DITA 1.3 proposed feature #13011

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Provide additional elements to the highlight domain for representing line-through (strikeout) and overlines.

Date and version information

- Completion date: Oct 1, 2012
- Champion: Eliot Kimber
- Email discussion: *https://lists.oasis-open.org/archives/dita/201107/msg00023.html*

Original requirement

From Eliot Kimber, July 2011:

> ...use cases that I've run into:
>
> - Legal documents showing revisions where the revisions are not marked using @rev.,
> - More generally, in a data conversion context where the DITA encoding of the document is not itself being revised, but the content as captured in DITA needs to reflect strikethrough used for an unknowable purpose (at least as far as the agent doing the conversion is concerned).
> - Discourse where line-through is used for rhetorical effect.
> - Informal documents, such as business documents, where the overhead of using full revision markup just to get strikethrough is prohibitive (in particular, the need to configure and use some form of DITAVAL facility).

Subsequent discussion on the TC list led to the suggested for adding overline, which is used in semiconductor documentation. Addition of overline also provides a complete set of "line" requests: underline, line-through, the overline.

Use cases

Use cases for line-through include:

- Legal documents, where strikeouts are an important aspect of the content and not just a side effect of automated revision marking.
- Legacy conversion, where the semantic of line-through content cannot be determined.
- Documents where strikeouts are used rhetorically (for example, for humorous effect)
- Specific editorial or typographic conventions that use line-through for some reason.

Use cases for overline include:

- Semiconductor documentation, where overlines are used to indicate logical negation.
- Linguistics, where overbar indicates different levels of syntactic structure.
- Physics, where overbar indicates a vector.
- Mathematics, when not using a more complete mathematics language.

Adding line-through and overline also brings DITA into alignment with the corresponding values provided by the CSS and XSL-FO text-decoration properties.

Note: The text-decoration property also provides the values "blink" and "none". In discussion of this issue to date, the TC has shown reluctance to include blink in the base language. It is not clear how the "none" value could be usefully or appropriately represented.

Benefits

- Provides a common typographic effect without the need to create a separate vocabulary domain

Costs

Outline the impact (time and effort) of the feature on the following groups:

- Maintainers of the DTDs and XSDs:
  - Adds two new element types to the existing highlight domain
- Editors of the DITA specification:
  - Two new reference topics are required.
  - How many existing topics will need to be edited? Overview topic for the highight domain may need to reflect the new element types.
  - This feature does not change the core DITA architecture in any way.
- Vendors of tools:
  - Tools that that render DITA content visually will need to produce appropriate renderings of the new elements. Both HTML and XSL-FO provide built-in means of creating both line-throughs and overbars.
  - XML editors will need to allow authoring of the new element types.
- DITA community-at-large:
  - Provides typographic controls that authors need today. Should not significantly add to the perception of DITA compexity.

Technical requirements

Element

Define a two element types, <line-through> and <overline>, specialized from <ph>, to the highlight domain.

These names reflect the names of the corresponding text-decoration properties in the CSS recommendation.

The element types are declared like so:

```
<!--                    LONG NAME:
 Line Through
 -->
<!ENTITY % line-through.content
                       "(#PCDATA |
                         %basic.ph;
 |

 %data.elements.incl; |

 %foreign.unknown.incl;)*"
>
<!ENTITY % line-through.attributes
             "%univ-atts;
              outputclass
                        CDATA

 #IMPLIED"
>
<!ELEMENT line-through    %line-
through.content;>
<!ATTLIST line-through    %line-
through.attributes;>
```

```
<!--                        LONG NAME:
 Overbar
 -->
<!ENTITY % overline.content
                       "(#PCDATA |
                         %basic.ph;
 |

 %data.elements.incl; |

 %foreign.unknown.incl;)*"
>
<!ENTITY % overline.attributes
             "%univ-atts;
              outputclass
                        CDATA

 #IMPLIED"
>
<!ELEMENT overline
 %overline.content;>
<!ATTLIST overline
 %overline.attributes;>

<!ATTLIST line-through %global-atts;
 class CDATA "+ topic/ph hi-d/line-
through "  >
<!ATTLIST overline    %global-atts;
  class CDATA "+ topic/ph hi-d/
overline "  >
```

Processing	Processors that render DITA content visually will need to provide appropriate rendering of line-through and overbar when those effects are available in the target rendition. For HTML outputs, implementation options include using the CSS text-decoration values "line-through" and "overline". For PDF outputs, the XSL-FO text-decoration values are also "line-through" and "overline".
Overall usability	These new element types make getting the typographic effects possible without the need to define or integrate new vocabulary modules.

Examples

```
<!DOCTYPE topic PUBLIC "-//OASIS//DTD DITA Topic//EN" "topic.dtd">
<topic
  id="topic_x3l_qcd_th">
  <title>Topic title</title>
  <body>
    <p>Line-through: DITA technology can be
      <line-through>maddening</line-through>a challenge to implement.</p>
    <p>Overline: <overline><i>x</i></overline> is the average value of
      <i>x<sub>i</sub></i></p>
  </body>
</topic>
```

Figure 1: Sample line-through and overline markup