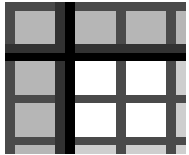


TOPCAT and all that

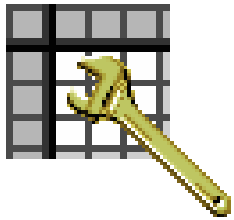
Mark Taylor, Bristol University, UK



STIL

- Public API for table I/O and processing

<http://www.starlink.ac.uk/stil/>



STILTS

- Command-line tools for table manipulation

<http://www.starlink.ac.uk/stilts/>



TOPCAT

- GUI table visualisation/manipulation

<http://www.starlink.ac.uk/topcat/>

Outline

- 'Project' status
- Software current capabilities & recent upgrades
- Future plans

Software Status

- Starlink is terminated
- I have some continued funding
 - 12-24 months, probably (PPARC, VOTech)
- VOTable-related work includes:
 - continued support of STIL
 - continued support/development of TOPCAT
 - recent v1.0 release of STILTS

STIL

- ... continues to work

Recent TOPCAT Developments

- Crossmatching improvements
 - Now uses HEALPix not HTM (*much* faster)
 - Per-row errors for sky matching
 - Choose all or best matches
 - More choice of join types (what rows in output)
- Additional Time conversion functions
 - MJD, ISO-8601, Julian/Besselian epoch
- MySpace access now uses ACR
 - Windows access initially broken – now fixed

STILTS

- Command-line package for VOTables/tables
- Experimental release since May 2005
- VOTable-specific tools:
 - `votcopy` – VOTable encoding translator
 - `votlint` – VOTable validator
- Generic table tools (including VOTables)
 - `tcopy` – Table format translator
 - VOTable, FITS, SQL, CSV, ASCII, ...
 - `tpipe` – All-purpose table pipeline utility
 - stats, data/metadata calculations, column rearrangement, coordinate manipulation, bad value substitution, row selection, sampling, ...

STILTS v1.0 (Oct 2005)

- Parameter system changed
 - backwardly incompatible
 - better value defaulting, more comprehensible, prompting
 - more extensible
 - more amenable to wrapping in external frameworks
 - SOAP, CEA, OPTICON, ??
- New tasks
 - `tmatch2` - 2-table crossmatcher
 - `tcat` - table concatenater
 - `calc` - quick command-line expression evaluator

Future Plans I

- TOPCAT graphics improvements
 - histograms
 - multiplots
- STILTS matching facilities
 - `tmatch1`
 - `tmatchN`
- PLASTICise TOPCAT
 - communication with Aladin, VisIVO etc (see apps IG)

Future Plans II

- VOTable metadata improvements
 - STIL to keep track of GROUPs?
 - STIL to retain VOTable document structure?
- STILTS/TOPCAT log processing steps in PARAMs?
- Alternative STILTS invocation (stilsh? PyStilts?)
- Better use of UCDs in TOPCAT/STILTS?
- STC?
- TOPCAT visualisation/analysis enhancements
 - improved multivariate statistics/visualisation?
 - interface with R?
 - publication quality graphics?
- STILTS plotting tools `tplot`, `thist` (-> gif/.eps)?

Future Plans III

- Your requests/suggestions?