



Readme-File for SBS-Macros

Creating Horizontal- and Vertical-Charts using Macro Files from the SBS in Wiler Switzerland
(Files for OpenOffice or Microsoft-Office)



inductive biblestudy

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Macros for creating horizontal and vertical charts

For MS-Excel & MS-Word (combined) and for OpenOffice Calc

The students of the School of Bible Studies have to draw and fill in certain diagrams as part of their work. This (Macro-)program can draw these diagrams given the starting verses of the paragraphs and the titles of the paragraphs, segments, sections, and divisions - so it does the "mechanical" part of this work.

It supports some different styles for creating the charts (see explanations to fields K15, K17, K19 and the other fields in section 4 below).

It has been written by the SBS student Stephan Hupf for Microsoft Excel in 2000 and revised by Eric Mueller (and adapted to OpenOffice Calc) in 2003-2007.

The functionality has been tested with Microsoft Excel 97, 2000, 2003 and with OpenOffice Calc Versions 2.0 and 2.3 (and with 1.0 after converting to OpenOffice.org 1.0 format with OpenOffice.org Version 2.3). It also works with later Versions of OpenOffice and with the parallel Versions thereof (LibreOffice or with NeoOffice for Mac).

Unless stated explicitly, the usage of the Microsoft Excel version and the OpenOffice.org Calc version is identical. The use of the OpenOffice.org Calc version can be recommended because generating the vertical charts into a text document is easier and has more functionality (see the explanation of "VD Writer" in section 3 below).

I have not marked registered trademarks in this documentation. The program is provided as is, no liability for any damage and loss caused by usage of the program is taken and you can freely distribute this program provided you include this documentation and document any changes into this text and do not change this sentence.

Note: From 2008, the spreadsheets are no longer in OpenOffice.org 1.0 format but in OpenOffice.org 2 format. They can be converted to OpenOffice.org 1.0 format (with full functionality) e. g. using OpenOffice.org 2.3.

Eric Mueller, Villingen-Schwenningen, 1 December 2008 (mail: ercmll7 AT gmx.de)

I will not provide Support by email, please consult your local SBS or BCC Staff.

1. BEFORE YOU START

On the first page check whether the names for "paragraph titles", "segment titles", "section titles", "division titles" (for the horizontal) in the fields K10-K13 and the header for the vertical sheets (appears together with the number of the vertical sheet in the top left corner of each vertical) in the field K16 have the correct language and if you want to change the separator between chapter and verse (e. g. a colon in "John 3:16", a comma in "Joh 3,16") in field K7.

You may also change the contents of fields C1, E1, F1, G1, H1, I1, C3, E3 ("paragraph titles", "segment titles", "section/division titles", "division titles", "verses", "width", "first paragraph", "first segment", respectively) on the first page and the fields C1, C2, C3 on the second page ("book", "title", "key verse") - the program only writes into rows 5-9.

You may also choose your own colours and fonts, in particular on the pattern for verticals on the third page (there you may also set the column widths). You may change the names of the pages. There is more information about all possible settings for the program in section 4 below.

To find out where you can make text changes without affecting the program, read section 6 below. It is wise to mark the file as read-only after making these initial changes, so that you do not overwrite it unintentionally. Some cells on the first page have been marked as write-protected. The password to unlock the page so that these cells can be changed again, is "bible" (without the quotation marks). The protection ensures that no settings are removed unintentionally by removing or inserting a row.

Note: When the spreadsheet is converted to OpenOffice.org Version 1.0, row 32000 may be write-protected, so that no row at all can be deleted or inserted. When you use Version 1.0, please unlock the page, remove the protection for this row and lock the page again.

2. HOW TO FILL IN THE DATA FOR THE CHARTS

Use the first spreadsheet page. Write the abbreviation of the book into field J3. Beginning from row 3, fill in the verse of the beginning of the paragraph in columns B, the title of the paragraph in column C, the title of the segment/section/division in column E, F, G if this paragraph is the first paragraph of this new segment/section/division, otherwise leave this cell empty (really empty, a space is not empty!)

If a chapter ends within or at the end of this paragraph, write the number of the last verse of the chapter in column D.

You need not fill in values into column A (if A3 is empty, it will be filled automatically with 1, unless the book just contains one chapter, when column A will always be emptied automatically). If there is an end verse in column D, then the default value of the next chapter number is the chapter number above plus 1, otherwise the default value is the chapter number above (if the chapter number is too big or missing, it will be set to this default value). If you fill in at least one division title in column G then the titles in column F are automatically treated as sections, and the horizontal chart consists of divisions, sections, and segments. Otherwise the horizontal chart consists of divisions (if there is any title in column F) and segments and paragraphs.

Hint: If you want to have the chapter numbers filled into the cells when you are filling the

titles into the first page of the spreadsheet, use the following trick: Append "--" (2 dashes, no quotation marks) to the title of the first unit and press the "VD" button. This is the fastest way to get the chapter numbers automatically, because no charts are generated. But do not forget to erase "--" from the end of the first unit title after filling in the titles, because you will not be able to generate any vertical chart otherwise!

Some special cases:

1) If the last division or section ends before the last segment (e. g. if the prolog and epilog are regarded as extra segments, not really belonging to the division/section), use a dash ("-") as pseudo division/section title to indicate that the last division/section has just ended. The horizontal chart will be drawn accordingly.

2) The verses in column B may also mark positions within a verse, e.g. if a paragraph starts at verse 18c, write "18c". Then the previous paragraph is assumed to end with verse 18b. (The calculated number of verses - for the width within or height within the diagram - does not depend on this: is the same for the starting verse "18" and "18c"). You can use capital and small letters for the partial verses. Note: There must be no blank after the number.

3) The books of Samuel, Kings and Chronicles are treated in the SBS as if they were just a single book. You obtain the correct chapter numbers of the second book when you put the chapter number 1 into column A at the row of the first paragraph of the second book. Then the chapters of the second book are numbered correctly. Moreover, the program automatically and correctly puts a "1" resp. a "2" before the book abbreviation as used in field A3 of the verticals.

Example: When you write " Samuel" (including the leading blank, no quotation marks!) as book abbreviation into field J3 (Microsoft Excel) resp. J2 (OpenOffice.org Calc), then the beginning of the first segment of the book will be computed as "1 Samuel 1:1" (assuming the chapter/verse separator as in field K16 is a colon).

Example:

Sample book with 2 chapters with 20 and 10 verses, respectively, and four paragraphs entitled Par1, Par2, Par3, Par4 starting at verses 1:1, 1:6, 1:17b, 2:2 and two segments Seg1, Seg2, containing the first and last two paragraphs:

| | A | B | C | D | E | F | G |
|---|---|-----|------|----|------|---|---|
| 3 | 1 | 1 | Par1 | | Seg1 | | |
| 4 | | 6 | Par2 | | | | |
| 5 | | 17b | Par3 | 20 | Seg2 | | |
| 6 | | 2 | Par4 | 10 | | | |

After generating the horizontal or the verticals, you see the correct chapter numbers 1, 1, 2 in fields A4, A5, A6, respectively (if A3 is empty in the beginning, it will be automatically filled with 1).

3. HOW TO GENERATE THE CHARTS

When you have filled in the titles, press the button "HZD" to generate the horizontal chart and the button "VD" to generate the vertical charts. In the OpenOffice.org Calc version you may alternatively press the button "VD Writer" to generate the charts within a newly generated OpenOffice.org Writer document (without having to generate them in the spreadsheet and even using a template file, e. g. vertik-al-word.dot, for formatting - please see note 11 below for some nice extra features of this functionality).

NOTES:

- 1) There must not be more than 498 paragraphs. The program can handle at most 100 paragraphs when there are no division titles in column G, and at most 100 segments when there are division titles in column G. So when there are more than 100 paragraphs, you *must* put in any text into field G3 to avoid an error, even if you have not considered division titles yet.
- 2) If the horizontal diagram does not fit on a page, reduce the number in field K7 ("Horizontal size") and re-generate.
- 3) If you use Microsoft Excel and if the starting verses of the paragraphs in line 9 of the horizontal diagram look unusual, then maybe you have to format line 9 as text. Proceed as follows: Mark line 9 of the sheet by clicking on the field "9" at the left edge of the sheet, then click with the right mouse button to get the context menu. Choose "Format cells...", then a new window for settings appears, choose the tab page "Numbers", select the category "Text" and press the "OK" button to confirm the changes. Then the cells should look as expected.
- 4) If there are more verses in a segment than the ratio K14/K15, the paragraphs of the segment will be distributed between several pages, but no paragraph will be split between two pages (if a paragraph contains more verses than K14/K15, it will be displayed on a single page though). See also discussion of field K15 below for different ways to produce verticals.
- 5) If the end verse of a chapter is missing or if the end verse of the chapter is less than the starting verse of that paragraph or if there is an end verse within a chapter, the program will stop and will set the selection to that field in column D, where you have to put in or to correct the number. After this you can try again generating the sheets.
- 6) If you just change the titles, do this in the first page - the changes are automatically transferred to the charts without further action, because the charts just contain references to the fields in the first page (unless the content of L7 does not start with 'R' - for more information see description of field L7 in section 4 below). If you change the starting verse of a paragraph or change the beginning of a segment/section/division or change the size of the diagrams (e. g. if they do not fit on a page), you have to re-generate the charts. You can do this as often as you want. Remark: When you re-generate the vertical charts but there are not so many pages as before, the last pages have names like "v10 void" indicating that they are not currently used.
- 7) You may leave column A (with the chapter numbers) blank - it will be filled automatically (but see remark 4 about the books of Samuel, Kings, and Chronicles in section 2 above). If the value is obviously too high, it will be corrected. If there are errors due to wrong chapter numbers, feel free to empty column A before re-generating.

8) The horizontal diagram contains:

- the starting verses of the paragraphs/segments in row 9,
- the paragraph/segment titles in row 8,
- the end verses of the chapters in row 7,
- the segment/section titles in row 6
- the division titles in row 5 (if there are any)

Therefore please use only the row 3 for the key verse (if row 3 is not high enough, please enlarge it manually).

9) In some cases there are problems (e. g. crashes) when generating all verticals together. You can exclude segments as follows: When you append two dashes to a segment title (e. g. "Text--"), then this segment and all following segments are skipped until there is a segment whose title ends with two plus signs (e. g. "Text++") - then this segment and all following segments are included until there is a segment whose title ends with two dashes etc. Note that the dashes and the plus signs are not removed automatically. You have to do this manually (on the first page of the spreadsheet).

10) You can obtain the calculated width for a verse (in millimetres, with one decimal) in the horizontal diagram as follows:

In Microsoft Excel using the formula in a cell

=ROUND(SUM(Daten!H3:Daten!H500)/SUM(Daten!I3:Daten!I500)*0.353;1)

In OpenOffice.org Calc using the formula

=ROUND(SUM(Daten.H3:Daten.H500)/SUM(Daten.I3:Daten.I500)/100;1)

The functions "ROUND" and "SUM" may have other names in other languages, e. g. "RUNDEN" and "SUMME" in German language.

11) Special features of generating charts with the "VD Writer" button:

When cells are merged (i. e. value of K19 does not end with minus sign), an extra row of minimal height is appended to the table. This allows for writing more observations into the merged cells without stretching the space allowed per paragraph (then the extra row grows automatically but is not seen on printed output).

If you specify a template file in cell K20 on the first sheet (usually a file with extension .dot, .ott, .stw), the generated text document will be based on it. Except for rather old versions of OpenOffice.org, the text will be inserted at the cursor position of the template. This allows to put general content before and after the verticals.

Any non-empty content in cell D1 (resp. D2) of the VD page will cause the program to copy the font attributes (e. g. size, colour, underlining) from that cell to be used for the paragraph title (resp. the text after the paragraph title).

Example:

If you want to have underlined paragraph titles but no underlined text, write anything into cell D1 and underline this text and do not choose underlining for the other cells on the VD page (which are the pattern for the font attributes for the corresponding cells in the charts). Then the verse numbers and your written text after the paragraph titles will not be underlined by default, but the paragraph titles will be. - You may even choose different fonts, sizes, colours for verse numbers, paragraph titles and your written text.

Hint:

If you want to edit the text document using another word processor (e. g. Microsoft Word),

you can save the document in the desired format (e. g. as Microsoft Word Document) and then open it using the other word processor.

The output is intended to be used as follows:

Horizontal chart:

Fill in the remaining data (key verse, etc.) and print it on a printer.

Vertical charts:

For the OpenOffice.org Calc version you may use the generated charts within the spread sheet or can directly generate them in an OpenOffice.org Writer document using the "VD Writer" button. It is not necessary to generate the charts within the spread sheet using "VD" before. The font attributes (colour, size, style, font name, etc.) are taken from the attributes of the corresponding cells within the "VD" sheet. Before printing the document, please check the printer settings (e. g. landscape format). If you put in the name of an OpenOffice.org Writer template file (or Microsoft Word template file) into K20, the generated document will be based on this file. -

In the Microsoft Excel version the generated charts are already selected and you may use them directly or copy them into a text document using "copy and paste". Some useful keystrokes: You can switch from one spreadsheet page to the next with Ctrl+(Page down) (i. e. press Ctrl key and page down key), in most Microsoft Windows versions you can switch between applications by keeping the Alt key pressed and then press the Tab key until you see the icon for the desired application marked; when you release the Alt key, the desired application is in the foreground. (Comment: Copying the tables within a macro would be possible by invoking Microsoft Word as ActiveX control. I have not done this because this may not work without problems on some versions of Microsoft Windows and Microsoft Word. Moreover, copying the tables using "copy and paste" is rather easy when using Microsoft Excel).

Some error handling:

The macro does not contain proper handling of all kinds of improper user data, so errors may occur in the following situations (usually it is not wise to try to debug unless you are familiar with the program code)

- if the entry of a field in column A or D is not just a number (or totally empty) - you have to correct this, similarly if the entry in column B is not either just a number or a number followed by a letter B-Z or b-z.

- if the end verse of a chapter is missing, the corresponding field in column D will be selected, and you have to enter the end number (the program detects this as follows: if the starting verse number of a paragraph is less than the starting number of the preceding paragraph, then there must be a chapter break). In the OpenOffice.org Calc version the inserted number will not be considered before you leave the cell. There is also an error (indicated similarly) when there is an end number in column D, but the chapter number in the next row exists and equals the chapter number of the current row. You must not mark end verses of segments which are not end verses of chapters.

- if there are more than 100 paragraphs in a book (so this is a book with divisions and sections), you have to put in at least one division title in column G of the first page, so that the horizontal chart has one segment (and not one paragraph) per column, because otherwise an error occurs.

4. SETTINGS

In the fields K7-19 and L7 you can make some settings which influence the appearance of the charts:

K7: Separator: this is the separator between chapters and verses, e. g. in "John 3:16", the colon (":") is the separator

L7: You can choose whether you want to have all titles copied into the charts or to have just references to them. Charts with copied titles have the advantage that they can be handled more easily by external programs and that some text adjustments are better in the horizontal; charts with references to the titles do not have to be re-generated when a title text changes. When you want to have references to the titles, insert into L7 any text starting with 'R' (capital R), for copied titles insert any other non-empty text. The default is now copied titles, because this is more suitable for formatting.

When generating the vertical charts directly into an OpenOffice.org Writer document (button "VD Writer") the titles are always copied (no references are used) regardless of the value of L7.

K8-13: Special settings for horizontal chart:

K8: Horizontal size: total horizontal size of the horizontal chart including column A. If you change this, you have to re-generate the horizontal sheet. (metrical units: roughly 1 point in Microsoft Excel, and 0.01mm in OpenOffice.org Calc). The actual horizontal size may differ from this by about 1cm in Microsoft Excel and 0.5mm in OpenOffice.org Calc. Adjust this so that the whole diagram fits on one page (page preview).

K9: minimal: This is the minimal size of a column (exception: if the minimal size is so big that its ratio to the total size K8 would be less than the number of columns, then all columns get the same size: total size (K8) divided by number of columns). If you change this, you have to re-generate the horizontal chart. Metrical units as for K8. This setting now also applies to the minimal height of a paragraph in the verticals.

(Remark: In the beginning, the sizes of the columns are computed such that their sizes are proportional to the number of verses. If there are columns which get size less than the minimal size, they get minimal size, and the others are shrunk accordingly. This may produce other columns of size less than the minimal size, so this process of shrinking the size of columns is sometimes repeated. In the end the sizes of all columns of size bigger than the minimal size are still proportional to the number of verses.)

K10-K13: names "paragraph titles", "segment titles", "section titles", "division titles", as they should appear in column A of the horizontal diagram. In the spreadsheet there are just references to these names, so you do not have to re-generate when you make changes.

K14-K19: Special settings for vertical charts (you have to re-generate the verticals when you make changes). Note that the setting in K9 now also applies to the verticals (minimal height of paragraph)

K14 Vertical size: This is the maximal vertical size of a vertical chart (starting from row 3). The metrical unit is 1 point in Microsoft Excel and 0.01mm in OpenOffice.org Calc. If the value is negative, its absolute value will be considered.

K15 per verse: This is the vertical space for one verse (metrical units as for K14). If there

are more verses in a vertical chart than the ratio of K14 and K15, the segment is displayed on several pages. You can either use a fixed value in K15, then all verses will have this height. Alternatively, you can type in the formula " $=K14/K18$ " to have at most the value of K18 verses per page. Alternatively you can type in the formula " $=K14/H2$ " so that the height per verse is such that there are not more than the value of K18 verses per page, but the largest segment which has at most the value of K18 verses, will fill one page completely with maximal height (height will be the value of K14).

Some SBS courses want to use fixed verse heights throughout the Old/New Testament and therefore should put a fixed value into K15. Other SBS courses want to have the longest segment (maybe except for a rather exceptionally long segment) to fill one page so that the verse height varies from book to book but is fixed within a book, just depending on the number of verses of the longest (but not exceptionally long) segment - they should put into K18 the number of verses above which a segment should be regarded as "exceptionally long" (and therefore should not be squeezed any more onto a single page), and put the formula " $=K14/H2$ " into field K15.

(Remark: when generating verticals, the field H2 is automatically filled with the number of verses of the largest segment whose number of verses does not exceed the value of K18; if there is no such segment, the value of H2 will be the same as the value of K18).

Hint: if you are interested in finding out the value for H2 fast, append "--" to the first segment title and press the "VD" button. Then all calculations run but actually no verticals will be drawn (see Note 8 in chapter 3 above for more explanation of this feature).

K16 segment: the content of this field together with the sequence number of the vertical chart appears as some kind of header in field A1 of the vertical chart, e. g. if K16 contains "Chart", then the first chart gets the header "Chart 1", the second chart gets "Chart 2", and so on. The corresponding page names will be "Chart1", "Chart2" etc.

K17 position: this is the position, where the range of the segment (this is: book abbreviation, starting and end verse) is placed. The default value is "C1", but you can also put it to some field in the second row, e. g. "B2". If you change this after you have already generated vertical charts, the ranges of the segment of the previous generation process remain where they have been, you have to empty these fields manually.

K18 max per page: this is the maximal number of verses per page (as used for computing H2 (see explanation of field K15 for details). Some SBS courses want to have each segment on a single page regardless of its length. When the value in K18 is negative, then the space of long segments will be squeezed proportionally to fit onto a page. This means that the space for a paragraph will be proportional to its number of verses within a segment but not necessarily between different segments. In any case, any paragraph will have at least the space given in K9 (unless there are too many paragraphs).

K19 column: column in which to put the boxes containing the paragraph titles (value normally "B" to have them in the middle of the paper - some SBS courses may want to have them at the left hand side resp. the right hand side of the paper and put in values "A" resp. "C"). Extra option for the OpenOffice.org Calc version: When you put a minus sign after the letter, then the cells in the charts will not be merged.

K20 Writer Template: Only in OpenOffice.org Calc: Word processor template file used for "VD Writer". This may be a Microsoft Word template file (extension .dot) or an

OpenOffice.org Writer template file. The field should contain an absolute or relative path; if it is left empty, no template file is used.

Changing fonts, sizes, colours:

The program does not make any font settings or size settings. The only setting concerns the lines of the charts: "automatic", "thin", "continuous" in Microsoft Excel and width 0.3mm in OpenOffice.org Calc.

5. LIMITATIONS

There must not be more than 78 paragraphs in a segment, not more than 48 divisions and sections, not more than 98 segments and not more than 498 paragraphs per book.

6. WHERE THE PROGRAM READS AND WRITES

On the first page, the program

- reads, interprets and writes column A from cell A3 downwards,
- reads (and interprets) columns B and D from cells B3, D3 downwards, respectively (but does not change the contents),
- checks columns E, F, G from cells E3, F3, G3 downwards, whether the entries are empty or not (in column E it also checks whether the entries end on "++" or "--"),
- reads the coloured entries J2 (resp. J3 in OpenOffice.org Calc version) and K7-K19 and L7,
- writes into columns H, I from cells H2, I3 downwards.
- The name of the first page is also used for the generated cross-references of titles in the horizontal and the verticals.

The program writes on the second page (horizontal) into rows 5-9.

The program writes on the other pages (verticals) into cells A1, A2 and the cell specified by K17 on the first page, moreover it writes into the column specified in K19 from cell in the third line (usually cell B3) downwards after emptying the range from cell A3 to C40. It may merge cells in the two other columns (usually A and C) from cell A3, C3 downwards. The program also generates the names of the pages of the verticals. The OpenOffice.org Calc version moreover reads the font attributes in the fields D1 and D2 (if they are non-empty) when the verticals are generated into a new OpenOffice.org Writer document (button "VD Writer").

The contents of any other cells do not disturb the program and are not overwritten.

7. THE FONTS USED IN THESE MACROS

In these Macros there is a rather narrow font being used, which exists in a normal, a bold and an extra-bold version. The Font is called Abadi-MT and is quite similar to the Font Arial-Narrow, which is installed normally on Windows Computers.

If you want to use this font, you can download it from the Website of SBS-Switzerland (see title-page) and you will find it there in the resources. These fonts may also be installed on Linux or Mac Computers.