OpenType Features

There are plenty of free fonts available that contain some OpenType features. Windows Vista includes several fonts such as Calibri, Cambria, or Constantia, and Windows 7 includes Gabriola, a script font that contains alternative swash character sets.

Many different OpenType features are possible. The supported features are shown in the OpenType Details Tab of the Format Character dialogue, with a preview showing what happens on enabling/disabling features. Alternative fractions will replace the more usual design. These are preferable for use with measurements using fractions of an inch, for example.

If the user types 123 and selects the Superscript feature, it will display as ^{123} using superscripts that are designed to match the weight of the font at small sizes. If Format, Character is used to apply superscripts, the numbers will be smaller, but will be too light: ^{123} not ^{123} and the vertical position may not be as designed. Small Capitals suffer from similar problems as well as being taller than the x-height.

Many modern fonts use lining figures, which are a uniform width, and that are aligned to the height of capital letters in fonts. A few fonts, like Georgia, have default OldStyle Figures (0123456789), which align with the x-height and so look better when used in body text.

If Standard Ligatures are enabled, when the user types "first offer" it is automatically changed to "first offer," and if Discretionary Ligatures are also enabled it is converted to "first offer."

If the Insert Symbol dialogue is used to add ligatures these words will be underlined as spelling errors. Also, if OpenType features are used, searching for "first offer" will find the text as usual, but if Alphabetic Presentation forms are used, the user must enter these glyphs in the find dialogue, which is much less convenient. Using the insert symbol dialogue is not only slow, but if glyphs are not found in other fonts, you will get errors when changing fonts. OpenType features avoid this problem.

Glyph Substitutions

This PDF uses my own OpenType fonts, which includes OpenType features such as Petite Capitals, Standard Ligatures, and Discretionary Ligatures. They use glyph substitutions — that is, if the feature is enabled, some letters or several letters will be substituted with another glyph.

Standard Ligatures are found in many fonts. (Even fonts without OpenType features may have a few Alphabetic Presentation Forms such as ff and fl). When the user types ff or fl with Standard Ligatures enabled, these Alphabetic Presentation Forms are substituted for the glyphs ff, fl, ffi, ffl wherever they are used, for example, in words like *effect*. In PagePlus X5 or later this can be done for all fonts with Alphabetic Presentation Forms by using the ligature option on the formatting dialogue, even if the font lacks OpenType ligatures. Standard ligatures should be used if the font contains them, as they are designed to avoid the unsightly clashes that occur when certain letter pairs are adjacent. My own fonts include less common Standard Ligatures for pairs like fb, fk, fh, tt, ty, fff, fffl, and for interrobang!? The Interrobang (U+203D) is not found in many fonts — one must type !? instead.
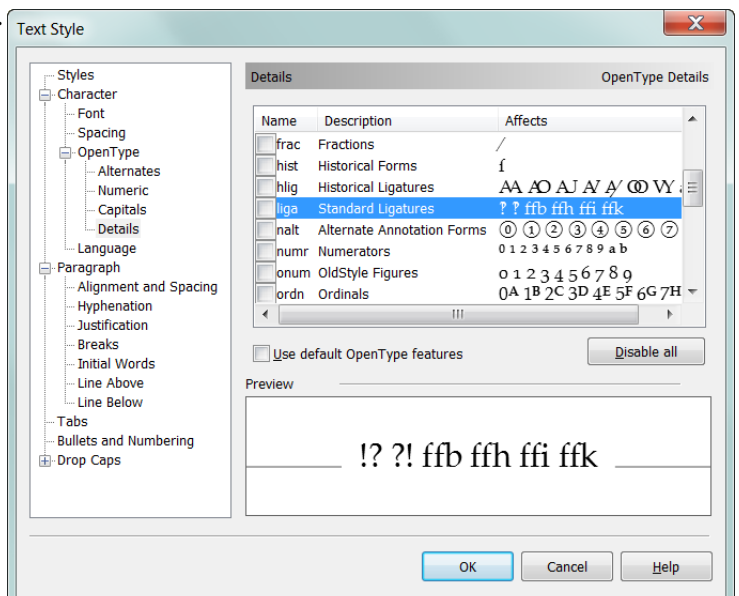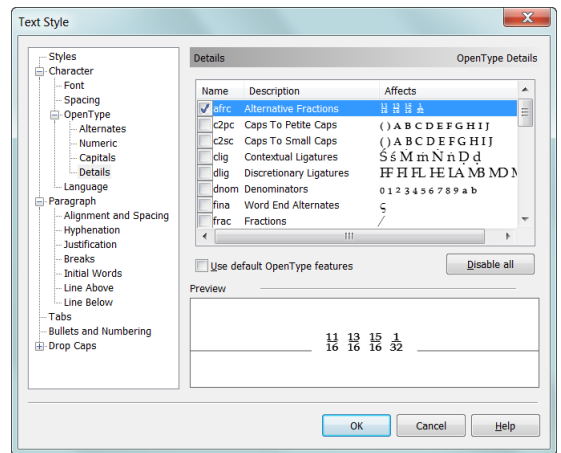
Case-sensitive and Localised Forms

Punctuation may need to be raised for uppercase, or reduced for lowercase. German ß may require a different form (ß) when used with capitals or Small Capitals (ẞ)

Contextual Ligatures

Some Paa.li scholars use the <u>Velthuis system</u> for typing accented characters. By enabling <u>contextual ligatures</u>, doubled vowels are converted to macron vowels: AA, II, UU, aa, ii, uu, and a period followed by Paa.li consonants have a dot below: .d, .l, .m, .n, .r, .s, .t, etc. This is a non-standard way of using this feature.

Discretionary and Historical Ligatures

These are optional. They are stylistic alternative forms. Ancient manuscripts often contain ligatures, or pairs of letters with connecting strokes. Letter pairs with <u>discretionary ligatures</u> in my fonts are: ck cky ct fb ffb fh ffh fk ffk fj fr ft fy fft ffy ftyfty it ip ky sf sh sfi sk sfy sp st tw ty, FF FI FL HE LA MB MD ME MP MR NK NT OC OG OO TT TW TY UB UD UP and UR. It is easy to enable/disable discretionary ligatures for individual words or sentences using the OpenType icon on the text context toolbar, e.g. LOOK or LOOK.

<u>Historical forms</u> and <u>Historical Ligatures</u> (Aɑ AOœ AJaı ɲa Ayaɣ OOoo Vⱽyy) are designed for archaic manuscripts. Note that the long ſ, which is similar to an f, is in fact a lowercase S.

Petite, Small, and Titling Capitals

Petite Capitals substitute lowercase glyphs with x-height uppercase glyphs. Small Capitals are designed for subheadings. <u>Petite Capitals</u> are designed for use in Body Text, and so match the x-height of the font, while <u>Small Capitals</u> are usually 70-80% of the height of capitals. To force Small Capitals for capital letters enable the Capitals to Small Capitals Feature, which can be mixed with Petite Capitals or small capitals My Pali font includes Small Capitals, which are 78.9% of the Caps-height.

caps to petite caps: Petite Capitals: Caps to Small Caps: Small Caps
TITLING CAPITALS • REGULAR CAPITALS

<u>Titling Capitals</u> are slightly lighter and more generously spaced than regular capitals. They are designed for use at large point sizes for book titles or on posters.

Alternative Fractions and Fractions

Alternative (Stacking) fractions are designed for typesetting measurements in feet and inches:
$1\frac{1}{2}$" $2\frac{5}{16}$" $3\frac{1}{8}$" $4\frac{31}{64}$" $5\frac{7}{32}$" $6\frac{5}{6}$" $7\frac{5}{8}$" $8\frac{7}{8}$" • 1½" 25/16" 3⅛" 4³¹⁄₆₄" 5⁷⁄₃₂" 65/6" 75/8" 8⅞"

Regular fractions don't look so neat. To use whole numbers with regular fractions the feature must be disabled for the whole number to prevent it being treated as part of the numerator:

Alternate Annotation Forms

<u>Alternate Annotation Forms</u> replace digits ①②③ and Ⓒapitals with Ⓔnclosed Ⓐlphanumerics. They are not designed for use with body text, but for lists or artistic text.

Ornaments

The <u>Ornaments feature</u> replaces numbers and text with dingbats. Expert users may prefer this to using the insert symbol feature. It is designed for use with lists. 123 = ❶❷❸, ABC-XYZ = ✖✗✘-✰✱✲ The feature is listed as "Unknown" in the OpenType details dialogue, but PagePlus does support this feature. The chess symbols in my fonts can be created by typing wq wn, etc., ♕♔♖♙♘♗ ♛♚♜♟♞♝

Stylistic Alternates

With <u>Stylistic Alternates</u> enabled, if the user types * + @ † ‡ • or © a selection of related glyphs can be selected by using the OpenType icon on the context toolbar. Instead of * + @ † ‡ • © the user can choose one of five alternate sets to get: 1) * + @ † ‡ • © 2) * + @ † ‡ • © 3) * + @ † ‡ • © 4) * + @ † ‡ • © or 5) * + @ † ‡ • ©

Ⓔnable or disable using the ⓄpenType flyout on the text context toolbar.
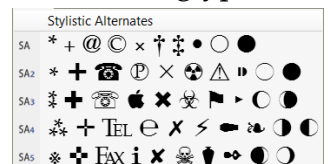
OldStyle, Proportional, Tabular, & Lining Figures

Most fonts have Lining figures, so called because they align vertically with Capitals. OldStyle figures can be used with body text. Some fonts like Talapanna have OldStyle figures 123 by default, so for figures to use with CAPITALS 123 Talapanna has a Lining Figures feature. Figures often have uniform advance width, but **Oδana** has proportional figures by default, so that has a Tabular Figures feature with monospaced figures.

Ordinals and Superscripts

These features are designed for different purposes, but share several glyphs. If the ordinals feature is enabled, as it is in this entire paragraph, superscripts are used only after digits: e.g. 1st, 2nd, 3rd, or 1ST, 2ND, 3RD. In French, è grave is used for ordinal premiere 1^{èm} — if you need to type Mme with superscripts, you must use the superscript feature just on the last two letters: Mme. In Irish (Gaelic) the 1^{ú} acute is used for all ordinal numbers. If the superscript feature is enabled, all alpha-numeric characters are superscripts. This may be used for cross-references, e.g.$^{(see\ appendix)}$

Numerators/Denominators, Subscripts, and Scientific Inferiors

Numerators and denominators were designed for use in fractions like $\frac{a}{b}$ or $\frac{1}{x}$. They are the same size as superscripts, but sit on the baseline. Subscripts are identical to denominators. Scientific Inferiors bisect the baseline, but unlike denominators and subscripts (which include lowercase a-z), they have only figures (0123456789 + – =) and a few mathematical operators.

Scientific Inferiors…$H_2SO_4\ C_4H_5$ • Subscripts…H2SO4 C4H5

Slashed Zero

A slashed zero makes the zero easier to distinguish from capital O.

Swashes

Garava was the first of my fonts to have a Swashes Feature. One of four sets can be selected from the OpenType flyout on the Text Context Toolbar:–

Swsh/0: (sw) This set uses the default Latin glyphs and is used to disable the feature.
Swsh/1: (sw2) This set uses the swash glyphs with a RGB value of 21,21,136
Swsh/2: (sw3) This set uses the swash glyphs with a RGB value of 251,87,87
Swsh/3: (sw4) This set uses the Word Start Alternate glyphs with a RGB value of 17,132,8

PagePlus does not yet support coloured OpenType fonts, so all will be in monochrome. This is not a problem in a DTP program as one can apply any colour using font styles. The coloured glyphs are supported by Firefox. Perhaps one day I will design different swash sets more like Gabriola, but for a first test of the Swash feature it was much easier to reuse the same glyphs with colour.

The Gabriola font that comes with Windows 7 includes some fancy swashes and Alternative Glyph Designs as Stylistic Alternates.

Word End Alternates

Currently, my fonts only include one terminal form, Greek sigma, which uses a different form at the end of a word, than elsewhere. Serif™ refer to them as Word End Alternates.

Word Start Alternates

WORD START ALTERNATES are found in Cankama, Garava, Lekhana, Jívita, Palí, and Talapanna. This feature replaces capitals at the START of words. The feature is called "Initial Forms" by Microsoft. Its use is probably best restricted to Drop Capitals or Headings. Due to the height of the Initial Forms in Talapanna, the default line-spacing is much more generous than for other fonts. To reduce line-spacing, use Proportional Leading at 125% of the pointsize or less if you only intend using them as drop capitals. The bold type style has an **A**lternative **D**esign.

Default Settings for OpenType Features

Standard ligatures, Contextual Ligatures, Glyph Decomposition, and Required Ligatures should all be active by default according to Microsoft's recommendations. If you need something different, modify the paragraph styles to disable or enable the features that you need.