## Junicode

The Junicode font is designed to meet the needs of medieval scholars; however, it has a large enough character set to be useful to the general user. It comes in Regular, Italic, Bold and Bold Italic faces. The Regular face has the fullest character set, and is richest in OpenType features.

Because Junicode has been designed for medievalists, some of the default letter-shapes are wrong for modern languages: for example, eogonek (e) is correctly shaped for medieval Latin but looks poor in Polish. It is possible to add language-specific letter-shapes, but this has not always been done. If you wish to see better support for any modern, medieval or ancient language, please leave a request at the Junicode project page (http://sourceforge.net/projects/junicode).

Junicode partially implements the recommendation of the Medieval Unicode Font Initiative. Look for special MUFI characters in the Private Use Area ( $\mathrm{U}+\mathrm{E} 000$ and above). Download the complete recommendation at http://www.mufi.info/. Please note that MUFI and the Junicode font change as medieval characters are adopted by the Unicode standard: these changes are outlined in the MUFI recommendation, which maintainers of medieval editions should consult for help in keeping their projects up to date.

Junicode is licensed under the GNU Public License. For a copy of this license and notes on the way the GPL applies to this font, see the file License.pdf. A quick summary of the license: You may use Junicode in any kind of publication without fee or restriction. You may modify the font for your own use. You may distribute your modified version if you license it under the GNU Public License.

## OpenType Features

Only Open Type-aware applications can make use of Open Type features. Among these are Adobe InDesign, Mellel, and (to a limited extent) Microsoft Word. XeTeX, a typesetting program built on top of TeX, bas especially good support. The following are standard Open Type features (not all available in all faces). For Open Type features especially for medievalists, see the next section.

Like many old-style fonts, Junicode contains several f-ligatures (first flight offer office afflict ford). It also has a number of other standard ligatures, e.g. thrift fifty afraid für fördern. It also has long-s ligatures (affert ftart flick omiffion and more). Most OpenType-aware applications will use these by default. You can disable them by turning off "Standard Ligatures" (liga). All faces.

If "Contextual Alternates" (calt) and "Horizontal Kerning" (kern) are on (as they should be by default), Junicode will avoid collisions between f and vowels with diacritics, e.g. fêler fíf fŭl.

For circled numbers and letters, use "Discretionary Ligatures" (dlig):

$$
\begin{aligned}
& {[1]=\text { (1) }} \\
& {[\mathrm{A}]=\mathrm{A}} \\
& {[\mathrm{a}]=\text { (a }} \\
& {[[1]]=\text { (1) }} \\
& <1>=1
\end{aligned}
$$

The same feature also gives you connected Roman numbers (I II III IV V VI VII VIII IX X XI XII), and fancy ligatures, e.g. act star track bitten attract. Regular face only.

With "Glyph Composition/Decomposition" (ccmp), a base character followed by one or more combining diacritical marks is replaced with a precomposed character when one is available: A+U+301 makes Á; a + U+301 makes á. Notice that although the combining acute character ( $U+301$ ) is the same, the A actually has a special capital form of the acute. All faces, depending on the availability of composed characters and combining diacritics.

Where no precomposed character is available, combining marks should still be correctly positioned, and marks can be "stacked" via "Mark to Base" (mark) and "Mark to Mark" (mkmk): ŏ́ (o + U + 306 + U +301 ); $\overline{\overline{1}}(\mathrm{i}+\mathrm{U}+304$ $+\mathrm{U}+306$ ). The dot of an i or j followed by a diacritic will generally be removed: ì. All faces; anchors less plentiful in bold and italic faces than in regular; diacritic stacking not available in bold italic.

Use "Small Caps" (smcp) to change lower-case letters to small caps; add "Caps to Small Caps" (c2sc) for text entirely in small caps. Junicode has true small caps rather than scaled capitals. Common combining diacritical marks should be positioned correctly relative to small caps: ÄçÉ. Regular face only.

You have a choice of either standard "lining" figures or old-style figures, selected by "Old-Style Numbers" (onum): 0123456789 oi23456789. All faces.

Superscript numbers are rendered with "Superscripts" (sups): 0123456789 . Subscript numbers are rendered with "Subscripts" (subs): 0123456789. Regular only.

A sequence of number + slash + number is rendered by a fraction if the fraction has a Unicode encoding and "Fractions" (frac) is on: $1 / 21 / 42 / 33 / 4$. All faces, but fullest in regular and bold.

The design of a few Junicode characters has changed since the font was introduced. The original designs, if you prefer them, will always be available via "Style Set 9" (ss09). Currently there are just a few such alternates: o for $\partial$, T for T , T for T .

## Notes on Junicode and MUFI

The MUFI specification defines a great many characters of interest to medievalists; the current version of Junicode contains most of these. While many MUFI characters have Unicode encodings, many others have MUFIrecommended encodings in the "Private Use Area" (PUA) of the Unicode standard-that is, a range of code points not assigned to Unicode characters and available for use in fonts for specialized purposes. Use of the PUA allows MUFI to include many characters that are not part of the Unicode standard.

There are risks with this approach. First, use of the PUA is deprecated by Adobe and Microsoft (major players in fonts and type rendering), and it is uncertain whether applications will continue to support it indefinitely. Second, and probably more important, MUFI characters are regularly accepted by the Unicode Consortium, whereupon they lose their PUA encodings and receive Unicode encodings-breaking any application that uses them.

To minimize these risks, the MUFI specification strongly recommends "that PUA characters should be encoded with mark-up or entities, and that PUA characters should be used for the final display only, whether on screen or in print." An alternative to entities is the use of OpenType features. If you are using an OpenType-aware application (e.g. XeTeX, InDesign, Mellel, and to a limited extent MS Word), many or all of the OpenType features of Junicode can help you avoid using PUA characters directly.

Characters with diacritics. Both Unicode and MUFI contain large numbers of characters with diacritics. Make it a habit never to use these "precomposed" characters directly; rather use the "plain" character followed by a character from the Unicode "Combining Diacritics" range. (This works with Word for Windows when Uniscribe is enabled, and also with other OpenType-aware applications.) In almost all cases the application will either substitute the correct precomposed character or position the diacritic correctly. For characters with more than one diacritic, follow these rules: when diacritics are stacked vertically, insert the one closest to the base character first; when diacritics are arranged horizontally, insert the leftmost one first. Examples: a + macron + acute $=\frac{1}{\text { a }}$; o + dot + acute $=$ ó. Remember that Unicode has both spacing and combining diacritics; only the combining diacritics will work correctly. If any combination fails to work for you, please leave a bug report at the Junicode website.

Small caps. Make it a hard-and-fast rule never to insert any small cap character into your documents. The encoding of small caps is inherently unstable and non-portable. MUFI recommends using small cap-like characters
from the Unicode phonetic ranges, but this would be an error with many fonts, including Junicode, which size phonetic "small caps" to harmonize with lower-case characters, whereas true small caps are somewhat larger. Always use the small caps command provided by the application you are using. If the application is able, it will use Junicode's true small caps.

You may use the "small caps" in the phonetic ranges to set IPA text. The "small cap" R is also recommended for setting transliterations of early Norse runic texts.

Nordic letter-forms. The default shape of $\varnothing$ and $p$ in Junicode is English: this is unusual in modern fonts. For the shapes used in Icelandic, specify the Icelandic language, if your application has good language support, or select "Style Set 1" (ss01): ðp.

Insular letter-forms. Insular letter-forms have recently been accepted by Unicode, and therefore their encodings will change. For Junicode, use "Style Set 2" (ss02) for insular letter-forms if your application supports it: abcoefる. Turn off "Standard Ligatures" (liga) for best results.

Old English typography. When Old English is set with Junicode, some letter combinations can produce unattractive collisions. To avoid this, make sure that "Contextual Alternates" (calt) and "Standard Ligatures" (liga) are on (as they should be by default): hæfó hæff fūl nīð.

Enlarged minuscules. In Junicode, "Style Set 6" (ss06) produces enlarged minuscules, thus: abcdefg. Since the underlying text remains unchanged, enlarged text can be searched like normal text.

Overlined characters. The MUFI specification envisions a font-based mechanism for producing text with overlines. Probably this will not be practical in the near future; rather, use your application's line-drawing facilities to produce text with overlines. For Junicode, roman numbers are an exception. Use "Style Set 4" (ss04) for roman numbers with high overline (viii XCXV) and "Style Set 5" (ss05) for lower-case roman numbers with medium-high overline ( $\overline{\mathrm{v} 111} \mathrm{đc} \overline{\mathrm{x}}$ ).

Letters with flourishes. For letters with flourishes (sometimes used for setting Middle English texts), use "Swash" (swsh): cr dı figr $k_{\imath} \mathrm{D}$ r.

Ligatures. Nearly all of MUFI's ligatures are accessible via "Historical Ligatures" (hlig). Even if you ae not a medievdist, you my still be amused by the strage effects you ca achieve by turning on this feature: eg track caught fa sock book A a AD д $A \mathrm{~J}$ a $A$ a.

Deleted text. In medieval manuscripts, text is often deleted by placing a dot under each letter. Both Unicode and MUFI define many characters with
 "Style Set 7" (ss07).

Alternate yogh. For Middle English, always use the yogh at U+021C and U+021D (33). Unicode also has an alternative yogh, which in Junicode has a flat top. If you prefer this, leave the underlying text the same and specify "Style Set 8" (ss08): 33 .

One conflict between MUFI and Junicode has been handled as follows: MUFI assigns latin letter long s descending to U+F127, where Junicode has latin letter small insular s, and insular s to U+F22E. To maintain compatibility with earlier versions, Junicode has insular $s$ at both code points. Note also that Unicode now assigns insular s to code point U+A785. Users should recode their documents to comply with the Unicode Standard; a future version of Junicode will have latin letter long s descending at U+F127.

## Old and Middle English

Wē æthrynon mid ūrum ārum pā ȳðan pæs dēopan wāles；wē gesāwon ēac pā muntas ymbe pēre sealtan $s \bar{x}$ strande，and wē mid āðēnedum hræg̀le and
 pēode．pā ȳðan getācniað pisne dēopan cræft，and pā muntas getācniað ēac pā mičelnyssa pisses creftes．

Apply the Open Type feature ss02（Style Set 2）for insular letter－forms．
Hep cẏnepulf benam pızebpẏht hır pıcer 〕 pertreaxna pıotan fop unnẏ－ heum dædum buton hameunfcine j he hæfde pa op he offloz pone al－ дopman pe him lenjerc punode $\}$ hiene pa cẏnepulf on andped aдрæfде 〕 he pæp punade op pæt hine an rpan offtaņ æt pnẏfeterflodan $\}$ he ppæc pone aldopman cumbpan j re cẏnepulf oft miclum zefeohtum feaht uuı bperpalum．

SIDEN be sege and pe assaut watz sesed at Troye， pe borz brittened and brent to brondez and askez， pe tulk pat pe trammes of tresoun per wro3t
Watz tried for his tricherie，be trewest on erthe：
Hit watz Ennias pe athel，and his highe kynde， Dat sipen depreced prouinces，and patrounes bicome Welneze of al pe wele in pe west iles．

## Old Icelandic

For Nordic shapes of p and d，specify the Icelandic language，if your application bas good language support； or apply the Open Type ss01（Style Set 1）feature．

Um haustit sendi Morrðr Valgarðsson orð at Gunnarr myndi vera einn heimi， en lið alt myndi vera niðri í eyjum at lúka heyverkum．Riðu peir Gizurr Hvíti ok Geirr Goði austr yfir ár，pegar peir spurðu pat，ok austr yfir sanda til Hofs．Pá sendu peir orð Starkaði undir Príhyrningi；ok fundusk peir par allir er at Gunnari skyldu fara，ok réðu hversu at skyldi fara．

## Runic

```
FILh FFFMNN FNFF゙ Ft FMRXM+BMRIX PFRP XF:SRIL XRFRt PFR NM F+ XRMNT
XISPMM NRETFS BFt
```



```
MPIFNHAMX
```


## Latin

Junicode contains the most common Latin abbreviations, making it suitable for diplomatic editions of Latin texts.
Adiuuanos d $\bar{f}$ falutarif nofter $\& ~ p p t \overline{~ g ł a m ~ n o m i n i f ~ t u i ~ d n e ̄ ~ l i b a n o f ~} \cdot \&$ ppitiuf efto peccatif noftrif ppter nomen tuum $\cdot$ Ne forte dicant ingentib: ubi eft d $\bar{f}$ eorum \& innotefcat innationib: corā oculif nrîf. Pofuerunt mofticina feruorū ruorū efcaf uolatilib: cęli carnef $\mathrm{fcō}_{z}$ tuoz beftiif tenice. Facti fum obpbrium uicinif nrif.

## Gothic Transliteration

jabai auk hoas gasaihip puk pana habandan kunpi in galiuge stada anakumbjandan, niu mipwissei is siukis wisandins timrjada du galiugagudam gasalip matjan? fraqistnip auk sa unmahteiga ana peinamma witubnja bropar in pize Xristus gaswalt. swap pan frawaurkjandans wipra bropruns, slahandans ize gahugd siuka, du Xristau frawaurkeip.

## Sanskrit Transliteration

mānaṃ dvividham viṣayadvai vidyātśaktyaśaktitah arthakriyāyāṃ keśadirnārtho 'narthādhimokṣataḥ
sadŗśāsadṛ́śatvācca viṣayāviṣayatvatah
śabdasyānyanimittānāṃ bhāve dhīsadasattvataḥ

## International Phonetic Alphabet

hwan $\theta$ at a:prıl wi $\theta$ is $\int u: r \partial s$ so:tə $\theta ə$ druxt of mart ha he:rsəd to: $\theta ə$ ro:te and ba: $\partial ə d$ evri væin in swit liku:r of hwitf vertru endzendrad is $\theta$ flu:r hwan zefirus e:k wi $\theta$ his swe:ta bræ: $\theta$

## Greek

The Greek typeface (new in version 0.6.12) is based on the Greek Double Pica cut by Alexander Wilson of Glasgow in the eighteenth century; in future releases it is likely to undergo revisions to adapt it for modern use.







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АВГДЕZНӨIKАМNЕОПРГТЧФХЧ $\Omega$

The Junicode font is available at http://junicode.sourceforge.net/. You can also find it in the repositories of many Linux distributions, and also via CTAN. Visit the Junicode Project Page at SourceForge to leave feature requests and bug reports. Contributions are welcome: if you wish to contribute to Junicode, leave a patch at the Project Page or contact the developer.

## Developer

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Thanks to the many users who have submitted feature requests and bug reports.

This document was set with $\mathrm{XH}_{\mathrm{HE}} \mathrm{T}$.

