User Guide

for version 0.1.1

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1. Getting started

The instructions are written for OpenOffice.org but should also work for LibreOffice.

1.1. Installation

In order to install odt2braille, OpenOffice.org version 3.1 or later is required. You can find the latest version of OpenOffice.org at http://download.openoffice.org/other.html. If you don't have *Java* installed on your system (verify your Java version at http://www.java.com/en/download/installed.jsp), make sure you include the *Java Runtime Environment (JRE)* to the download. Java 1.6 is required. If you choose not to download OpenOffice.org with Java you can easily install Java afterwards. You can get the latest version from http://java.com/en/.

To add the odt2braille extension, launch OpenOffice.org and open Tools > Extension Manager…. First remove any older versions of odt2braille. Then choose *Add...*, select the odt2brailleinstallation package and follow the steps. You can download the latest version from http://odt2braille.sourceforge.net/downloads.html.

Note

Make sure the installation package is an *.oxt* file. It might happen that Internet Explorer saves it as a *.zip* file. In this case, just rename the file back to *.oxt*.

It is strongly recommended that you also download and install the *odt2braille fonts*: http://odt2braille.svn.sourceforge.net/viewvc/odt2braille/trunk/fonts/odt2braille6.ttf for 6-dot Braille and http://odt2braille.svn.sourceforge.net/viewvc/odt2braille/trunk/fonts/odt2braille8.ttf for 8-dot Braille.

Note

Make sure you install the fonts *after* the plugin has been installed. Doing it the other way around may cause the Braille preview window to show a bunch of meaningless squares or periods instead of Braille symbols.

Finally, when everything is installed, restart OpenOffice.org and you're ready to go.

1.2. OpenOffice.org and LibreOffice Accessibility

OpenOffice.org and LibreOffice are poorly accessible with traditional screen readers on Windows. Accessing these office suites with the newer screen reader NVDA (NonVisual Desktop Access http://www.nvda-project.org/) appears to work better. Mac OS users can access OpenOffice.org with VoiceOver (http://www.apple.com/accessibility/voiceover/); Linux users can access itwith Orca (http://live.gnome.org/Orca). (Some screen readers may provide good access to the user interface but not to document content, for example, the text alternative for an image.) However, access to OpenOffice.org or LibreOffice does not necessarily imply that the user interface of an extension is accessible in the same way. The odt2braille project would greatly appreciate any feedback about the accessibility of the extension (with information on which OpenOffice.org/LibreOffice version, which screen reader version, which operating system, etcetera you use the extension).

1.3. Introduction

This guide explains how to create a document in OpenOffice.org Writer and prepare it for Braille production. You can find more help on working with Writer at http://wiki.services.openoffice.org/wiki/Documentation/OOo3_User_Guides/Writer_Guide.

After installing odt2braille, a whole new range of user preferences will become available. Because of the broad range of Braille formatting conventions in use worldwide, odt2braille provides a lot of flexibility. Users are able to adjust the Braille layout in detail, just like they can fully customize the print layout.

To make sure that non-technical users will not be overwhelmed with possibilities, they have the option to choose from a series of *formal* Braille rules, e.g. the *BANA principles of print to Braille transcription* (see http://www.brl.org/formats/). This will considerably limit their freedom, but it will also greatly simplify the production of valid and well-formatted Braille.

What follows next is a detailed overview of all possibilities odt2braille offers.

2. Authoring Braille

2.1. Languages

- OpenOffice.org allows you to write documents in various languages or mix multiple languages within the same document. You can set the language for the whole document, individual paragraphs, or even individual words and characters. The language tools can be found in Tools > Languages.

- Languages can be associated with *Braille translation tables* in Format > Braille…. The translation table for the whole document can be set with the main language option on the *General* tab. A contraction level can also be chosen. If the document contains multiple languages, each additional language can be linked to a translation table and contraction level in the *Languages* tab.

- Translation tables are available for all Western European languages, Modern Hebrew, some Asian languages and even some minority languages like Gaelic and Esperanto.

2.2. Paragraphs

- In OpenOffice.org, all regular text between *¶ markers* is considered a paragraph (¶ markers can be made visible by selecting View > Nonprinting Characters).

- Each paragraph has got a formatting *style*. Paragraph styles can be assigned and modified in Format > Styles and Formatting (F11).

- All paragraphs will be transcribed as Braille paragraphs, except headings, captions and paragraphs inside a list, inside a table or inside a note.

- By default, paragraphs are rendered in *indented paragraph style* (first line cell 3, runovers cell 1 and not separated by blank lines.

- Paragraph settings can be altered in Format > Braille > Paragraphs. You can link each used paragraph style with a different Braille formatting style.

- Braille formatting settings for paragraphs include spacing, alignment and margins. You can control how many lines of a paragraph must be printed at least at the bottom of a page (*Orphan control*). Moreover, you can protect a paragraph from being split across multiple pages (*Don't split*), and you can keep a paragraph together with the first line of the next (*Keep with next*).

- By default, empty paragraphs are dropped in the Braille edition. By checking the option *Keep empty paragraphs*, an empty paragraph is brailled as an empty line.

2.3. Headings

- In order for a paragraph to be interpreted by odt2braille as a *heading*, following conditions must be true:

  - An *outline level* has to be assigned to the paragraph. This can be achieved in two ways:

    - Outline levels can be permanently linked to paragraph styles in Tools > Outline Numbering.

- If no outline level is linked to the current paragraph style, a level can still be assigned to the text by setting *Outline Level* in Format > Paragraph > Outline & Numbering.

  By default, the paragraph styles *Heading 1*, *Heading 2*, etc. have outline levels 1, 2, etc. The navigator View > Navigator (F5) provides an overview of all headings in a document and the outline levels.

  - In addition, the paragraph should not be placed inside a list, table or note.

- To enable automatic numbering or bulleting of headings, set *Numbering Style* (Format > Paragraph > Outline & Numbering) to *Outline Numbering*.

- The exact formatting of bullets and numbers can be determined in Tools - Outline Numbering. Alternatively, choose Format > Bullets & Numbering when a heading has the cursor.

- In Braille, headings are rendered as follows:

  - Level 1 headings are centered and preceded and followed by a blank line.

  - Level 2 headings are centered as well but are only preceded by a blank line.

  - Level 3 headings begin in cell 5 (runovers too) and are preceded by a blank line.

  - Headings with an outline level greater than 3 begin in cell 1 (runovers too) and are preceded by a blank line.

  All these settings can be altered in Format > Braille > Headings.

- As with paragraphs, you can set spacing, alignment and margins, you can protect a heading from being split across multiple pages, and you can keep a heading together with the first line of the following heading or paragraph.

- In addition, you can make a heading start on a new page.

- Numbers of headings are completely adopted in Braille.

- Bullets inside headings are automatically removed.

- Empty headings are automatically removed.

- All special typeface in a heading is ignored.

- Only headings inside the *body* of the document (not in the frontmatter) are included in the table of contents.

- Footnotes in headings: see Notes.

- When a regular volume doesn't start with a heading, odt2braille inserts a *continuation heading*: the closest preceding heading is repeated and suffixed with the string "`(Cont.)`". This continuation heading is included in the table of contents as well.

  Tip

  Always start a volume with a heading.

2.4. Lists

- Each paragraph with a *Numbering Style* Format > Paragraph > Outline & Numbering that is not *Outline Numbering* or *None*, will be interpreted by odt2braille as an item of a list.

- To produce a numbered or bulleted list in OpenOffice.org, either use the *numbering* and *bullets* icons, or use *list styles*.

  - The numbering and bullets icons can be found on the *Formatting* toolbar View > Toolbars > Formatting or the *Bullets and Numbering* toolbar View > Toolbars > Bullets and Numbering.

  - List styles can be selected in Format > Styles and Formatting > List Styles. When creating a new list style, make sure the name is not of the form **L1** / **L2** / …

- The *level* of a list item can be modified with keyboard shortcuts (*tab* to move down a level, *shift + tab* to move up a level) or with the *Bullets and Numbering* toolbar.

- The exact formatting of lists can be determined in Format > Bullets and Numbering. Alternatively, if the list was created using list styles Format > Styles and Formatting > List Styles, right click on the list style and choose *Modify*.

- All Braille formatting settings for lists can be altered in Format > Braille > Lists.

- By default, lists are brailled as follows:

  - Level 1 list items begin in cell 1, runovers begin in cell 5.

  - Level 2 list items begin in cell 3, runovers in cell 7.

  - Level 3 list items begin in cell 5, runovers in cell 9.

  - List items with an outline level greater than 3 begin in cell 7, runovers in cell 11.

  The entire list is preceded and following by a blank line.

- Numbers of list items are completely adopted in Braille.

- The user can determine how bullets are brailled.

- List items or entire lists can be protected from being split across pages.

- Textboxes and images that are anchored to a list item are rendered only after completion of the entire list.

2.5. Tables

- In OpenOffice.org, tables are created with Table > Insert > Table or Insert > Table or with the *Table* toolbar View > Toolbars > Table.

- The first row(s) of a table can be defined as *column headings* by checking the *Headings* box.

- To add a caption to the table, place the cursor inside the table and choose Insert > Caption. In order for a table caption to be correctly linked to the table, it must be placed directly beneath the table.

- In Braille, tables are by default rendered in *stairstep format*:

  - Column 1 table cells begin in cell 1, runovers too.

  - Column 2 table cells begin in cell 3, runovers too.

  - …

  - Table cells in column 10 and beyond begin in cell 19.

- However, is it also possible to render tables in *linear format*. In this case, all cells in a table row are joined together. The user can choose the *column delimiter* symbol which separates the cells.

- Table rows can be protected from being split across Braille pages.

- All table settings can be accessed in Format > Braille > Tables.

- Only regular text is retained in a table cell, all other elements are dropped or transposed. If a table cell contains multiple paragraphs, these are first serialized.

- Table lines are only shown in Braille if they are present in print. A table line is represented by a series of unspaced Braille dots 2356 (top table line) or 1245 (bottom table line), extended across the full width of the Braille page. A table inside a larger textbox is enclosed by full table lines (Braille dots 123456). If no table lines are shown in print, the table is preceded and/or followed by a blank line.

- If column headings are present, these table rows are separated from the table body by a series of unspaced Braille dots 25, extended across the full width of the Braille page.

- If a caption is correctly linked to the table, it is centered and placed directly below the top table line (or top blank line if the table line is absent). A blank line is inserted between the caption and the actual table content.

- All footnotes are collected beneath the table body, but above the bottom table line (or bottom blank line if the table line is absent). Footnotes in the table caption are placed directly below the caption.

- Empty table cells are indicated with an ellipsis (Braille dots 5-5-5).

- When a table contains other tables, lists, textboxes or images, these elements are moved outside the table. Every transposition is indicated by a double dash (Braille dots 36-36-36-36) at the element's original location. An explaining transcriber's note is inserted before the table. Only after completion of the entire table, all previously omitted material is rendered. Each element is preceded by another transcriber's note explaining it was moved from it's original location.

  ### Tip

  Do not place other tables, lists, textboxes or images inside a table.

- A merged table cell is processed as if its whole content were in the left- and uppermost 'sub'-cell. The other (empty) 'sub'-cells are not shown in Braille. (This currently also applies to right-to-left writing systems such as Hebrew.)

  ### Tip

  Try to avoid merged cells.

2.6. Textboxes

- In OpenOffice.org, textboxes can be produced by choosing Insert > Frame. Options can be modified later in Format > Frame/Object. On the *Type* tab, the anchor type can be selected. The anchor is the basis of the position and behavior of the textbox within a document. It makes the textbox move with the object it is anchored to. You can anchor frames as a character or to a page, paragraph, or character. In addition, if a textbox has been placed inside another textbox, it can be anchored to this outer frame. The anchor is symbolized by a gray marker, which is only visible if the textbox is selected.

- To add a caption to the textbox, place the cursor inside the textbox and choose Insert > Caption. In order for a caption to be correctly linked to the textbox by odt2braille, one of the following must be true:

- The textbox is anchored to a caption.

- The paragraph immediately following the object the textbox is anchored to is a caption, and no other frame (i.e. textbox or image) is anchored to it.

- The last paragraph of the textbox is a caption and no other frame is anchored to it.

A caption that has been inserted through Insert > Caption is automatically linked to the textbox.

- If textboxes are anchored as a character or to a paragraph or character, they are rendered in Braille after completion of the paragraph or heading that contains the anchor.

- If textboxes are anchored to another textbox, they are rendered inside this outer textbox, before any other material it contains.

- Textboxes are omitted in Braille if they are anchored to a page.

- Textboxes that are anchored to a list item are rendered only after completion of the entire list.

- Textboxes that are anchored to a table cell are rendered only after completion of the entire table.

- Textboxes that are anchored to a note are replaced by a double dash (Braille dots 36-36-36-36), indicating the omission.

- Box lines are only shown in Braille if they are present in print. A box line is represented by a series of unspaced Braille dots 2356 (top table line) or 1245 (bottom table line), extended across the full width of the Braille page. If no box lines are shown in print, the textbox is preceded and/or followed by a blank line.

- If a caption is correctly linked to the textbox, it is centered and placed directly below the top box line (or top blank line if the box line is absent). A blank line is inserted between the caption and the actual content of the box.

- All material inside a textbox is retained in Braille. Headings are included in the table of contents.

2.7. Images

- In OpenOffice.org, images can be inserted by choosing Insert > Picture. Options can be modified later in Format > Picture. Like textboxes, an image can be anchored as a character or to a page, paragraph, character, or frame.

- To add a caption to the image, select the image and choose Insert > Caption. In order for a caption to be correctly linked to the image by odt2braille, one of the following must be true:

  - The image is anchored to a caption (*Anchored to paragraph, to character or as character*).

  - The paragraph immediately following the object the image is anchored to is a caption, and no other frame (i.e. textbox or image) is anchored to it.

  A caption that has been inserted through Insert > Caption is automatically linked to the image.

- For each image, a title and/or description can be provided in Format > Object > Description. Alternatively, the title can be set with the *Alternative (Text only)* field in Format > Picture > Options.

  Tip

  The image description should be as brief and concise as possible.

Note

OpenOffice 3.2 and older versions have a bug that deletes an image's text alternatives (Title and Description) if the anchor is modified or when a caption is added. To avoid this, the text alternatives should be added after modifying the anchor or after adding a caption.

- In Braille, images are replaced by a transcriber's note, which includes

  1. The image caption (if one is correctly linked to the image).

  2. The image title (if one is defined).

  3. An alternative desciption (if one is defined).

- If images are anchored as a character or to a paragraph or character, they are rendered in Braille after completion of the paragraph or heading that contains the anchor.

- If images are anchored to a textbox, they are rendered inside this textbox, before any other material it contains.

- Images are omitted in Braille if they are anchored to a page.

- Images that are anchored to a list item are rendered only after completion of the entire list.

- Images that are anchored to a table cell are rendered only after completion of the entire table.

- Images that are anchored to a note are replaced by a double dash (Braille dots 36-36-36-36), indicating the omission.

2.8. Captions

- To add a caption to an object in OpenOffice.org, select this object and choose Insert > Caption.

  odt2braille treats all text (with the exception of headings) with a paragraph styles *Caption*, *Table*, *Drawing*, *Illustration* or *Text* as captions.

  You can also add your own caption style by right-clicking on one of the above styles and choosing *New*.

- A caption is only rendered in Braille if odt2braille links the caption to an object. Captions can be linked to tables, textboxes or images. For more details on the linking of captions to objects, see the appropriate sections.

- Table captions and textbox sections are centered and placed directly below the top table/textbox line (or top blank line if the table/textbox line is absent). A blank line is inserted between the caption and the actual table/textbox content. Image captions are contained in the transcriber's note that represents the image.

- Footnotes in captions: see Notes.

2.9. Notes

- To insert a note in an OpenOffice.org document, put the cursor where you want the note reference marker to appear, then select Insert > Footnote/Endnote. Footnotes are displayed at the bottom of the page containing their corresponding reference. By default, endnotes are collected at the end of the entire

document. To collect endnotes at the end of the OpenOffice.org *section* that contains the note reference, choose Format > Sections, select a section, choose Options > Footnotes/Endnotes and check the option *Collect at end of section*. Sections can be inserted by choosing Insert > Section.

- In Braille, note references are preceded by the unspaced *reference indicator* (Braille dots 35-35) and a number indicator (in case of a number) or a letter indicator (in case of a letter). References are separated from surrounding text by at least one blank cell.

- No blank lines are left before, after or between notes.

- Only regular text is retained inside a note, all other elements are dropped. If the note contains multiple paragraphs, these are first serialized. Every omission of an element is indicated by a double dash (Braille dots 36-36-36-36) at the element's original location.

- Footnotes begin in cell 7, runovers begin in cell 5. Footnotes in paragraphs, headings, captions and list items are rendered immediately below the paragraph, heading, caption or list item. Footnotes in tables are are collected beneath the table body, but above the bottom table line (or bottom blank line if the table line is absent).

- Endnotes are collected in *note sections*. Each note section begins on a new page. The fully capitalized heading ("**NOTES**") is formatted as a level 1 heading. This heading is not included in the table of contents. Then the endnotes are listed, ordered by their appearance in print. Each endnote begins in cell 1, runovers begin in cell 3. When the note section is complete, subsequent text is resumed on a new page.

- Note sections can appear at various places in the Braille document:

  - If an endnote is contained in an OpenOffice.org section that has the *Collect at end of section* option checked, the note is brailled accordingly at the end of that section.

  - Endnotes that are contained in the frontmatter are placed at the end of the frontmatter.

  - All remaining endnotes are collected at the end of their volume.

2.10. Special Typeface

- In OpenOffice.org, you can apply many formats to characters using the Format > Character… window and the buttons on the *Formatting* toolbar (View > Toolbars > Formatting). Text can also be formatted by applying a character style (Format > Styles and Formatting > Character Styles).

- The relevant options for odt2braille are *Bold*, *Italic*, *Underline* and *(Small) Capitals*.

- Braille formatting settings for characters can be altered in Format > Braille > Special Typeface. The user can link each used character style with a different Braille formatting style. Bold, Italic, Underline and Capitals can be ignored in Braille, but by default the print version in followed.

- All special typeface in headings is ignored in the Braille edition.

2.11. Page Numbering

- To add a page number, put the cursor where you want the number to appear, then select Insert > Fields > Page Number. If you want to number all your pages automatically, insert a page number in the page header Insert > Header > Default or page footer Insert > Footer > Default.

- odt2braille will only proces the *first* page number in a header or footer (in that order).

- All pages of text in the Braille edition carry consecutive Braille page numbers starting with arabic 1 in the first volume (or a higher value specified by the option *Start numbering at*). In subsequent volumes, pages of text are numbered consecutively from volume to volume. Preliminary page numbers are either prefixed by the unspaced letter *p*, or rendered in Roman numerals, the choice is up to the user. Each preliminary section is numbered individually, starting with *p1* or *i*. By default, the Braille page number is displayed in the bottom right corner of the page, with no fewer than three blank cells left between the text and the number. The user can also decide to place page numbers at the top, or not display them at all.

- If the source document contains page numbers, they can be included in the Braille version as well. By default, print page numbers are displayed in the top right corner of each Braille page (except on preliminary pages), again with no fewer than three blank cells left between the text and the number. The number can also be placed at the bottom. When print page numbers and Braille page numbers are both placed at the top or bottom, they are rendered next to each other, print number first, with a space in between.

- If material on a print page cannot be contained on a single Braille page and must be continued on one or more pages, the same print page number is placed in the top right corner of each of these pages. The number is prefixed by the unspaced letter *a* (brailled without the letter indicator) for the first continued page, the letter *b* for the second, etc.

- Optionally, the user can decide to display the *range* of print pages contained in a Braille page (instead of only the page number of the *first* print page). If the first page in this range is a continued print page, it is prefixed with a letter as usual.

- When a new print page begins *within* a Braille page, a *page change indicator*, a line of unspaced Braille dots 36, can be produced, with or without the new print page number placed on the same line at the right margin. No space is left between this indicator and the first symbol of the page number.

- By default, empty pages are ignored. If this setting is disabled, a *combined* print page number will be displayed whenever empty pages are encountered: the number of the first empty page is combined with that of the page on which text reappears, e.g. 5-7. If lettered continuation pages are required, they carry only the number of the page on which text reappears.

- Another option is to treat *unnumbered* print pages as if they were a part of the preceding page (as if their was no page break).

- All page number settings can be found in Format > Braille > Page Numbers.

2.12. Preliminary Pages

Preliminary pages are those pages that precede the actual text of the document. These can include for example a title page, a special symbols page, a transcriber's note page, cover material, about the author, a dedication, acknowledgements, an abstract, a table of contents, author's notes, a preface, a foreword, an introduction or a prologue, etc.

- Which content is included in the preliminary section and the order of items is totally up to the transcriber. All frontmatter content must be placed inside a section at the beginning of the document. In OpenOffice.org, sections can be inserted by choosing Insert > Section. An overview of all sections the document contains and there level is provided by the navigator View > Navigator (F5). In Format > Braille > Document Structure, you can specify which section is the preliminary section.

- The transcriber also has the option to automatically include a list of special symbols, a transcriber's note page and a table of contents. These are at the very end of the preliminary section, before any possible note sections.

- Another possibility is to create a preliminary volume. This option should be checked if more than 80-90 Braille pages are required for the preliminary pages in the first volume to include all items (see Volume Management).

- Some pages (i.e. the title page, the special symbols page, the transcriber's notes page and the table of contents) are repeated in every Braille volume. However, their content is different for each volume. All other pages only appear in the *extended* (the first) preliminary section.

- Preliminary pages are distinguished from normal pages by a different page numbering.

- The actual volume body that follows the preliminary section always starts on a new right-hand Braille page.

2.13. Volume Management

Often, because documents are too long to be bound in one single Braille book, they are arranged in *volumes*.

Tip

Typically a volume should have around 80-90 one-sided pages (the page count includes all pages, including the preliminary pages). Ideally, the next volume starts at a logical place, such as the beginning of a new chapter. As a guideline, there should not be a difference of more than 15 pages between two volumes.

Also, appendixes, glossaries, indexes, bibliographies, etc. are often more useful when bound in separate *supplementary* volumes (*supplements*). Finally, the extended preliminary pages are sometimes bound in a separate *preliminary* volume, when the first volume would otherwise become to long.

- OpenOffice.org, by default, puts the entire document in one single volume. The document can also be automatically split in volumes, based on a preferred number of print pages per volume.

- To manually create volumes and supplements, devide your document into sections Insert > Section. In Format > Braille > Volume Management, you can then specify which sections belong to which volumes.

- In Braille, every volume or supplement has its own preliminary section (if enabled by the user). Both the preliminary section and the volume body start on a new right-hand Braille page. If a preliminary volume is created, it contains the extended preliminary pages, but no actual volume body.

- When a volume doesn't start with a heading, odt2braille automatically inserts a continuation heading: the closest preceding heading is repeated and suffixed with the string "**(Cont.)**".

2.14. Title Page

- To create a title page, create a section inside of the preliminary section. In Format > Braille > Document Structure, you can specify which section is the title page.

Tip

The title page should be the very first page.

- If a title page has been defined, the transcriber has the option to include a transcription information block. Furthermore, if the title page is a preliminary page, a volume information block can be included as well. These options can be found in Format > Braille > General. The Braille formatting of the blocks can be specified by the *Paragraph style* fields. The name of the transcriber can be set with the *Transcriber* field.

- The volume information block contains the volume identification, the total number of volumes, the page range, etc.

Example 1. Example 1

In 9 volumes and 2 supplements

Volume 2

Braille pages p1-p16 and 1-72

Print pages 46-79

Example 2. Example 2

In 1 preliminary and 5 volumes

Preliminary volume

Braille pages p1-p81

- The transcription information block contains the transcriber's name, the year of Braille transcription, etc.

Example 3. Example

Transcribed 2010 by Bert Frees with odt2braille

2.15. List of Special Symbols

- If a preliminary section has been defined, the transcriber has the option to include a list of special symbols in Format > Braille > Special Symbols. He or she can also decide which symbols will be shown, in which order, under which conditions (always, only in the first volume, or only when actually used in the current volume), and how they are described. The list heading can be modified as well. By default, it is set to "**SPECIAL SYMBOLS USED IN THIS VOLUME**".

- A special symbols list is included in the preliminary pages of each volume. The actual content varies between volumes. The special symbols list begins on a new Braille page. The heading is formatted as a level 1 heading. It is not included in the table of contents.

- Each Braille symbol begins in cell 1 and is followed, after one blank cell, by its identifying dot numbers, enclosed in parentheses, and its description. Runovers begin in cell 3. These are the symbols that are listed by default:

  - **# (56) Letter indicator**,

  - **# (3456) Number indicator**,

  - **## (35, 35) Note reference indicator**,

  - **## (6, 3) Transcriber's note indicator**,

  - **# (46) Italic indicator**,

  - **# (456) Boldface indicator**,

  - **#### (36, 36, 36, 36) Double dash indicating an omission**, and

- **### (5, 5, 5) Ellipsis indicating empty table cell**.

The exact Braille dots of some symbols can differ between languages.

- If no symbols are listed, the special symbols list is not displayed.

2.16. Transcriber's Notes

A transcriber's note is a note that is added in the Braille edition by the transcriber but not shown in the print text. Some notes are inserted between other items in the document body, some notes are displayed on a separate *transcriber's note page* in the preliminary section.

- Transcriber's notes are automatically inserted by odt2braille. A user can only control whether or not a transcriber's note page is included in the preliminary pages, through the option Include transcriber's note page in Format > Braille > General. The transcriber's note page heading can be modified in the field below. By default, it is set to "**TRANSCRIBER'S NOTES**".

- Transcriber's notes that appear throughout the document are brailled in *paragraph form*. Each paragraph of the note begins in cell 7, runovers begin in cell 5. The complete note is preceded and followed by the unspaced *transcriber's note indicator* (Braille dots 6-3).

- The transcriber's note page begins on a new Braille page. The heading is formatted as a level 1 heading. It is not included in the table of contents. Notes are brailled as indented paragraphs (first line cell 3, runovers cell 1, no blank lines between notes). No *transcriber's note indicators* are used.

2.17. Table of Contents

- In OpenOffice, a table of contents can be added to the document by selecting Insert > Indexes and Tables > Indexes and Tables and choosing *Table of Contents* for *Type*. However, these tables are not adopted in the Braille version. Instead, users are given the option to include a table of contents in the preliminary pages of each volume. This option is found in Format > Braille > Table of Contents. The table heading can be modified. By default, it is set to "**CONTENTS**".

    ### Tip

    If a table of contents is present in print, include it in the Braille version also.

- The table of contents is rendered at the very end of the preliminary section, before any possible note sections. The table of contents begins on a new Braille page. The heading is formatted as a level 1 heading.

- The actual content varies between volumes. On the *extended* (the first) preliminary pages, the table of contents lists all headings in the entire document. Only headings in the *body* of the document are included. In all other regular volumes, the table of contents is limited to headings in that particular volume.

- Each table entry is composed of

    - the heading,

    - [the print page number, prefixed with the appropriate letter if the heading begins on a continued page], and

    - [the Braille page number].

Print and Braille page numbers in the table of contents can be enabled or disabled.

- By default, level 1 headings begin in cell 1, runovers in cell 5. Level 2 headings begin in cell 3, runovers in cell 7, etcetera. All these settings can be altered in Format > Braille > Table of Contents.

- The print and Braille page numbers are placed to end at the right margin of the Braille line on which the heading ends. If space allows it, a sequence of unspaced *guide dots*, preceded and followed by a blank cell, is inserted between the heading and the page numbers. The Braille symbol for these guide dots can be specified by the user, the default value is Braille dots 5.

2.18. Mathematics

- To insert a mathematical expression in OpenOffice.org, go to Insert > Object > Formula. The equation editor will open at the bottom of the screen, and the floating Selection window appears. The equation editor uses a markup language to represent formulas. For more information on inserting math, read the math guide at http://wiki.services.openoffice.org/wiki/Documentation/OOo3_User_Guides/Math_Guide.

- Mathematical equations are conveyed to Braille through the use of specialized math Braille codes. Supported math codes are *Nemeth* (generally accepted in the United States), *Marburg* (Germany), *UK Maths* (United Kingdom) and *Woluwe* (Flanders, Belgium). You can select which code you want to use in Format > Braille > Mathematics.

2.19. Inserting Literal Braille

- To insert Braille characters in the document that will be rendered identically in the Braille edition and the print edition, the transcriber has two possibilities.

  - In the *dot pattern entry mode*, Braille strings are specified by their dot patterns, e.g. 12-1235-1-24-123-123-15 (*"braille"* in uncontracted English Braille).

  - In the *six-key entry mode*, users can insert characters with the keys **S** (dot 3), **D** (dot 2), **F** (dot 1), **J** (dot 4), **K** (dot 5) and **L** (dot 6), as if they were using a mechanical embosser such as the Perkins Brailler. So to insert *"braille"*, type **D+F**, **S+D+F+K**, **F**, **D+J**, **S+D+F**, **S+D+F**, **F+K**. Spaces are entered with the spacebar as usual and the **enter** / **return** key generates a hard return without starting a new paragraph.

    ### Note

    Not all keyboards support this feature!

  These modes can be activated in the menu Insert > Braille Characters.

2.20. Braille-only Material

- Text can be formatted such that it will only be rendered in the Braille edition of the document, but not in the print edition.

  - To insert non-printing text, go to Insert > Fields > Other… > Functions > Hidden text.

  - To insert a non-printing paragraph, go to Insert > Fields > Other… > Functions > Hidden Paragraph. In the *Condition* field, enter `TRUE`.

  You can highlight these fields by checking View > Field Shadings.

2.21. Hyphenation

- The user can choose to split words at the end of Braille lines if they are too long. This will improve the layout of paragraphs. To enable hyphenation, check the corresponding box in Format > Braille > General.

- For most languages, odt2braille has a hyphenation dictionary for automatic breaking of words. In addition, a word at the end of a Braille line is always split when it contains a *hard hyphen*, i.e. a plain minus sign (-). This allows for manual hyphenation. A more elegant solution is to use *soft hyphens*, which are not brailled when the word appears in the middle of a Braille line. To insert a soft hyphen, go to Insert > Formatting Mark > Optional Hyphen. They are only visible in OpenOffice.org when View > Field Shadings is checked.

  ### Note

  Soft hyphens can only be used in Windows and MacOS.

2.22. Templates

- When you use the same Braille settings and layout frequently, it may be a good idea to store these settings and layout in a *template*. Simply save your document as *ODF Text Document Template (.ott)*.

- odt2braille also includes some predefined, real handy Braille templates. One for a simple Braille document and one for a more advanced, multi-volume Braille document. Both templates contain a preliminary section with a titlepage. You can find them under File > New > Templates and Documents > Templates > Braille Documents.

3. Embossing Braille

To print a document on a Braille embosser, call the *Emboss...* window from the *File* menu, right beneath *Print...*.

- Select your embosser from the dropdown list. If your embosser is not supported, please contact us and we will add it if possible. You can request features at http://sourceforge.net/tracker/?func=add&group_id=330251&atid=1385420.

- Check that your embosser is powered on and loaded with paper. Specify the paper size in the dialog. If the paper is not in the list, define a "*Custom*" paper size.

- Depending on the type of embosser, you can choose between single- or double-sided printing, and between a 6- or 8-dot matrix. In addition, some embossers have special features like *Character set selection*, *Magazine style* and *Z-folding*.

- Finally, set the margins.

Pressing the *Emboss* button will trigger the transcription process. When the document is succesfully translated, you are given the option to "*Preview*" the Braille output before printing, or go on and print the document immediately.