

Applications WG

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Sessions

- Apps 1: TAP Applications
- Apps 2: General Applications
- Apps 3: SAMP and Portals
- Apps Special: Nulls in VOTables

Application Presentations

Themes:

- TAP — lots of activity
- Portals/Gadgets ↔ Android

SAMP Web Profile

- Client implementations:
 - ▷ VAO DDT (Dean Hinshaw)
 - ▷ ESO archive experiments (Alberto Micol)
 - ▷ Rumours/experiments from elsewhere (CDS, Bristol, ESA, JMMC, ...)
- Status:
 - ▷ Standard mostly ready to go
 - ▷ Hub implementations available
 - ▷ Clients ready to deploy to science users
- Open issues (continued experimentation within clients):
 - ▷ Security — probably good enough; look at https certs
 - ▷ Client resource hosting — not essential; try some options
- Actions agreed:
 - ▷ Put Web Profile-capable hubs in hands of science users
 - Release hub libraries with Web Profile enabled by default
 - Deploy in hub-bearing user tools (Aladin, TOPCAT, VOSpec, others?)
 - ▷ Push forward with standardisation
 - SAMP v1.3: → PR end 2011, REC early 2012?

Nulls in VOTable (1)

● Issues:

- (1) Hard (sometimes impossible) to encode **NULLs** for integer columns (esp. streaming)
- (2) No distinction between **NULL** and **NaN** for floating point columns
- (3) No distinction between **NULL** and empty array for array columns

● Proposed Changes:

- Empty `<TD/>` element for integer columns means **NULL**
 - ▷ Previously illegal, but commonly used with this meaning
 - ▷ Solves (1) for **TABLEDATA**
- Empty `<TD/>` element for floating point columns means **NULL**
 - ▷ Previously meant **NaN** — subtle semantic change unlikely to cause problems
 - ▷ Solves (2) for **TABLEDATA**
- New DATA encoding **BINARY2** — like **BINARY** but with per-cell bitmask marking **NULLs**
 - ▷ This is a new encoding
— but for now only encountered by clients explicitly requesting it (from TAP)
 - ▷ Solves (1), (2), (3) for **BINARY** (at least, **BINARY**-like encoding)

● New status for known VOTable encodings:

- **TABLEDATA**: All pressing issues resolved
- **BINARY**: All issues resolved by using new **BINARY**-like format
- **FITS**: is FITS – little motivation/opportunity to resolve issues, rarely used

Nulls in VOTable (2)

- Related Change:

- Add optional `serialization` parameter to VOTable MIME type ([RFC 2046](#)):
 - ▷ Example: `application/x-votable+xml; serialization=BINARY2`
 - ▷ Allows optional provision of new `BINARY2` encoding only if explicitly requested
 - ▷ Clarification of VOTable variant useful in some other contexts
 - ▷ Existing (unparameterised) declared MIME types still valid

- Other Changes:

- We do *not* intend to revisit other areas of VOTable at this time

Nulls in VOTable (3)

Procedure:

- Summarise conclusions to interop@ivoa.net
- Solicit opinions from interested absent parties (François Ochsenbein, Tom McGlynn)
- If general consensus:
 - ▶ Draft VOTable 1.3
 - ▶ Proceed through DocStd process via [Apps WG](#) (or possibly revived [VOTable WG](#))