

Designing A Book



In PagePlus

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Saving the Book as a Template

Once you have finished the book, you may want to save it as a template for reuse to create more books of the same format. To do this, just delete the main story, leaving the connected text frames, headers and footers, covers, table of contents, and the index if it has one.

From the File menu, use Save as... and select PagePlus Template from the Files of Type: drop list. The template will automatically be saved in your Application Data folder for PagePlus and will then appear in the Startup Assistant on starting a New Publication.

Templates *can* be saved elsewhere, but then they won't appear in the Startup Assistant.

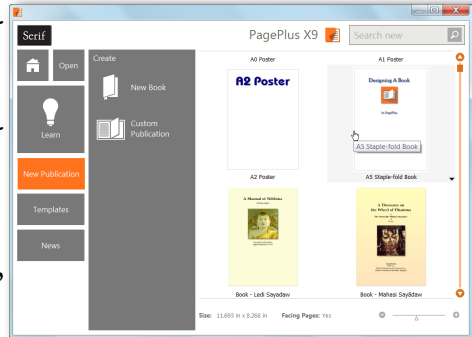
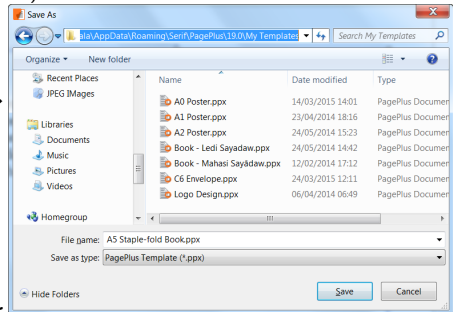
Now close the current (template) publication and reopen the original book if you need to work on it some more.

On starting a new publication, you're ready to start typing or importing the main story for the next publication, and modifying the cover design as required.

If importing files from Word or LibreOffice, I recommend importing without formatting, then applying the Body Text style to the whole book in PagePlus.

After formatting a few headings with Heading 1, Heading 2, etc., the Table of Contents can be regenerated to keep track of progress, and after marking words for the index, the index can be regenerated for the new publication. Edit headers on the master page and edit the running headers on the recto pages as editing nears completion.

Most of my publications share a similar cover design for books by the same author as part of my "House Style." Many of them use my Pali font. Creating a new publication involves a bare minimum of reformatting so my time and energy can be focused on writing and editing. For my purposes, clarity of the content is the most important, but I also spend time to tighten formatting to reduce potential printing costs.



Designing a Book in PagePlus

I assume that the reason why there are no Book Templates bundled with PagePlus is because there is no standard layout for books. It is best to design your own template, then reuse it for your other publications, or for other publications by the same author.

This tutorial aims to explain the design process and the methods that I use for my own publications. I hope it will make it easier to design your own template, while avoiding some of the common pitfalls.

Publication Setup

The first decision is to choose the page size. This may be specified by the printing company who will be producing the book, or dictated by the size of paper that your desktop printer can handle if it's to be produced in small numbers. If it's to be a PDF publication, the page size can any convenient size, bearing in mind that it will be read in a PDF viewer, or printed on A4 or US Letter paper.

The next decision is about binding. Will it be a staple-bound book or will it be perfect bound? If the former, then in Publication Setup, Paper, Regular/Booklet publications, select "Side-fold Booklet." PagePlus will impose the pages, so that pp 64 and 1, pp 2 and 63, etc., are printed on one sheet. For perfect binding, choose Booklet, None, to print page 2 on the back of page 1, etc. In both cases, facing pages, dual master pages is usually the most convenient option for laying out the book as it will appear to the readers, with the cover and page 1 on the right, page 2 on the left, page 3 on the right, etc.

Thirdly, how big do the margins need to be for trimming and stapling? Do they need to be wider on the outside or the inside? Is the top margin able to accommodate the headers, and the bottom margin adequate for the footer or page number? I design my margins to position the header above the top margin, because text will be flowed to fit inside the margins by default. If the page number is at bottom centre, then I position its baseline on the bottom margin, so that it aligns with the bottom of the text on the facing page, or slightly lower. How you design the page layout is very much a personal choice. Look at some books, and decide what you think looks best. Then take that as a guide to designing your template.

Typefaces and Fonts

Many long books have been written on Typography. If you don't know which typeface to choose, do your research because the decision is not one that should be changed late in the design process. A slightly different font will entail a huge amount of work to ensure that the pages break neatly again, chapters begin in the right place, *etc.* Updating the Table of Contents and Index will be the least of your worries.

A typeface for a book should have at least four type styles: Regular, *Italics*, **Bold**, and **Bold Italics**. If your chosen typeface doesn't have a bold or italic style, then don't use **bold** or *italics* anywhere in your book because Windows will generate a false style that will look bad, and cause problems when publishing to PDF.

Having decided on the typeface, you then need to choose a font. There are countless clones of the most popular typefaces. You don't have to pay serious money to buy professional typefaces, but you might regret the choice if you use a poor quality clone. Expensive professional fonts can also be a poor choice if they have restricted license embedding.

The typeface used for this publication is "Sukhumala," which is my free OpenType version of Sort Mills Goudy. The Goudy typeface is graceful and extremely popular for printed publications. Run through this checklist to see if your chosen font is adequate for the intended publication:

Legibility. Can it be read easily by your target audience?

Licensing Rights. Can it be embedded in PDF files?

Glyph Coverage. Does it include all of the accents, symbols, and punctuation that you need?

Type Styles. Does it include the full range of styles and weights that you want to use? Will you use the same typeface for headings, or if not, which typeface will work best with the body text font?

OpenType Features. Does it included SMALL CAPITALS, Ordinals (1st, 2nd, 3rd), ligatures (ff fi, ffi, etc.), Fractions ($\frac{1}{x}$) or Alternative Fractions ($\frac{1}{2}$, $\frac{3}{4}$) if you need to use them?

Leading, Justification, Hyphenation, and Tracking

This affects what is known as "copyfit" in the printing trade. The cost of printing hard copies, or the number of pages that can be stapled, may limit your choice of typefaces and sizes. If your target audience is

older readers or the very young, it's not advisable to use a small font size to reduce printing costs. However, some typefaces are more legible than others at the same point size. I find that 11 point text is the smallest that I can read comfortably, or 10 point if the font is Verdana.

There are ways of fitting more words on the same number of pages, without compromising legibility too much. Because I design my publications for reproduction on a desktop laser printer, I use all available tricks of the trade to use fewer pages:

Leading. The default line-spacing for this 11 point Sukhumala font is 14.3 points, or 130% of the point size. However, it works quite well for English text if the line-spacing is reduced to 120% of point size. If it were being used for Vietnamese text, this would not be advisable due to the large number of accents. It was originally designed for Buddhist publications, with possible use for Vietnamese in mind.

Justification. Books often use fully justified text. PagePlus will remove space between words to fit more text on a line. If the minimum setting in Format, Paragraph, Justification is reduced to 97% it will also reduce the spacing between letters. I use a maximum value of 103%.

Optical Justification. This allows for the fact that the eye automatically compensates for the different letter shapes when they occur at the end or beginning of a line of text. If Optical Justification is enabled in Format, Character, Spacing; letters like A, T, V, W, and punctuation will be moved slightly into the margin, *i.e.* outside of the text frame. In PagePlus, when the text frames are displayed, this will make the margins look ragged, however, when printed, the straight lines forming the Text Frame boundaries won't be printed, and the ragged margins will now appear straighter than they would without Optical Justification.

Hyphenation. Automatic hyphenation will allow long words to break at the margin. If you prefer to have less frequent hyphenation, or none at all, change the settings in Format, Paragraph, Hyphenation. I increase the defaults for Minimum word size, and set the minimum number of letters to break to three instead of only two.

Tracking. This refers to the spacing between letters. PagePlus calls it "Condensed or Expanded Spacing." It often happens that a paragraph has only a few words on the last line. By reducing the tracking with the shortcut Ctrl + Alt + Left Cursor, PagePlus will adjust the tracking in increments of 0.1%. Often, one can reduce a paragraph by one line by adjusting the tracking by 0.1% to 1%, which readers won't even notice. If it's really necessary to fit the last line of the last paragraph onto the last page in a

chapter, you may find that reducing the tracking by as much as 3% is acceptable.¹ The tracking can also sometimes be *increased* to force a few more words to flow onto the last line of a page, filling an empty line.

Kerning. This refers to the spacing between individual letter pairs. Kerning pairs are defined in the font with kerning tables. There are two types of kerning tables: kern and GPOS. The former kerning tables are now superseded by the latter. The latest version, PagePlus X9, now supports GPOS kerning. If you choose a font with only GPOS kerning tables (e.g. Linux fonts or Adobe Pro fonts), earlier versions won't be able to use Automatic kerning. Automatic kerning should be enabled in the paragraph style for text above a certain size. The default of 16 points is too high. Even footnote text will benefit from kerning, and Body Text will use less space if kerned, without looking cramped, as long as the font designer did a good job. By using all of the above techniques to fine-tune spacing, a book that was 66 or 67 pages, can be made to fit on 64 pages, without changing the font size or choosing a less legible typeface.

Project Management

How will you get the text, images, and other content into your book? Is the text already written in a word-processor, will it be copied from a PDF file, or will you type it yourself as you go? Are you accepting contributions from a number of different contributors, or only working with one?

In my experience, it is best to import the text without retaining the formatting (clear the checkbox when using Insert, Text File, to import a file from a word-processor. Then apply paragraph styles within PagePlus. Just select all, apply Body Text, then work your way through, while deciding which heading level to apply to each heading paragraph. If you need an alternative paragraph style to body text, for a quotation or numbered list for example, then apply the desired paragraph settings to that paragraph, and create a new style based on Body Text for the selected text.

If importing contributions from various authors, ask them to use the Open Document format of OpenOffice or LibreOffice. Footnotes, Endnotes, Index marks, and Tables should import without issues. Ask them not to bother with formatting, and to supply diagrams as separate files. LibreOffice can export



¹ The tracking of this paragraph is reduced by 0.9% to fit one more line. The paragraph below this one is condensed by just 0.1%, enabling the last word "typeface" to move up to the previous line, saving 1 line in 14 or 7%.

drawings in SVG (Scalable Vector Graphics) format, like the question mark graphic in this paragraph. PagePlus can often import these with better results than WMF or EPS. Very long tables are best split into several single page files wherever possible.

Only in exceptional cases should you use BookPlus. It is a legacy feature from earlier versions of PagePlus, which did not have page numbering sections, or mixed orientations within a single publication. It is far easier to edit the content globally if it is all in one publication. BookPlus might be a sensible choice for very long publications with a large numbers of images, drawings, tables and charts, but most problems can be avoided by following these simple steps:

Create a project folder for all images to be used in your publication.

Optimise all images to the number of pixels needed for the placed size at 300 dpi. For a full A4 page allowing for some bleed, that would be about 12" x 8.5" or no more than 3,600 x 2,550 pixels. If any images are bigger than that — and images from modern cameras may be significantly bigger — resample them using IrfanView, FastStone PhotoResizer, or a similar utility, and save the copies in your project folder, leaving the originals untouched. If your publication is intended for publishing on the Internet as a PDF, then use only as much JPEG compression as you find acceptable to keep file sizes small without unsightly JPG artefacts. The image of a Chindit above was compressed from IrfanView using a medium setting of 75 for use on this web page. If you zoom in close, you can see the artefacts.



Link all images to your publication — do not embed them. Embedding images only bloats your PagePlus file, making it slower to load, save, and backup. Many issues that I have seen reported on the support forums about corrupted PagePlus files were apparently a result of users embedding lots of large images. Perhaps they switched off their PC while PagePlus was still busy saving the file! It is hard to know for sure, but if linking images might avoid some problems it is better to use it. If you do need to transfer the project to another PC, then use the Save as package option on the file menu. That will embed all images and fonts too if necessary. Make a backup of the project folder and save it in a safe place, e.g. on an external drive or on DropBox. Think about how you would recover your work after a fire, computer theft, or hard drive failure.

Images that flow with the text should be anchored inline. Images that are wider or higher than the text frame will be resized to fit, as will images

that are much bigger than the page. Use the Transform Tab to check that images are placed at 100%. If they are not, then data is being thrown away, or images will be resampled on publishing, resulting in loss of sharpness. When publishing to PDF, clear the “Downsample image” checkbox on the Compression Tab of the Publish to PDF dialogue to leave your carefully optimised images untouched. The Table opposite shows the benefits of optimising image compression to suit the intended purpose.

Wide tables that need to be rotated on the page in the printed publication are difficult to edit in the normal design mode. Right-click on any rotated tables or text objects to edit them in the Logo Studio. When opened in Logo Studio the rotation will be removed automatically so that you can read and edit the text normally. You might also want to use this technique for maps with text objects, arrows, lines, *etc.*, even if they are not rotated. It will group the objects and stop them getting moved accidentally, while remaining easy to edit simply by double-clicking on the Logo object.

For sharing projects with other collaborators, use the Save As Package... option on the file menu to embed all linked content and fonts to ensure that they have everything that they need. When they open the package they will be asked to select a folder in which to extract the embedded content. After that, on saving it, the file becomes a regular publication with the content linked. The file size is greatly reduced, and the file again loads and saves in just a few seconds.

Page Numbering Sections

All recent versions of PagePlus support page numbering sections. A common requirement is to have no page numbers for the cover and inside cover pages, Roman numerals for the front matter, Arabic numerals for the body of the book, and perhaps another section for the appendix.

To add a new page numbering section, from the Format menu, open the Page Number Format dialogue and click on Add. Type the publication page number where you want the new section to start, and select the page numbering style from the radio buttons. Then deselect the “Continue from previous section” checkbox and enter the starting number for the new section (which is 1 in most cases).

I have assigned the shortcut Ctrl+# to insert a page number code, and Alt+# to open the Page Number Format dialogue. See my tutorial on *Customising Keyboard Shortcuts* for details.

Compression	JPG Size	WebP Size	Suggested Use
Lossless PNG	2.34 Mb		File storage
100	1135 Kb	700 Kb	Photographic Prints
90	365 Kb	228 Kb	Photography Website or Product catalogue for antiques, fashion, jewellery, etc.
80	234 Kb	111 Kb	Tourism Website where image quality is paramount
75	199 Kb	87 Kb	General purpose website where image quality is important
70	178 Kb	82 Kb	Product catalogue for manufactured goods
60	143 Kb	71 Kb	General purpose website
50	121 Kb	61 Kb	Low bandwidth website for mobile devices where quality still matters to some extent
40	103 Kb	52 Kb	Low bandwidth website where lower image quality is acceptable for advertised products
30	85 Kb	45 Kb	Low bandwidth website where optimum performance is more important than quality
20	65 Kb	38 Kb	JPG is not recommended, but WebP is OK. Anything lower shows very obvious JPG compression artefacts

The most commonly used format for web images is JPG, but WebP images are smaller for a comparable quality. Not all browsers support WebP. In future the new BPG format might take over due to its better quality, animation, and alpha support.

Configuring Styles

PagePlus supports hierarchical styles. Designing paragraph styles carefully not only saves a lot of error-prone editing, it also ensures consistent design throughout the publication. Open the Text Style Palette from the Format menu to organise the styles that you plan to use in this publication. See my tutorial on [Customising PagePlus](#) for details.

Modify the Normal paragraph style to use the font that you plan to use for Body Text. If it's not already cleared, clear the "Allow for text advances" checkbox on the paragraph spacing tab. Set the line-spacing to 120% of pointsize or whatever value best suits your chosen font. Most other settings can be left as they are: hyphenation, optical justification disabled, widow/orphan control enabled, *etc.*

Modify the Body Text style to make sure that it is based on the Normal paragraph style, and that the style for the following paragraph is also Body Text. These settings are on the General Tab of the Text Style dialogue **when modifying styles**.

Modify the Headings style to base it on the Normal paragraph style. Headings might use a different font to Body Text, or the same font, but different before and after paragraph spacing.

Modify all other Heading styles to base them on the Headings style.

Modify other styles like Footnote Text to base them on Body Text.

Remove all unused styles to make it easier to select styles from the Styles drop list or the Text Styles Tab.

Assign shortcut keys to styles in Tools, Options, User Interface, Keyboard, Text Editing context, Styles. If you haven't previously edited the keyboard shortcuts, you will first have to create a new Keyboard Profile and select it. I use Shortcuts like Ctrl + Shift + 1 to apply the Heading 1 style, Ctrl + Shift + 0 to apply Body Text, *etc.*

Setup the Baseline Grid

Using the baseline grid is optional, but it helps by aligning the baseline of text on facing pages for a more professional appearance.

Enable the grid in Tools, Options, Baseline Grid. The value for Grid Spacing should be the same as the default line-spacing for the Body Text style, which for this publication is $11 \times 120\% = 13.2$ points.

The Start position for the grid can be relative to the Top Margin or relative to the top of the page. If the Heading 1 style is the first paragraph

on a page, and if that style is aligned to the baseline grid, it should snap to the first grid line. If the Start Position is at the top margin, any paragraphs with line-spacing greater than 13.2 points will only snap to the second grid line, thus leaving a large gap. So, set the start position to the line-spacing for the largest heading, e.g. $16 \times 120\% = 20.8$ points, or disable Align to baseline grid for Heading 1 (Chapter level headings), but enable it for Heading 2 style and set the Start Position of the Baseline Grid to suit that: *i.e.* $14 \times 120\% = 18.2$ points. That is what I have done for this publication. Where the first line of a page is Body Text that will also align to the first line at 18.2 points from the top margin, and not 13.2 points from the top of the text frame as it would do without baseline grid alignment.

The other setting is the Display Threshold, which is the zoom level at which the baseline grid is displayed (when not working in Clean Design mode or Trimmed Mode). The default is 70% so the grid will be visible while editing text at 100%, though probably not when viewing at the Fit to Page setting. I find the grid distracting, so I change this setting to 200%. I also change the baseline grid colour to a pale blue. The baseline grid can be displayed in front of graphics, but the default is to send it to the back behind any object with a fill.

Be aware, if using the Baseline Grid, that it's not supported in versions of PagePlus before X8, so the formatting of publications will be broken on opening a publication using a Baseline Grid in PagePlus X7 or earlier. This may cause problems if collaborating with others using older versions, so avoid using it, and align baselines by designing the before and after paragraph spacing for different styles to give totals that are multiples of the Body Text line-spacing.

Footnotes and Endnotes

If you want notes at the end of the book, the entire book will have to be a single story, with only the Table of Contents, title page, and index as separate stories. Endnotes or footnotes can only be placed at the end of the story or at the bottom of a page, column, or text frame. If you want note numbering to be sequential throughout the book, and not restarting for each chapter, a single story is also the best option.

If you want the notes at the end of each chapter, then each chapter will have to be a single story, with endnotes at the end of the story, while footnotes could still be at the bottom of each page.

The Footnote Text style¹ is applied to footnotes, and the Footnote Reference character style is applied to note index references in the text and the footnote. If the font has an OpenType superscript feature, this can be enabled on the Font Tab of the text style dialogue by editing the Footnote Reference character style. Enable the “Use default OpenType features” checkbox. True ^{superscripts} are slightly bolder than those generated by using superscript formatting, and in the correct vertical position to suit the font design. If the font has no superscript feature, the Character style can be modified to use a different point size and a raised position instead of superscript formatting.

In technical or academic publications that have many short footnotes, they use far too much vertical space. It is possible to improve on this by using the method described in my tutorial on [Formatting Footnotes](#). However, where there are only three or four footnotes per page, it is not worth the extra effort.²

On the last page of a chapter, if you want footnotes to be moved up to just below the end of the text, the text frame will have to be resized. Currently, there is no way to automate this in PagePlus.

Contents and Index

Generating a Table of Contents is simple — insert a new text frame on a page where you want it to be generated, open the TOC Tab, and select the paragraph styles that you wish to include. Then set dot leader, and hyperlink options, and generate it.

Before you can create an Index, you will need to mark all of the index entries. This is one reason why I do not recommend using BookPlus. Although an Index can be added to the last Chapter, or any chapter, using BookPlus, adding index marks and editing the index are made much more difficult by splitting the book into multiple publications. The index tab in the index chapter does not display index entries in other chapters.

See my tutorial on [Working with Indexes](#) for more details.

¹ Footnote text is based on the Body Text style, but uses a smaller point size. The small text would look too widely spaced if Align to baseline grid were enabled, so it is disabled for the Footnote Text style. In any case, footnotes are placed at the bottom of the text frame, and usually have a separator line above them. Forcing them to fit the baseline grid may not give a good result.

² Use tab stops to indent footnotes.

Printing and Publishing

Unless you are printing the book on a desktop laser printer, you will probably want to produce a PDF file. If it's for the Internet, then you can simply use the Web Normal or Web Compact PDF profiles. If it's for professional printing, then the Press-ready or PDF/X-1a profiles are the best to use. PDF profiles can be modified and saved for reuse to suit any specialised needs that you may have. I use a custom PDF profile for most of my publications that doesn't downsample images because I carefully optimise all images before placing them.

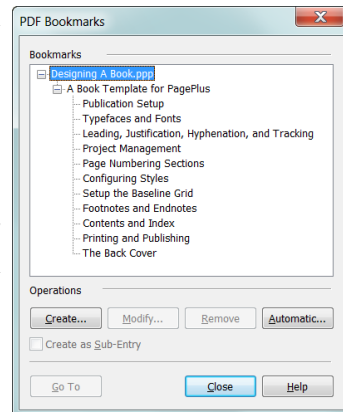
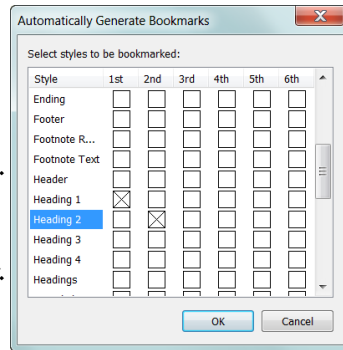
For PDF publications it is very helpful to include PDF bookmarks. Although this current book has a Table of Contents with hyperlinks, once a link in a PDF viewer has been followed, the TOC is no longer visible. With PDF bookmarks, the book's Table of Contents is available at a glance in the Bookmarks panel of the user's PDF viewer. From the Insert menu, select Insert PDF Bookmarks, Automatic, and select the heading styles to included in the PDF Bookmarks, and the indent level.

Check that the automatically generated bookmarks are in the desired order before publishing the PDF again.

The Print/PDF Preview mode (on the File menu) can be used to check how the publication will look when printed, to impose pages, or to allow for creep (moving imposed pages apart or closer together when creating staple-bound publications).

The Back Cover

This should not be an afterthought. The back cover is often the second thing that potential buyers will look at when browsing in a book shop. As well as the publication details, a QR code, and ISBN number if it has one, the back page can be used for some blurb about the book and/or its author to get them to read further. Be concise, and give as much thought to the design of the back cover as to the front.



The author of this PagePlus tutorial, Bhikkhu Pesala, has been producing Buddhist Publications for twenty-eight years. Starting with “The Debate of King Milinda,” using WordPerfect for DOS in 1988 he continued using WordPerfect until at least 1993.



After moving to Chithurst House in West Sussex he used MS Publisher 3.0, followed by PageMaker Classic (ver 4.0), then, later, he used GST Pressworks for a short while.

He started using PagePlus from version 9.0 (released 2003), and then OpenOffice for its better Unicode support. However, after PagePlus 11.0 was released in October 2005 he switched back to using PagePlus. Since then, every year or two, from PagePlus X2 through to the latest version, he has regularly updated his old publications and added new ones.

Buddhist publications require accents for Pāli words with macrons above the vowels, ā, ī, and ū, dots below the consonants ḍ, ḷ, ṃ ṇ, and ṭ, plus a dot above the ṅ and ñ tilde. Sanskrit words like śloka or Ṛgveda require a few more Latin Extended characters, such as ś, ħ, and Ṛ.

He started editing fonts from Serif Font Pack with CorelDraw 3.0 to add the required accents and additional tonal marks for the Chanting Book produced for the English Saṅgha Trust at Chithurst. In 2002 he abandoned these outmoded ANSI encoded TrueType fonts, and started using a proper font editor, High-Logic’s FontCreator, which could edit Unicode fonts.

In 2008, after reading this tutorial on the High-Logic forums he started adding OpenType features to his fonts using FontCreator 6.0. He later promoted the idea that Serif should support them. In 2010, Serif added OpenType support to PagePlus X5, and by 2013, FontCreator 7 had support for adding basic OpenType features.

WebPlus X8 can now embed these custom fonts, but it doesn’t support OpenType features.

Bhikkhu Pesala’s publications are available on www.aimwell.org as free PDF downloads, and his OpenType fonts are available on his

Softerviews website. They are released under an open GNU license to encourage co-operative effort in developing and improving these valuable resources for the benefit of all. The fonts have a very wide glyph coverage, making them suitable for Vietnamese and any European language. They include many symbols.

