DR xxx — Shared MLs: OMML editorial errors and terminology inconsistencies

Status: Open

Subject: Shared MLs: OMML editorial errors and terminology inconsistencies

Qualifier: Editorial defect

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Submitter’s Defect Number: n/a

Supporting Document(s): none

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IS 29500 Reference(s): 29500:2016, Part 1, §22.1

Related DR(s): none

Nature of the Defect:

The term “math argument” as used in §22.1.2.5 is not defined. In fact, there are four elements in this category: §22.1.2.26 deg, §22.1.2.32 e, §22.1.2.112 sub and §22.1.2.114 sup. They all share the same complex type ‘CT\_OMathArg’. It could be argued that the term doesn’t need to be defined, because it has the generally-accepted meaning in a mathematical context, but the term is used inconsistently.

§15.1 defines ‘n-ary operator’ to be “An operator that involves n terms when expanded…’. But in OMML the term n-ary applies not only to true n-ary operators, such as finite series summation and series product, but also to the integral operator, which is not normally described as an n-ary operator.

In the first paragraph of §22.1.2.70 “an n-ary object, consisting of an n-ary object...” doesn’t make sense and “... *optional* upper and lower limits” (my italics) appears to contradict the schema, in which the elements sub and sup are mandatory. It is poor design to represent an omitted object (e.g. base) with an empty element (e.g. ‘<m:e/>’), and some explanation of this convention would be helpful.

In §22.1.2.6, the use of the term “degree argument” in the last line of text in the example doesn’t make sense. It should probably be “box base argument”.

In §22.1.2.26 the second sentence appears to contradict the schema, as the element deg is not optional in the schema.

In §22.1.2.88 the first sentence appears to contradict the schema, as the element deg is not optional in the schema. Note that the example in §22.1.2.89 correctly shows an empty ‘<m:deg/>’ element, for the case where there is no degree object/argument in the math expression. It has already been mentioned that this is poor design, and some explanation of the convention would be helpful.

The only prose specification of the element sub is in §22.1.2.112, but this specifies a particular case, not the general case. Either this Clause needs to be generalized, or a new Clause defining sub in the general case needs to be added. The element sub occurs in the content model of the following elements: nary, sPre, sSub and sSubSup.

Other editorial “nits” in §22.1.2 that I’ve spotted are:

* In §22.1.2.4, the example includes “Example (OFF)” and “Example (ON)”, which I think would be clearer if these were ‘not aligned’ and ‘aligned’ respectively.
* In §22.1.2.71, two occurrences of “built down form”, which should be “built-down form” with a hyphen.

Solution Proposed by the Submitter:

Consider either defining or replacing the terms “math argument” and “argument”.

Change the definition of ‘n-ary operator’ in §15.1 to read something like “A mathematical operator comprising an operator character and, optionally, expressions of a lower limit, an upper limit, or both.”

In §22.1.2.70 revise the first sentence in the first paragraph as follows:

This element specifies an n-ary object, consisting of an n-ary ~~object~~operator, a base (or operand), and ~~optional~~ upper and lower limits. ...

In §22.1.2.6 revise the final line of text in the example as follows:

Because the size is set to -1 on the ~~degree~~box base argument, the ~~degree~~box base argument is 1 size smaller than normal.

In §22.1.2.26 delete the second sentence of the first paragraph:

This element specifies the degree in the mathematical radical. ~~This element is optional.~~ ...

In §22.1.2.88 revise the first sentence of the first paragraph as follows:

This element specifies the radical object, consisting of a radical, a base ~~e~~, and a~~n optional~~ degree ~~deg~~.

Correct editorial nits in §22.1.2.4 and in §22.1.2.71 as proposed above.

Schema Change(s) Needed:

No

**Editor’s Response:**

None

Changes to Part 1: N Part 2: N Part 3: N Part 4: N