odt2braille User Guide

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Getting Started

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

Installation

In order to install odt2braille, OpenOffice.org version 3.0 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 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 odt2braille installation 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 Sim-Braille font from Duxbury Systems at `http://www.duxburysystems.com/product2.asp?product=The%20Braille%20TrueType%20Fonts&level=free&action=pur"`. As of version 0.0.3, odtbraille will use his own *odt2braille fonts* instead: `http://odt2braille.svn.sourceforge.net/viewvc/odt2braille/Odt2BrailleAddOn/fonts/odt2braille6.ttf` for 6-dot Braille and `http://odt2braille.svn.sourceforge.net/viewvc/odt2braille/Odt2BrailleAddOn/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.

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 it with 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).

Introduction

This guide explains how to create a document in OpenOffice.org Writer and prepare it for Braille production. Chapter 1 explains all you have to know to get started real quickly. In chapter 2 you will find a more comprehensive reference. 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.

1 Quick Guide

Quick guide

2 Advanced Guide

2.1 Languages

OpenOffice.org

- 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 [*File > Braille Settings. . .*]. 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

OpenOffice.org

- In OpenOffice.org, all regular text between *pilcrow markers* is considered a paragraph (pilcrow 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 (Section 2.3 [Headings], page 5) ,
  - captions (Section 2.8 [Captions], page 10) ,
  - paragraphs inside a list (Section 2.4 [Lists], page 6) ,
  - inside a table (Section 2.5 [Tables], page 7) ,
  - inside a note (Section 2.9 [Notes], page 11) ,
  - or on the title page (Section 2.14 [Title Page], page 15) .

Braille

- 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 [*File > Braille Settings > 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

OpenOffice.org

- 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 text. 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, a heading should not be placed on the title page (Section 2.14 [Title Page], page 15) or inside a list (Section 2.4 [Lists], page 6) , table (Section 2.5 [Tables], page 7) or note (Section 2.9 [Notes], page 11) .
- 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.

Braille

- 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 [*File > Braille Settings > 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 (Section 2.10 [Special Typeface], page 11) in a heading is ignored.

- Only headings inside the *body* of the document (not in the preliminary section) are included in the table of contents (Section 2.17 [Table of Contents], page 17) .
- Footnotes in headings: see Section 2.9 [Notes], page 11.
- When a regular volume (Section 2.13 [Volume Management], page 14) (not a preliminary or supplementary 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

OpenOffice.org

- 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*.

Braille

- All Braille formatting settings for lists can be altered in [*File > Braille Settings > 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 (Section 2.6 [Textboxes], page 8) and images (Section 2.7 [Images], page 9) that are anchored to a list item are rendered only after completion of the entire list.

2.5 Tables

OpenOffice.org

- 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. Set multiple heading rows by checking *Repeat headings*.
- To add a caption (Section 2.8 [Captions], page 10) 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 and no other frame (i.e. textbox (Section 2.6 [Textboxes], page 8) or image (Section 2.7 [Images], page 9)) can be anchored to it.

Braille

- 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 [*File > Braille Settings > 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 (Section 2.8 [Captions], page 10) 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 (Section 2.9 [Notes], page 11) 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). This usage is explained on the transcriber's notes page (Section 2.16 [Transcriber's Notes], page 17) .

- When a table contains other tables, lists (Section 2.4 [Lists], page 6) , textboxes (Section 2.6 [Textboxes], page 8) or images (Section 2.7 [Images], page 9) , 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 (Section 2.16 [Transcriber's Notes], page 17) 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

OpenOffice.org

- 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 (Section 2.8 [Captions], page 10) 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 (Section 2.7 [Images], page 9)) 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.

Braille

- 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 (Section 2.4 [Lists], page 6) are rendered only after completion of the entire list.
- Textboxes that are anchored to a table cell (Section 2.5 [Tables], page 7) are rendered only after completion of the entire table.
- Textboxes that are anchored to a note (Section 2.9 [Notes], page 11) 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 (Section 2.8 [Captions], page 10) 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 (Section 2.3 [Headings], page 5) are included in the table of contents (Section 2.17 [Table of Contents], page 17) .

2.7 Images

OpenOffice.org

- In OpenOffice.org, images can be inserted by choosing [*Insert* > *Picture* > *From File*]. Options can be modified later in [*Format* > *Picture*]. Like textboxes (Section 2.6 [Textboxes], page 8) , an image can be anchored as a character or to a page, paragraph, character, or frame.
- To add a caption (Section 2.8 [Captions], page 10) 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 (Section 2.6 [Textboxes], page 8) 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 images 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.

Braille

- In Braille, images are replaced by a transcriber's note (Section 2.16 [Transcriber's Notes], page 17) , which includes

  1. The image caption (Section 2.8 [Captions], page 10) (if one is correctly linked to the image).

  2. A note saying that the image is not reproduced in Braille.

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

  4. 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 (Section 2.6 [Textboxes], page 8) , 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 (Section 2.4 [Lists], page 6) are rendered only after completion of the entire list.

- Images that are anchored to a table cell (Section 2.5 [Tables], page 7) are rendered only after completion of the entire table.

- Images that are anchored to a note (Section 2.9 [Notes], page 11) are replaced by a double dash (Braille dots 36-36-36-36), indicating the omission.

2.8 Captions

OpenOffice.org

- To add a caption to an object in OpenOffice.org, select this object and choose [*Insert > Caption*]. odt2braille treats all text elements (with the exception of headings (Section 2.3 [Headings], page 5)), with a paragraph style [*Format > Styles and Formatting > Paragraph Styles*] that is

  - *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*.

Braille

- A caption is only rendered in Braille if odt2braille links the caption to an object. Captions can be linked to tables (Section 2.5 [Tables], page 7) , textboxes (Section 2.6 [Textboxes], page 8) or images (Section 2.7 [Images], page 9) . 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 Section 2.9 [Notes], page 11.

2.9 Notes

OpenOffice.org

- 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*].

Braille

- 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.
- Footnotes and endnotes are always preceded by their corresponding reference. 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 (Section 2.2 [Paragraphs], page 4) , headings (Section 2.3 [Headings], page 5) , captions (Section 2.8 [Captions], page 10) and list items (Section 2.4 [Lists], page 6) are rendered immediately below the paragraph, heading, caption or list item. Footnotes in tables (Section 2.5 [Tables], page 7) 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 centered at the top of the page and followed by a blank line. This heading is not included in the table of contents (Section 2.17 [Table of Contents], page 17) . 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 reference 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.
  - Else, if an endnote reference is placed on the preliminary pages (Section 2.12 [Preliminary Pages], page 13) , the corresponding note is rendered at the end of the preliminary section.
  - All remaining endnotes of a volume (Section 2.13 [Volume Management], page 14) are collected at the very end of that volume.

2.10 Special Typeface

OpenOffice.org

- 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

- Braille formatting settings for characters can be altered in [File > Braille Settings >
  Special Typeface]. The user can link each used character style with a different Braille
  formatting style. Bold, Italic, Underline and Capitals can be turned on or off in Braille,
  irrespective of how the text is actually formatted in print. By default, the print version
  in followed.

- In English Braille, a single italic word is prefixed by the unspaced *italic sign* (Braille
  dots 46). If more than three consecutive words are italicized, the first word is preceded
  by the *double italic sign* (Braille dots 46-46), and the last word by the single italic sign.

- A single bold word is prefixed by the unspaced *bold sign* (Braille dots 456). If more
  than three consecutive words are boldfaced, the first word is preceded by the *double
  bold sign* (Braille dots 456-456), and the last word by the single bold sign.

- Other special typefaces like *underline*, *small caps*, etc. are not indicated in English
  Braille.

- All special typeface in headings (Section 2.3 [Headings], page 5) is ignored in the
  Braille edition.

- In other languages (Section 2.1 [Languages], page 4) , other rules for indicating special
  typeface might apply.

2.11 Page Numbering

OpenOffice.org

- 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).

Braille

- All pages of text in the Braille edition carry consecutive Braille page numbers start-
  ing with arabic 1 in the first volume (or a higher value specified by the option *Start
  numbering at*). In subsequent volumes (Section 2.13 [Volume Management], page 14)
  , 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, start-
  ing 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 (Section 2.12 [Preliminary Pages], page 13)), 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 completely 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 [*File > Braille Settings > 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.

OpenOffice.org

- Which content is included in the preliminary section and the order of items is totally up to the transcriber. All preliminary content must be placed inside a level 1 section (not nested in another section) named `PreliminaryPages`. 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)*].

- If a preliminary section has been defined, the transcriber has the option to include a list of special symbols, a transcriber's note page and a table of contents. These options

can be found on the *General*, *Table of Contents* and *Special Symbols* tabs in [*File* >
Braille Settings. . .].

- 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 Section 2.13 [Volume Management], page 14).

- All content before the `PreliminaryPages` section will be ignored.

Braille

- If a preliminary section has been defined in OpenOffice.org, every Braille volume (Section 2.13 [Volume Management], page 14) or supplement will be preceded by a number
  of preliminary pages.

- Some pages (i.e. the title page (Section 2.14 [Title Page], page 15) , the special symbols
  page (Section 2.15 [List of Special Symbols], page 16) , the transcriber's notes page
  (Section 2.16 [Transcriber's Notes], page 17) and the table of contents (Section 2.17
  [Table of Contents], page 17)) are repeated in every Braille volume. However, their
  content is different for each volume. All other pages only appear in the *extended* pre-
  liminary section. This section is either included in the *preliminary volume* (if present)
  or in volume 1.

- The print order of items is completely adapted in Braille. The special symbols page,
  transcriber's notes page and table of contents are placed (in that order) at the very
  end of the preliminary pages, before any possible note sections (Section 2.9 [Notes],
  page 11) .

- Preliminary pages are distinguished from normal pages by a different page numbering
  (Section 2.11 [Page Numbering], page 12) .

- 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 (Section 2.18 [Bibliographies],
page 18) etc. are often more useful when bound in separate *supplementary* volumes
(*supplements*). Finally, the extended preliminary pages (Section 2.12 [Preliminary Pages],
page 13) (i.e. with all preliminary content included) are sometimes bound in a separate
preliminary volume, when the first volume would otherwise become to long.

OpenOffice.org

- OpenOffice.org, by default, puts the entire document in one single volume.

- To create a volume manually, insert a level 1 section [*Insert* > *Section*] and name it `Volume1`, `Volume2`, etc. It is important to arrange volumes in this order, otherwise they will not be accepted.

- A supplementary volume can be created by inserting a section named `Supplement1`, `Supplement2`, etc. Make sure you put supplementy volumes after the last regular volume and in the right order, otherwise they will not be accepted.

- If no regular volumes have been defined manually, everything between the preliminary pages (Section 2.12 [Preliminary Pages], page 13) (or beginning of the document) and supplement 1 (or end of the document) is equal to volume 1.

- If a preliminary section is present, a preliminary volume can be created by checking the Create preliminary volume option in [*File* > *Braille Settings* > *General*].

Braille

- 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 (Section 2.12 [Preliminary Pages], page 13) , but no actual volume body.

- When a regular volume doesn't start with a heading, odt2braille automatically inserts a continuation heading (Section 2.3 [Headings], page 5) : the closest preceding heading is repeated and suffixed with the string "`(Cont.)`".

2.14 Title Page

OpenOffice.org

- To create a title page, insert a section named `TitlePage` [*Insert* > *Section*] (this does not have to be a level 1 section). The title page can be placed anywhere, but it is recommended to put it at the beginning of the document. If a preliminary section (Section 2.12 [Preliminary Pages], page 13) is present, place the title page inside of it, so that it is repeated in each volume.

    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 [*File* > *Braille Settings* > *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.

Braille

- The print order of items on the title page is adopted in Braille. The volume information block and transcription information blocks are placed (in that order) at the very end of the title page.

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

```
        In 9 volumes and 2 supplements
        Volume 2
        Braille pages p1-p16 and 1-72
        Print pages 46-79

        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:

  ```
        Transcribed 2010 by Bert Frees with odt2braille
  ```

2.15 List of Special Symbols

OpenOffice.org

- If a preliminary section has been defined, the transcriber has the option to include a list of special symbols in [*File > Braille Settings > 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"`.

Braille

- A special symbols list is included in the preliminary pages (Section 2.12 [Preliminary Pages], page 13) of each volume (Section 2.13 [Volume Management], page 14) . The actual content varies between volumes. The special symbols list begins on a new Braille page. The heading is centered at the top of the page. It is not included in the table of contents (Section 2.17 [Table of Contents], page 17) .

- After a blank line, the list follows. 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 (Section 2.1 [Languages], page 4) .

- 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.

OpenOffice.org

- 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 [*File > Braille Settings > General*]. The transcriber's note page heading can be modified in the field below. By default, it is set to "`TRANSCRIBER'S NOTES`".

Braille

- Transcriber's notes that appear throughout the document are brailled in *paragraph form*. A note consists of one or more *note paragraphs*. Each note paragraph begins in cell 7, runovers begin in cell 5. No blank lines are left before, after or between note paragraphs. 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 centered at the top of the page. It is not included in the table of contents (Section 2.17 [Table of Contents], page 17) . After a blank line the notes are listed. Notes are brailled as indented paragraphs (Section 2.2 [Paragraphs], page 4) (first line cell 3, runovers cell 1, no blank lines between notes). No *transcriber's note indicators* are used. If the transcriber's note page doesn't contain any notes, it is not displayed.

2.17 Table of Contents

OpenOffice.org

- 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, odt2braille generates its own table of contents, and the user is given the option to include this table of contents in the preliminary pages of each volume. This option is found in [*File > Braille Settings > Table of Contents*]. The table heading can be modified in the field below. By default, it is set to "`CONTENTS`".

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

Braille

- The table of contents is rendered at the very end of the preliminary section (Section 2.12 [Preliminary Pages], page 13) , before any possible note sections (Section 2.9 [Notes], page 11) . The table of contents begins on a new Braille page. The heading is centered at the top of the page and followed by a blank line.

- The actual content varies between volumes. On the *extended* preliminary pages (either included in the preliminary volume (Section 2.13 [Volume Management], page 14) , if

present, or in volume 1), 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. No table of contents is included in supplementary volumes.

- Each table entry is composed of
  - the heading,
  - [the print page number (Section 2.11 [Page Numbering], page 12) , 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. Level 3 headings begin in cell 5, runovers in cell 9. Headings with an outline level greater than 3 begin in cell 7, runovers in cell 11. All these settings can be altered in [*File* > *Braille Settings* > *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 Bibliographies

OpenOffice.org

- In OpenOffice.org, references to source material can be added through [*Insert* > *Indexes and Tables* > *Bibliography Entry*]. Although you can define sources within the document itself, creating and keeping a *bibliographic database* allows reuse in other documents and saves a lot of time. Select [*Tools* > *Bibliography Database*] to show this database.

- To generate a bibliography that lists all referenced sources, put the cursor where you want this bibliography to appear, then select [*Insert* > *Indexes and Tables* > *Indexes and Tables*] and choose *Bibliography* for *Type*. The bibliography heading can be modified in the *Title* field.

  > **Tip:** Bibliographies are often more useful when bound in a supplementary volume.

Braille

- In Braille, references to bibliography entries are rendered exactly as in print (the short name or a number enclosed by square brackets).

- The bibliography begins on a new Braille page. On the first line, the heading is centered and followed by a blank line. It is not included in the table of contents (Section 2.17 [Table of Contents], page 17) . The actual bibliography entries are brailled like any other list (Section 2.4 [Lists], page 6) . Each item begins in cell 1, runovers in cell 3. The entries are translated literally, including special typeface (Section 2.10 [Special Typeface], page 11) . After completion of the bibliography, subsequent text is resumed on a new page.

2.19 Mathematics

OpenOffice.org

- 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.

Braille

- 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 [*File > Braille Settings > Mathematics*].

2.20 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*].

2.21 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*].

2.22 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 [*File > Braille Settings. . . > 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.

2.23 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*].