OpenMath/MathML Interface
User Manual

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1 Introduction

The OpenMath/MathML interface for REDUCE provides an easy to use series of commands to translate OpenMath into MathML and vice versa. This manual is intended to describe the commands to allow proper use.The principal features of this package can be resumed as:

- Translation of OpenMath into MathML 1.0 or MathML 2.0
- Translation of MathML 1.0 and MathML 2.0 into OpenMath
- Generation of MathML and OpenMath compliant code.
- Provides an option which allows MathML code to be embeded within HTML `<embed>` tags for direct inclusion into a web page. The MathML can then be rendered by a plug-in.

2 Installation

The OpenMath/MathML interface is composed of the following files: `om2ir.red`, `ir2om.red`, `mml_ir.red`, `tables.red`, `tools.red` and `main.red`. There are two ways to load the program into REDUCE:

- Type `in "main.red"` at the prompt
- Type `faslout om_mml; in "main.red"; faslend;`. This will produce a library which can thereafter be quickly loaded by typing `load om\_mml;`

Once the program has been loaded using any of these two methods it is usable.

3 Usage

3.1 Switches

There are three switches which define the behaviour of the interface. These are `mathml1`, `mathml2` and `web`. There use can be described as follows:

`mathml1:` All MathML output will be MathML 1.0 compliant.

`mathml2:` All MathML output will be MathML 2.0 compliant.

`web:` All output will be printed within an HTML `<embed>` tag. This is for direct use in an HTML web page.

3.2 Commands

The following commands translate from one standard to the other:

`om2mml()` Translate OpenMath into MathML

`mml2om()` Translates MathML into OpenMath

In order to translate from one standard to the other one can directly input an expression into the prompt, or import one from a file.

To input an expression into the prompt, simply type the command `om2mml();` or `mml2om();` followed by the complete expression in OpenMath or MathML respectivily.

To input from a file, create a file with the command `om2mml();` or `mml2om();` followed by the complete expression in OpenMath or MathML respectivily. Once inside REDUCE type `in foo` where foo is the name of the file. The file will be read in, and the translation will be output to the user.