

# Meeting Minutes 13 April 2001

## Reference and Report Metadata

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## 1 Introduction

These meeting minutes discuss how to handle reference and report metadata in CellML. The method selected must be able to handle both published references and unpublished reports. Ideally, it will also allow published references to be cited by either a database unique identifier (such as the Medline UI) or by full reference information (i.e., author, title, journal, etc.). It must also be possible to indicate whether a reference is the primary reference for the model or a secondary, supporting reference.

The following are some possible methods for handling reference metadata:

- DocBook
- Medline XML format
- XML/RDF serialization of the OMG Bibliographic Query Service data model
- A CellML-specific solution

## 2 Comparison of Options

## 3 Recommended Method

The best option is to use the OMG's BQS data model. This serialization of this data model into RDF is described in [11 April 2001 meeting minutes](#)<sup>1</sup>. The CellML metadata specification should only require CellML metadata compliant software to recognize the following elements:

- **<bqs:reference>** — this element is the root for reference information.
- **<dc:identifier>** — used to refer to a reference by its database.
- **<bqs:identifier\_scheme>** — used to indicate from which database the identifier was taken.
- **<bqs:identifier\_type>** — used to allow cross-references to the same citation in multiple databases. If the value of this element is `alternative` the enclosing identifier element provides a cross-reference.
- **<dc:type>** — used to indicate the type of reference (i.e., journal article, book, thesis, etc.)
- **<dc:title>** — used to store the title of the reference. Also used to store the title of a journal.
- **<dc:date>** — used to indicate the date of the reference
- **<dcq:dateType>** — used whether indicate that the date is the publication date (used for published references) or the creations date (used for unpublished references).

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<sup>1</sup>[http://www.cellml.org/private/progress\\_reports/20010411\\_meeting\\_minutes.html](http://www.cellml.org/private/progress_reports/20010411_meeting_minutes.html)

- **<dc:dateScheme>** — identifies the encoding scheme for the date. The BQS data model uses the W3C-DTF scheme. However, explicitly including this information increases the interoperability of the reference metadata.
- **<dc:creator>** — used to store reference authors. Multiple authors must be stored in an **<rdf:Seq>** container, because this provides an ordered list.
- **<dc:publisher>** — used to store the reference publisher. Only one publisher is allowed.
- **<dc:contributor>** — used to store reference contributors, such as editors. Multiple contributors must be stored in an **<rdf:Seq>** container, because this provides an ordered list.
- **<bqs:contributor\_type>** — used to indicate what type of contributor is contained in the value of the **<dc:contributor>** element. The most common value for the **<bqs:contributor\_type>** element will be `editor`.
- **<bqs:journal>** — the container for journal information.
- **<bqs:abbreviation>** — stores the abbreviation for a journal name.
- **<bqs:abbreviation\_scheme>** — indicates which standard abbreviation is used for the journal. Allowed values are Medline and CAS.
- **<bqs:volume>** — stores the volume of the reference (used for books and journal articles).
- **<bqs:edition>** — stores the edition for a reference (used for books).
- **<bqs:first\_page>** — stores the first page of the reference (used for journal and book articles).
- **<bqs:last\_page>** — stores the last page of the reference (used for journal and book articles).
- **<bqs:issue>** — stores the issue of the journal from which the reference was taken (used for journal articles).
- **<bqs:issue\_supplement>** — stores the issue supplement of the journal from which the reference was taken (used for journal articles).
- **<bqs:url>** — stores the URL for a web resource reference.
- **<bqs:property>** — stores a property of a reference, journal, author, contributor, or publisher.
- **<bqs:property\_type>** — indicates the type of property stored in the value of the enclosing **<bqs:property>** element.

In addition, the following RDF constructs are used:

- **<rdf:value>** element
- **<rdf:Seq>** element
- **rdf:resource** attribute
- **rdf:parseType** attribute

The **<bqs:property>** element can be used to indicate whether the cited reference is a primary or secondary reference. To do this, the **<bqs:property\_type>** element should be given a value of `citation_type`. The corresponding **<rdf:value>** element should be given a value of `primary` or `secondary`. The absence of this particular **<bqs:property>** element can be taken to mean that the citation is the primary reference.

## 4 Examples

The [11 April 2001 meeting minutes](#)<sup>2</sup> provide several examples of storing reference metadata in the BQS serialization.

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<sup>2</sup>[http://www.cellml.org/private/progress\\_reports/20010411\\_meeting\\_minutes.html](http://www.cellml.org/private/progress_reports/20010411_meeting_minutes.html)