Keeping SCS up-to-date within DAL landscape

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OUTLINE

- DALI/VOSI endpoints
- Metadata discovery
- Response
- UCD updates
- Registry extension
DALI/VOSI prescribed endpoints

- **DALI**
  - "A simple query-only DAL service like ConeSearch can be easily described as having a single DALI-sync resource where the job is a query and the response is the result of the query."

- **Changes**
  - capabilities
  - tables!
  - availability
  - (examples)

- **DALI-sync endpoint to stay as is**
  - How to add DALI/VOSI interfaces to cone searches exposed as:
  - Allow POST-ing to base search
Metadata discovery

• **SCS-1.03**
  - “In particular, a zero value of Search Radius should not return an error condition. This is because an application may be more interested in the metadata than the data, and send a fixed query (for example RA=0&DEC=90&SR=0) simply to discover the fields delivered by the service.”

• **DALI**
  - **MAXREC=0**
    - **MAXREC and overflow**
Response glitches

- **Add**
  - RESPONSEFORMAT

- **Relax**
  - VOTable version = 1.0 | 1.1
  - RA, Dec mandatory type: double
  - Single `<RESOURCE>` in single `<TABLE>` response
    - Impacts Datalink usage inside SCS response

- **Try to move towards DALI compliant error responses**
UCD updates

- Mandatory ones in response
  - ID_MAIN
    - meta.id;meta.main
  - POS_EQ_RA_MAIN
    - pos.eq.ra;meta.main
  - POS_DEC_RA_MAIN
    - pos.eq.dec;meta.main

- Probably not a critical change on server side, but what about clients?

- Other UCD-1.0 annotation requests may be solved by STC annotations

- `<GROUP>` based double UCD annotation
  - Does it fit this scope?
  - Does it solve client side issue?
### VO Validation

#### Validation Docs

<table>
<thead>
<tr>
<th>Error Name</th>
<th>Error Description</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>comm</td>
<td>Apparent communication error produced an exception inside the validator:</td>
<td>1396</td>
</tr>
<tr>
<td>2.2.1d</td>
<td>Values in the ID_MAIN column must be unique.</td>
<td>742</td>
</tr>
<tr>
<td>2.1b</td>
<td>The RESOURCE element must contain exactly one TABLE.</td>
<td>548</td>
</tr>
<tr>
<td>2.1a</td>
<td>VOTable must contain only one RESOURCE.</td>
<td>510</td>
</tr>
<tr>
<td>2.2.1a</td>
<td>The TABLE must contain exactly one FIELD with ucd=ID_MAIN.</td>
<td>392</td>
</tr>
<tr>
<td>validator error</td>
<td>connection validation error: Timeout Exceeded, timeout set to 60 second(s)</td>
<td>250</td>
</tr>
<tr>
<td>3a</td>
<td>Error message must appear in an INFO or PARAM with name=’Error’ in required location.</td>
<td>78</td>
</tr>
<tr>
<td>2.2.2a</td>
<td>The TABLE must contain exactly one FIELD with ucd=POS_EQ_RA_MAIN.</td>
<td>36</td>
</tr>
<tr>
<td>2.2.3a</td>
<td>The TABLE must contain exactly one FIELD with ucd=POS_EQ_DEC_MAIN.</td>
<td>30</td>
</tr>
<tr>
<td>responseType</td>
<td>Apparent communication error produced an exception inside the validator: UnrecognizedResponseTypeException:</td>
<td>24</td>
</tr>
</tbody>
</table>
| 2.2.1b     | The ID\_MAIN column must have datatype=’char’.
| 2.2.3b     | The POS\_EQ\_DEC\_MAIN column must have datatype=’double’.
| 2.2.1c     | The ID\_MAIN column must have a string-appropriate arraysize (recommend "").     | 13        |
| 2.2.2b     | The POS\_EQ\_RA\_MAIN column must have datatype=’double’.
| 2.2.2c     | The POS\_EQ\_RA\_MAIN column must be defined as a scalar – i.e. arraysize="1", arraysize="", or not provided (preferred). | 6         |
| 2.2.3c     | The POS\_EQ\_DEC\_MAIN column must be defined as a scalar – i.e. arraysize="1", arraysize="", or not provided (preferred) | 6         |
| **Total**  |                                                                                    | 4060      |
Registering Simple Cone Searches

- Section 3 (Resource Profile) and Appendix B (Mapping to RM and VOResource)
  - Probably better if replaced by SimpleDALRegExt reference
  - Ideally: import SimpleDALRegExt.sub(SCS) into an SCS revision
Summary

- Updating SCS to current DAL landscape seems possible
- Updates seem compatible with current implementations
- Changes must not affect existing server/client side assets severely
  - 1.0 clients should work with 1.1 services
  - 1.0 services must be consumable by 1.1 clients

謝謝