MathML,
or math
in general

Some 1 developments

I MathML started as an interchange format on the one hand (content)

II but also provides a rendering variant (presentation)

III and in the meantime has been merged with what is called open math

IV we now have MathML 3 and ConTEXt has been updated a while ago to support this

Some 2 history

I   we supported MathML right from the start

II   in MkII quite some data juggling takes place because we need to do some analysis

III   the MkII code has been upgraded a few times but is now frozen

IV   in MkIV we have rewritten all code using the first version of the new xml parser

V   it currently is a mixture of Lua, TEX and METAPOST

VI   there will probably be a partial rewrite some day in the future

UNICODE 3

I   in the meantime Unicode has been extended with math

II in the past in MathML special characters and symbols were accessed by entity

III but now we can exclusively use Unicode characters and forget about the entities

IV no matter what, we do need to do some analysis on the content of (presentation) elements

Rendering 4

I   we still provide rendering options as there might be (cultural) differences

II   in both marks we just need to load the module

III in MkIV you need a reasonable namespace directive

IV content markup can give better results than presentation markup

Consequences

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I   we already use a database or definitions

II   we won't go the (somewhat extreme) route of more commands

III   we're working on a subsystem for field driven rendering

IV   bidirectional math already works but will be integrated in the layout model

V   cultural specific solutions are possible (we already provide language specific functions)

VI   more information is carried around (for rendering as well as export), for instance functions