

# Specific Requirements for the Application of the Nordic Guidelines (2020-1 and later) in Accessible EPUB 3 Production for MTM

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## Introduction

This document further specifies the application of the "Nordic Guidelines for the Production of Accessible EPUB 3" (2020-1 and onwards) in EPUB 3 production for the Swedish Agency for Accessible Media (MTM). As noted in the Nordic Guidelines ([section 1.1](#)), between the general guidelines and title-specific editing instructions, there is an Ordering Agency-specific level of requirements, which provide general guidance for the application of the Nordic Guidelines at that particular organisation. The goal of this document is to provide that level of guidance for accessible EPUB 3 production carried out for MTM.

## General requirements

### General rule for aria-label values

For bodymatter sections where no heading is available in the source copy, the Nordic Guidelines require labels to be created and stored in an `@aria-label` attribute in the heading section. For MTM productions, if nothing else is mentioned in accompanying Editing Instructions, we kindly request our producers to name the untitled sections using the first three words of the chapter text, followed by a space and an ellipsis, e.g. `aria-label="Det var längesedan ..."` for a bodymatter section where the first three words of the body text are "Det var längesedan".

For similar issues around untitled front- and backmatter sections, if there is no match in the Nordic Guidelines [section 5.2.4](#), EPUB 3 producers are instructed to use the labels "Inledande/Avslutande avsnitt" respectively (English: "Introductory/Closing section").

Please note that deviations from these general rules might occur. They will be clearly stated in the Editing Instructions.

Note that all sections whether top-level or nested ones, need to be supplied with an `@aria-label` value in the absence of a `<h[x]>` heading to point to.

### Accessibility metadata

MTM will add more detailed accessibility metadata in postproduction, but MTM productions should contain a boilerplate accessibility metadata section, following the Nordic Guidelines, [section 2.4.1.1](#).

### Metadata granularity

Section 2.4.1.2 in the Nordic Guidelines describes a way of incorporating more granular title and author/creator descriptions in `package.opf`, making use of additional `<meta>@refines` elements.

Until further notice, MTM does **not** order that level of metadata granularity for our productions. However, we want to remind our EPUB 3 producers that proper maintitle and subtitle identification is still requested for the title page (see Nordic Guidelines, [section 3.3.2](#)), and that when a subtitle is present, it should be concatenated together with the main title in a single `<dc:title>` element in the

metadata, i.e.: `<dc:title id="title">[main title] :  
[subtitle]</dc:title>` (note the " : " separator).

## **CSS**

MTM provides an MTM-specific stylesheet file, which can be retrieved from the GitHub repository <https://github.com/mtmse/epub3-css/releases>.

MTM will notify the EPUB 3 producer when a new version of the stylesheet is available.

The CSS file should be inserted in all MTM productions according to the Nordic Guidelines, [section 2.8](#).

## **Unicode character representation**

MTM requests all unicode character to be represented by the unicode character rather than an XML entity reference. This is in line with the default option of the Nordic Guidelines (see [section 4.2](#)).

MTM, echoing the guidelines, wants to stress the importance of correct unicode character representation of letters, typographical symbols, phonetic notation, etc.

## **NCX navigation document**

Please note that an `.ncx` file is **not** ordered for MTM productions.

## **Non-verse line-by-line markup**

The Nordic Guidelines ([section 3.4.11](#)) provide a structure for marking up verse/poem content using linegroup/line markup.

While not being included in the Nordic Guidelines yet, MTM will sometimes request line-by-line markup for non-verse content, e.g. easy-to-read book content, latin original texts, verbatim reproductions of text for analysis in methodology literature, etc.

In these cases, we request Suppliers to use a `<div class="line-by-line">` wrapper for the linegroup/line markup instead of the `<div class="verse">` wrapper.

## **Footnotes and backlink clarification**

All footnotes, both endnotes and in-chapter footnotes, should use the backlink formatting of e.g. `<p><a href="#ref" role="doc-backlink">Go to the note reference.</a></p>` at the end of the footnote/endnote text.

Preformatted numbering of footnotes should be avoided. Adjust with `@start` if numbering is continuous across chapters. In case of uncertainty, please contact MTM for further guidance.

Backlinks formatting will be clarified in future releases of the Nordic Guidelines.

## **Footnotes with shared note references**

Occasionally, the source material includes notes with shared note references, i.e. several note references pointing to the same note. While it is technically possible to have multiple links to the same note in EPUB, a workaround is currently

needed due to lack of support in reading systems and a good solution for providing backlinks.

In the case of multiple references to the same note in the source material, MTM requests suppliers to repeat the note text for every note reference occurrence. This way, all note references will have an exact note match, and backlinks will always work properly so that the reader can return to the correct note reference.

### **Clarification regarding EPUB source files**

With an increased amount of EPUB source files from the publishers, MTM has noticed a greater variety in the structure and formatting of these files. Often, these source files rely on CSS and styling but have a low level of semantic accuracy and accessibility. Therefore, MTM wants to stress the importance of visual run-through and semantic interpretation in the production of these files. For instance, an apparently flat heading structure in the source file could well be logically expressed with more levels, blockquotes in the source file might only be indented but not marked up with the `<blockquote>` element, etc. If unsure about the proper interpretation of an element of an EPUB source file book, suppliers are encouraged to reach out to MTM for clarification.

### **The title page**

Treatment of the title page is described in in the Nordic Guidelines, [section 3.3.2](#). In addition to the title/subtitle instructions given in the Nordic Guidelines, MTM also requests the legacy “docauthor” class, one `<p class="docauthor">` for each author/contributor mentioned on the title page.

In some cases, the source material does not include a title page, e.g. for some EPUB source files. If this is the case, MTM requests that an “artificial” title page content file is generated by the EPUB 3 producer, based on the following structure:

1. Title information (title/subtitle)
2. Authors/contributors (in the format described above)
3. The publisher name (in a separate `<p>` element).

If the information needed is not apparent from the cover (PDF source files), or source file metadata (EPUB source files), suppliers are encouraged to reach out to MTM for clarification regarding the specific title.

Please note that for source files including title pages, no extra information or author/contributor analysis should be added to the title page content file, the instructions above only apply to cases where the title page is missing from the source file.

## **Advanced content-only requirements**

### **Mathematics markup**

MTM currently use two methods for math content capture in the markup process, 1. Capturing math as text and/or images, or 2. Capturing math as

MathML. Which of the alternatives applies to a specific order will be apparent in the purchase order.

Here follows clarifications for the correct treatment of math content in each alternative:

#### Capturing math as text and/or images

Math content is required to be recorded as text using Unicode characters rendered on a single line. Please make sure to use the correct Unicode characters, e.g. ÷ (U+247;) for division, × (U+215;) for multiplication and – (U+8722;) for subtraction. Expressions containing fractions, spanning several lines, containing illustrations or for other reasons are impractical to render on a single line are to be captured as images, using high resolution so that readers are able to magnify. Inline images are to be used where relevant.

#### Capturing math as MathML

Math content is required to be marked up with MathML. MTM currently adhere to NLB's guidelines (with one exception, see below), please track <https://github.com/nlbdev/mathml-guidelines/releases> for the most recent update.

In addition to structurally marked up content in MathML, MTM kindly requests an ASCIIMath-coded version of the expression in the @alt attribute, and an image capture fallback specified in the @altimg attribute.

MTM has two important exceptions to NLB's guidelines:

- For MTM productions, MTM requests the use of a **non-prefixed environment** for <math> elements. Rather than using m:-prefixed MathML, MTM requests the <math> element to declare the MathML namespace as the default namespace, e.g. <math xmlns="http://www.w3.org/1998/Math/MathML">. The reason for this is to maximise successful rendering of the files in various reading systems (see the DAISY Accessible Publishing Knowledge Base <http://kb.daisy.org/publishing/docs/html/mathml.html>).
- For MTM productions, MTM requests that parentheses be marked up using the <mo> element rather than <mfenced>. The reason for this is that <mfenced> has been discontinued in the MathML core specification (<https://www.w3.org/TR/mathml-core/#operator-fence-separator-or-accent-mo>).

### Version history

- **v. 1.4, 2024-09-13:** Added a second exception to NLB's MathML guidelines, as <mfenced> is now discontinued.
- **v. 1.3, 2023-07-03:** Removed paragraph on MathML accessibility metadata entry in "Accessibility Metadata", as MathML is now ordered by MTM in some cases.
- **v. 1.2, 2023-05-02:** Added sections "Clarification regarding EPUB source files" and "The title page". Rewrote "Mathematics markup" section.