International
Virtual
Observatory
Alliance

Model Instances in Votables

Version 1.0

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Abstract

Vodml-instance-vot proposes a syntax to map VOTable data on any model serialized in VO-DML. Vodml-instance-vot annotations are grouped in a single XML block located in the VOTable head. The annotation block allows to easily reconstruct the model structure. It designed in a way that the block can be reused on different data sets in order to facilitate the annotation process. Vodml-instance-vot is enable to join data from different tables

Status of this document

This is an IVOA Working Draft for review by IVOA members and other interested parties. It is a draft document and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use IVOA Working Drafts as reference materials or to cite them as other than "work in progress".

A list of current IVOA Recommendations and other technical documents can be found at http://www.ivoa.net/documents/.

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Acknowledgments

PDF fallback.
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Figure 1: Architecture diagram for this document

Conformance-related definitions

The words "MUST", "SHALL", "SHOULD", "MAY", "RECOMMENDED", and "OPTIONAL" (in upper or lower case) used in this document are to be interpreted as described in IETF standard RFC2119 (**?**).

The *Virtual Observatory (VO)* is a general term for a collection of federated resources that can be used to conduct astronomical research, education, and outreach. The International Virtual Observatory Alliance (IVOA) is a global collaboration of separately funded projects to develop standards and infrastructure that enable VO applications.

1 Introduction

1.1 Role within the VO Architecture

Fig. 1 shows the role this document plays within the IVOA architecture (**?**). ???? and so on, LaTeX as you know and love it. ????
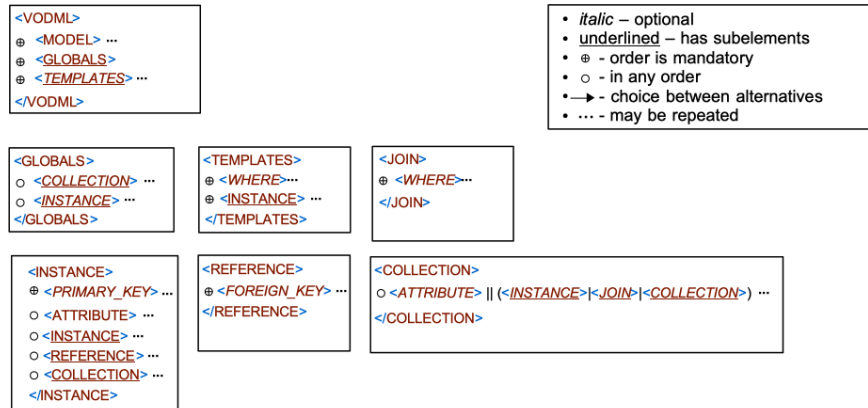
2 Use Cases and Requirements

2.1 Use Cases

2.2 Requirements

3 Syntax

Element Hierarchy

```
<VODML>
 ⊕  <MODEL> ⋯
 ⊕  <GLOBALS>
 ⊕  <TEMPLATES> ⋯
</VODML>
```

- *italic* – optional
- <u>underlined</u> – has subelements
- ⊕ - order is mandatory
- ○ - in any order
- → - choice between alternatives
- ⋯ - may be repeated

```
<GLOBALS>
 ○  <COLLECTION> ⋯
 ○  <INSTANCE> ⋯
</GLOBALS>
```

```
<TEMPLATES>
 ⊕ <WHERE>⋯
 ⊕ <INSTANCE> ⋯
</TEMPLATES>
```

```
<JOIN>
 ⊕ <WHERE>⋯
</JOIN>
```

```
<INSTANCE>
 ⊕ <PRIMARY_KEY> ⋯
 ○ <ATTRIBUTE> ⋯
 ○ <INSTANCE> ⋯
 ○ <REFERENCE> ⋯
 ○ <COLLECTION> ⋯
</INSTANCE>
```

```
<REFERENCE>
 ⊕ <FOREIGN_KEY> ⋯
</REFERENCE>
```

```
<COLLECTION>
 ○ <ATTRIBUTE> || (<INSTANCE>|<JOIN>|<COLLECTION>) ⋯
</COLLECTION>
```

Attribute Summary

VODML

MODEL
name
url

GLOBALS

TEMPLATES
tableref

INSTANCE
dmrole
ID

COLLECTION
dmrole
ID

REFERENCE
dmrole
tableref
dmref

ATTRIBUTE
dmrole
dmtype
ref
value
unit
arrayindex

PRIMARY_KEY
ref
dmtype
value

FOREIGN_KEY
ref

WHERE
primarykey
foreignkey
value

JOIN
tableref
dmref

3.1 Mapping Block Structure

```
<VOTABLE xmlns="http://www.ivoa.net/xml/VOTable/v1.3"
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         version="1.4">
  <VODML>
      <MODEL> ... </MODEL>
      <GLOBALS> ... </GLOBALS>
      <TEMPLATES> ... </TEMPLATES>
    . ...
  </VODML>
  ...
</VOTABLE>
```

Listing 1: Complete mapping block example

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3.2   Syntax

3.2.1   MODEL

Attribute	Role
@name	Name of the mapped model (informal). This attribute must be left empty
@url	Url of the vo-dml serialization of the model.

Table 1: `MODEL` attributes

3.2.2   GLOBALS

3.2.3   TEMPLATES

Attribute	Role
@tableref	ID of the mapped table

Table 2: `TEMPLATES` attributes

@tableref	Pattern
OPT	Always mandatory

Table 3: Valid attribute patterns for `TEMPLATES`

3.2.4   COLLECTION

Attribute	Role
@ID	ID of the mapping element
@dmrole	Role of the collection in the DM

Table 4: `COLLECTION` attributes

3.2.5   INSTANCE

Attribute	Role
@ID	ID of the mapping element
@dmrole	Role of the instance in the DM

Table 5: `INSTANCE` attributes

3.2.6 ATTRIBUTE

Attribute	Role
@dmrole	Role of the attribute
@dmtype	Type of the attribute
@ref	—
@value	—
@unit	—
@arrayindex	—

Table 6: `ATTRIBUTE` attributes

3.2.7 REFERENCE

3.2.8 JOIN

3.2.9 WHERE

3.2.10 PRIMARY_KEY

3.2.11 FOREIGN_KEY

4 Changes from Previous Versions

No previous versions yet.