

VOTable 1.2 implementation feedbacks



*Just for illustrating VOTable
1.2 space reference
implementation experience in
Aladin Beta release*

Pierre Fernique - CDS
Interop 2009 - Strasbourg

Good surprises

- 4 hours (for reading doc + implementing + debugging)
- Good doc, clear examples
- Usage of `ref=>ID` requires similar algorithm that the COOSYS previous definition
- `utype` very useful in this case. No ambiguity

Algorithm with sax-like parser (game level 1)

```
<GROUP ID="Coo1" utype="stc:AstroCoords" >  
  <PARAM ... utype="stc:AstroCoords.coord_sys_id" value="UTC-FK5-TOPO" />  
  <PARAM ... utype="stc:AstroCoordSystem.SpaceFrame.CoordRefFrame.Equinox"  
    value="1991.25" />  
</GROUP>  
...  
<FIELD name="RA" ref="Coo1" ....>
```

- 1) parse GROUP with utype="stc:AstroCoords" => memorise ID
 - a) look for PARAM with utype="stc:AstroCoords.coord_sys_id"
 - b) associate the group ID with the "value" attribute in a hashtable
 - c) same for epoch and equinox
- 2) in FIELD, look for ref="xxxx" attribut
 - a) search for corresponding ID in the hashtable
 - b) parse the string for retrieving the original coordinate system (ICRS, FK5, FK4, GALACTIC,...), specify eq/ep if necessary
- 3) For each RA,DEC couple in the data, process to the conversion

Game level 2... manage the complexity

- Usage of ref=>ref=>ID (exemple 2 in the doc)
- GROUP into GROUP
- GROUP at VOTABLE, or RESOURCE or TABLE level

=> This flexibility/complexity will certainly discourage some developers (remember COOSYS client implementation success).

Bad surprises

- Fieldref optional ! concretely not really usable
- Equinox/epoch time syntax not really defined
 - ex1: unit="yr" value="J1991.25"
 - ex2: unit="double" value="2000"
- ref to direct STC lib removed, but only partially in the doc