Addendum to Den Dansk Punktskrift 2021

Formatting of Braille printed on paper and delivered in digital format.

1. Introduction.

The Danish Braille has so far not contained instructions on the rules according to which Braille must be produced and delivered to the readers/users.

Books and other publications in braille are produced today almost exclusively using braille printers, which receive print files that contain control characters that control the placement and positioning of text on the pages, placement of information such as page numbering and table of contents. The input files are generated automatically, possibly after manual editing to achieve a more appropriate layout based on printed text of a special nature.

The way of producing braille that was previously used, namely manual entry on paper, is nowadays only used in special individual cases by educators or teachers, for example in connection with the first teaching in the use of braille for pre-school children or for adult beginners. Use of the 6-point Perkins machine or print boards for manual point writing gives good control over the desired layout, but especially the print boards are used quite rarely these days, as it requires special knowledge and the ability to be able to mirror the characters and write from right to left. Manual entry has the weakness that if errors occur, using these methods there is no real possibility of change or editing. Electronic production, including editing, conversely provides great opportunities for editing as well as a more advanced arrangement of text, including in tables.

When choosing formatting principles, account must be taken of the great difference between reading, orienting oneself, searching and being able to mark a text on paper, a two-dimensional format, and in digital format, shown on a braille display, which can be of varying length, but typically consists of one line. This can be from 12 to 80 characters long, and moving to the next segment of a text is done by making a "display-scroll" command which replaces the displayed line with either the next or previous display line of text.

2. The two forms of presentation, point on (physical) paper and electronic point on a display, each have their advantages and challenges.

Point on paper

• Offers a two-dimensional structure with a given number of lines per page and characters per line.

• With a physical movement of the hands, one can, without the use of other remedies or facilities, feel and search for text on the current page and flip through the text in the same way as a sighted person can do with a paper version of a text in a book: E.g. , skim a page, flip to other pages and thus create an "overview".

• The text takes up a lot of space, and placed in a book, this will typically take up space, have a certain weight and, depending on the practical situation, be difficult to handle. If the book is in many bound volumes, it can be difficult to bring a book in its entirety with you from place to place.

Point on a display (electronic point)

• Will be able to be displayed on the device (display via computer / notepad / display via smartphone) loaded via an external medium such as e.g. a storage device.

• Will offer options for searching, editing, displaying a series of texts (one at a time) generated by executing relevant commands.

• Will be displayed without a multidimensional structure, with the text displayed in segments corresponding to the length of the display.

• Will in many cases be able to be combined with synthetic speech, with the advantages and pitfalls this may entail (auditory support or risk of long-term effects in the form of functional illiteracy).

• Will be easy to carry with you and can be retrieved without any prerequisites other than knowledge of the equipment's command structure.

It follows from the above that the formatting requirements and instructions that must be set to ensure a uniform and predictable structure will be very different depending on which of the above media the braille is delivered in.

3. Basic principles.

Regardless of the format in which braille is delivered to the individual user, the manufacturer / supplier must comply with the rules and instructions set by the Danish Braille Board

instructs. It is added that in relation to the specific output, possibly by agreement with the user/ reader, extra formatting methods can be added which can improve readability and usability and make reading Braille a greater pleasure and richer experience (refer to Den dansk Punktskrift chapter 13).

The better and more rigorously the text is formatted and organized, the better the users can use the text. The formatting / organization must, however, take as much account as possible of the way in which the text is to be used, e.g. fictional prose, non-fiction texts (articles, technical reports, etc.) and poetry.

4. Point on paper.

Margin

The margin must be sufficiently wide that holes or binding do not make reading difficult or affect dot patterns. There must therefore be at least 3 spaces without Braille on both the binding side and the opposite edge.

Dot paper thickness

The thickness of the paper must ensure that the braille does not become weak or too flat during handling or shipping. Experience has shown that the thickness can be reduced without affecting clarity and legibility. Choosing paper of a minimal but usable thickness will make the individual booklets cheaper to send by post and handled by the user.

The line length

The length of the individual lines must be 30 - 32 characters per line. line.

Wrap around

Formatting must be done in such a way that the lines - taking into account correct hyphenation - are filled out as much as possible.

The top and bottom margin

Both the top and bottom margin must be at least 1 line incl. line with page number.

Number of lines per page

Number of lines per page must be 27 incl. line with page number.

Page number in Braille

The page number must be on an empty line in the lower right corner, and must be positioned so that it respects the right margin. Page numbers must, as a minimum, be found on odd pages and must be preceded by a p?

Page number in printed text

If the page number in the printed text is to be indicated, it must be done on the same line (bottom line) as the point page indication and then placed centered with the indication of a p. or a TT before the number on the printed text page.

Non-fiction and texts for teaching use should always contain page numbers in printed text for the sake of references.

New chapters

Chapter breaks must start at the top of a page with an odd page number.

Headings of chapters and main sections

Must be marked with two blank lines before and one blank line after stating the chapter + number, after which the heading itself must appear on a new line immediately below the chapter / section number.

Subsection

Must be placed with one blank line before and one blank line after the text. It must be indented two spaces.

New episodes in fiction

A new paragraph in Braille is marked with an indent so that the text starts in the 3rd space.

In non-fiction, new paragraphs must be marked with a blank line to the extent that the formatting of a digital version requires this.

To note

Notes in a text must be marked as mentioned in Den Danske Punktskrift section 8.2. The content of notes must -

depending on extent and number - as far as possible be placed in the text after the section where the note marking is given or at the end of the current point booklet. A comprehensive notation should be placed at the end of the point edition starting at the top of an odd-numbered page or, if necessary, in an independent point booklet.

Tables of contents

In fiction, tables of contents must be found in the first volume of the book.

In non-fiction, the table of contents must be found in an independent booklet, if this is comprehensive. It must also be stated in which booklet the various parts can be found.
In addition, a list of contents applicable to the booklet in question must first be found in each point booklet.

Tables of contents, both general and specific to each booklet, must be placed on a new point page with odd numbering.

Tables of contents must be arranged so that the chapter / section is indicated with the first line in space 1 and any subsequent lines in space 2. The text and page indication are connected with dots as indicated in Den Danske Punktskrift section 6.5.

If in non-fiction books, in addition to the point page indication, there is also an indication of a black page to promote easier navigation, this must be placed before the point page indication with a distance of two spaces.

Pages with table of contents must be consecutively paginated with Roman numerals.

In books where, before the text, there is publishing or other information about the book, introductory paragraphs, etc., these must be included in the series of pages indicated by Roman numeral pagination.

Keyword registers

Indexes of keywords in trade books, lists, cookbooks, etc. must be placed at the back of the point book.
If the keyword register is estimated to be longer than a few pages, it is recommended that it be published in a separate booklet.

The page reference must, as a minimum, always refer to the point pages in the book.

Between specifying keywords with different letters, there must be a blank line, and the initial letter must be specified on a separate line.

The individual volumes / booklets must be a maximum of 70 pages, and where reference books, cookbooks and lists etc. are ordered and delivered, the binding must be done using rings / spirals, so that it is easier to look up and it is prevented that the book "claps in" when it is dropped / placed on a surface with the reading side facing up.

Tables and layouts

Tables and tables of data, figures, etc. in academic works and teaching material must be organized in a Braille edition on paper in such a way that the greatest possible overview is created for the reader. A discussion with the user may be appropriate in such cases.

Layout etc. should, as far as possible, start at the top of a new page and end with a page break.

In the case of tables and statements with several columns, these should be stated first in the statement with semicolons and spaces between the individual column statements. As far as possible, a brief description of the format should be given before the table, including an indication of the individual lines.

In the table, each line must begin in space 1 and the continuation on a new line in the point edition must take place in space 3.

Between each column in the lines, a semicolon and a space must be placed. Where no text or numbers are specified in a column, a dash followed by a semicolon must be inserted.

5. Formatting text in digital format for use on braille displays.

In recent years, an ever-increasing number of braille readers have switched to reading braille on a display either on notepads or on a display connected to the computer. Both fiction and non-fiction are read in this way, just as display reading is used by point readers both privately, during education and in a job context.

It is important to be able to orientate yourself and navigate in an electronic braille text, just as you can in a braille text on paper and as a sighted person can do it on a screen or print. However, the printed / visual structure is not necessarily the most functional when reading braille on a display, where it is possible and sometimes expedient to free oneself from the visual structure and instead navigate solely according to the possibilities and limitations of the tactile medium.

It can be useful, especially in books delivered in digital format, that at the front of the book there is an indication of the book's size indicated in the number of printed pages.

The Braille Board, with invited experts and producers, finds it interesting and relevant to be able to find systems by which we will be able to navigate freely and more versatilely in Braille texts in electronic format than we have the opportunity to do today. This will entail a navigation that is safer and closer to the document's message. A proposed structure must be an offer or an option that the reader / user can choose to or not. Thereby, it will be possible to choose whether the structure shown must meet the special needs of the visually impaired user or must follow the structure that only appears in the visual version.

The function must be an optional function that all producers of the electronic text offer for leisure as well as for professional and teaching and training purposes.

The idea is that the reader should be able to choose between and combine different presentations of the structure of the document below, including: Paragraph numbering, sentence division and table / layout presentation.

Chapters and subsections are marked using decimal numbering. This means that the headings are given consecutive numbers. The same applies to subheadings, where the numbering naturally starts over with a new main heading.
This makes it possible for the reader to search and determine the location of a given section in the text. You will, for example, be able to search for the decimal number 3.2.4 and without any problems find subheading 4 under subheading 2 under main heading 3. In the same way, you will be able to determine your position exactly in the text while reading.

The decimal numbering must follow the visual expression (incl. any markings, change in colour, typography, shooting, etc.).

Page numbering is not always important except in relation to the table of contents, where it can be used as a reference tool. However, it cannot be ignored that especially in

non-fiction, it can be very useful for the printed publisher's page number to be indicated in the digital text.

However, this must be assessed from text to text and on the basis of the specific format.

Requirements for information-bearing structure: The left margin is the most important starting point. This does not necessarily mean that all text must begin in space 1, as indentation can be very useful. Centering text is undesirable.

For plain text, new sentence (after period, question mark, exclamation mark, colon followed by space and capital letter) must start on new line.
Sections are marked with a blank line.

For bulleted lists such as agendas and course programmes, the text is structured so that point numbering and time begin in space 1. A new sentence must start on a new line after a full stop, exclamation mark, question mark and colon followed by a space and a capital letter and the new sentence begins in space 3.

Table information is structured so that the new column (column) is moved out to the left margin for an overview. The first column is in the 1st compartment, the next columns in the 3rd compartment (indented), a new line in the table is marked with a blank and a new line, i.e. new paragraph.
Text wrapping within the relevant part of the column is unwrapped.
In tables, empty fields in columns must be marked (e.g. with two lines).