

University of Crete
Dpt. of Computer Science
CS 566 - Internet Knowledge Management

BibTeX In OWL

BIBTEX

Kartsonakis Efthimis

Kriara Lito

Papadakis Giannis

Heraklion, 2008

Table of Contents

Introduction	3
Usage of BibTeX	4
BibTeX Ontology	5
Classes and Properties	5
OWL	6
Examples of Ontology	7
BibSonomy	7
Example	7
References	9

Introduction

BibTeX is a tool for formatting lists of references. The BibTeX tool is typically used together with the LaTeX document preparation system. Within the typesetting system, its name is styled as $\text{BIB}\text{T}\text{E}\text{X}$.

BibTeX was created by Oren Patashnik and Leslie Lamport in 1985. BibTeX makes it easy to cite sources in a consistent manner, by separating bibliographic information from the presentation of this information. This same principle of separation of content and presentation/style is used by LaTeX itself.

BibTeX formats bibliographic items according to a style file, typically by generating TeX or LaTeX formatting commands. However, style files for generating HTML output also exist. BibTeX style files, for which the suffix .bst is common, are written in a simple, stack-based programming language that describes how bibliography items should be formatted.

Usage of BibTeX

Most journals or publishers that support LaTeX often have a customized bibliographic style file for the convenience of the authors. This ensures that the bibliographic style meets the guidelines of the publisher with minimal effort.

```
@Book{abramowitz+stegun,  
  author = "Milton Abramowitz and Irene A. Stegun",  
  title = "Handbook of Mathematical Functions with Formulas, Graphs, and Mathematical Tables",  
  publisher = "Dover",  
  year = 1964,  
  address = "New York",  
  edition = "ninth Dover printing, tenth GPO printing"  
}
```

If a document references this handbook, the bibliographic information may be formatted in different ways depending on which citation style (APA, MLA, Chicago etc.) is employed. The way LaTeX deals with this is by specifying `\cite` commands and the desired bibliography style in the LaTeX document. If the command `\cite{abramowitz+stegun}` appears inside a LaTeX document, the BibTeX program will include this book in the list of references for the document and generate appropriate LaTeX formatting code. When viewing the formatted LaTeX document, the result might look like this:

Abramowitz, Milton and Irene A. Stegun (1964), Handbook of mathematical functions with formulas, graphs, and mathematical tables. New York: Dover.

Depending on the style file, BibTeX may rearrange authors' last names, change the case of titles, omit fields present in the .bib file, format text in italics, add punctuation, etc. Since the same style file is used for an entire list of references, these are all formatted consistently with minimal effort required from authors or editors.

```
@Book{hicks2001,  
  author = "von Hicks, III, Michael",  
  title = "Design of a Carbon Fiber Composite Grid Structure for the GLAST Spacecraft Using a Novel Manufacturing Technique",  
  publisher = "Stanford Press",  
  year = 2001,  
  address = "Palo Alto",  
  edition = "1st",  
  isbn = "0-69-697269-4"  
}
```

```
@INPROCEEDINGS {author:06,  
  title = {Some publication title},  
  author = {First Author and Second Author},  
  crossref = {conference:06},  
  pages = {330--331},  
}
```

```
@PROCEEDINGS {conference:06,  
  editor = {First Editor and Second Editor},  
  booktitle = {Proceedings of the Xth Conference on XYZ},  
  year = {2006},  
  month = {October},  
}
```

BibTeX Ontology

BibTeX ontology is a recasting of the BibTeX bibliographic markup language in OWL for use in RDF and semantic web applications. As the semantic web grows, there is the need for more and more formal ontology definitions in standard languages such as the Web Ontology Language (OWL) of the World Wide Web Consortium.

Classes and Properties

Nearly all of the classes and properties come directly from the BibTeX format document. There are a few additional properties and classes, some added to help organize BibTeX cardinality restrictions, others for ease-of-use. At the moment, BibTeX ontology is not standardized yet, so the fields are subject of change.

- Entry (Entry, Base class for all entries)
- Article (An article from a journal or magazine.)
 - #hasAuthor [1 +oo]
 - #hasTitle [1 +oo]
 - #hasJournal [1 +oo]
 - #hasYear [1 +oo]
- Book (A book with an explicit publisher.)
 - #humanCreator [1 +oo]
 - #hasTitle [1 +oo]
 - #hasPublisher [1 +oo]
 - #hasYear [1 +oo]
- Booklet (A work that is printed and bound, but without a named publisher or sponsoring institution.)
 - #hasTitle [1 +oo]
- Conference (Conference, The same as INPROCEEDINGS, included for Scribe compatibility.)
- Inbook (Inbook, A part of a book, which may be a chapter (or section or whatever) and/or a range of pages.)
 - #humanCreator [1 +oo]
 - #pageChapterData [1 +oo]
 - #hasTitle [1 +oo]
 - #hasPublisher [1 +oo]
 - #hasYear [1 +oo]
- Incollection (Incollection, A part of a book having its own title.)
 - #hasAuthor [1 +oo]
 - #hasTitle [1 +oo]
 - #hasBooktitle [1 +oo]
 - #hasPublisher [1 +oo]
 - #hasYear [1 +oo]
- Inproceedings (Inproceedings, An article in a conference proceedings.)
 - #hasAuthor [1 +oo]

- #hasTitle [1 +oo]
- #hasBooktitle [1 +oo]
- #hasYear [1 +oo]
- Manual (Technical documentation.)
 - #hasTitle [1 +oo]
- Mastersthesis (A Master's thesis.)
 - #hasAuthor [1 +oo]
 - #hasTitle [1 +oo]
 - #hasSchool [1 +oo]
 - #hasYear [1 +oo]
- Misc (Use this type when nothing else fits.)
- Phdthesis (A PhD thesis.)
 - #hasAuthor [1 +oo]
 - #hasTitle [1 +oo]
 - #hasSchool [1 +oo]
 - #hasYear [1 +oo]
- Proceedings (The proceedings of a conference.)
 - #hasTitle [1 +oo]
 - #hasYear [1 +oo]
- TechReport (A report published by a school or other institution, usually numbered within a series.)
 - #hasAuthor [1 +oo]
 - #hasTitle [1 +oo]
 - #hasInstitution [1 +oo]
 - #hasYear [1 +oo]
 - Unpublished (Unpublished, A document having an author and title, but not formally published.)
 - #hasAuthor [1 +oo]
 - #hasTitle [1 +oo]
 - #hasNote [1 +oo]

OWL

OWL-S is an ontology, within the OWL-based framework of the Semantic Web, for describing Semantic Web Services. It will enable users and software agents to automatically discover, invoke, compose, and monitor Web resources offering services, under specified constraints.

Both OWL-S and WSDL need to be used together to allow a full specification of grounding. Although both languages target at different levels of specification, there is an intersection between them:

- An OWL-S atomic process corresponds to a WSDL operation;
- The inputs and outputs of an OWL-S atomic process correspond to WSDL messages;

- The types of the inputs and outputs of an OWL-S atomic process correspond to WSDL abstract types.

Examples of Ontology

BibSonomy

BibSonomy is a social bookmarking and publication sharing system available at <http://www.bibsonomy.org/>. The system aims to integrate the features of bookmarking systems as well as team-oriented publication management. It offers users to store and organize their bookmarks and publication entries and supports the integration of different communities and people by offering a social platform for literature exchange.

Both bookmarks and publication entries can be provided with keywords (tags) to structure and refine information. As the descriptive terms can be freely chosen, the assignment of tags from different users creates a spontaneous, uncontrolled vocabulary: a folksonomy. In BibSonomy, the folksonomy evolves from the participation of research groups, learning communities and individual users, organizing their information needs.

Publication posts in BibSonomy are stored in the BibTeX format. However, export in other formats such as EndNote or HTML (e. g. for publication list creation) is possible. The service was developed by a team of students and scientists working at the Institute of Knowledge and Data Engineering [1] and is hosted by the University of Kassel.

Example

Search term: 'Author::Antoniou'

```
<?xml version="1.0" encoding="UTF-8"?>
  <!DOCTYPE rdf:RDF [
    <!ENTITY rdf 'http://www.w3.org/1999/02/22-rdf-syntax-ns#'>
    <!ENTITY rdfs 'http://www.w3.org/2000/01/rdf-schema#'>
    <!ENTITY swrc 'http://swrc.ontoware.org/ontology#'>
    <!ENTITY xsd 'http://www.w3.org/2001/XMLSchema#'>
  ]>

  <rdf:RDF
    xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
    xmlns="http://purl.org/rss/1.0/"
    xmlns:cc="http://web.resource.org/cc/"
    xmlns:taxo="http://purl.org/rss/1.0/modules/taxonomy/"
    xmlns:dc="http://purl.org/dc/elements/1.1/"
    xmlns:syn="http://purl.org/rss/1.0/modules/syndication/"
    xmlns:content="http://purl.org/rss/1.0/modules/content/"
    xmlns:admin="http://webns.net/mvcb/"
    xmlns:burst="http://xmlns.com/burst/0.1/"
    xmlns:rdfs="&rdfs;"
    xmlns:swrc="&swrc;"
```

```

xmlns:xsd="&xsd;"
>

<channel rdf:about="http://www.bibsonomy.org/uri/author/Antoniou">
<title>BibSonomy publications for /author/Antoniou</title>
<link>http://www.bibsonomy.org/burst/author/Antoniou</link>

<description>BibSonomy BuRST Feed for /author/Antoniou</description>
<dc:date>2008-03-29T16:46:57+01:00</dc:date>

<items>
<rdf:Seq>
<rdf:li
rdf:resource="http://www.bibsonomy.org/uri/BibTeX/243bc024957995096f22cccaeb7b8208/callagialla"/>
<rdf:li
rdf:resource="http://www.bibsonomy.org/uri/BibTeX/25013f086e491a95e61eb8cfe1ac4bec5/taspel"/>
<rdf:li rdf:resource="http://www.bibsonomy.org/uri/BibTeX/21c3e2144e55c22dccf499b5bc162381d/idsia"/>
<rdf:li rdf:resource="http://www.bibsonomy.org/uri/BibTeX/224d93abc80174ed2b45ca87e327d1eaf/dblp"/>
<rdf:li rdf:resource="http://www.bibsonomy.org/uri/BibTeX/23dbfbf86e1bb3e6a0857c55a328ed49f/imtm"/>
<rdf:li rdf:resource="http://www.bibsonomy.org/uri/BibTeX/22eb03ffe8cad4b8e43332c93c673db9/dblp"/>
<rdf:li
rdf:resource="http://www.bibsonomy.org/uri/BibTeX/21c3e2144e55c22dccf499b5bc162381d/schau"/>
<rdf:li rdf:resource="http://www.bibsonomy.org/uri/BibTeX/2daec8aa347175f36957df80dc6b406fa/dblp"/>
<rdf:li rdf:resource="http://www.bibsonomy.org/uri/BibTeX/22d0706919dafa40f7d72a19537abe243/dblp"/>
<rdf:li rdf:resource="http://www.bibsonomy.org/uri/BibTeX/218357a0b4dafdf509c132899f1d4b3f8/dblp"/>
</rdf:Seq>
</items>

</channel>

<item rdf:about="http://www.bibsonomy.org/uri/BibTeX/243bc024957995096f22cccaeb7b8208/callagialla">
<title>Ontology Language: OWL</title>
<link>http://www.bibsonomy.org/BibTeX/243bc024957995096f22cccaeb7b8208/callagialla</link>
<dc:creator>callagialla</dc:creator>
<dc:date>2008-03-20T21:01:58+01:00</dc:date>
<dc:subject>diss </dc:subject>

<content:encoded>
<![CDATA[
<div class="block">
<div class="bmtitle">
<a href="http://www.bibsonomy.org/BibTeX/243bc024957995096f22cccaeb7b8208/callagialla"> Ontology
Language: OWL</a>
</div>
<div class="bmdesc">
<span style="color:#555555;">
Grigoris <a href="http://www.bibsonomy.org/author/Antoniou">Antoniou</a>
and Frank Van <a href="http://www.bibsonomy.org/author/Harmelen">Harmelen</a>
</span>
<em>Handbook on Ontologies: International Handbook on Information Systems</em>
67-92
(2004)
</div>
<span class="bmmeta">
to
<span class="bmtags">
<a href="http://www.bibsonomy.org/user/callagialla/diss">diss</a>
</span>
by <a href="http://www.bibsonomy.org/user/callagialla">callagialla</a>
on 2008-03-20 21:01:58 </span></div>
]]>
</content:encoded>
<taxo:topics>

```



```

<rdf:Bag>
  <rdf:li rdf:resource="http://www.bibsonomy.org/tag/diss" />
</rdf:Bag>
</taxo:topics>
<burst:publication>

  <swrc:InCollection>
    <swrc:booktitle>Handbook on Ontologies: International Handbook on Information
Systems</swrc:booktitle><swrc:pages>67-92</swrc:pages><swrc:publisher><swrc:Organization
swrc:name="Springer"/></swrc:publisher><swrc:title>Ontology Language:
OWL</swrc:title><swrc:year>2004</swrc:year><swrc:keywords>diss </swrc:keywords><swrc:date>2008-03-20
21:01:58.0</swrc:date><swrc:hasExtraField>
  <swrc:Field swrc:key="isbn" swrc:value="3540408347"/>
</swrc:hasExtraField>
<swrc:author>
  <rdf:Seq>

    <rdf:_1><swrc:Person swrc:name="Grigoris Antoniou" /></rdf:_1>
    <rdf:_2><swrc:Person swrc:name="Frank Van Harmelen" /></rdf:_2>
  </rdf:Seq>
</swrc:author>

<swrc:editor>
  <rdf:Seq>
    <rdf:_1><swrc:Person swrc:name="Steffen Staab" /></rdf:_1>
    <rdf:_2><swrc:Person swrc:name="Rudi Studer" /></rdf:_2>
  </rdf:Seq>

</swrc:editor></swrc:InCollection>
  </burst:publication>
</item>

</rdf:RDF>

```

References

1. Nick Knouf (2004). Working Draft. In *BibTeX Definition in Web Ontology Language (OWL) Version 0.1*. Retrieved March 29, 2008, from <http://zeitkunst.org/BibTeX/0.1/>
2. Wikipedia article. BibTeX. Retrieved March 29, 2008, from <http://en.wikipedia.org/wiki/BibTeX>
3. Wikipedia article. Owl-s. Retrieved March 29, 2008, from <http://en.wikipedia.org/wiki/Owl-s>
4. Wikipedia article. BibSonomy. Retrieved March 29, 2008, from <http://en.wikipedia.org/wiki/BibSonomy/>
5. Xml Schema taken from <http://www.bibsonomy.org/burst/author/Antoniou>

The Mathematical Tables Project survived the termination of the WPA in 1943 and continued to operate in New York until 1948. At that point, roughly 25 members of the group moved to Washington, DC to become the Computation Laboratory of the National Bureau of Standards, now the National Institute of Standards and Technology. Blanch moved to Los Angeles to lead the computing office of the Institute for Numerical Analysis at UCLA and Arnold Lowan joined the faculty of Yeshiva University in New York.Â Handbook of Mathematical Functions with Formulas, Graphs, and Mathematical Tables. Applied Mathematics Series. 55 (Ninth reprint with additional corrections of tenth original printing with corrections (December 1972); first ed.).

-- The Princeton Companion to Mathematics. -- Handbook of Mathematical Functions: with Formulas, Graphs, and Mathematical Tables (Dover Books on Mathematics). -- NIST Handbook of Mathematical Functions (Being of course the 2010 update of the Abramowitz classic above). Given these four, there is hardly a topic from among the current 495 math fields of study that isn't at least explained in enough detail to save LOTS of time on link expeditions.Â Thorough derivations of equations involved with advanced mathematical functions. Wonderful description of interpolation techniques for application against the hundreds of pages of various mathematical tables. Read more. One person found this helpful. Handbook of Mathematical Functions with Formulas, Graphs, and Mathematical Table. Handbook of Mathematical Functions with Formulas, Graphs, and Mathematical Table.Â The present Handbook has been designed to provide scientific investigators with a comprehensive and self-contained summary of the mathematical functions that arise in physical and engineering problems. The well-known Tables of Functions by E. Jahnke and F. Emde has been invaluable to workers in these fields in its many editions during the past half-century. The present volume extends the work of these authors by giving more extensive and more accurate numerical tables, and by giving larger collections of mathematical properties of the tabulated functions. Handbook of Mathematical Functions. With. Formulas, Graphs, and Mathematical Tables. Edited by Milton Abramowitz and Irene A. Stegun. National Bureau of Standards.Â Numerical tables of mathematical functions are in continual demand by scientists and engineers. A greater variety of functions and higher accuracy of tabulation are now required as a result of scientific advances and, especially, of the increasing use of automatic computers. In the latter connection, the tables serve mainly for preliminary surveys of problems before programming for machine operation.

and Tables Schaum's Mathematical Handbook of Formulas and Tables Murray R. Spiegel Fundamentals of Mathematics: Functions and Graphs. 642 Pages 2016 2.33 MB 6,908 Downloads New! . Fundamentals of Mathematics: Functions and Graphs Sanjay Mishra Mathematics, Probability and Statistics, Applied Mathematics. 260 Pages 2013 1.6 MB 78,608 Downloads. G. Zill. A hand book of mathematical function with formula, graph and mathematical tables The POWER of Your Subconscious Mind. 222 Pages 2010 1.15 MB 435,515 Downloads. Joseph Murphy. D.R.S. thinking and imagery mold, fashion, and create your destiny; .. grow rich "Serve yourself with How to Study 7th Edition. 250 Pages 2011 878 KB 299,882 Downloads. Handbook of Mathematical Functions. Index to all pages and sections. Note: pages omitted from this electronic edition are not hyperlinked. Start page. 0. Start page using frames. 0. 4. Elementary Transcendental Functions: Logarithmic, Exponential, Circular and Hyperbolic Functions. 65. Mathematical Properties. 4.1. Logarithmic Function. 67. 68. 4.2. Exponential Function. With an estimated 40,000 citations, the Handbook of Mathematical Functions may well be it. Edited by Milton Abramowitz and Irene Stegun and released by the National Bureau of Standards in 1964, the Handbook was the result of a ten-year project to compile essential information on the special functions of applied mathematics (e.g., Bessel functions, hypergeometric functions, and orthogonal polynomials) for use in applications. The Handbook remains highly relevant today in spite of its age The number of citations yearly has been steadily increasing since 1964." The OCR scan just created a mash of numbers, with an occasional scan image of a section table of contents. This EPUB is mostly useless. 7,492 Views. Handbook of Mathematical Functions. With. Formulas, Graphs, and Mathematical Tables. Edited by Milton Abramowitz and Irene A. Stegun. National Bureau of Standards. Numerical tables of mathematical functions are in continual demand by scientists and engineers. A greater variety of functions and higher accuracy of tabulation are now required as a result of scientific advances and, especially, of the increasing use of automatic computers. In the latter connection, the tables serve mainly for preliminary surveys of problems before programming for machine operation. Home Browse by Title Books Handbook of Mathematical Functions, With Formulas, Graphs, and Mathematical Tables, Handbook of Mathematical Functions, With Formulas, Graphs, and Mathematical Tables, June 1974. June 1974. Dang D and Lehre P Efficient Optimisation of Noisy Fitness Functions with Population-based Evolutionary Algorithms Proceedings of the 2015 ACM Conference on Foundations of Genetic Algorithms XIII, (62-68). Maulat S and Salvy B Formulas for Continued Fractions Proceedings of the 2015 ACM on International Symposium on Symbolic and Algebraic Computation, (275-282).