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#March 10, 2016

Notes by Debra Kazden

Known Attendees:

R. Chen, M. Gordon, E. Guinness, S. Hardman, L. Huber, S. Hughes, C. Isbell, R. Joyner, D. Kazden, T. King,
J. Mafi, S. McLaughlin, L. Neakrase, C. Phillips, A. Raugh, R. Simpson and J. Stone

##Meeting Agenda and Summary

1) CCB/SCR Statuses

-- CCB-145: Improve statement of when a new version ID must be used (M.Gordon)

-- 20160301: Queued_for_Implementation: revision of SR

-- e-Vote PASSED: 5 Yes (ATM, GEO, IMG, IPDA, RMS), 2 Failed to vote (PPI, SBN)

(Discussed)

2) Task Statuses - 5 Minutes each

(Quick Updates)

3) SCR Issues to discuss:

-- CCB-65: Need additional Target Identification/type values (A.Raugh)

- URGENT - enhancement / improvement
- Open:
 - (1) Needs Proposed Solution
 - (2) Needs Requested Changes
- 20150730: DDWG -- Anne to think about working the solution;
- 20150813: formed WG: J.Mafi, Ed.G, A.Raugh, RJ
- ** (Not Discussed) **
- CCB-77: Augment Product Update with <File Area Update> - S.Hughes
 - Open: under DDWG discussion
 - has been TA'd
 - 20141002: There is now a tiger to work Update in general that will start in a few months
 - 20150519: Waiting for M.Gordon ?
 - 20150922: DDWG discussion topic; SCR needs to be updated by Mitch
 - ** (Discussed under Task Statuses) **
- CCB-100: Remove Array 2D and Array 3D from File Area. (T.King)
 - Open; Under_DDWG+Review: 20150201
 - 20150519: sent email to C.Isbell asking for input (since E is not available)
 - 20150602: sent email to C.Isbell asking for input (since E is not available)
 - 20150604: C.Isbell entered IMG comment -- waiting for Steve TA
 - 20150609: TA'd by Steve with recommendation to withdraw SCR
 - 20151007: J.Padams requested to table this until after Insight; Maybe end of November/early December?
 - ** (Not Discussed - Tabled until Jordan is present) **
- CCB-125: The bit mask attribute seems to be misplaced and possibly missing where needed (A.Raugh)
 - 20150915: Open; needs DDWG discussion
 - 20151008: Jordan to provide example label that uses bit mask
 - ** (Not Discussed - Tabled until Jordan is present) **
- CCB-131: Missing constraint on Special Constants attributes (A.Raugh)
 - 20150922: Open

-- 20160223: under DDWG discussion

(Not Discussed - will discuss in future)

-- CCB-132: Units of Map Scale Improperly includes pixel/deg as a unit (J. Padams)

-- 20151007: Open

-- 20151007: Email to Jordan to provide explicit changes to IM

-- 20151008: I updated SCR to include specific changes required; ready for Steve to TA

-- 20151012: TA'd; email to Emily and Dick to review

-- 20151013: Email from Jordan to pull back for further discussion / work

-- 20151022: Jordan to finalize new & improved proposal before next DDWG

-- 20151104: Jordan updated SCR as comment in JIRA

-- 20151105: DDWG agreed to send to CCB

-- 20151116: Needs TA; then ready for CCB per DDWG

-- 20151117: TA'd by Steve; Emily reviewed; Dick sent email with concerns

-- 20151118: Setup telecon to discuss Dick's concerns

-- 20151119: DDWG discussion; send to CCB if no comments

-- 20151123: Needs TA; then ready for CCB per DDWG

-- 20151202: Emily and Dick reviewed -- Ready

-- 20151208: CCB e-vote; rejected

-- M.Showalter proposed name changes:

Units of Map Pixel Resolution

Units of Map Pixel Scale

-- CCB will have telecon to discuss

-- 20151222: CCB sent back to WG / DDWG to re-work

-- 20160204: MC on 2016-02-04, Jordan et al violently agreed on a workable solution

(Not Discussed - Tabled until Jordan is present)

-- CCB-133: Special Constants class precludes the ability to specify multiple invalid/missing constants (J. Padams)

-- 20151012: Open

-- 20151021: Under DDWG review

- 20151022: WG -- Jordan, Steve and RJ; sent email to WG with proposed changes
- 20151105: Jordan -- <special constants> needs to be specified per "band" not per "axes"
(Not Discussed - Tabled until Jordan is present)
- CCB-138: Mismatch between context object types and values of <type> in <Observing System Component> class (A.Raugh)
 - 20151202: Open; under DDWG review
 - 20151203: WG: Anne, Steve, Dick, Jordan, and RJ
(Discussed - on hold until it has a champion)
- CCB-142: Create Data Quality Flags to hold metadata on Quality Flags (E.Shaya)
 - 20151229: Open;
 - 20160126: Under DDWG review
(Discussed - will discuss again in two weeks)
- CCB-143: Validate field format via regex (Lev Nagdimunov)
 - 20160210: Open & Under DDWG review
(Not Discussed)
- CCB-149: Should PDS4 allow packed data? (E.Shaya)
 - 20160309: Open & Under DDWG review
(Discussed)
- CCB-150: Add value "Balloon" to type list in Facility class (A.Raugh)
 - 20160309: Open & Under DDWG review
(Discussed)
- CCB-151: Bundle Member Entry and Internal Reference do not require either LID or LIDVID. (A.Raugh)
 - 20160309: Open & Under DDWG review
(Not Discussed)
- CCB-152: field format definition mismatch between IM and SR. (L.Nagdimunov)
 - 20160309: Open & Under DDWG review
(Not Discussed)

4) Topics for Discussion

- Proposal: CCB-1xx: Remove Enumerated List from Instrument.type (L.Huber)

-- Status & develop implementation plan

(Not Discussed)

-- SETI Issues (R.Simpson et al)

-- Status

-- Issues in XLS have been vetted by SETI notes

-- Issues to be "consolidated" & prioritized

(Not Discussed)

-- IPDA PDS4 Project: 2014-2015 Final Report (S.Martinez, S.Hughes)

-- Status & develop implementation plan

(Not Discussed)

##DDWG Telecon

##CCB/SCR Statuses/Issues

##CCB-145 - Improve statement of when a new version ID must be used See <https://pds-jira.jpl.nasa.gov/browse/CCB-145>

Was sent to the CCB.

(Note taker did not catch any more comment on that)

##Task Statuses

##Geometry - Mitch

Limited distribution of the DD. In pretty good shape. EN came up with a way to reduce necessary schematron rules.

Will get it out next week - hopes to call it a fate accomplice. Accommodates longer observations.

Question: Version 1.3?

Answer: Yes.

Another Question: The website has version 1.5 - how are we handling this?

Another Answer and Question: That's in development. It's 1.2 in file, 1.5 is version. When it's submitted - turns in XML, schema and ingest LDD, but whats posted is different and has a new file name, right?

Answer: Not sure if EN does that - didn't think they were re-running.

~ But it's not the same as what's turned in.

~ Working on it.

~ Post generation edits are a concern. Comments become document attribute - gets mingled - need to deal with the whole question of versioning and keeping current with IM model - as discussed at SETI.

Question: What will the file name be?

Answer: I think PDS4 Geometry 1300 version of the DD. If that's not true we need to sort this out.

~ Concern because there's a file named 1500. GEO would like to be kept in loop on what's worked out.

##NSSDC - Steph

No updates. Still need to touch base offline with EN. Been working on issues.

##Document Updates - Dick

No updates.

##Product Update - Mitch

Need to update the SCR.

##Version 1.6 - Steve and Sean

In February, called for final SCRs for changes to IM. Tomorrow EN will start final unit testing. Monday will start final regression testing. Freeze on March 31.

As EN begins regression testing, will send message out to DDWG - all DD stewards need to run them against 1.6 to make sure there are no issues. Need emails to confirm they are still valid. Will try to compile a list of registration/mapping of LDDs all consistent with that IM. Will make it available so people know what they can use with 1.6.

Question: Lots of LDDs reference a version of the core, so what are we - unclear on what the test is - change what, core? Cause that changes content?

Answer: Yes, that's the issue that was raised at SETI. Want to change that to confirm nothing corrupted by the change. Should be able to validate that content is not corrupted.

~ But if changing anything, the version should be changed.

~ In personal copy, go in and change the references to common, then check in Oxygen that still valid.

Don't actually make changes. We discussed this at SETI. No procedure yet.

MAVEN is locked at version 1.4.

~ That doesn't go away, but want to see if it works with new version of the core model - if forward compatible.

Someone understands the issue, but still needs clarity.

This is for active LDDs - not one offs. Just want to know if changes to common breaks things.

There are not a lot of changes in 1.6. Expecting content validation soon - libraries - performance. Core functionality not really changing. Doesn't think there's much that will need to be addressed in this version.

Simulation & Model and Software Archive WGs - Todd

Both work groups are still working on an assessment of what they are chartered to do. A couple of things - policy statements on how PDS should handle software and simulations. Both discussions led to questions about preservation. Duration of preservation for software is different than for observational data. Sent request to DDWG for possible preservation levels.

Question: Have you looked at this years ROSES? Should read section C.1 - requirements for archiving in planetary science - addresses software and modeling.

Answer: Read that. Github thing - will end up with a pile of files.

Let's move on.

Someone wants to comment. Thinks there was a policy on simulation data - not applicable yet. Seems work group should submit an SCR to the DDWG to design a new product - that would then force the conversation on preservation. Lots of work has been done. Could do the policy, SCR issues, another policy, then SCR.

Impression from MC is that would imply very long term preservation, but that's not necessarily what's wanted.

~ But types of simulations are not clear yet. SCR would clear up the design. Then preservation could be addressed.

This should be worked offline.

No. It's premature to do an SCR. Need a straw-man first - identifying issues now. MC won't want us to design a new product yet. Not ready.

~ Right, would need to get management to buy in.

##SCR Issues

CCB-65 - Need additional Target Identification/type values See <https://pds-jira.jpl.nasa.gov/browse/CCB-65>

Covered later - pass.

##CCB-77 - Augment Product Update with File Area Update See <https://pds-jira.jpl.nasa.gov/browse/CCB-77>

Heard from Mitch already.

##CCB-100 - Remove Array 2D and Array 3D from File Area See <https://pds-jira.jpl.nasa.gov/browse/CCB-100>

Would like to table this for now. Jordan is on vacation.

##CCB-125 - The bit mask attribute seems to be misplaced and possibly missing where needed.
See <https://pds-jira.jpl.nasa.gov/browse/CCB-125>

Bypass. Jordan will give an example label with bit mask.

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

Last note is that this is under DDWG discussion.

No idea what the status is.

We will come back to this at some point. Maybe a work group.

##CCB-132 - Units of Map Scale is Badly Defined See <https://pds-jira.jpl.nasa.gov/browse/CCB-132>

Another Jordan. Still open issues. Work in progress.

##CCB-133 - Special Constants class precludes the ability to specify multiple invalid/missing constants
See <https://pds-jira.jpl.nasa.gov/browse/CCB-133>

Another Jordan.

##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>

There's a work group.

Question: There is?

Another Question: Didn't we work this out?

Answer: No, this is enumerated value list for type not corresponding to types in context products. No reason to have value type A if can't use it in labels. But don't really remember... trying to look at jira.... In text, lists types. Would expect one list to be a super set of the other, but there is no super set. Seems ridiculous. Maybe just oversight because two lists came from two different places.

Question: Does SBN want to chair this?

Answer: No time.

~ So, this will be on hold.

~ Then SBN will report to the MC that they can't deliver PDS4 data.

This seems like part of the instrument type discussion. Both are classifications.

~ This could be part of that.

This is a show stopper.

It's apples and oranges. CCB-150 has a note - it's not complicated.

Until there is a champion who will take this on, it's on hold. Thinks there will be others too.

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

From Ed Shaya.

Someone thinks they put a comment in jira - but doesn't remember.

Pass for now.

Question: Want me to come up with something on this for the next call?

Answer: Yes. Two weeks. Have discussion points. Hopefully, we can invite Ed Shaya.

****Action Item - Dick**** to have discussion points for CCB-142 for next telecon.

##CCB-143 - Validate field format via regex See <https://pds-jira.jpl.nasa.gov/browse/CCB-143>

Skip.

##CCB-149 - Should PDS4 allow packed data?

See <https://pds-jira.jpl.nasa.gov/browse/CCB-149>

From Ed Shaya.

Someone thinks this was submitted because it's really an envelope for bit fields.

Question: Is there any need for this?

Answer from RS: Some DSN legacy data - old data fields packed.

Answer from PPI: Some legacy data too.

~Someone thought we're not supposed to design a system for the future for past data.

~ PPI is migrating.

~ If nodes are migrating they need to touch the bits.

~ Would need to peer review if do that.

~ But even if migrating - never going to get rid of the PDS3 version.

This came up because working on IDL software to read PDS4 data - trying to support entire PDS4 IM, but what is there isn't complete. The first question - since it's not well defined - is if we have an actual need for this in PDS4 - cause it's not fleshed out.

Question: Straw vote on do we allow packed data?

Answer: Don't want to get rid of it based on fifteen seconds of discussion today. Hasty.

~ Someone is convinced it's not fully in the model - has hooks, but not fully defined. Can't be universally programmed.

The IM has packed data fields. Haven't looked closely, but agrees, either need to fully document this or get rid of it. It's probably something left over for early discussions.

~ Pushed for this for DSN data.

~ Agrees. We need to examine the need.

Question: Spent time on bit ordering. Questions came up on what's allowable, how to represent things -

all these things. Couldn't find a PDS4 example to look at, so the question is if there isn't any and no compelling need - shouldn't we just get rid of it for now?

Another Question: Isn't the question if there's enough to pull the data out - a description? Seems we have punted on the details due to an inability to describe...?

Answer: There are ways to describe bits.

Should write another SCR.

~ If the DDWG needs this, the chapter on packed data should be uploaded.

Question: Do we need a rewrite?

Another Question: How do we test it?

Answer: PPI has data - can migrate a PDS3 thing.

~ Sounds like solving the problem before we're sure if there is a problem.

Question: Okay with having Ed Shaya update the SCR?

Answer: Yes.

****Action Item -PPI**** to test.

Question: Anything else?

Answer: (Silence)

##CCB-150 - Modify Product Context to accommodate Balloon See <https://pds-jira.jpl.nasa.gov/browse/CCB-150>

This is a pretty simple SCR - a smaller subset of CCB-138.

The problem is that there's data right now - SBN needs this now so they can move on.

Question: Type facility can be laboratory or observatory. Balloon is a type of observatory...?

Answer: SBN would have been happy with type other. It's a balloon and gondola with a telescope instrument. Had to call it something. If it can't be other, fine, but it's not an observatory.

Question: Have there been any objections?

Answer: Want to figure out the set - airborne observatory, like balloon or aircraft. If a laboratory is an environment, observatory has a permanent location - it could be airborne.

~ An aircraft has a planned trajectory - a balloon follows the wind.

Question: Is there one for suborbital observations? ATMOS needs that, but would probably use spacecraft.

Answer: That's not a facility.

~ Facility provides name and address, but they are optional attributes. Not sure our definition is good.

The implication is that it's a place.

Question: What subclass would they fit into?

Another Question: Isn't it observing system?

Another Answer/Question: Yes, but what component? The whole point is to have SBN users able to actually look for the balloon data. Would expect to have a few types for facet based search for data collected by the surface of the earth.

~ In instrument host - could have ground based... (Interrupted)..

~ Argued to get rid of that for three years - don't want to go backwards.

Question: Is there something we want to add?

Answer: Want to be able to distinguish between balloons and airplanes.

~ Never want to see us use other. That's a useless bucket.

~ Someone disagrees. Same problem with instrument type - we will always come back to this.

Classification scheme can have up to three sigma, then other.

We might need to change the definition of facility. It only has two values. Could include balloons,

airplanes, suborbital observations - because we will get them.

Question: Is there an inconsistency because earth based?

Answer: Yes, cause facility has a name and address.

~ It's not clearly defined.

~ Someone agrees that there's an inconsistency.

~ Facility is where the mail gets delivered. Instrument host is for the science.

Question: Would it work to add balloon?

Answer: No, because the instrument is mounted on the telescope, on the gondola, on the balloon.

(People talking over each other)

Question: In product context - as a new product context...?

Confusion.

These are context products combined in the observing system.

People don't understand.

Define balloon as a context product data object.

~ Product type balloon just punts the problem.

Question: With that, would aircraft go in the same place?

Answer: Yes, and SBN would have to re-do thousands of labels. Talked to EN about this - thought they just had to file the paperwork to get this included. Didn't expect this discussion. ROSES is out. It takes three days just to validate the data.

~ You don't always get what you want in the DDWG.

SBN and EN thought they had this worked out.

Just adding balloon under facility doesn't make this onerous.

~ But a balloon would never have an address.

~ If we confuse this with instrument host we lose the unique function facility was.

~ Balloon originates somewhere - it's not an unreasonable thing.

~ Put that address.

~ So, make balloon a facility and add an address.

~ Address is optional. Could put address of PI that operated the balloon, but it isn't required. Facility provides name and address - could provide PI info for facilities that are mobile.

~ Someone agrees that we could lose the unique function of facility. We did what we did for a reason.

~ Someone else is not convinced that there was a lot of thought put into it.

SBN will implement whatever we decide.

Question: Are we trying to get this in to 1.6?

Answer: SBN needs to be able to post something reasonably stable for ROSES proposers. Don't have a lot of options. Would be happy with future version if knew what it would look like, what the LID would be and the type value. Only need the answer, not the solution.

A context product for balloon makes the most sense. Should go to the CCB.

~ The hang up is that balloon works as type, problem is the LID which is based on the class itself. Change the LID and have to change it in all the labels.

So, we're converging on adding balloon to context.

Question: Would the attributes be name and description?

Answer: Usually name, description and type.

~ Not sure what the type would be. Balloon is it.

Another Question: Should there be some association to PI or something?

Answer: That would go in the mission description.

Special context product - something there will only be one of.

~ There will be other balloon missions.

~ But all there is to say is that they have a temporary existence.

Question: Launch date?

Answer: That's mission description, not balloon description. They don't contribute to the data.

Question: Anyone else have balloon?

Answer: (Silence)

~ Not yet, but several planned.

Another Question: Vega?

Answer: The point is that this should be a discipline decision.

~ In this class. Will only be one member ever.

Question: if they will all have the same context product - why have it? Inclined to make the context airborne, type balloon, rockets, drones, etc.

~ Drones don't usually look up.

Answer: People like airborne.

~ It follows the default of having name, description and type. Huge progress.

~ Odd definition of progress.

Question: Can we update the SCR? (When does the CCB meet?)

Answer: Three weeks.

Another Question: Can EN get a LID to SBN for the labels so the labels can be updated?

Answer: ****Action Item - Steve****

To confirm - it's airborne context product, type balloon. Will send email.

SBN needs a LID and type. Don't care if it's in the next build.

~ It would be better if the CCB blesses it.

~ We can move ahead with the SCR.

Question: When does the CCB meet?

Answer: Three weeks. We want this on the plate.

~ If this is seriously urgent can get the CCB to have an emergency meeting.

~ Description needs to include that we all signed off on this and why the urgency.

~ Not everyone has signed off. They could have an emergency meeting.

~ We need a fully defined SCR.

~ Not everyone is convinced that adding airborne is a good idea.

Question: Other than RS, are there objections to adding airborne.balloon?

Answer: (Silence)

****Action Item - Steve**** will update the SCR.

We need to get the ball rolling.

Question: What's wrong with making instrument host airborne?

Answer: Cause the instrument is mounted on the telescope.

~ Not sure sees the problem.

~ It would have to be balloon/gondola/telescope.

~ We have earth based ones now.

~ That's a PDS3 carryover.

~ We could add something parallel to earth based.

~ But they are not earth based.

~ Not following.

~ You're on the short end of this - we need someone to update the SCR.

Question: Steve has the action item to update the SCR, but what's the LID? Steve will get the SCR to the CCB and Richard will take care of the LID.

Answer from Richard: Will implement the LID, but doesn't want to do the formation rule.

Another Question: Isn't it just another collection?

Answer: I think appendix F might be affected.

~ "This is not - this doesn't go well - no."

~ Someone doesn't see why.

We need some latitude in appendix F so we can get a LID to SBN so they can move forward.

Question: Any objections?

Answer: (Silence)

##Internal References on Context Products - Mitch

In a set of context products, would expect internal references from the spacecraft to instrument or instrument to spacecraft. Don't think we have to point both ways - expect calibrated images to point to raw images - not vice versa. No need for bidirectional references.

Question: For balloon/gondola/telescope which way are we pointing? Does the telescope point to the instrument or does the instrument point to the telescope?

(No Answer)

We need a best practice that says top down or bottom up.

Someone thinks it should be unidirectional - bottom up.

~ In reverse order of existence.

Captured in registry.

~ Once there's a relationship, software can determine - system names other way the inverse of.

Question: What if an instrument moves from place to place?

Answer: For mobile instruments...

Consensus is for best practices to be bottom up.

****Action Item - Mitch**** write something for DPH, which is no longer under CCB control.

Question: When did it fall out of CCB control?

Answer: There was an email that said SR is still under the CCB, not the DPH.

~ It was discussed at the MC.

~ Someone is not sure about this.

~ ****Action Item - Ron**** will confirm.

We didn't get to enumerated list for instrument type. Next time.

Question: Anything else?

Answer: (Silence)