that the SR required a real number have a trailing zero after the decimal point.

Unclear if the format statement is optional in table if this is trying to require it.

~ No.

~ Not sure how this would work with the validation program. Thinks if someone wants to use a format that's fine, but did have an issue with a migration where there were no trailing zeros and that was flagged by validation. No format statement.

~ That's a separate issue. This SCR is about requiring real numbers with a format. It will be a problem for SBN legacy data. The issue is a little more complicated because format statement is being used for two distinct purposes that conflict. There's an issue with validation. Having a format statement to check validation is useful. There should be two attributes - format and one to make sure things match format. Might want to trigger strict format validation with the second attribute.

Question: Optional? Required?

Answer: Optional for when you want strict validation.

~ Optional has no non-backwards compatibility issue.

~ The validator is programmed to do what's there now.

Someone likes this discussion, but not sure anyone would use the new attribute.

~ SBN would use it and would require pipelines to use it.

~ Rings would use it too. Concerned that precision sometimes varies, but tables are fixed. It can give a false impression of precision.

~ Human beings look at them first and can read them in accordingly. A small percentage of tables are like that.

Question: How should we precede?

Answer: We can change the SCR to add this new field and then we could discuss it further.

~ The team will discuss it **\*\*(Action Item for Jesse and Anne)\*\***

Question: Is this a new field with a flag? A new attribute? Both?

Answer: Attribute.

Question: Does anyone have heartburn over this?

Answer: Okay if it's optional.

~ It needs to be clear what the format statement is doing now and what will change. Needs to be clear.

Question: Mike Cayan is on-line. Any issues?

Answer: It seems the proposed changes just escape the max precision. The validation tool checks the precision. If changing to say the maximum allowed, that's a minor change to the tool.

~ Yes, but precision drops could be an error, not intentional.

~ Yes, but that's why I would use the attribute. Would only see unevenness if you didn't use the attribute.

So we need a new statement in the field definition that would do what the validation tool does now if present and the current would be a format for printing out values.

~ Same validation as before, but triggered by different circumstances.

We will look forward to the new write up and see if we can move forward.

Comment - the precision drop is the significant difference. It could be an error if digits are missing. Need to know what the number of digits is and validate against that.

~ The common case is that all have the same precision. Validation would check against format. Don't want to see padding out.

## CCB-210 - Need to preserve the Ingest LDD file as part of a PDS4 Product and CCB-212 - Add Modification History to Ingest LDD See <https://pds-jira.jpl.nasa.gov/browse/CCB-210> and <https://pds-jira.jpl.nasa.gov/browse/CCB-212>

Email was sent for this discussion from M. Gordon, on November 27, 2018. See attachment CCB-210-212-2018-11-27.docx

Hopefully everyone read the email. This goes back to the February tech session when we said we needed greater control. Hopefully, everyone understands LDD tool and ingest, and how XML schema, schematron and label are spit out for LDD. Those three things are a product XML schema. We're saying we want that listed in the file area of product. To get control we need it. It can't be vague. If we want to use the dictionary we need those three files - schema, schematron and the label. Want something that says this is a dictionary. Ultimately, these two SCRs can be easy if we know where we want to go. Recommendation is that we tighten the definition of product XML schema to use for all dictionaries.

Question: Are people okay with that?

Answer: Would need a new class to add external schemas for CCB-211. (Add XML as an option for some non-label files, See <https://pds-jira.jpl.nasa.gov/browse/CCB-211>)

~ Need a restriction somehow. Will need a generic product. Every new dictionary uses product XML schema now.

~ That doesn't have to be the same going forward. Confused by list. Not sure what product local dictionary comes from. Not sure why we don't just have a product dictionary.

~ Output of LDD tool.

Question: Is all output from LDD tool getting it's own label?

Answer: No.

~ Confused.

~ LDD output needs to be expanded to include all output files. Maybe two labels - one for the LDD and one for the documentation. That would be product dictionary. Need to distinguish between common and other LDDs.

~ Someone would use LDD tool for all.

~ So far, confused. The idea is that schema, schematron, JSON file etc - anything that's in the archive has a label. Adding JSON makes a lot of sense. Ingest LDD has become very important to keep.

~ Yes.

It seems that we need a top down approach and these two SCRs are at the end of the train. We need to understand the whole process of how to standardize generations of DDs and documents. Like where this is going, but to do it right we should really figure out the whole process.

~ Yes. With CCBs 210 and 212 kept having a chicken and egg situation.

Question: What bundle do LDDs belong to? What's the LID?

Answer: System bundle.

Another Question: How important is it that that be maintained?

Answer: It's the system bundle, XML schema collection, namespace XML schema.

- ~ That doesn't sound very useful. Maybe if dictionary is a collection itself and versions of it could be a bundle - namespace to name the bundle, version to name the collection. Individual pieces could be individual pieces.
- ~ Wow. Can see advantages to that. Very different path from where we were going.
- ~ An individual product for each piece.
- ~ Someone agrees there is a lot of possibility. Original intent was to label everything that is generated, which would get it all into the archive. How it's served out is a different issue.

Question: So, do we need new document formats for output types generated by LDD tool?

Answer: We would have to add additional types.

Thinking that where we started was to capture ingest LDD. It could be one product.

- ~ Want one product that includes all the pieces.
- ~ And LDD tool would write it. No ingest LDD for common.
- ~ One because no other file being written with so many peculiarities. Multiple labels will add a lot of complexity.
- ~ If we had two products, one input and one output, the steward could write the label. Label would be fairly simple. When downloading LDDs now you get a lot of files.
- ~ People get them from the website.

There are two issues, 1) how to archive and 2) how to serve to users.

- ~ Someone prefers input and output to be labelled and separate. Worried about having them floating about. The proposal will give us neatly labelled collections of files, but not sure who labels the ingest LDD.
- ~ The steward. For now, LDD tool does a lot of things that the steward would have to do - like counting bytes.
- ~ Bytes is optional. We're looking at making a very easy product, and LDD tool wouldn't read it.

Question: Will it have to go in the archive?

Answer: Yes. The label has nothing to do with the process. It's to get it in the archive. Not sure why ingest LDD with a label if it's not going in the archive.

~ It's going in the archive.

Question: Why can't the label be made when the file is generated?

More Questions: What do we do? Is there any way to solve this? Should we discuss this at a tech session? Not sure we can solve this without a wipe board and people present.

- ~ Thinks this is heading that way. Not sure what track to go down.
- ~ The process talk. Think we need to think through all the possible consequences. Need to decide what to do.
- ~ Tech session would have to be in the new year. Maybe two days on dictionaries not tied to an MC. Won't make the next build. Would give us time to consider all the possibilities.
- Would put CCBs 210, 211 and 212 on hold. Maybe others.
- ~ Not sure CCB-211 is intertwined with this, unless we go a certain approach.
- ~ One of the problems is that ingest LDD is an XML file.

The action is for Ed to send Emily email that the DDWG is wrestling with the entire dictionary process and wants a two day tech session to solve these problems. **\*\*Action Item - Ed\*\*** ~ Works for me.

- ~ We should do some prototypes.
- ~ We should do homework up front.
- ~ Maybe we can give a committee a two week lead up.

**\*\*Action Item - Ed\*\*** will discuss having a tech session with Emily.

IPDA noticed there are a lot of systematic issues - like with internal references, units. Need to be dealt with too.

**\*\*Action Item - Tanya\*\*** will put her thoughts in this in an email to Ed.

## CCB-211 - Add XML as an option for some non-label files See <https://pds-jira.jpl.nasa.gov/browse/CCB-211>

Jesse volunteered to lead this.

There are three main points:

- 1) People want to archive XML products.
- 2) We need to figure out a way of naming XML files that makes sense.
- 3) Validation with validate tool can work. What is validated can be controlled with an exclude list or something like that.

People are glad Jesse took this on.

~ Comments have been added in jira.

Mitch is listed as reporter on this SCR. Says he would be happy to have it changed to Jesse. Also encourages Jesse to have Mike C. in his work group.

## CCB-202 - Amend the Instrument Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-202>

The tiger team had a telecon yesterday. Last time, the DDWG asked them to discuss having one instrument type dictionary list. It's a great team, reached immediate consensus. End result is they all agree there should be one instrument LDD. Ready for discussion and vote.

**\*\*Action Item - Everyone\*\*** - look at the SCR. We will discuss it next week.

One issue is who the steward will be and another is how we add values. One idea was a small team could be steward. Maybe a PDS person and a PSA person. Sebastian volunteered.

Please look at the SCR in jira.

Stewards will have the responsibility of figuring out the process.

Sounds like we are shuffling off DDWG work to a committee - a new entity.

~ We have many LDDs with many different stewards.

~ This solves the time lag for updates.

~ We could have a rule that adding new values gets top priority when the DDWG meets. Not sure about adding another branch is helpful. These comments will be added in jira.

---

We will meet next week, on December 6.

~ Not everyone is available.

~ We will discuss the list of SCRs.

~ Someone is concerned about SCRs that haven't seen the light of day in years.

Question: Any comments?

Answer: (Silence)

## DDWG Notes 2018-12-06

title: DDWG Notes 2018-12-06

layout: default

date: 2018-12-06

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# December 6, 2018

Notes by Debra Kazden

Known Attendees: C. De Cesare, M. Gordon, E. Guinness, L. Huber, R. Joyner, D. Kazden, J. Mafi, S. McLaughlin and A. Rough

Observers: S. Slavney and J. Stone

### ## DDWG Agenda

(Included in email sent December 4, 2018, from E. Guinness, DDWG agenda, Dec 6)

0) Please let me know if you cannot attend.

1) Review open CCB status

CCB-227 Missing Requirements in Source Product External

CCB-214 Optional trailing zeroes in ASCII Real for Table Character (see comment from Jesse)

CCB-202 Amend the Instrument class context product **\*\*(Discussed 227 and 214)\*\***

2) What other SCRs do we need to finish for build 9b? Here are the open SCRs. Please review the list and be ready to advocate for ones needed for build 9b.

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235	Add data type ASCII BibCode	27-Jul-18
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227	Missing Requirements in SourceProductExternal	24-Jun-18
223	Attributes of Special Constant class	1-May-18
222	Add citation text to Citation Information	24-Apr-18
220	Add ability to specify many source products via table	31-Mar-18
216	Change Uniformly Sampled units from an element to an attribute	1-Mar-18
214	Optional trailing zeroes in ASCII Real for Table Character	27-Feb-18
212	Add Modification History to Ingest LDD	14-Feb-18
211	Add XML as an option for some non-label files	14-Feb-18

210 Add the Product Ingest class to the IM 14-Feb-18

209 Correct definitions of Tagged-\*Object 24-Jan-18

208 Add GeoTiff as a permissible value for the attribute Encoded Image.encoding standard id 18-Jan-18

205 Additional constraints/best practices for discipline and project dictionaries 20-Dec-17

204 Define and enforce best practices and discipline and project dictionaries 20-Dec-17

203 Define and enforce constraints on local dictionaries to avoid confusion with key pds: namespace attributes 20-Dec-17

202 Amend the Instrument class context product 25-Nov-17

196 Restrict use of non-printing control characters in Field Character 4-Aug-17

187 Null values in Table Delimited 3-May-17

186 ASCII String and UTF8 String whitespace handling 3-May-17

170 Deprecate IEEE 754 NaN and Inf in favor of PDS4 Special Constants 27-Oct-16

167 Remove xmlns:pds recommendation from DPH 2-Sep-16

164 Display Settings not required for images 29-Jun-16

138 Mismatch between context object types and values of type in Observing System Component class 24-Nov-15

\*\*(Discussed - will begin work on CCB-235)\*\*

### 3) Other business

a. When do we meet again?

b. Possible tech session and topics.

\*\*(Discussed)\*\*

### # DDWG Telecon

We are missing several people and someone needs to leave early today.

## CCB-214 - Optional trailing zeroes in ASCII Real for Table Character See <https://pds-jira.jpl.nasa.gov/browse/CCB-214>

SCR has been updated in jira.

~ Field format was split into field format and validate format. Believes the main concern is that you can't just drop field format without breaking backwards compatibility. Used a lot of language from field format.

Concern: This seems to refer to field character, didn't see field delimited - thought it would also apply to that.

~ That can be fixed. Didn't see the problem in field delimited originally.

Question: If it's optional and we have the delimited format populated, will that break it? Guess it would be empty or have to conform for validation.



Answer: It's possible to have character data in a binary table. It's valid. Can exclude it. Would have to have fixed format. Part of it is the numbers are in binary, there's not a lot you can do. Would make sense to start with tighter constraints. If utility for it in delimited tables, then yes, add it with a note that the logic would have to be different for validation. Probably not for field binary.

~ Character can be a subset of binary. Valid character types valid in field binary, just not usually used.

~ We should stick to field character. Not sure if there's an issue for delimited.

Question: What does PPI think? Is it worth adding field delimited?

Answer from PPI: Instinct is that it wouldn't matter. You use field delimited because you can have variable widths. Will think on it, but initial thought is not to do it.

~ Someone agrees. We will start with field character if people are okay with that.

Everyone needs to review this.

It needs a better definition. In requested changes, put in a definition for validation format. In jira.

~ There is a definition in the attachment.

~ Not in the PDF.

~ It can be put there.

**\*\*Action Item - Jesse\*\*** will add the definition for validation format in jira.

People should give this a final review. **\*\*(Action Item)\*\***

**\*\*Action Item - Steve\*\*** will update the TA.

If there are no issues we will vote next time.

~ Fine.

**## CCB-227 - Missing Requirements in Source Product External** See <https://pds-jira.jpl.nasa.gov/browse/CCB-227>

This has been updated in jira. There are attachments.

Question: Have people reviewed this? We will treat it like the last one - people will review it, Steve will do the TA and then we will move to a vote next time. Anyone reviewed the changes yet?

Answer: (Silence)

**\*\*Action Item - Everyone\*\*** will give this a final review and **\*\*Steve\*\*** will do the TA.

**## CCB-211 - Add XML as an option for some non-label files** See <https://pds-jira.jpl.nasa.gov/browse/CCB-211>

Updates were made in jira. A new class was defined for XML data. Took XML data and added an ID. Wants to require that schema products be archived with the data. A new class to define non-dictionary schemas. Also working on changes for the SR.

There is XML data and we don't want it in the PDS. We need to be careful of terminology. Need to be careful of collisions. Concerned.

~ **\*\*Action Item - Jesse and Anne\*\*** will work on that.

There are two issues. First, if schema is going to be required. It's an open issue to think about. Maybe a document to describe the format. And two, name collisions.

~ Thinking about it - thinking of a .pds4 extension instead of .xml.

~ That will make life hell for our users because of mime type. Tricky.

We need some straw-man ideas to throw darts at. Rovers have a slightly changed extension, .rml, and seismic data uses .sxml.

~ If our labels were something besides .xml it wouldn't be a problem, but that's what we chose. We need to figure out how this affects validation and how that's affected by the file name.

Having to check to see if something is a label or a file might be a huge impact. Tools assume .xml files are labels. NSSDCA too.

Question: Is it acceptable to force our users to rename their files? To change the extension?

Answer: It makes third party tools inaccessible. Could be acceptable. Not a fan of mandatory file naming conventions, but this might be a time for that.

Two things: 1) We are bound to have more cases of data or documents in XML, and 2) It's arrogant of us to think we can use XML and no one else can. We should have a few options.

~ Someone tried to suggest eight years ago that we can't appropriate XML for PDS. Feeling smug.

~ We need to either change the data or label extension or have software that looks for XML.

~ Not sure we can retrofit for version 1.

~ For data that has to end with the XML extension, maybe we need a different label extension for the labels.

~ That can be worked out.

~ It's still a problem for third party tools.

**\*\*Action Item\*\*** - Query people and try to come up with more ideas.

**## CCB-202** - Amend the Instrument Class Context Product See <https://pds-jira.jpl.nasa.gov/browse/CCB-202>

Steve isn't here to report on this today.

**## Other Business**

There are several new SCRs dealing with the context model for people to check out. **\*\*(Action Item)\*\***

There are five new ones. Most shouldn't be controversial. They are wanted in the next build.

People need to look at them in jira.

---

There is a list of SCRs in the agenda. People have not come forward to say any of them need to be in the next build.

CCB-235 should be in the next build. (Add data type ASCII BibCode for use in data tables and local dictionary attribute definitions, See <https://pds-jira.jpl.nasa.gov/browse/CCB-235>). This should be trivial. Is a hold up for our IPDA partners. They want this type for their mission classes. It has a well defined pattern and can be validated. Unless there's an objection, and I can't think of any reason not to have it, it seems reasonable. Can't see a way for it to be abused.

Question: Others?

Answer: That was the one that stood out.

Another Question: Anyone else?

Answer: (Silence)

**\*\*Action Item - Everyone\*\*** look at CCB-235 in jira. Add comments. It will be added to the discussions. We'll hope to finish it for the next build.

~ It will need a TA.

~ We will see if any changes are needed first.

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Question: Did people see the tech session email from Emily? Emily is trying to find dates at the end of February.

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When we will meet again

Question: Are people available on December 20?

Answer: Not Christina, Anne or Debbie. Mitch will be available.

We will schedule a meeting. Probably a short one. Changes need to be off to the the CCB by early February.

Question: Anything else?

Answer: (Silence)

DDWG Notes 2018-12-20

From: guinness@wunder.wustl.edu

To: pds-ddwg2@list.jpl.nasa.gov

Subject: DDWG agenda for Dec 20.

Date/Time: 2018-12-18T12:23:00 PST

All,

We will have a DDWG telecon this Thursday, December 20 at 9:30 PT (12:30 ET). The call-in information is list below. **The deadline for approval of SCRs to be included in build 9b is February 15, 2019. Notes from the meeting are highlighted in red and interleaved with the agenda that had been distributed two days earlier. Action Items are in bold.**

Attendees: David Hollibaugh Baker, Mike Cayan, Mitch Gordon, Ed Guinness, Lyle Huber, Steve Hughes, Tanya Lim, Joe Mafi, Stef McLaughlin, Paul Ramirez, Anne Raugh, Dick Simpson, and Jesse Stone.

Agenda

Guinness called the meeting to order at 12:31 EST.

#### 1. Review CCBs ready for a vote:

CCB-227 Missing Requirements in Source\_Product\_External:

Guinness mentioned a typo (identified by Simpson) in the proposed change the DPH. Raugh is the JIRA Reporter; but she doesn't have access to CCB-214 on JIRA, so she can't make edits. Simpson suggested voting on the SCR with a lien; Guinness concurred. Ramirez reported later that he had made the edits and placed the new version of the DPH text in the Attachments section of the CCB-227 JIRA page. Votes:

Yes: Huber, Ramirez, Hughes, Guinness, Lim, Mafi, Gordon, Simpson, Raugh.

No: none

Not Voting: NAIF

Guinness declared the SCR passed. **He will check with NAIF for a possible late vote, then forward the results for CCB action.**

CCB-214 Optional trailing zeroes in ASCII\_Real for Table\_Character:

Simpson had some comments, which he posted in JIRA; Stone has responded. The revised SCR now says that <validation\_format> and <field\_format> cannot appear in the same class. Raugh countered that we might actually want to allow both attributes for strings; in her view, <field\_format> is for display, while <validation\_format> is for validation, and they can co-exist. Simpson is not ready to vote because he doesn't understand what we mean by 'validation' in this context, particularly with non-numeric fields. Raugh wondered whether any other DN cares about what we mean by 'human readable' formats. Gordon likes the new attribute; he thinks this will help people when reading files.

Hughes noted that the original issue was zero padding on the right for floating point numbers and whether the number of digits implies precision. Raugh said SBN has tables with values from many sources; the tables tend

to have the same number of digits (from padding) even though the precisions may vary greatly. Simpson suggested adding a field with 'standard deviation' to indicate precision; but Raugh said she is not willing to change tables to improve performance of a validating tool. **Stone will continue refining the SCR; Guinness will plan a vote for the next meeting.**

## 2. Status of active CCBs

### CCB-235 Add data type ASCII\_BibCode

The SCR would allow references using a different reference system, which has been requested by a European colleague. Guinness has seen no comments on the SCR in JIRA. He noted there is a formation rule in the Proposed Solution, but it does not appear in the Requested Changes. There was agreement that Proposed Solution is a general statement, while Requested Changes contains the technical details for implementation. Raugh said she would write the Requested Changes, including the code for implementation. Stone said he could help; **Guinness gave Stone the action since Raugh is on 'vacation'.** It would be desirable to have CCB-235 ready for the next build.

### CCB-211 Add XML as an option for some non-label files

Stone has posted some ideas on avoiding name collisions. An XML 'data' file would presumably have extension \*.xml while its label would presumably be the base name with extension \*.xml — that is, the same file name. One solution is to add prefixes or suffixes to base names when the data object is an XML file. **Everyone should review the current contents of CCB-211 in JIRA.**

### CCB-202 Amend the Instrument class context product

CCB-202 was discussed most recently two meetings ago. The proposed solution is to have one LDD maintained by a TBD steward that is dedicated to instrument types. Guinness and Hughes believe that the SCR is ready for a vote. Simpson has commented that the process is flawed: the SCR only moves work from DDWG to an LDD committee, adding bureaucratic structure while not changing the resources needed for effective action. Guinness wondered whether we should propose a steward before the vote; Sebastian (of PSA) has volunteered, and Lim said PSA is willing to lead the effort. Huber has volunteered to be on a 'steward team' previously. Guinness noted that a TA has been written, but Huber believes it is out of date. **Hughes will update the TA.** When revised, **Guinness will put the SCR forward for a vote, possibly by e-mail.** Hughes requested an immediate vote, but Gordon was not ready and no further action was taken.

## 3. CCBs about Context products and associated LIDs

### Atmospheres Node submitted CCBs 242-246. Comments?

No comments were posted on JIRA, but Simpson said he wondered whether changes to the Spectral LDD (CCB-242) should be worked within the 'spectral' community rather than in DDWG. He needs to study CCB-244, 245, and 246 for the possible consequences resulting from deprecating enumerated values. Guinness wants everyone to review the SCRs; they will be brought to a vote soon. Huber would like TAs since there don't seem to be any voiced objections; **Hughes will provide TAs on all five.**

### Another new submission (CCB-247):

Simpson has requested that "Radio Science" be returned to the list of enumerated values for Instrument.type; it was apparently deprecated during a previous update. Guinness conducted a straw vote that "Radio Science" be restored as a valid Instrument.type but with the mechanism to be worked later:

Yes: Ramirez, Hughes, Guinness, Lim, Mafi, Gordon, Simpson, Raugh

No: none

Not Voting: NAIF

Abstain: Huber (he objects to the TBD method; CCB-202 should be the solution)

**Guinness will forward the results of the CCB-247 vote to the CCB**, possibly setting a new record for DDWG throughput speed.

#### **4. Other business**

- a. When do we meet again? Jan 3 or Jan 10. Simpson is OK with either date. CIS will not be back at work on January 3. Huber said many will be back at work on the 3<sup>rd</sup>, but having a DDWG so quickly after the holidays may not be convenient. **Guinness scheduled the next telecon for January 10.**
- b. Emily Law is scheduling a Tech Session face-to-face meeting to discuss LDD issues. Gordon said the DDWG should begin roughing out an agenda early next year. Guinness doesn't want to be stuck with organizing and running the meeting, but he is OK with proposing topics. Lim said she would like the dates to be close to the LPSC dates so she can combine travel. As presently scheduled, the Tech Session will be two weeks before LPSC, in which case, **Lim will try to find someone else to attend the F2F.**

#### **5. Adjournment**

Guinness adjourned the meeting at 13:25 EST.

If you can't attend Thursday, please pass this message to your backup person.

Thanks,

Ed

[Join WebEx meeting](#)

Meeting number (access code): 905 812 392

Join by phone

**+1-510-210-8882** USA Toll