Canonical Science Today, and notation/syntaxes for CanonMath

Source: http://sci.tech−archive.net/Archive/sci.math.research/2006−02/msg00045.html

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- *Date*: 10 Feb 2006 01:24:17 −0800

Introduction
I am developing the CanonML language (version 1.0) as a way to generate, store, and publish canonical science documents on the Internet. This language will be the basis for the next version 2.0 of the website of the Center for CANONICAL |SCIENCE). The current preliminary version −in proof stage− has been developed on XHTML 1.1 + MathML 2.0 language without semantics (e.g. there exists not use of <h1> or <p>). We wait see the CanonML language like an advanced proposal for the generation of next generation of academic electronic datuments.

The CanonML language and related software we will develop (XSLTs, etc.) will be open source; anyone can use, personalize, and generalize it. We wait some technical advice and help in those issues. We wait the WG will provide some technical advice in the development of the CanonMath input syntax for MathML.

XHTML (including the future XHTML 2.0) and MathML or specific languages as Docubook do not fit all our requirements −for example, we need specific scientific requirements for <chemistry> are not fulfilled even by the specialized CML−, therein the need for the CanonML language.

Currently, <CanonML> is splinted into three modules: <CanonText>, <CanonGraph>, and <CanonMath>. CanonText is ready, but the development of CanonGraph has been stopped until a better browsers' support of vectorial graphics. Our current emphasis is on CanonMath.

The main aims of CanonML language are: simplicity, completeness, and semantic−oriented. For instance, CanonText achieve the semantic level of XHTML 2.0 for general text but being more accessible and optimised than later. The optimisation is largely an outcome of the application of basic generic ideas from canonical science ontology. This relative success reinforces our initial supposition on the power of canonical science.

Another syntaxes

After of a relatively intense research of the present and future capabilities of TeX/LaTeX, IteX, ASCIIMath, and the two MathML syntaxes, I have discarded them as basic input syntaxes for the math module of the CanonML language. Notations for chemistry also are partially discussed: The mhchem chemical package and ConTexT approaches are not suitable input syntaxes for chemical formulae.

The output of the Hermes project used in Living Reviews on Relativity is presented as an example of very unpleasant code from the point of view of logical design, optimised code, and semantic clean web goals. Hermes like output is highly undesirable for the future generation of web datuments.

For more information see canonical science today entry:
http://canonicalscience.blogspot.com/2006/02/choosing−notationsyntax−for−canonmath.html.

Poll on notation
I am doing a poll for choosing the final notation of CanonMath for introducing mathematical formulas in XML documents. Comments, criticism, suggestions, and varied opinions are welcomed.

Source:
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