MOClint, a validation tool for Multi-Order Coverage maps (MOC)

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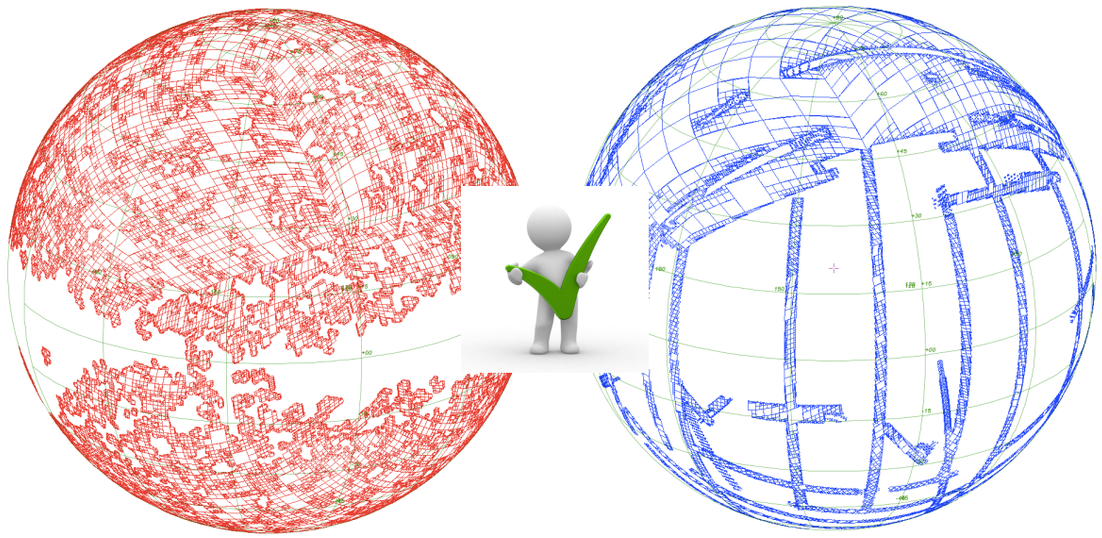

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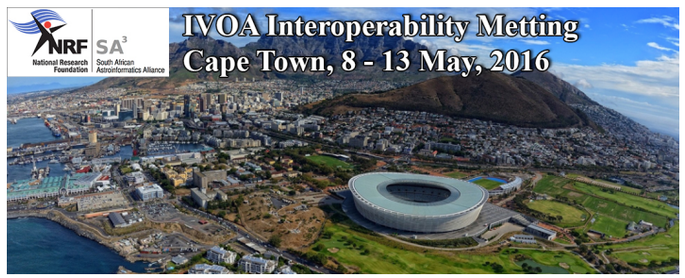
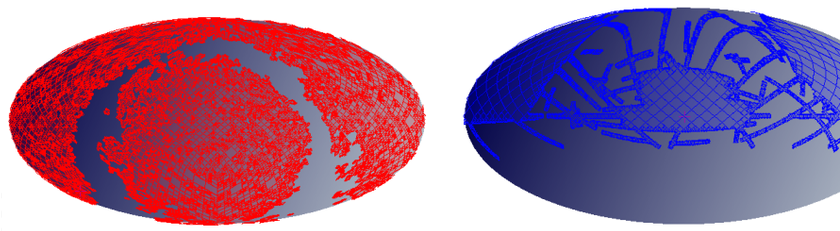
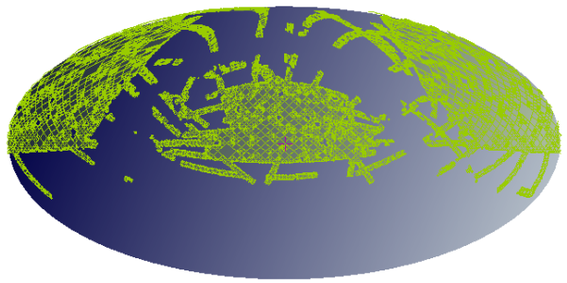


Context

- MOC: **M**ulti-**O**rder **C**overage maps
  - HEALPix-based description of sky regions
  - Allows for fast comparison of dataset coverages
  - IVOA REC since June 2014





- MOC in registry
  - 12,000 VizieR catalogues with positions have their MOC described

MOClint - Service

- validation of remote MOC (via URL) or local files
- performs over 30 tests
  - validity of FITS file
  - compulsory keywords
  - sensible values for keywords
  - well-formedness of MOC
  - …
- Output: HTML report or JSON
- http://alasky.unistra.fr/MocServer/lint

MOClint - Java library

- JAR, source code and examples available at: http://wiki.ivoa.net/twiki/bin/view/IVOA/MocInfo
  - Part of the larger MOC library (GPL3)

- Class `cds.moc.examples.MocLint`

Lessons learnt

Testing our existing MOC against MOClint

- found many small errors or omissions
- errors in source code mainly due to updates since pre-REC versions of the document
- validator quite useful, complements reference implementation

General questions on validators

- Schema for generic output format?
  - validation status
  - errors reporting
- blurry boundary between *validation=OK* and *validation=Warning* (partial compliance)
- validators as registered services?