THINGS WE HAVE TO DO

Nathan Potter, James Gallagher

October 30, 2003

1   Questions

- Should we switch URI for URL?

- Should we have a section about clients that cannot handle certain types? What should they do? What about servers that gag on something? We do have a quasi-standard way to handle errors in attributes implemented by the HDF4 server...

- Limit types, the way types can be combined, or keep the spec completely general? For example, will any client be able to process an Array of Sequences? Sure, we could write one, but will anybody else?

- Supported relational expressions for the String type are limited to equality, inequality and regular expression match. The less than operations are just too wierd in real life.

- We need to find that reference for Out of Band data (from the W3C).

- Are we going to Base64 encode Attributes.

- Should the XML syntax for *Grid* be changed to eliminate the *Target* element? We could do this by adding a `role` attribute to the *Alias* element and specifying that the allowable values for `role` are `array` and `map`. The `role` attribute would only be allowed in *Aliases* that are member variables of a *Grid*.

- Should the XML syntax for *Constraint* be changed to make the *NoAttributes* element (which is a really a simple switch) into an XML attribute of *Constraint*? This might look like an option Xml attribute called `Attributes` whose value could be set to `yes` or `no` with it defaulting to `yes` if the attribute was missing.

2   Important Points

- Grids now may have N dimensional maps.

- We're introducing some new atomic types: Boolean, Enumeration, Int64, UInt64, and Time.

3   Dap Objects TODO

Uppercase MUST, MAY NOT, etc.

[DONE] MUST

[DONE] MAY

[DONE] MAY NOT

others?

DONE Add origin attribute to Dataset?

DONE Add (and name) an *Attribute* free DDX. FIX: Added tag to constraint expression that does the trick.

DONE There are significant conflicts in general discussion of Grid; in Variables section, Responses (DDX XML Elements) section, and in examples. In particular:

- [DONE] The Maps cannot yet be Aliases. (FIX: allow aliases)
- [DONE] The discussion of the way MAP is related to a dimension in the ARRAY is ambiguous and contradictory (both, can you believe it?): Is it by dimension name? OR is it by the name of the MAP element? What about multiple dimension MAP elements? (FIX: Assign by dimension name.*This is a show stopper for releasing this document.*

DONE Fully qualified names vs partial names in projection and selection. FIX: Make all fully qualified. (Can we start with slash and skip dataset name?)

DONE Sequence variables poorly defined in DDX XML Elements. Consider adding:

- Alias may not point to a member of Sequences.
- Sequences cannot contain Aliases that point outside the Sequence. FIX: Make it so. Provide some justification. Implicit relation argument.

DONE Can you have *Arrays* of *Enumerations*? FIX: No.

DONE What about allowing selection based on Attribute content? Say, all variables with origin="helena"? All variables with a attributed named "units"? All variables with an Attribute named "units" whose value is "cm"? FIX: Yes, think about it at length. Add note to that affect

DONE dap objects document needs page numbers. dap objects document has formatting issues (it's too long on my pages when I print it out.) FIX: Ask Tom S.

DONE Why do we restrict Attributes to being homogeneous? Why not both values and child Attributes? FIX: That's just the way it is. "Because"

DONE Naming rules, encoding rules, and length specification might all go in a separate section? What about discussing partial implementations? Example netcdf lib doesn't do sequences. FIX: Added sub-section to Responses Section.

Add FAQ/release notes/new features