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| **The Swedish Library of Talking Books and Braille** | webblogga300pix |
| **Appendix:****Restricted Procurement of ANSI/NISO Z39.86 DTBook Production Services****Requirements for Text and Image Quality** **and Markup with DTBook XML****Version: 2011-2** |  |
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# Introduction

## Background

Since 2005, Celia, NLB, Nota, SPSM and TPB have produced a variety of adapted text-based media for persons with print disabilities using the DTBook XML standard to represent content.

Materials requiring adaptation include University texts, novels for adults, fact books for adults, novels for children, fact books for children and school level textbooks for various school levels, including mathematics.

At it’s core the DTBook XML standard, part of the ANSI/NISO Z39.86 specification for digital talking books, involves creating a text file where the content of source material is marked up.
The purpose of these guidelines is to assist the producer of DTBook XML in recognising a book’s structural content and determining the proper tags to be used in representing it.

The elements and attributes described in this document represent a subset of the tags and attributes described in the Daisy Consortium’s Structure Guidelines for the Digital Talking Book.
The elements and attributes contained in the subset are defined by the standard’s Document Type Definition (DTD).

## Version 2011-2

From January 2011, five separate government agencies will be placing orders for the production of DTBook XML.
Production is required to be based on these requirements.

At various points throughout this document, language specific requirements regarding certain element content and attribute values are exemplified in English and Swedish.

Please note, however, that the requirements concerning non-English renderings may vary among Ordering Agencies.

These requirements are the most recent version, earlier versions are therefore deprecated and Suppliers must not combine requirements.

## Summary of Changes to this Version

* 3.1.1. Image Content – Clarification regarding treatment of images when resizing
* 3.24 Linegroup – Explanation regarding usage of <linegroup> tag. See also 4.18
* 3.32 Production note – Clarification regarding usage of <prodnote> tag. See also 5.3.
* 3.45.1 Table caption – New text regarding treatment of table captions. See also 5.4.
* 3.48.1 Table heading – New text regarding treatment of table headings. See also 5.5.
* 4.2.1 and 4.2.2 – Clarification regarding treatment of paragraph breaking and floating content.
* 4.21 Drop cap initials – New text clarifying the treatment of Drop Cap Initial content.
* 5.1.3 Ocular Check of AsciiMath in DTBook – New text concerning recommendations for visual control of AsciiMath notation.

## The Use of Editing Instructions

Editing instructions, i.e. written comments concerning particular solutions for a text to be produced using DTBook XML, may be included by Ordering Agencies with each order. The key role of Editing Instructions is to facilitate specific mark up where room for alternative mark up choices may exist. Editing instructions are based on and can refer to the requirements described in this document, and as such, must be adhered to by the Supplier.

# Format requirements

## Number of files

Suppliers are required to deliver a single XML file for DTBook conversions.
The number of image files delivered is required to correspond to the number of images chosen for reproduction, in accordance with the guidelines described in section 3.1 Requirements with regard to image reproduction.

## File Naming Convention

DTBook files must be given the production number (dtb:uid) provided when ordered and have the .xml extension.

The file extension must be lower case.

## Required Markup Standard

Suppliers are required to use the current DTBook DTD as established in the DAISY standard – DAISY/NISO z.39.86-2005 unless otherwise indicated by the Ordering Agency.

See <http://www.niso.org/standards/resources/Z39-86-2005.html>
specifically <http://www.niso.org/standards/resources/Z39-86-2005.html#Text>

See also http://www.daisy.org/z3986/structure/SG-DAISY3/index.html

## XML Declaration and Encoding

The following xml declaration must be used:

<?xml version="1.0" encoding="utf-8"?>

DTBook documents must be saved using UTF-8 character encoding and not include a byte order mark (BOM).

## Document Type Declaration

The following document type declaration must be included:

<!DOCTYPE dtbook PUBLIC "-//NISO//DTD dtbook 2005-3//EN" "http://www.daisy.org/z3986/2005/dtbook-2005-3.dtd">

Note that the abovementioned declaration and its expression may change as the standard is developed.

## Processing Instructions

Processing instructions, e.g. stylesheet paths, must not be included in the delivered file.

## DTBook Root Attributes

Suppliersare required to include the following attributes on the DTBook root element:

* xml:lang – Language definition
* xmlns – Namespace
* version – DTD version

### Language Definition

Suppliersare required to identify specific languages and define them in DTBook files using the xml:lang attribute.

Required values are:

* content=”en” for English
* content=”sv” for Swedish
* content=”no” for Norwegian
* content=”da” for Danish
* content=”fi” for Finnish

Suppliersare required to contact the Ordering Agency for clarification in those cases where the majority language is not identifiable or when the majority language is none of the above languages.

### Namespace

Suppliers are required to apply the value: xmlns="http://www.daisy.org/z3986/2005/dtbook/" until the Ordering Agency adopts a newer version of the standard.

### DTD Version

The current value of the standard version is 2005-3. This value may change if the Ordering Agency adopts an updated version of the standard for production purposes. Suppliers will be informed of any such change during the contract period.

## Metadata

Metadata is a valuable addition to DTBook files. The 2011-2 Guidelines define ten standard metadata elements, based on the Dublin Core and the ANSI/NISO Z39.86-2005 standards.

The <meta> element contains information about the DTBook document in two attributes, name=”” and content=””; the attribute scheme=”” is also used in conjunction with dc:Date.

|  |  |  |
| --- | --- | --- |
| Name=”” | content=”” | Explanation |
| dtb:uid | [identification] | <meta name="dtb:uid" content="[identification]" />Contains the document’s identification and is supplied by the Ordering Agency. |
| dc:Title | [book title] | <meta name="dc:Title" content="[title][ : subtitle]" /> |
| dc:Creator | [author name] | <meta name="dc:Creator" content="[surname], [first name] [other name]" />Contains the author’s name and is to be formatted "surname, first name". Individual <meta> mark up is to be provided for each author if more than one is indicated. |
| dc:Contributor | [contributing person or entity] | <meta name="dc:Contributor" content="[surname], [first name] [other name]" />Contains the contributing person’s name and is to be formatted "surname, first name". |
| dc:Date | [date of file completion] | <meta name="dc:Date" content="YYYY-MM-DD" /> |
| dc:Publisher | [Ordering Agency] | <meta name="dc:Publisher" content="[ordering entity]" />Used to indicate the Ordering Agency. |
| dc:Language | [xx] | <meta name="dc:Language" content="[xx]" />The value of the attribute is required to mirror that present in xml:lang.  |
| dc:Rights | [Ordering Agency] | <meta name="dc:Rights" content="[Ordering Agency]" />Use to indicate the rights holder for the produced material. Provided in Editing Instructions when necessary. |
| dc:Subject | [subject of the work produced] | <meta name="dc:Subject" content="[topic of the work produced]" />Use to indicate the subject of the book. Provided in Editing Instructions when necessary. |
| dc:Type | [genre of the work produced] | <meta name="dc:Type" content="[genre of the work produced]" />Use to indicate the genre of the book. Provided in Editing Instructions when necessary. |
| track:Guidelines | [xxxx-x] | <meta name="track:Guidelines" content="[xxxx-x]" />The value of the attribute is required to mirror the version number of the production requirements in use. |
| track:Supplier | [name of supplier] | <meta name=”track:Supplier” content=”[name of supplier]” />Used to indicate the DTBook Supplier. |

# General requirements

## Requirements with regard to image reproduction

### Image Content

Suppliers are required to deliver image content maintaining a level of 100% integrity to the source material in terms of:

1. Aspect ratio – aspect ratio of the original should always be maintained.
2. Colour images – images are required to be reproduced with no observable degradation in colour rendering.
3. Greyscale images – images are required to be reproduced without introducing visible compression artefacts, e.g. banding.
4. Text rich images – images in the work containing a preponderance of text, e.g. flow charts, are required to be reproduced without introducing any degradation in legibility in comparison with the original.

When resizing images:

1. Maximum image size is set to 600 pixels on the image’s longest side unless
2. an increase in the size of an image is required to achieve the legibility of text rich images, see point d) above

In those circumstances where this requirement conflicts with requirements for legibility the Supplier is required to contact the Ordering Agency

Images are to be delivered in high quality (i.e. low compression) JPEG format

### Handling specific image types

Image content in books varies in both form and function. The Ordering Agencies require that all image content be delivered, with the following exceptions:

* Publisher logotypes
* Vignettes – i.e. images used to separate sections or chapters, decorate borders or flyleaves, jackets or panels
* Iconic – i.e. an image that stands for its object by virtue of a resemblance or analogy to it
* Formatting – i.e. images that have no connection to the subject matter and are purely an artefact of layout and design

Handling of the preceding types of images should proceed as follows:

* Publisher logotypes – images of this type are not to be included in the DTBook markup and consequently not delivered as images
* Vignettes – images of this type are not to be included in the DTBook markup and consequently not delivered as images
* Iconic – the Ordering Agency will provide Suppliers with editing instructions
* Formatting – images of this type are not to be included in the DTBook markup and consequently not delivered as images

### Text External to Images and Skewing

Suppliers are required to deliver images free of all text external to the image itself, e.g. captions, headers, and footers etc. Suppliers are required to rectify images skewed as a result of conversion to DTBook.

## Annotation: <sidebar>

Shorter marginalia are to be marked using the <sidebar> element.

## Annotation Reference

Annotation references are required to retain that formatting found in the work and be appropriately marked up to mirror this, for example <em> or <strong>.

## Block Quotations: <blockquote>

The <blockquote> tag is used to mark up quotes broken out of the text flow. Markup may require xml:lang. Inline quotations do not need to be identified.

In those circumstances where inline images occur i block quotations Suppliers are required to place the image directly after the <blockquote> tag.

## Bodymatter: <bodymatter>

The <bodymatter> tag contains the work’s core content. This can be defined as the parts, chapters, and sub-headings found in the original. Content such as epilogue, conclusions and the like are to be contained within the <bodymatter> tag.

## Bold Emphasis: <strong>

The <strong> element is to be used to identify bold text.

## Book Author or Editor: <docauthor>

The <docauthor> tag is used to mark up the author of the work. Suppliers are required to use the following content format: **[author/editor first name + other names + surname]**. If the work has more than one author/editor, each name is to be marked up using individual <docauthor> tags.
Text other than the author’s name is not to be included in the tag.

Note that specific Ordering Agency requirements will be included in editing instructions.

The <docauthor> tag must be placed after the <doctitle> tag.

## Book Content: <book>

The <book> tag comes after (though at the same level of hierarchy) as the <head> tag inside <dtbook> and contains the contents of the work.

## Book Title: <doctitle>

The first element within <frontmatter> must be <doctitle> and use the following content format: **[title] – [sub-title]**.

## Chapter Notes (endnotes): <note>

Suppliers are required to mark up chapter (endnotes) using the <note> tag.

Requires id=””. The value in the id=”” attribute *must* correspond to the value of the idref=”” attribute in its associated <noteref> tag

## Code: <code>

Suppliers are required to mark up <code> with the xml:space=”” attribute. The value in the xml:space=”” attribute is required to be preserve.

In those cases where several lines of code are presented, Suppliers are required to close any open tag, e.g. <p>, and open a new <p> tag to contain the <code> markup.

Example:
<p>
<code xml:space=”preserve”>
$a = shortcode\_atts( array(
 'title' => 'My Title'
 'foo' => 123,
 ), $atts );
</code>
</p>

Inline code content is not subject to the above requirement*.*

## Container for Bibliographic Information: <head>

The <head> tag comes immediately after the <dtbook> tag and contains the document metadata.

## Definition Data: <dd>

Suppliersare required to mark up all definition data parts coupled to a <dt> with the <dd> tag. More than one definition data part can occur.

## Definition List: <dl>

The <dl> tag is used to mark up lists of terms and their definitions.

Typical examples range from glossaries to lists of acronyms and the like.

The <dl> element is subject to *%flow* restrictions.

## Definition Term: <dt>

Suppliersare required to mark up all individual definition terms within a definition list with the <dt> tag.

## Footnotes: <note>

Suppliersare required to mark up footnotes with the <note> tag.

Requires id=””. The value in the id=”” attribute *must* correspond to the value of the idref=”” attribute in its associated <noteref> tag. Suppliersare required to move footnotes from their original position in the work to a new <level1> container.

This **<level1>** container is required to be placed at the end of the <rearmatter> section.

## Front matter: <frontmatter>

<frontmatter> contains that information presented before core content in the print original, e.g. foreword, preface and the like.

## Headings: <h[x]>

The <h1> - <h6> elements are used to identify headings in the print original.

Note that <h[x]> must be contained within their respective <level[x]> element.

The <hd> tag is not to be used in markup unless expressly indicated by the Ordering Agency.

## Image Caption: <caption>

The <caption> element contains the text associated with an image in the original.

<caption> must always be placed directly after the appropriate <img> element.

If the <caption> text describes a series of images, and is the only <caption> text, it must be placed after the last image in the series.
If each image has a corresponding <caption> text, each <caption> must be placed after the respective image.

## Images: <imggroup>

An image, its caption, and any associated image description must always be contained within the <imggroup> tag. With the exception of image series, i.e. two or more images used to illustrate a theme, process, or the like, the <imggroup> tag is required to contain a single image only.

## Images: <img>

The <img> tag represents all image-based content in the work.

The <img> element requires the following attributes:

* alt – this must include the value **image** for texts in English, Ordering agencies will supply correct value for other languages
* src – this must include a reference to an image file.

Image tags must be formatted as self-closing tags, i.e.: <img/>.

## Italic Emphasis: <em>

The <em> tag identifies italicised text.

## Jacket copy: <p>

In those cases jacket copy is present in source material, the following markup is required:

<level1 class="jacketcopy">

<prodnote render="optional" class="frontcover">[relevant text]</prodnote>

<prodnote render="optional" class="rearcover">[relevant text]</prodnote>

<prodnote render="optional" class="leftflap">[relevant text]</prodnote>

<prodnote render="optional" class="rightflap">[relevant text]</prodnote>

</level1>

In those circumstances where jacket copy is not available in source material it will be provided in editing instructions.

In those circumstances where jacket copy is neither available in source material nor provided in editing instructions Suppliers are not required to provide jacket copy markup.

The markup is to be placed directly after the <docauthor> tag.

## Linegroup: <linegroup>

The <linegroup> tag is used to preserve the formatting of text grouped into line sets. The <line> tag is used to wrap the individual lines within the linegroup.

## List: <list>

The <list> tag is used to mark up lists, ordered, unordered or preformatted.

Requires type=”pl”.

Any formatting present in the text node of the list must be maintained, whether this is a number or letter, a bullet or any other formatting.

## List heading (external preceding): <p>

Suppliers are required to mark up all list headings preceding the list by using the <p> tag.

## List heading (internal): <li>

Suppliersare required to mark up all headings contained within a list with the <li> tag. Note, however, that use of <hd> may be specifically requested by the Ordering Agency via Editing Instructions.

## List item: <li>

Suppliers are required to mark up all individual items contained within a list be marked up with the <li> tag.

## List item component: <lic>

The <lic> tag is used to define individual elements of information in a list item. It’s primary use is in a table of contents to differentiate between headings and page numbers.

## Metadata: <meta>

The <meta> tag is used for bibliographic and other data.

Required attributes are name=”” and content=””.

## Note reference: <noteref>

Note references are required to be marked up using the <noteref> tag.

Suppliers are required to ensure that the <noteref> tag has the idref=”” attribute applied.

The value in the idref=”” attribute must correspond to the value of the id=”” attribute in its associated <note> tag and always be preceded by the **#** character.

## Pagination: <pagenum>

All pages present in the print original included in the pagination, even those not provided with a printed number, are required to be marked up with the <pagenum> element unless otherwise stated by the Ordering Agency.

In those cases where pagination of a text cannot be effectively represented using the following rules the Supplier is required to contact the Ordering Agency.The <pagenum> tag identifies the change from recto to verso and consequently the change in pagination.

The tag requires the page=”” and id=”” attributes.

No requirements for the content of the id=”” attribute, other than those defined by the usage of the id=”” attribute *per se*, are required.

### Standard

The page=”” attribute must have the value normal.

The attribute value normal can be used for pagination occurring in the <frontmatter>, <bodymatter> and <rearmatter> sections.

### Front matter

The page=”” attribute is required to contain one of the following values:
front or normal.
Roman numerals are to retain that letter case used in the work. The page=”” attribute requires the value front**.**Standard numbering forms indicate that the page=”” attribute requires the value normal.

<pagenum page=”front”/> is not allowed outside of the <frontmatter/> element.

### Other

The page=”” attribute must have the value special.

Examples of content requiring this markup are: an appendix not numbered in a standard manner, e.g. a1, a2, a3, or where un-numbered inserts occur. For example: suites of photography.

Note that, in cases where a numbering system is not present, the following markup should be provided:
<pagenum page=”special” id=”page-[x]”/>, where [x] represents an ID value generated by the Supplier.

## Paragraph: <p>

The <p> tag identifies a paragraph.

## Poetry: <poem>

The <poem> tag identifies poetry and lyric based content.

The <linegroup> and <line> tags are required children of <poem>; the <linenum> a required tag in those circumstances where line numbering occurs.

## Production note: <prodnote>

The <prodnote> tag identifies information introduced by Suppliers into the DTBook file. Suppliers are required to contact the Ordering Agency before introducing <prodnote> markup. See also 5.3 Extraction of Text Content in Images.

## Rearmatter: <rearmatter>

<rearmatter> contains all content appended to the core text. Examples of material that can be found in <rearmatter> include, though not exclusively: appendices, glossaries, references, notes, and indices.

## Rearnotes: <note>

Suppliersare required to mark up rear notes with the <note> tag.

The <note> tag requires the id=”” attribute.

The value in the id=”” attribute *must* correspond to the value of the idref=”” attribute in its associated <noteref> tag

## Root element: <dtbook>

The <dtbook> element is the DTBook document’s root element and consequently contains all other element tags.

## Sidebar: <sidebar>

The <sidebar> element is used to mark up sidebar content, i.e. content that while contextually coherent may in terms of its positioning on the page or graphical format be differentiated from the main flow of the text.

The Supplier is required to apply the render=”” attribute and with the value ”optional”.

Ordering Agencies will provide instruction in editing instructions when the render=”” attribute requires the value ”required”.

Content within sidebar material is required to follow *%flow* rules.

## Sidebar heading: <p>

Suppliers are required to mark up headings either preceding or contained within sidebars by using the <p> tag. Note, however, that for internal headings, use of <hd> may be specifically requested by the Ordering Agency via Editing Instructions.

## Structural Content containers: <level[x]>

The <level[x]> tag represents the heading *levels* of the work. <level[x]> elements are to be associated with their respective headings in the print original, if such exist. [x] mirrors the structure of the headings and must have a value from the span 1 to 6.

Note that use of the un-numbered <level> tag is disallowed

## Subscript: <sub>

The <sub> element identifies subscripted text.

## Superscript: <sup>

The <sup> element identifies superscripted text. Note that use of <sup> to identify note references is incorrect

## Table: <table>

The <table> element is required when content in the print original is presented in tabular format or table-like format.

## Table caption: <p>

Suppliers are required to mark up table captions by using the ***<p>*** tag.

### Table caption: <caption>

The <caption> element may be used only when specifically requested by the Ordering Agency via Editing Instructions. See 5.4

## Table data: <td>

The <td> element is used to mark up table cell content.

Requires colspan=”” and rowspan=””.

The colspan=”” and rowspan=””attributes are used when a single cell stretches over a number of following cells in a table row or coulumn. The attribute must have a numerical value.

## Table footer: <td> or <p>

In those circumstances where the table footer clearly falls within a cell, Suppliersare required to use <td>.
In those circumstances where the table footer follows the table and is not contained within a table cell, Suppliersare required to use <p>.

Where <td> is used, the colspan=”” and rowspan=”” attrubutes are to be applied when necessary.

In those cases where a table data stretches over more than one column or row, Suppliersare required to mark up using colspan=”” and rowspan=”” attributes.

## Table heading (column & row): <td>

Suppliersare required to mark up column or row headings with the <td> tag.

Requires colspan=”” and rowspan=””.

In those cases where table data stretches over more than one column or row, Suppliersare required to mark up using the colspan=”” and rowspan=”” attributes.

### Table heading: <th>

The <th> element may be used only when specifically requested by the Ordering Agency via Editing Instructions. See 5.5.

## Table notes: <note>

Suppliersare required to mark up table notes using the <note> tag.

Requires id=””.

The value in the id=”” attribute *must* correspond to the value of the idref=”” attribute in its associated <noteref> tag

To qualify as a table note a reference needs to be present in the table data.
Notes must not be moved from their position within or following a table.

## Table row: <tr>

The <tr> element is used to mark up table rows.

# Specific requirements

## Unacceptable Markup caused by %flow

Suppliers are required to avoid markup errors due to the so-called ***%flow*** property of the DTBook standard in, for example:

* <sidebar>
* <list>
* <table>

Suppliers are required not to combine ***block*** and ***inline*** elements in an inappropriate manner, even when such markup is allowed by the DTD.

Two examples of acceptable allowed markup using <sidebar> are:

Example 1:
Possible valid markup:

<sidebar>
Oh, see. Oh, see Jane. Funny, funny Jane.
</sidebar>

Example 2:
Required valid markup:

<sidebar>
<p> Oh, see. Oh, see Jane. Funny, funny Jane.</p>
</sidebar>

Example 3:Markup valid to the DTD, though unacceptable:

<sidebar>
Oh, see. Oh, see Jane. <p>Funny, funny Jane.</p>
</sidebar>

While the example above is valid according to the DTD it mixes content and markup inappropriately, and produces semantically and structurally unclear mark up.
Suppliers are required to deliver materials free of ***%flow*** errors.

### %flow and Nested Lists

A nested list will require the use of a list item containing both the text content and markup for the new nested list, for example:

<li>List item text.
<list>
<li>List item text.</li>
</list>
</li>

However, this admixture of text content and markup is considered undesirable. The <p> element is required to be used by Suppliers to solve the issue as follows:

<li><p>List item text.</p>
<list>
<li>List item text.</li>
</list>
</li>

## Placement of Paragraph Breaking and ’Floating’ Elements

The body text of a work may be interupted by new or complementary content, e.g tables, images or sidebars. Such new or complementary content often has two types of placement that require that content be moved when marked up.
Paragraph breaking content does precisely as the description implies, breaks the flow of a paragraph either between words or in the middle of words; and when being marked up requires relocation to preserve the flow of the content.
So called “floating content” represent content that often occur entirely outside of the context of the text flow but on the same page, e.g. in the margin or in the text itself – though often distinguished from the text visually – and that when marked up requires placing in an appropriate context.

### Paragraph breaks existing on the page

The following requirements are to be applied when marking up such content:

* In those cases where paragraph breaking content is identified, Suppliers are required to relocate the marked up content to an appropriate location on the current page before or after the paragraph in which it occurs.
* In those cases where floating content is identified, Suppliers are required to relocate the content to an appropriate location on the current page before or after the paragraph it is parallel with.

### Paragraph breaks not existing on the page

In those circumstances where an inline <pagenum> tag occurs on both sides of the paragraph breaking element, Suppliers are required to apply the following:

* **Sentence or word breaking content**: Suppliers must move the text (up to and including the first sentence ending punctuation mark) in front of the content that broke the word or sentence
* **Floating content**: Suppliers must move the text (up to and including the first sentence ending punctuation mark) in front of the content that broke the word or sentence.

Note also, such repositioning must not break the requirements for %flow or markup validity.

For the purposes of production those elements requiring identification are limited to tables, sidebars, and images.

## Images Positioned Before Headings

In those cases where, at the beginning of a new level, an image occurs before a heading Suppliersare required to re-locate the image after the necessary heading markup*,* for example:

<level[x]>Heading</level[x]>

<pagenum>101</pagenum>
<h[x]>Heading</h[x]>
<imggroup>
<img src=”” alt=””/>
<caption>Image caption text.</caption>
<prodnote/>
</imggroup>

…

</level[x]>

## Images Covering Two or More Pages

In those cases where images cover two or more pages, Suppliersare required to *not* split images over pages but deliver a single image marked up in the appropriate manner, and place that content on the page containing the initial instance of the image.

## Pagination

### Placement of the <pagenum> Tag

Suppliers are required to place the <pagenum> precisely at the verso-recto change.

The <pagenum> element is both a ***block*** and an ***inline*** tag and can therefore be placed exactly where the work changes page.

When a page begins with a <level[x]> tag the <pagenum> tag is to be placed directly after the <level[x]> tag and before any occurring <h[x]> tag.

### Placement of <pagenum> in Conjunction with Hyphenation Occurring Due to Page Change

Language specific rules apply in those circumstances where hyphenation occurs due to page change. Action taken will be based on the value of the root language. For example, where xml:lang=”en” is the root the following applies:

In the original:

I have of late, but where-[change of page]fore I know not, lost all my mirth.

In the resulting DTBook file:

I have of late, but wherefore·<pagenum>I know not, lost all my mirth.

Note – With regard to English language texts, the removal of hyphens found in compound words occurring at the page break is disallowed*.*

For example:

Removal disallowed:
What I expect, from all my boys, is a spirit of co-[change of page]operation at all times.

Removal allowed:
What we have here, is a failure to co-[change of page]mmunicate.

Ordering Agencies will supply required action with regard to this in editing instructions.

### Repetitive Pagination

In those cases where an original’s pagination includes repeated numbering (e.g. pages 1-18 for Part 1, pages 1-33 for Part 2 and pages 1-28 for Part 3), Suppliers are required to provide the <level[x]> tag containing the set of pages with a class=”nonstandardpagination” attribute. In conjunction with markup of this content, Suppliers are required to use <pagenum> markup that applies the page=”special” attribute.

### Works Free of Pagination

Un-paginated works, particularly shorter children’s literature and picture books, are required to be provided with pagination. Note that standard recto-verso order is to be maintained.

### Un-numbered pages

In those cases where normal pagination is interrupted by the occurrence of pages absent of any form of pagination, e.g. pages containing a suite of photography, the following markup should be provided:
<pagenum page=”special” id=”page-[x]”/>, where [x] represents an ID value generated by the Supplier.

#### Tables

When marking up page change in tables, Suppliers are required to place <pagenum> tags as siblings to <tr> tags in the table, i.e. between the appropriate <tr> tags, e.g.:

<tr><td>A table cell</td></tr>
<pagenum/>
<tr><td>A table cell</td></tr>

#### Image groups

The markup of page numbering in image groups is dependent upon the layout of the images in question. Suppliers should be aware of two areas where particular attention is required to supply correct markup:

* Page number markup for image group and images in series
* Page number markup for image group and images over a double-page spread

When marking up page change in image groups, Suppliers are required to place <pagenum> tags as siblings to other markup contained in <imggroup> tags, i.e. in those circumstances where layout dictates page number markup be contained by an image group, the <pagenum> tag should be placed at the same nesting level as <img/> and <caption/> tags.

##### Page number markup for image group and images in series

The following image illustrates a typical image series breaking over two pages.



Suppliersshould note that the series as a whole, on each page, possesses a caption. Furthermore, each individual image possesses a caption.

The following code example illustrates required markup in such cases:

<pagenum>189</pagenum>
<imggroup>
<caption>Series caption text.</caption>
<img src=”” alt=””/>
<caption>Image caption text.</caption>
<img src=”” alt=””/>
<caption>Image caption text.</caption>
<img src=”” alt=””/>
<caption>Image caption text.</caption>
<img src=”” alt=””/>
<caption>Image caption text.</caption>
<img src=”” alt=””/>
<caption>Image caption text.</caption>
<pagenum>190</pagenum>
<caption>Series caption text.</caption>
<img src=”” alt=””/>
<caption>Image caption text.</caption>
<img src=”” alt=””/>
<caption>Image caption text.</caption>
<img src=”” alt=””/>
<caption>Image caption text.</caption>
<img src=”” alt=””/>
<caption>Image caption text.</caption>
</imggroup>

The following image illustrates a more complex example of layout over a double-page spread, using an image series:



Suppliers should note that the initial image is coupled to the second image and comprises a series. This results in the second image and its caption being moved. Suppliers should also note that the placement of the <pagenum> tag does not need to be within an <imggroup> tag.

The following code example illustrates required markup in such cases:

<pagenum>98</pagenum>
<imggroup>
<img src=”” alt=””/>
<caption>First image caption text.</caption>
<img src=”” alt=””/>
<caption>Second image caption text.</caption>
</imggroup>
<p>The text content of the page.</p>
<pagenum>99</pagenum>
<imggroup>
<img src=”” alt=””/>
<caption>Third image caption text.</caption>
</imggroup>
<p>The text content of the page.</p>
<h[x]>Heading</h[x]>
<p>The text content of the page.</p>
<pagenum>99</pagenum>
Continuation of markup …

Suppliers should note that regardless whether a single image or a series of images is laid out over the page break, the requirements specified in apply.

Suppliersare recommended to contact the Ordering Agency for guidance before commencing production when layout of this kind occurs in originals.

##### Page number markup for image group and images over a double-page spread

Two sorts of this type of layout can be illustrated.

The following image illustrates a straightforward markup example:



The following code example illustrates required markup in such cases:

<pagenum>70</pagenum>
<imggroup>
<img src=”” alt=””/>
<pagenum>71</pagenum>
<caption>First image caption text.</caption>
<caption>Second image caption text.</caption>
</imggroup>
<pagenum>72</pagenum>
Continuation of markup …

## Structure Requiring <level[x]> Markup

The <level[x]> tag represents the heading *levels* of the work.
<level[x]> elements are to be associated with their respective headings in the print original, if such exist. [x] mirrors the structure of the headings and must have a value from the span 1 to 6.

A relatively common layout practice is the varying use of fonts when setting headings. This practice leads to discrepancies between a work’s actual structures as opposed to the visual representation of its structure. For example, an introduction heading may have a font that is also applied to sub-headings in the remaining text.

Suppliers mustnot represent this format with <level[x]> tags.

In addition, the use of otherwise empty <level[x]> tags as a container to achieve such inappropriate <level[x]> markup is not allowed.

The un-numbered <level> tag is not be used in markup.

As a rule, the <level[x]>tag is required to be free of class=”” attribute markup.However, exceptions to this are:

* <level1 class=”part”> **–** Applied when the book contains parts
* <level1 class=”jacketcopy”> **–** Applied when jacket cover text is present
* <level1 class=”colophon”> **–** Applied to the level containing the book’s colophon

## Structure Requiring <p class=””> Markup

Titles that do not provide the same depth of navigation through heading structures may provide meaningful structure by using the common practice of indentation and/or empty lines to indicate a ‘paragraph-level thematic break’.

In those circumstances where depth of structure is not amenable to structural markup using only <level[x]>, Suppliers are required to provide the following structural markup to distinguish paragraph-level thematic breaks:

* Where empty lines occur within any <level[x]> element containing paragraph markup, Suppliersare required to mark up the <p> tag immediately following the empty line with class=”precedingemptyline”
Note that the previous rule does not require application when the paragraph immediately follows a heading or <level[x]> tag.
* Where separation of paragraphs occurs using a visual marker, e.g. an asterisk or horizontal rule, Suppliersare required to mark up the <p> tag immediately following the marker with class=”precedingseparator”
* Where lines occur having any length of indentation and contained within any <level[x]> element Suppliersare required to mark up the <p> tag with class=”indented”
NOTE – that the previous rule does not require application with regard to hanging indentation. Suppliers are required to contact the Ordering Agency with regard to such layout.
* Where combinations of formatting occur, Suppliers are required to combine the defined attributes.
NOTE – the reading order of the formatting is required to be used to define the order of inserted values, a single space must separate the values entered, for example:
<p class=”precedingseparator indented”>

## Lists stretching over two or more pages

In those cases where lists stretch over a number of pages Suppliers are required to mark up such with <list>in accordance with the following:

* Lists extending over two or more pages that contain numbers of shorter list items or nested lists are requiredto be marked up using appropriate <list> markup.
* Lists extending over two or more pages that contain paragraph elements that in turn may contain other element content *must* *not* be marked up using <list> markup.

## Attribute usage

Suppliers are required to use and apply tag attributes defined in these requirements **only**, unless otherwise indicated by the *Ordering Agency*.

## Markup of Block Element Language attributes

Longer text extracts (at least one whole sentence) whose language is not that stated in the root element are required to be marked up with the xml:lang attribute.
Inline text is not required to be marked up unless ordered specifically by the Ordering Agency as optional markup.

Block elements that may require the xml:lang attribute are:

* <p>
* <list>
* <table>
* <poem>
* <level[x]>
* <sidebar>
* <blockquote>

Suppliers are required to use the IETF RFC 3066 standard for language identification.
If the language is included in the ISO 639-1 standard, Suppliers are required to use the two-letter code.

## Title Page

Details of the title, author, and publisher can often be found repeated at the beginning of the print original. Such repeated content is superfluous and must be excluded from the XML document. Provision of <doctitle> and <docauthor> markup suffices.

## Colophon and Similar Publisher Material

Any colophon and similar material present in the work’s front matter is required to be included in the resulting DTBook file. Typical content can include, though not exclusively, publisher specific content, printer specific content, copyright content, ISBN and translator.

## Table of Contents

Suppliers are required to supply <list> markup for works containing a table of contents. A class=”” attribute with the value ***toc*** is required to be applied to the <list> element.

Example:

<level1>
<h1>Table of Contents</h1>
<list type="pl" class=”toc”>
<li><lic>Chapter 1</lic> <lic>1</lic></li>
<li><lic>Chapter 2</lic> <lic>15</lic></li>
<li><lic>Chapter 3</lic> <lic>30</lic></li>
</list>
</level>

Markup of a table of contents is to be contained in a <level1> tag.

Whitespace or other formatting between items in the table of contents should be normalized to a single space character between <lic> elements.

A table of contents not possessing a heading does not require the inclusion of such.

## Introductory Texts

If an ”Introduction” or material of a similar nature **is numbered in accordance with the original’s other headings***,* Suppliers are requiredto include such material in the <bodymatter> element.
Otherwise, this type of material is required to be included in the <frontmatter> element.

## Index Content

Suppliers are required to supply <list> markup for works containing an index. A class=”” attribute with the value index is required to be applied to the <list> element.

Markup of an index is to be contained in a <level1> tag.

An index not possessing a heading does not require the inclusion of such.

## Rear notes content

In those circumstances where a heading for the rear notes section of a work does not exist Suppliers are required to supply a heading, i.e.: <h[x]>Notes</h[x]>

## Line numbering

Certain types of content have associated line numbering, e.g. school texts. Where line numbering occurs, Suppliers are required to mark up the line in question using the ***<line>*** tag and thereafter mark up the number using the ***<linenum>*** tag.

To preserve paragraph structure it is also required to contain ***<line>*** tags in the ***<linegroup>*** tag.

Where this content is identified, Suppliers will receive guidance via editing instructions from the Ordering Agency.

## Linegroup formatting of text

Certain types of books, particularly children’s books, will contain text formatted throughout the work as line sets. When such content is identified, use of the ***<linegroup>*** and ***<line>*** tags may be preferred instead of the ***<p>*** tag. Suppliers will receive guidance via editing instructions from the Ordering Agency.

## Empty Elements

Suppliersare requiredto deliver DTBook files free of empty elements, exceptions to this are:

* <img/>
* <br/>
* <meta/>
* <td/>
* <pagenum/>

## Typographic Emphasis and Line Breaks in Headings

Typographic emphasis found in headings is not to be removed.

Line breaks occurring in headings must not be represented.

## Drop cap initials

When content of this type is identified the character must be rendered as non-formatted text and not contained in an <em> or <strong> tag.

## Handwritten, underlined text, circled text, or crossed-out text

Typically, such content may be rendered with <em> or <strong> tags.

## Special Character Representation

Suppliers are required to contact ordering entities for a clarification of requirements when punctuation, typography, and special characters beyond the scope of the following rules occur.

### Hyphen Character Representation

Note that Suppliersare *not* required to interpret the usage of the listed characters in those circumstances where typographer choice differs from established or common usage.

Suppliersare required to deliver the following representation:

* Hyphen-Minus characters are required to be represented using Unicode (Hex.) 002D
* En dash characters are required to be represented using Unicode (Hex.) 2013
* Em dash characters are to be represented using Unicode (Hex.) 2014
* Horizontal Bar (a.k.a. Quotation Dash) characters are required to be represented using Unicode (Hex.) 2015

### Hyphenation Occurring Due to Line Breaks or Page Change

Hyphenation at margins occurring due to line breaks or page changes are required to be removed.

### Representation of Arrows

Suppliersare required to represent text containing arrows accurately. Suppliersare required to represent such characters using the appropriate Unicode code point from the span: Unicode (Hex.) 2190 to Unicode (Hex.) 2199.

### Representation of Phonetics

Suppliersare required to represent text containing phonetic notation accurately using the appropriate Unicode code point from the spans:

* Unicode (Hex.) 0250 to Unicode (Hex.) 02AF (IPA Extensions)
* Unicode (Hex.) 1D00 to Unicode (Hex.) 1D7F (Phonetic Extensions)
* Unicode (Hex.) 1D80 to Unicode (Hex.) 1DBF (Phonetic Extensions Supplement)
* Unicode (Hex.) A700 to Unicode (Hex.) A71F (Modifier Tone Letters)
* Unicode (Hex.) 02B0 to Unicode (Hex.) 02FF (Spacing Modifier Letters)
* Unicode (Hex.) 2070 to Unicode (Hex.) 209F (Superscripts and Subscripts)

Suppliersare required to contact the Ordering Agency for clarification of requirements before commencing production when phonetic notation occurs in originals.

### Representation of Pictograms, Ideograms and Logograms

The Ordering Agency will provide the Supplier at order time with Edit Instructions detailing the specific handling of such content.

# Requirements for optional markup

## Markup and notation for mathematics

The ASCIIMath notation system is used for presenting mathematics in a linear form.

The purpose of using ASCIIMath is to be able to write mathematic and other formulae in a way that can be presented to different users in ways that suit their needs in different media.

ASCIIMath allows a degree of flexibility, however, since many students read ASCIIMath exactly as it is written, it is important to use consistent notation. Suppliers are required to follow those requirements for notation and markup in the DTBook file defined in this document.

### Basic guidelines

All math expressions present in a text are to be marked up and notated using ASCIIMath when such work is included in an order. It is not allowed to use Unicode character representation for mathematical entities when ASCIIMath is ordered, i.e. α should be marked up <span class="asciimath">`alpha`</span> in every instance.

Only formulae containing single numbers (i.e. numbers free of decimal fractions or sign (like -10) or letters are allowed to be left without markup and ASCIIMath notation.

Only text that is directly part of a math expression is to be included in markup and ASCIIMath notation.

Where parts of a math expression are boldface, italicized, underlined or coloured the Ordering Agency undertakes to provide the Supplier with relevant information regarding mark up in editing instructions. If no instruction is provided, Suppliers should mark up the fonts only with ASCIIMath entites, i.e. ℝ is <span class="asciimath">`RR`</span>

Note that double quotes (“) must only be used to identify text in notation, grouping of numbers or variables in math expressions must be made using brackets.

Suppliers should not introduce redundant brackets in expressions, only if an expression needs brackets to preserve its structure, or if brackets are included in the printed book (even if they are not strictly needed), they must be included in the markup.

Remove possible spaces in big numbers like 100 000. Such numbers are not rendered correctly if the spaces are not removed.

Use only dot (.) as a decimal delimiter. The use of comma(,) as a decimal delimiter is disallowed in spite of what is printed in the book.

ASCIIMath expressions must be enclosed by back-ticks, i.e. `math expression`.

The use of Unicode is disallowed in ASCIIMath markup.

The use of LaTex syntax is disallowed in ASCIIMath markup.

The use of DTBook inline elements is disallowed in ASCIIMath markup.

Text that is part of a math expression must be enclosed using double quotation marks, e.g.:

<span class="asciimath">`10 " cm"^2"`</span>

It is necessary to add spaces at the start and/or end of a quotation-marked text depending on which end of the text is towards the math expression.

#### Markup convention

The following list describes the markup necessary for mathematics:

* Where inline mathematics occur the following markup convention is required:
<span class="asciimath">`math expression`</span>
* Where block mathematics occur the following markup convention is required:
<p><span class="asciimath">`block math expression`</span></p>

#### Notation convention using examples

The following examples show different uses of notation.

Example: Markup of full expression with decimal numbers and big numbers with spaces

|  |  |
| --- | --- |
| Expression: | 0,5 · 100 · 1500 - 65 000 = 10 000 |
| Markup: | <span class="asciimath">`0.5 \* 100 \* 1500 - 65000 = 10000`</span> |

Example: Markup of full expression with text and fractions

|  |  |
| --- | --- |
| Expression: |  |
| Markup: | <span class="asciimath">`"Lutningen" = "höjden av ett trappsteg"/"bredden av ett trappsteg" = 3/5 = 0.6`</span> |

Example: Use of less than (<) and greater than (>)

|  |  |
| --- | --- |
| Expression: | p2 > 5q |
| Markup: | <span class="asciimath">`p^2 &gt; 5q`</span> |
| Expression: | p2 < 5q |
| Markup: | <span class="asciimath">`p^2 &lt; 5q`</span> |
| Expression: | 3x - 2 ≥ 20 |
| Markup: | <span class="asciimath">`3x - 2 &gt;= 20`</span> |
| Expression: | 0 < x ≤ 10 |
| Markup: | <span class="asciimath">`0 &lt; x &lt;= 10`</span> |

**Comment:** “>” and “lt” that are the standard ASCIIMath markup for “greater than” and “less than” shall not be used.

Example: Correct grouping with parentheses

|  |  |
| --- | --- |
| Expression: |  |
| Markup: | <span class="asciimath">`(4x^3)/(3x)` </span> |
| Expression: |  |
| Markup: | <span class="asciimath">`(5a)/5=125/5`</span> |

**Comment:** Very common problem in previous productions are missing grouping with brackets when the denominator or nominator contains compound expressions, as in the examples above. Be extra careful with this.

Example: Answer fields in ASCIIMath notation

|  |  |
| --- | --- |
| Expression: | (n - 2)2 = - 5n +  |
| Markup: | <span class="asciimath">`(n - 2)^2 = ”---” - 5n + ”---”` </span> |

**Comment:** the answer field indicated by a check box in the expression is to be replaced as shown in the exemplified markup. Suppliers are required to supply this answer field markup when such occurs in inside math expressions, and not that answer field markup defined under the previous section on answer fields.

Example: Omitted brackets

|  |  |
| --- | --- |
| Expression: |  |
| Markup: | <span class="asciimath">`sqrt 43`</span> |

**Comment:** Omit brackets here. This works for single operands. Note that space is needed for readability for those who read ASCIIMath as it is written.

|  |  |
| --- | --- |
| Expression: |  |
| Markup: | <span class="asciimath">`sqrt (43 \* 4)` </span> |

**Comment:** Do not omit brackets here. Both examples are correct. Just remember to double check the grouping. When omitting brackets remember that the mark-up should be easy to read as it is**.**

Example: Crossed over numbers

|  |  |
| --- | --- |
| Expression: |  |
| Markup: | <span class="asciimath">`2^2 / 2^5 = (2\*2)/(2\*2\*2\*2\*2) = ("stricken " (2 \* 2) " stricken")/(2\*2\*2 \* "stricken " 2 \* 2 " stricken") = 1/(2\*2\*2) = 1/(2^3)` </span> |

**Comment:** The Ordering Agency will inform if this mark up is requested in the book.

### Exceptions to standard ASCIIMath markup

The following table shows a list of character transformations that Suppliers are required to include in their ASCIIMath notation.

When a certain character is not referred in the table, standard ASCIIMath notation should be used. If the character is not defined in standard ASCIIMath, suppliers should contact the Ordering Agency for further advice.

|  |  |  |
| --- | --- | --- |
| Printed book |  Required ASCIIMath Notation | Notice |
| **,** | **.** | This refers to decimal delimiter |
| **.** | **.** | This refers to decimal delimiter |
| **‰** | **:%** |  |
| **°** | **^@** | The degree sign |
| **>** | **&gt;** | gt and > not allowed |
| **<** | **&lt;** | lt and < not allowed |
| **≥** | **&gt;=** | ge and >= not allowed |
| **≤** | **&lt;=** | le and <= not allowed |
| **→** | **rarr** | -> not allowed |
| **↦** | **|-&gt;** | |-> not allowed |
| **⇄** | **rlreaction** |  |

### Ocular Check of ASCIIMath in DTBook

To make an ocular check of the DTBook it´s best to make an XHTML-version of the book and check how the Math is presented in that version. The mathematics should be presented in a similar way as in the printed book. Use FireFox 4.0 for the checking.

The ASCIIMath code itself must also be checked directly in the DTBook. It is important that Unicode characters outside the ASCII-range are not used.

#### Programs and fonts needed

* DAISY Pipeline,<http://www.daisy.org/pipeline/download>.
* ASCIIMathML.js script, <http://www1.chapman.edu/~jipsen/mathml/asciimathdownload/>
* If using Firefox you may need to install MathML fonts,<https://developer.mozilla.org/en/Mozilla_MathML_Project/Fonts>

#### How to make an XHTML version of the DTBook

1. Make an XHTML-version of the book using DAISY Pipeline.
2. Add the following line in the <Head> of the XHTLML-file:
3. <script type="text/javascript" src="ASCIIMathML.js" charset="utf-8"></script>
4. Place the ASCIIMathML.js script it in the same folder as the XHTML-file.
5. Open the file in Firefox and the resulting Mathematics should resemble those in the printed book. The only difference should be decimal delimiter where comma (,) has been replaced by period (.) .

#### More about ASCIIMath

<http://www1.chapman.edu/~jipsen/mathml/asciimath.html>

## Handling of content specific to school level texts

### Markup of exercises and answers

The occurrence of exercises and related answer fields is common in school texts.

In those circumstances where requirements do not cover a particular type of exercise, contact should be made with the appropriate Ordering Agency.

Markup of exercises and answers is not considered standard for all texts and Ordering Agencies undertake to inform Suppliers in editing instructions when this markup will be used.

#### Exercises containing punctuation

In certain books punctuation may occur in exercises. When marking up such exercises punctuation may need to be removed.

#### Numbered exercises

Exercises will often benumbered in some way. Numbering may have a primary and a secondary indicator, for example:

Example:

**100 a) What is the name of the capital city of Madagascar?**

The requirement here is that both the primary and secondary indicators need to be marked up, i.e.:

Markup example:

<p>
<span class="exercisenumber">100 </span>
<span class="excercisepart">a) </span>
What is the name of the capital city of Madagascar?
</p>

Other forms of numbering may occur but the principle is the same: each exercise number itself must be identified and marked up, and thereafter each part. Note that the text in the exercise itself needs no particular markup, but is contained within a <p> tag.

Line breaks in exercises are represented by space or <br/>.

The use of <span> without a class attribute is not allowed when marking up exercises.

#### Answer fields

Markup of such content uses the <span> tag and a specific attribute for each field.

Answer fields comprising a single or many lines need only be indicated as occurring in a text, e.g.:

Example:



The requirement here is that each field is replaced by three hyphens and represented using the tag and attribute, i.e.:

Markup example:

<p>

2 Hon säger att hon ska läsa frågorna för barnen.
<span class="answer">---</span>

3 Alla barnen tycker att det verkar kul.
<span class="answer">---</span>

</p>

Answer fields may also comprise a single space or a series of spaces within an exercise, e.g.:

Example:

10 b) Fill in the missing letter: DTBo\_k

The requirement here is that each field is represented using the tag and attribute, i.e.:

Markup example:

<p>
<span class="exercisenumber">10 </span>
<span class="exercisepart">b) </span>

Fill in the missing letter: DTBo<span class="answer\_1">**-**</span>k
</p>

Note that each missing character is required to be marked up with <span class="answer\_1">.

Accuracy with regard to the representation of whitespace characters is crucial in this form of markup.

Answer fields may also comprise so called ballot boxes, e.g.:

Example:

Would you like some candy? Yes No

The requirement here is that each field is represented using the tag and attribute, i.e.:

Markup example:

<p>

Would you like some candy?

Yes <span class="box">---</span>

No <span class="box">---</span>

</p>

### Markup of inline language attributes

Certain school texts, primarily concerning language learning, require definition of the language in use on an inline level. Segments of the original such as glossaries, references, indices, and appendices, may include terms, titles, names, and the like, that deviate from the document’s majority language. These inline elements will require application of the xml:lang attribute.

In those circumstances where requirements do not cover a particular type of inline language markup contact should be made with the appropriate Ordering Agency. Markup of inline language attributes is not considered standard for all texts and Ordering Agencies undertake to inform Suppliers in editing instructions when this markup will be used.

Suppliers are required to use the IETF RFC 3066 standard for language identification.
If the language is included in the ISO 639-1 standard, Suppliers are required to use the two-letter code.

## Extraction of text content in images

Certain image types contain text that an Ordering Agency may require extracting and placed in relevant markup. Ordering agencies will include this optional service in orders and indicate in editing instructions which images require text extraction.

Suppliers are required to place extracted text in a correctly marked up production note using the <prodnote> tag, The <prodnote> markup must be placed directly following the relevant <img> tag. In those cases where an image caption is present, the <prodnote> tag must be placed after the <caption> tag.

## Table caption

The <caption> tag may be used when specifically requested by the Ordering Agency.

Since the <caption> element is allowed only as first child to <table>, it may be necessary in some cases to relocate this content.

## Table heading

The <th> tag may be used when specifically requested by the Ordering Agency.