

## Build 3a RFA List

RFA #	Name	Topic	Problem	Recommendation	Disposition	Timeframe	Comments	Plan	Resolution
RFA_Build3a_001	Martin	Registry and Tool examples	It would be helpful to have a single set of example products and label files that are used across all the components of the delivery (registry, harvest, validate, etc), instead of having disparate examples in each different directory.	Prepare a small but useful example set of entries and products that provides some meaningful entries for the registry and demonstrates the interrelationship of the registry, generate, harvest and validate.	ACCEPTED	Build 4a	Agree with recommendation.	Review the Example Bundle for this purpose.	
RFA_Build3a_002	Martin	Generate Issue	The default operation is supposed to produce an output file containing the label but instead sends the output label to the screen.	Fix	IMPLEMENTED	Build 3b	Agree with recommendation.		Changed default setting to be input PDS product name with appended ".xml".
RFA_Build3a_003	Martin	Generate Issue	The output messages from the program says "New PDS3Label" then gives path to old pds3 label which is confusing:  <pre> "C:\data\pds4delivery\delivery3a\generate\examples\example1&gt;..\bin\generate -p pds3_example.lbl -t template_example.vm New PDS3Label - C:\data\pds4delivery\delivery3a\generate\examples\example1\pds3_example.lbl &lt;Product_Array_2D_Image xmlns="http://pds.nasa.gov/schema/pds4/pds/v03" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://pds.nasa.gov/schema/pds4/pds/v03 Product_Array_2D_Image_0311B_MPF_IMP_ED R.xsd "&gt; &lt;!-- Scenario 1 - Hard-coded values --&gt; &lt;Data_Standards&gt;   &lt;dd_version_id&gt;0311B_20110709&lt;/dd_versio n_id&gt; ... </pre>	Fix	IMPLEMENTED	Build 3b	These are inadvertent debug messages.		Turned off debug messages.
RFA_Build3a_004	Martin	Generate Issue	Error in generate example 2. Cryptic error message. The template calls for encoded image but there is no encoded image in the example file.  <pre> "C:\data\pds4delivery\delivery3a\generate\examples\example2&gt;..\bin\generate -p 1p216067135edn76pop2102l2m1.img -t mer_template.vm -o pds4_image.xml New PDS3Label - C:\data\pds4delivery\delivery3a\generate\examples\example2\1p216067135edn76pop2102l2m1.img [Fatal Error] :9:22: The prefix "img" for element "img:Encoded_Image" is not bound. Error applying XSLT to output XML. Verify label and template are correctly formatted. New PDS4 Label: C:\data\pds4delivery\delivery3a\generate\examples\example2\pds4_image.xml Null" </pre>	Fix	ACCEPTED	Build 4a	Agree with recommendation.	Enhance error handling to be more descriptive.	

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RFA_Build3a_005	Martin	Generate Issue	In the generate mpf example, the template uses:  <pre>"&lt;Object_Statistics&gt;   &lt;local_identifier&gt;IMAGE_OBJECT_STATISTIC &lt;/local_identifier&gt;   &lt;maximum&gt;\$label.IMAGE.MAXIMUM&lt;/maximum&gt;   &lt;md5_checksum&gt;\$generate.obj_md5_checksum&lt;/md5_checksum&gt;"</pre> But the \$generate.obj_md5_checksum doesn't work.	Fix	IMPLEMENTED	Build 3b	Typo in template example.		Template example updated.
RFA_Build3a_006	Martin	Generate Issue	The examples in the generate directory do not produce proper pds4 objects (product_observational's). Example1 is obviously just showing the capabilities of using generate, but doesn't provide any file info. Also, the mpf example doesn't provide an accurate offset for the image file and the image checksum is not being computed.	Fix	ACCEPTED	Build 4a	Initial iterations of the tool were intended to show basic functionality available from the tool. Future iterations will include examples that produce PDS4-compliant products.	Include examples that will produce PDS4-compliant products.	
RFA_Build3a_007	Martin	Harvest Log	It would be helpful if the harvest log would identify source arguments (policy file name, options).		IMPLEMENTED	Build 3b	N/A	Include a "Parameters" section in the Harvest Tool log file similar to the one included in the Validate Tool log.	Issue corrected in revision 11260 of the EN Subversion software repository. The fix will be delivered in version 1.4.0 of the Harvest Tool.
RFA_Build3a_008	Martin	Harvest Master Policy File	In the master policy file the following conversions are wrong.  <pre>&lt;!-- Instrument_Host --&gt; &lt;xPath slotName="instrument_host_name"//Instrument/name&lt;/xPath&gt; &lt;xPath slotName="instrument_host_version_id"//Instrument/version_id&lt;/xPath&gt; &lt;xPath slotName="instrument_host_type"//Instrument/type&lt;/xPath&gt; &lt;xPath slotName="instrument_host_description"//Instrument/description&lt;/xPath&gt; &lt;xPath slotName="instrument_host_naif_id"//Instrument/naif_host_id&lt;/xPath&gt; &lt;xPath slotName="instrument_host_serial_number"//Instrument/serial_number&lt;/xPath&gt;</pre>	Fix the policy file.	IMPLEMENTED	Build 3b	Agree with recommendation.	N/A	Issue corrected in revision 11163 of the EN Subversion software repository. The fix will be delivered in version 1.4.0 of the Harvest Tool.

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RFA_Build3a_009	Martin	Harvest Policy	The use of harvest and its policy files seems very complicated to me.	Clarify and/or simplify how harvest works.	ACCEPTED	Build 4a	Unfortunately, harvesting metadata in a manner that makes the rest of the system work is a complicated problem. Model fluctuations early on in development mandated that the field-to-slot mapping be user configurable.	Work to move the more common configuration policy to the tool's global policy area and away from the user configurable area. In addition, provide user scenarios for using the tool and corresponding configurations for that scenario to aide the user.	A portion of this plan will be implemented in Build 3b with the rest implemented in Build 4a.
RFA_Build3a_010	Martin	Label Bloat	<p>A simple statement "Target_name = Mars" in PDS3/ODL has been expanded to the following :</p> <pre> &lt;Target_Identification&gt; &lt;name&gt;MARS&lt;/name&gt; &lt;type&gt;planet&lt;/type&gt; &lt;description&gt;description of MARS goes here&lt;/description&gt; &lt;Internal_Reference&gt; &lt;lid_reference&gt;urn:nasa:pds:target.MARS:1.0&lt;/lid_reference&gt; &lt;reference_type&gt;data_to_target&lt;/reference_type&gt; &lt;/Internal_Reference&gt; &lt;/Target_Identification&gt;  &lt;Internal_Reference&gt; &lt;lid_reference&gt;urn:nasa:pds:target.MARS&lt;/lid_reference&gt; &lt;reference_type&gt;data_to_document&lt;/reference_type&gt; &lt;/Internal_Reference&gt; </pre>	This seems like a very cumbersome approach.	CLOSED		The example does not follow PDS4 requirements and guidelines and so does contain too much information. Assuming a reference to a target context product is desired then a single internal reference to the target context product would be sufficient. There is ongoing discussion on whether the type attribute should be required. However the required name attribute is for the convenience of the human readers of the label. Finally a high priority requirement for the PDS4 data standards was to remove the functional overloading and subsequent ambiguity associated with PDS3 constructs like "Target_name = Mars".		
RFA_Build3a_011	Martin	Registry size and lids and guides	Due to the heavy use of associations in PDS4 data design, the registry stores a large number of lids and guides. They may account for doubling the storage space of the actual searchable registry entries. It seems that it would be much more storage efficient to use a numeric value (as is done by fedex, ups and usps to track parcels) vs these long character strings.	Reexamine the internal structure of the registry.	CLOSED		As for the LIDs, the format/convention was determined by the DDWG versions ago and changing it is a non-starter. As for the GUID, it is roughly 45 characters in length. A typical registry entry for a product is 10,000 characters in length and larger. Changing the makeup of the GUID would save some space but does not warrant the effort involved in the opinion of the Development Team.		

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RFA_Build3a_012	Martin	OAL issue	ObjectAccess table method getTableObjects will return an image object if there is one in the the data file. The methods for the specific table types (e.g. getTableCharacters, getTableBinaries, and getTableDelimited) do not.	Fix problems.	IMPLEMENTED	Build 3b	The issue has been captured in Jira issue PTOOL-115.		
RFA_Build3a_013	Martin	OAL issue	DataType.NumericDataType does not support all allowed PDS4 data type values.	Fix problems.	IMPLEMENTED	Build3b / Build4a	The issue has been captured in Jira issue PTOOL-119. All allowed data types for table fields are supported in FieldType. The DataType.NumericType supports only a few of the allowed data types for array elements.		Issue has been partially addressed in Build 3b. Not all types can be supported easily for images, however, because of limitations in the Java imaging API. We believe that all image types that were used in PDS3 are supported, but we don't have enough examples in PDS4 format to be certain. Additional work is planned for Build 4a.
RFA_Build3a_014	Martin	OAL issue	Documentation missing for tablerecord method: recordBytes - map - metadata -	Fix problems.	IMPLEMENTED	Build 3b	TableRecord has been changed to an interface in the latest version of OAL and has proper documentation.		
RFA_Build3a_015	Martin	OAL issue	Object access method getTableDelimited should be getTableDelimiteds to match pluralization of getTableBinaries, getTableCharacters.	Fix problems.	IMPLEMENTED	Build 3b	The issue has been captured in Jira issue PTOOL-116.		
RFA_Build3a_016	Martin	OAL issue	I have not been able to get the method ByteWiseFileAccessor.readRecordBytes to work.	It would be helpful if the key methods for accessing data object parameters and the object data all had example code.	IMPLEMENTED	Build 3b	ByteWiseFileAccessor class is meant to be used internally by table reader and exporter and should not be exposed to the public. The issue has been captured in Jira issue PTOOL-117.		
RFA_Build3a_017	Martin	OAL issue	Only a few methods have example code.	It would be helpful if the key methods for accessing data object parameters and the object data all had example code.	IMPLEMENTED	Build 3b	The issue has been captured in Jira issue PTOOL-120.		Issue has been addressed in Build 3b to an acceptable level for the present. *All methods* that have been added to address RFA_Build3a_020 now have example code in the Javadocs.

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RFA_Build3a_018	Martin	OAL issue	There are a lot of get routines (e.g. getRecords() in a file object) for attributes that have minOccurs = 0, meaning the user must check for a null pointer error when accessing every one of these.	I wonder if it wouldn't be better to have the OAL return an empty string or 0 for numeric types for optional attributes.	IMPLEMENTED	Build 3b			Issue has been addressed in Build 3b to an acceptable level. New methods have been added to address RFA_Build3a_020 that do not have this characteristic. Only if the user is calling the low-level XML-oriented APIs will the user see this characteristic.
RFA_Build3a_019	Martin	PDS4 OAL user guide	There needs to be a simple users guide for the OAL.	Provide a user guide for the PDS4 oal.	IMPLEMENTED	Build3b			Issue has been partially addressed in Build 3b. There is no separate users guide, but the Javadocs have been restructured to guide the user directly from the package list to the best place to start looking at the API, and that API class has full example code. Links have been added within the Javadoc to help guide the user to other API classes that have been added to address RFA_Build3a_020. Additional work is planned for future builds.
RFA_Build3a_020	Martin	PDS4 OAL Methods	The user shouldn't need to understand the structure of pds4 labels in order to access a data object. Currently one needs to open the label file, find a product_observational, find a file_area_observational then finally identify data objects and access the objects.	There should be a simple set of methods that take a label filename as an argument and identify the objects described in the label, their types, their basic attributes, and provide access to a data object as an array of bytes or an array of the datatype of the object. The following sorts of simple methods are provided by other data processing tool kits (like matlab, idl, etc).  <pre> objectlist = inquire(filename) // returns names of objects attributes = inquire(filename,objectname [, elementname]) // returns attributes data = read(filename,objectname [, elementname]) // returns object data </pre>	IMPLEMENTED	Build 3b / Build 4a	Current status is that table types and arrays are fully implemented, but not yet complete for images.	Full implementation will occur over multiple builds.	Issue has been addressed in Build 3b by creating a new set of API classes that are at a higher level than the XML-oriented classes produced by JAXB. For access to tables and arrays the user need not know anything about the structure of the XML labels.

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RFA_Build3a_021	Martin	Registry-UI Product Search	On Windows xp and vista, if a product search (on guid, lid or name) fails then subsequent product searches will not work until the registry-ui is reloaded or restarted.		IMPLEMENTED	Build 3b	This issue as been captured in JIRA issue PDS-133.  <a href="https://oodt.jpl.nasa.gov/jira/browse/PDS-133">https://oodt.jpl.nasa.gov/jira/browse/PDS-133</a>	The fix will be implemented as indicated in issue PDS-133.	Issue corrected in revision 11216 of the EN Subversion software repository. The fix will be delivered in version 1.4.0 of the Registry User Interface.
RFA_Build3a_022	Martin	Registry-UI Screensize	The basic registry-ui screen height exceeds the height of a standard display screen so one constantly has to scroll up and down in the browser window to operate the program (advance to new pages, close popup windows).	Reduce the detail line spacing and eliminate the graphic at the top of the page to allow more lines to fit on a page. Reduce the default number of display lines to a number that will fit on a screen with 768 lines of resolution. For the popups put the close button at the top and bottom.	ACCEPTED	Build 4a	Recommendation will be taken under advisement.		
RFA_Build3a_023	Martin	Registry tools/services consistency	The registry/report function should also report the number of events. The registry-ui uses the term "products" and while the registry service uses the term "extrinsics", the registry-ui uses "schemes while registry/report uses "classification_schemes.	Resolve nomenclature differences between registry-ui and registry-service.	ACCEPTED	Build 4a	Nomenclature differences will be reviewed for possible modification.		
RFA_Build3a_024	Martin	Registry Size	If entries are added to the Derby registry then deleted the size of the registry folder remains the same.	Shouldn't the registry size reflect the contents?	CLOSED		This is likely the result of the Registry Service recording an event for each deleted item which will add size to the database. In addition, it probably has something to do as well with how Derby handles deletions.		
RFA_Build3a_025	Martin	Registry Event User	The user in the Event Registry is specified as "unkown" instead of unknown.	Fix	IMPLEMENTED	Build 3b	Agree with recommendation.	The fix will be implemented as indicated in issue PDS-160.	Issue corrected in revision 11527 of the EN Subversion software repository. The fix will be delivered in version 1.4.0 of the Registry Service.
RFA_Build3a_026	Martin	Schema flattening in harvest	The PDS4 schemas are hierarchical but the registry is flat. The conversion of PDS4 attributes to registry slots may allow collisions where the same registry slot name is used for multiple PDS4 schema classes (e.g. context_area.targetIdentification.name vs observation_area.targetIdentification.name, target.name, targetPDS3.target_name). Also, it would seem that different nodes might adopt different translations from their local schemas to their local registries causing confusion down the road.	Evaluate the long term impact of having a hierarchical information model and flat registries.	CLOSED		A naming convention has been adopted for slots in the Registry Service for common areas in the product labels. This naming convention is captured in the example configuration files supplied in the Harvest Tool distribution. Nodes will be strongly encouraged/required to utilize these configuration files and add to them where appropriate. As we address product-level search in subsequent releases, this naming convention will be extended to the more specific classes in the Product_Observational product.		

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RFA_Build3a_027	Martin	Search-core command files	There is no Windows batch file for solr_post which seems to be required to run the search service.	Provide solr_post.bat.	ACCEPTED	Build 4a	Agree with recommendation.	A Windows batch file will be provided in the package distribution.	
RFA_Build3a_028	Martin	Software Documentation	<p>The documentation is oriented to the Unix environment.</p> <p>Some of the windows examples don't work, for example in transform install:  set PATH = %PATH%;C:\Program Files\transform-0.1.0\bin  Needs to have the spaces removed between PATH and = and between = and %PATH%.</p> <p>In Search-Service, it might be useful to show examples of adding to catalina_opts in windows:  set CATALINA_OPTS=%CATALINA_OPTS% "-Dsolr.pds.home=c:\data\pds4delivery\delivery3a\search-service"  set CATALINA_OPTS=%CATALINA_OPTS% "-Djavax.xml.transform.TransformerFactory=net.sf.saxon.TransformerFactoryImpl"</p> <p>In Search-ui I first copied the whole "include" directory into webapps instead of just the subdirectories in the include directory so maybe the wording could be clarified.</p> <p>In the search-service install document the Advanced Application Deployment section only shows the procedure for Unix environments.</p>	Enhance the documentation for Windows users.	ACCEPTED	Build 4a	Agree with recommendation.	Documentation will be updated accordingly.	
RFA_Build3a_029	Martin	Tool command line options	<p>The command line options -t has a different meaning for different tools:</p> <p>Generate uses -t for template and -p for the input pds3 label, but transform and validate use -t for target files. Also, transform and validate allow the target file to be specified without a flag, but generate requires the -p flag.</p> <p>I thought I ran across a tool that used -f for the input file names, but I can't identify it now.</p>	Change generate to use -t for input files and some other letter for the template file.	ACCEPTED	Build 4a	Recommendation will be taken under advisement.	Command-line arguments across the EN-provided tool suite will be reviewed for consistency and changes will be made where appropriate.	
RFA_Build3a_030	Rough	Identification_Area/Citation_Information/keyword	The content and format for this attribute appear to be undefined.	This is 'keyword' in the sense used by Icarus at the end of abstracts. Viewed in this context, the definition seems OK; but there may be some confusion for people who are used to PDS3 keywords.	IMPLEMENTED	Build 3b			DDWG (2/27/13) - Change data type of the attribute keyword to UTF8_Short_String_Collapsed and the description attribute to UTF8_Text_Preserved

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RFA_Build3a_031	Rough	Observation_Area/Primary_Result_Summary	This is currently optional. It should be required.	Make it required	IMPLEMENTED	Build 3b	Boris has agreed to change from Observation_Area to Context_Area in Product_SPICE_Kernel. Schematron rules will be added to validate his desired and unique set of required components, of which Primary_Result_Summary is not.		DDWG (2/27/13) - Primary_Result_Summary was made required in Product_Observational/Observation_Area
RFA_Build3a_032	Rough	Observation_Area/Target_Identification/name	The IM contains nothing to either prevent or disambiguate name collisions between targets of different type	The Target_Identification currently in the 3a information model and schema is almost identical to the design provided in an SBN document received on 12/15/2011 12:06 PM, Subject: Preamble classes. The differences are the placement of <description>, the removal of the class external_reference, and the definitions of <name> and <type>.	DEFERRED	Build 4a		Continue design of target identification.	
RFA_Build3a_033	Rough	Observation_Area/Target_Identification/type	Only a single type is allowed, and the present standard value list conflate disparate taxonomies (spectral and dynamic, for example). It is inadequate and misleading for a large number of Small Bodies targets.	Based on the model provided by SBN with both <name> and <type> having cardinality 1..1 within Target_Identification it seems that a 1..1 relationship between <name> and <type> was intended. Since the cardinality of Target_Identification is 1..* in the context of Observation_Area, one or more unique targets could be entered, each identified with a unique combination of <name> and <type>.	DEFERRED	Build 4a	Primary_Result_Summary can now be made required in Product_Observational/Observation_Area	Continue design of target identification.	
RFA_Build3a_034	Rough	Array_2D_Image	There are requirements on the names of axes that exist only in the Schematron file and are not documented in the Standards. - In addition, these requirement prohibit functional naming of image axes (with display labels, for example).	This request will be forwarded to the Document Alignment team. This request will be forwarded to the Imaging team for review.	DEFERRED	Build 4a	Simpson votes for removing the requirement that axes be named "line" and "sample", which is only in the Schematron file. / Imaging points out that the ordering and display scheme depend on the current names.	Array Axis team will re-address the naming of axes.	
RFA_Build3a_035	Rough	Array_2D/Axis	We have data where the axes are not only named, but have units and sampling intervals associated with them. There is a place for the units, but in some arrays the axis names are constrained and there is no place to indicate a sampling interval at all.	There is no requirement that spacing along array axes be uniform — only that elements have identical formats. An optional class might be added to the Axis definition that would allow user specification of positions along the axis; but this makes the model more complex. Perhaps a candidate for development within a local data dictionary with later promotion to 'common' status if a successful design emerges.	DEFERRED	Build 4a		Array Axis team will address the sampling interval.	



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RFA_Build3a_036	Rough	Array_2D_Spectrum and Array_2D_Map	These appear to be identical to Array_2D, but they prohibit use of the essential Display_2D_Image class, which would at least determine how to display the data.	Add Display_2D_Image to Array_2D_Spectrum and Array_2D_Map	IMPLEMENTED	Build 3b		The fix for this RFA will probably be replaced by the fix for RFA_Build3a_034 and RFA_Build3a_035	Add Display_2D_Image to Array_2D_Spectrum and Array_2D_Map
RFA_Build3a_037	Rough	Array_2D/Object_Statistics/maximum, minimum, median, mean, standard deviation	The data dictionary definitions of all these attributes are problematic in that: There are references to "fields", but arrays are defined in terms of elements.; The definitions refer to "empty" fields, but it is logically impossible to have an "empty" field in an image.; The definitions do not specify of bit masks, scaling factors, or offsets are to be applied before or after calculating the number, or not at all.	A new set of definitions were proposed (note that the definitions for minimum were wrong in the original)	IMPLEMENTED	Build 3b			Changed definitions.
RFA_Build3a_038	Rough	Array_2D/Object_Statistics/bitmask	A bit mask is NOT a statistic. It is part of the definition of the array element, or should be. The point at which a bitmask is to be applied is not stated in the definition, neither are there any constraints on the bit mask relative to the data it is supposed to mask (for example, one would expect that the mask must have exactly as many bits as the associated scalar).	New Definition: Object_Statistics.bitmask: The bit_mask attribute is a series of binary digits identifying the active bits in a value; it has exactly the same number of the bits as the array element to which it is applied.	IMPLEMENTED	Build 3b			Changed definition.
RFA_Build3a_039	Rough	Array_2D/Object_Statistics/maximum_scaled_value, minimum_scaled_value	The definition does not mention at what point any relevant bit mask is to be applied.	The bit mask should be applied as the element bits are being extracted from storage.	IMPLEMENTED	Build 3b			Changed definitions.
RFA_Build3a_040	Rough	All Field_* types: field_format	This attribute is optional but should be required.; No format standards are supplied for this field.	SBN apparently is requiring field_format for binary fields to indicate range and precision of field values. I would not use field_format this way.; The definition of field_format currently includes the statement "The standard POSIX string formats are used." This can be expanded, for example to reference a section of the standards reference.	IMPLEMENTED	Build 3b			A subset of the POSIX String formats has been identified and documented.
RFA_Build3a_041	Rough	All Group_* types: repetitions	This structure allegedly exists only as a notation convenience, yet the "repetitions" attribute is allowed to be "1". These two statements are logically incongruous.	I would leave the minimum value at 1. There may be circumstances in which the number of repetitions is dynamic (among products of the same type); being able to set repetitions to 1 in the course of generating many similar, but not identical, labels is logically acceptable. /Simpson	CLOSED				No change to the model.
RFA_Build3a_042	Rough	Group_Field_(Character Binary)/fields	This value is not defined. The current definition references records, not group_fields.		IMPLEMENTED	Build 3b	The set of Group classes and attributes have been reviewed by the DDWG.		The DDWG recommendations have been applied to the model and documentation.

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RFA_Build3a_043	Rough	Group_Field_(Character Binary)/group_location	The definition references the wrong class name.		IMPLEMENTED	Build 3b	The set of Group classes and attributes have been reviewed by the DDWG.		The DDWG recommendations have been applied to the model and documentation.
RFA_Build3a_044	Rough	Record_Delimited/field_number	This attribute is optional. Without a "field_location" attribute, there is nothing in the label to specify the actual order of fields in the record. So either a numbering system is needed, or some standard constraint needs to be stated that fields MUST be defined in physical order.		IMPLEMENTED	Build 3b	This attribute was reviewed as part of the Group classes and associated attributes.		The DDWG recommendations have been applied to the model and documentation.
RFA_Build3a_045	Rough	Group_Field_* generally	The definition of this alleged notation convenience and the implication it has for various accounting attributes within and without its own structure is logically unsound as written, and contaminates the accounting for the containing Record_* structures.		IMPLEMENTED	Build 3b	The set of Group classes and attributes have been reviewed by the DDWG.		The DDWG recommendations have been applied to the model and documentation.
RFA_Build3a_046	Rough	Header/object_length	This is optional. It should be required to provide minimal validation options.	Make required	IMPLEMENTED	Build 3b			Header/object_length was made required.
RFA_Build3a_047	Rough	Header/external_standard_id	The list of valid IDs is vague and contains some highly questionable values. It must at least include specific version numbers for each standard cited, as version is critical in determining format and content.	Identifiers and version information has been added to IDs and meanings.	IMPLEMENTED	Build 3b			Identifiers and version information have been added to IDs and value meanings.
RFA_Build3a_048	Rough	Header/encoding_type	There is no definition (and therefore no set of standard values) for encoding type in Header in the data dictionary.		PENDING	Build 3b			
RFA_Build3a_049	Rough	Header_Encoded	There seems to be no specific reason for this to exist. Remove it.	Imaging states that it is needed.	CLOSED				No change to the model.
RFA_Build3a_050	King	Simplify Table class	The model for Tables is not as simple as is currently possible. In addition, the model for Table does not align with the conceptual model for table as used by users, data providers and tools.	It is possible to describe a table using a single Table class. Merge the attributes of all Table_* classes into a single Table class. Do the same for Record_* class into a single Record class and Field_* classes into a single Field class. Associate Record to Table and Field to Record. Using rules (in Schematron) to constrain the allowed values and required attributes based on the "encoding_type".	CLOSED		This change has been proposed several times in the past. The DDWG consensus remains that specific and explicit definitions for binary, character, and delimited tables are desired in the model, schema, and labels.		A DDWG recommendation was written and sent to MC. The recommendation was to reject the proposed change. See email from D. Simpson dated Mon 3/25/2013 2:57 PM - Subject: [planetary-data-system-mc] DDWG Recommendation on Todd King's Proposal
RFA_Build3a_051	King	Remove "_Area" from class names	While "area" might be the nomenclature for describing a portion of an XML document ("segment" is another term commonly used). Having it in class name does add to the context.	Remove "_Area" from class names. Changes to: File_Area_*, Discipline_Area, Identification_Area, Investigation_Area, Mission_Area, Node_Area, Observation_Area. Note: This will result in a conflict with File and File_Area, but this could be resolved with a new name.	CLOSED		This is a nomenclature issue and therefore low in priority. Even if a consensus was obtained for the change, the proposed benefit is overwhelmed by the impact on overall development, specifically examples and written documentation.		With a vote of 6:1 the DDWG voted to reject the RFA. This issue might be rediscussed after the DDWG Bundle Building workshop.
RFA_Build3a_052	King	Use single type of reference for position.	The position of an object can be specified in three ways "offset", "location", and "start_" depending on the object. This requires calculating position three different ways while describing certain products. Also there are instances where location has a prefix when it is unnecessary to do so.	Counting is much easier with "offset" so change all "_location" and "start_" to "offset". Add "bit" to the "unit" attribute of "offset" (which currently has "byte" as possible value) to make it clear whether to count bits or bytes.	CLOSED		The current implementations represent consensus DDWG decisions and they work. The propose changes would have significant impact on development and the schedule.		With a vote of 6:1 the DDWG voted to reject the RFA. This issue might be rediscussed in the future.

## Build 3a RFA List

RFA #	Name	Topic	Problem	Recommendation	Disposition	Timeframe	Comments	Plan	Resolution
RFA_Build3a_053	King	Use single type of method for size.	Record and Field have length, but Field_Bit has "stop_bit". Since bits and bytes are always contiguous, use "length" in Field_Bit. Also there are instances where location has a prefix when it is unnecessary to do so.	Eliminate specialized "length" attribute names when definition is the same. Change "object_length" to "length", "field_length" to "length", "group_length" to "length", and "record_length" to "length". Change "stop_bit" to "length".	CLOSED		The nomenclature issues implicit in this proposed change are low in priority. In addition significant attribute overrides or other differences in a particular context often call for making the attribute name more specific. The current implementation works.		With a vote of 6:1 the DDWG voted to reject the RFA as written.
RFA_Build3a_054	King	Simplify data types.	Current data types allow for a mixing of byte orders within a record. This should not be allowed. Also, the width of a data type is expressed as an attribute of the field and in the data_type. The attribute should be the definitive source of width information.	Define basic data types of Single, Double, Complex, Signed, Unsigned, Text(Character/UTF8?), and Text field types. Let byte order (MSB or LSB) be specified at the Table level and precision be controlled by field length.	CLOSED		The current data type design works in general and represents consensus DDWG decisions. In addition the proposal to put byte order at the table level would violate existing requirements. The propose changes would have significant impact on development and the schedule.		With a vote of 5:1:1 (abstain) the DDWG voted to reject the RFA.
RFA_Build3a_055	King	Don't have counts for things that can be counted.	Embedding counts for the occurrences of metadata is extraneous information.	Eliminate counts for "fields" in Record and "bit_fields" in Packed_Data_Fields.	CLOSED		The DDWG consensus decision was to include count fields.		With a vote of 6:1 the DDWG voted to reject the RFA.

<b>Summary</b>	
OPEN	0
REQUIRES	0
FOLLOW-UP	
ACCEPTED	9
PENDING	1
IMPLEMENTED	29
DELIVERED	0
CLOSED	12
DEFERRED	4
<b>TOTAL</b>	<b>55</b>