

MathML Applications

Neil Soiffer, Design Science Inc

Browsers

- **Internet Explorer + MathPlayer**
- **Firefox and other Mozilla based browsers** (eg, Netscape 7)
- **Amaya**

Browser Plug-ins, Scripts and Extensions

- **Abacus** abacus.mozdev.org
Extension for Mozilla-based applications for writing and editing MathML expressions.
- **ASCIIMathML** www1.chapman.edu/~jipsen/asciimath.html
JavaScript allows incorporating mathematical formulas on webpages using a simple linear math notation.
- **GtkMathView-Bonobo** helm.cs.unibo.it/software/gtkmathview-bonobo
Bonobo (GNOME) wrapper for GtkMathView which allows GtkMathView to be embedded inside Bonobo applications. GtkMathView is a C++ rendering engine for MathML documents.
- **MathPlayer** www.dessci.com/en/products/mathplayer
MathML display engine for Internet Explorer.
- **Techexplorer** www.integretechpub.com/techexplorer
Renders TeX, LaTeX, and MathML. Java APIs provide programmatic access to techexplorer and document properties.
- **WebEQ** www.dessci.com/en/products/webeg
Toolkit (edit, view, graph, evaluate) for building web pages that include interactive math.
- **webMathematica** www.wolfram.com/products/webmathematica
Enables creation of web sites that allow users to compute (using Mathematica) and visualize results directly from a web browser.

Scientific Computation

- **jscl-meditor** jscl-meditor.sourceforge.net
Java symbolic computing library and a mathematical front-end to access it. Exports MathML.
- **Maple** www.maplesoft.com/products/maple
Symbolic and numeric computation system with support for importing and exporting MathML.
- **Mathcad** www.adeptscience.co.uk/products/mathsim/mathcad
Numerical and graphical scratchpad that supports MathML export.
- **Mathematica** www.wolfram.com
Technical computing system with high-quality mathematical typesetting and editing with support for importing and exporting MathML.
- **MathJ** www.archimedessolutions.com
Java component that provides mathematical expression and function evaluation capability.
- **Scientific WorkPlace** www.mackichan.com/products/swp.html
Word processor with built-in computer algebra system that exports MathML.

Document Editors

- **OpenOffice.org** www.openoffice.org
Productivity suite contains a math editor that exports (buggy) MathML.
- **Publicon** www.wolfram.com/products/publicon
Technical authoring designed to simplify the creation of publication quality structured documents.
- **Scientific Word** www.mackichan.com/products/sw.html
Compose technical documents and publish the document on the Web using HTML or PDF or print it with or without LaTeX typesetting.
- **SciWriter** www.soft4science.com/fr_index.html?/products/SciWriter/s4s_SciWriter.html
XML-based scientific editor that integrates writing mathematics and text in the same environment.
- **xfy technology** www.xfytec.com
Architecture for authoring and editing compound XML documents where multiple XML vocabularies are integrated into a single space.

MathML Editors

- **EdiTeX** helm.cs.unibo.it/software/editex
Combines in a single tool a TeX-to-MathML converter and a WYSIWYG editor for math expressions
- **Formulator** www.hermitech.ic.zt.ua/projects/formulator
Customizable template-based equation editor that imports/exports MathML. Works in Web browsers and XMLSPY.
- **Integre MathML Editor** www.integretechpub.com/techexplorer
Creates well-formed content and presentation MathML.
- **MathCast** mathcast.sourceforge.net
Math editor with an equation list manager.
- **Mathiwyg Flash MathML Editor** www.terradotta.com/index.cfm?FuseAction=TerraDotta.Home&Selected=Products&Link_ID=118&Page_ID=27
Flash-based WYSIWYG MathML editor.
- **MathML .NET Control** www.soft4science.com/fr_index.html?/products/MathMLControl/s4s_MathMLControl.html
Equation editor component designed for the .NET Framework.
- **mathmled** www.newmexico.mackichan.com/mathml/mathmled.htm
Experimental MathML editor written in XUL to run in Mozilla.
- **MathType** www.dessci.com/en/products/mathtype
Math editor for Word that can export Word documents as web pages containing MathML.
- **WebEQ** www.dessci.com/en/products/webeg
Toolkit (edit, view, graph, evaluate) for building web pages that include interactive math.

TeX Converters

- **gellmu** www.albany.edu/~hammond/gellmu
LaTeX-like input for DVI and XHTML+MATHML output
- **Hermes** www.aei.mpg.de/hermes
Semantic XML e-publishing tool for LaTeX and AMSTeX authored scientific articles.
- **itex2mml** pear.math.pitt.edu/mathzilla/itex2mml.html
Transforms webpages with embedded itex (a dialect of latex) into XHTML and MathML pages.
- **LaTeX2HTML** www.latex2html.org
TeX to HTML with a MathML option.
- **LaTeXML** dlmf.nist.gov/LaTeXML
LaTeX to XML translator
- **TeX4ht** www.cse.ohio-state.edu/~gurari/TeX4ht
TeX to SGML/XML translator
- **TeX/LaTeX to/from MathML** www.orcca.on.ca/MathML/software.html
Converts between TeX/LaTeX/AMSTeX and MathML and vice-versa.
- **TtM** hutchinson.belmont.ma.us/tth/mml
(La)TeX to HTML + MathML translator.
- **WeM MathML Editor** mathosphere.net/editeurml/doc_english.html
Simple, small subset of TeX supported for generating HTML+MathML.
- **XSLT MathML Library** xsltml.sourceforge.net
A set of XSLT templates for MathML 2.0 to LaTeX translation.

Other Converters

- **BraMaNet** handy.univ-lyon1.fr/projets/bramanet
XSL Style Sheet that translates MathML into French Mathematical Braille.
- **Custard** www.schemasoft.com/mathml
MathML to SVG Converter
- **EntTran** www.orcca.on.ca/MathML/software.html
Converts between the types of entity references in an XML file or HTML file.
- **eXtyles** www.inera.com/extylesinfo.shtml
Microsoft Word to XML+MathML.
- **Fixidea** mainline.essi.fr/wiki/bin/view/Fixidea/WebHome
MathML to SVG Converter
- **IGroup UMA** karshmer.lklnd.usf.edu/~igroupuma
Two-way conversion of MathML to various math braille codes.
- **JEuclid** jeuclid.sourceforge.net
Component for the Apache Cocoon project that converts MathML documents to GIF images or SVG.
- **Lambda** www.lambdaproject.org
Two-way conversion of MathML to different math braille codes. Includes an linear math editor.
- **TIMathML** triton.towson.edu/users/bbh1/ti/TIMathML.htm
MathML import/export module for TI-89/92+ calculators

Composition Engines

- **Advent3B2 Core Publishing System** www.3b2.com
High-end composition and pagination software that is designed to solve challenging publishing requirements.
- **Antenna House XSL Formatter** www.antennahouse.com/product/axfo30/axfo3top.htm
Transform an XML document into XSL Formatting Objects (XSL-FO), format the XSL-FO, and output it to either a PDF or directly to a printer.
- **ConTeXt** www.pragma-ade.com
Converts documents coded in TEX format as or XML into high quality PDF.
- **XPP** www.xyenterprise.com/xpp.asp
XML-based publishing application, with MathML module.

Stylesheets to/from MathML

- **MathML Content StyleSheet** www.orcca.on.ca/MathML/software.html
XSLT stylesheet to render Content MathML or mixed (Content+Presentation) MathML to Presentation MathML.
- **DSSSL stylesheets** www.nag.co.uk/projects/OpenMath/mml-files
Using Jade, renders MathML to TeX or RTF
- **tbook** tbookdtd.sourceforge.net
XML to XHTML+MathML, Postscript, PDF and DocBook
- **XSLT MathML Library** xsltml.sourceforge.net
XSLT templates for MathML 2.0 to LaTeX translation.

DTDs and Schemas using MathML

- **XHTML+MathML+SVG** www.w3.org/TR/2002/WD-XHTMLplusMathMLplusSVG-20020809
- **CellML** www.cellml.org
- **Docbook + MathML** docbook.org/specs/wd-docbook-mathml-1.1CR1.html
- **NIH's Journal Archiving & Publishing DTD** dtd.nlm.nih.gov/publishing/tag-library/2.0/n-f790.html
- **Schema for MathML** www.w3.org/Math/XMLSchema

Miscellaneous Components and SDKs

- **ActiveMath** www.activemath.org
User-adaptive, interactive and web-based learning environment for mathematics.
- **Figure** www-sop.inria.fr/lemme/Hanane.Naciri/these/mathml/main.html
Comprehensive Java framework for structured text formatting/editing.
- **gNumerator** numerator.sourceforge.net
Set of components for .net supporting MathML: MathML DOM, and a MathML rendering WinForms control.
- **GtkMathView** helm.cs.unibo.it/mml-widget
Renders presentation MathML markup; used in software based on the GTK+ toolkit.
- **MathFlow** www.dessci.com/en/products/mathflow
Tools for publishers working with MathML in XML workflows.
- **Web-based math test** mathml.peterrowlett.net
Web-based test in which each question contains pseudo-randomized elements and where simple questions can combine to form more complicated questions.