

Comments on PDS4 Core  
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21 Jan 2013

## **Release Audience**

In the introduction, I do have a serious problem with the terminology. The first paragraph talks about the previous release to a “scoped set of data providers”, which is fine. The second paragraph talks about a “public release”. That terminology implies release to all data providers and all data users. As implied by Mike Martin’s comments, there may be nothing in this new release that will look like an improvement to any data users. That suggests that maybe the first public release should be a release to mission data providers. Similarly, I don’t think OLAF will be ready soon, so I think release to data providers other than missions and any other projects that are funded to produce compliant archives seems premature also. I think it is important that public releases show some significant advantages to the target audience and the only target audience that may see an advantage is the mission data provider community.

As I look at the core classes required for public release, I think the list is not too bad, but I think there are a few items suggested for 1b (Build 4a) that are really needed for release 1 (build 3b) so that it is not seen as a step backward. Here are specific thoughts on this issue:

## **Core Classes**

Array\_2D\_Spectrum and Array\_2D\_Map are needed. At least 2D-spectrum is very frequently used in raw data products. Maps are high level products so perhaps less urgent, but it is really important to show that there are multiple sub-classes under the class of Array. The data providers need to see that we have a systematic approach to sub-classes rather than an ad hoc approach that depends on whatever a mission wants to do. Furthermore, there are already data structures in PDS3 that address these things at least to some extent and we don’t want PDS4 to appear to be a step backwards. Array 3D is also something we already have in PDS3 so in that sense it also ought to be included in the first “public” release. Whether this is more urgent than, e.g., Array\_2D\_map is something better addressed by the GEO and IMG nodes. On the whole, the Array class, which is the class that encompasses the bulk of real observational data (Table class would be second most important for real data), appears to be the least developed class. In my view, this is a serious barrier to “public release”, even if it is only to mission data providers. Schedules are nice, but releasing something embarrassing to meet a schedule is a recipe for disaster. Bottom line – more subclasses under the Array class are crucial. We can haggle over which subclasses, but having more of them is a sine qua non.

It also does not appear to me that the table in the Appendix shows all the classes and subclasses. I thought we agreed at the MC that we had to have a comprehensive list

of what is and what is not included in the Core. (Dick Simpson also made the point that we need the list of what is not included.)

### **System Capabilities**

As mentioned above the absence of a product search capability argues for not releasing this to users. However, there is another significant gap. The Label Generation Tool, which currently only deals with migration from PDS3 labels to PDS4 labels, is a serious omission. This is the single thing that would most easily get buy-in to PDS4 from mission data providers in that it would make it much easier for them to produce data products. Unfortunately, this is not in the planned “public release”. The label validation tool is a step forward, and will be a significant improvement for PDS4 data providers. However, it is an order of magnitude less valuable than the label creation tool. I think this is a key thing that should be ready for PDS4. Dick Simpson has made a similar point.