

PDF/UA (Universal Accessibility) Working Group

Draft Meeting Minutes

Wednesday, September 6, 2006, 3:00 P.M. - 5:00 P.M. EST

NOTE: The meeting was conducted "live" on the Wiki.

Roll Call

- Duff Johnson, DJ - Chair, Document Solutions
- Joe Clark , JC - Independent Accessibilty Consultant
- James Cole, JCole - Pitney Bowes Mgt. Services
- Ferass Elreyes, FE - Netcentric Technologies
- Betsy Fanning, BF - AIIM
- Dick Herring, DH - Independent Accessibility Consultant
- Karen McCall, KM - Karlen Communications
- Greg Pisocky, GP - Adobe Systems
- Neil Soiffer, NS - Design Science

Approval of PDF/UA 2006-127 Agenda

Fanning / Soiffer

Approval of 2006-126 Meeting Minutes

Cole / Soiffer

Report on / update and discuss PDF/UA - Action Items

Deferred action item, deleted from the active list.

Ensure XFA forms spec is represented in the Draft Spec. Locate and post.	08/23/06	Completed delete	50%	in progress
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MathML leaf has been completed by Neil Soiffer.

Select and review a specific "leaf"

JC - Meeting logistics, the Gladstone Hotel is conveniently located near the meeting room. Duff Johnson has urged attendees to book rooms now.

BF - International travel, be aware of delays.

Proposal made to select the leaf to be examined at the meeting prior to the discussion. The Logical structure leaf has been proposed for discussion for the next meeting.

Neal Soiffer to address MathML leaf this meeting. Current mechanisms are inadequate for rendering the formulas for use with assistive technology. Discussion regarding the tag set arose. One standard is preferable to multiple standards. Given there are simple formulas, does one need to tag simple formulas using MathML. Does not cover chemical formulas and

Proposed text:

The PDF that represents a mathematical expression shall be tagged using MathML's presentation elements. The tagging shall be done in a manner that allows navigation of the substructure of the mathematical expression.

The MathML may also contain content elements to convey semantic information in addition to notational information. If content markup is used, it should be inside of a <annotation-xml> element inside of a <semantics> element. "id" and "xref" attributes should be used to link the presentation elements to the content elements. Although semantic information is not used by Braille math codes, it can be used by MathML renderers to improve what is spoken for the expression.

In addition to the presentation tags listed in the MathML specification, the top level <math> element and the <semantics> element are considered valid presentation elements provided the first child of the semantics element is a valid presentation element.

GP - Example?

NS - At a future time, that could be possible.

To be discussed

- Meta/philosophical issues:
  - what are our definitions of success for math being accessible?
    - spoken?
    - navigated?
    - synchronized highlighting?
    - translation to braille?
  - can we mandate something for which there are currently no production tools?  
NS- those production tools are coming down the road. GP - Some standards, do it just fine.

NS - Possible to have conformance levels?

DJ - So alt text and simple tagging would satisfy the low level requirement

NS- Yes you could at least note that items are mathematical.

DJ - Indicating you have noted math, how does that even contribute to conformance...

NS - (With strong reservations - Here is the argument, but I don't necessarily agree with it) If you tagged it as math, then you certainly make it easier to translate to Braille, etc. You could also create other distinctions such as linear equations, items without subscripts, superscripts.

etc.  $A$  over  $B$  does not qualify as non-linear because you have gone 2 dimensional. MathML it's what is going into DAISY. I do understand that some people would not want to do the tagging, that sort of thing.

Should content MathML tags be legal? M action, raises issues we may not want to get into, issues associated around glyphs. Technical issues around entity names.

- Possible requirements:
  - Math shall be tagged as `<formula>`.
  - Math shall be tagged as MathML.
- Should there be an alternative for "simple" math?
  - What is "simple" math?
  - Supporting multiple implementations (simple math and MathML)
- MathML Issues:
  - Should content MathML be legal?
  - Should some presentation elements be illegal?
    - `maction`
    - `mglyph`
    - `mpadded`, `mphantom`, `mstyle`
  - Characters and character encodings in the MathML:
    - Should named entities be legal (`&int;` vs `&#x222B;`)
    - What encoding is legal (UTF-8, etc)
  - What should be said for math not handled by MathML (tricky diagrams,???)

DJ - Neal can go into edit mode and modify items. I suggest we drill on the question of the appropriate way to do higher order notations, the issue is implementation. The question of simple math -  $A$  plus  $B$  (operands with operators between them). No tools does the tagging for these simple things and  $B$  most authors would be put off by this requirement.

We have the option of considering conformance levels. The only way it is down right now is you make alt text and treat the formula as an image.

NS: One of the issues, Joe and Jacques in terms of simple Math you could save a Microsoft Word as PDF and it would work (provided it was not a fraction).

**Review and update "out of meeting" work assignments**

**Set milestones and target timeline**

**Wrapup**

**Adjourn**