The allrunes Font and Package.

Version 2.1

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Abstract

The allrunes font and package is aimed for typesetting runes. It is supposed to cover all the Germanic runes. Separate font families are set up for six main types of runes: Common Germanic, Anglo-Frisian, normal (Scandinavian), short-twig (Scandinavian), staveless (Scandinavian) and medieval (Scandinavian). Within each font family a lot of varieties are supplied. All varieties exists as both Metafont fonts and type1 fonts as well.

Contents

1 Introduction

This package contains the METAFONT source and driver files for the allrunes font families, type1 files for the main varieties, plus a LaTeX package to utilize those fonts, along with a number of font definition files, as required by the New Font Selection Scheme (NFSS).

1.1 About the Documentation

The full documentation of this font and package is rather large, something like 187 pages actually. Most of it is the METAFONT programs for the characters for the fonts; to make them visible, just remove the `\OnlyDescription` from the preamble of `allrunes.dtx`.

1.2 Notes on Installation

The information in this documentation can be usefull if you intend to install the allrunes font and package, and it is intended be sufficient. However, in some TeX-implementations (like MiKTeX) the allrunes font and package is part of the distribution; in such cases it is easier to use that.

2 The Fonts

Both METAFONT source files and type1 font files are supplied. It is recommended to install either just the METAFONT files, or both of them.

2.1 The METAFONT files

Base File and Source Files The names of the base file and the files containing the code for the characters of the allrunes font all starts with the letters `fru`. The next five possible letters reflects what kind of code is contained within the file, e.g., the base file ends in `base`, the file containing the code for the word separators end in `sep`, and so forth.

Font Driver Files The font driver filenames has been chosen to conform to the `fontname` scheme, as far as possible.

The filename all contain the three characters `fru`, where, according to the the `fontname` scheme, `f` stands for *public* and `ru` for *runic*.

Next comes one of the following letters: `c` (*Common Germanic*), `a` (*Anglo-Frisian*), `n` (*Normal*), `t` (*Short-twig*), `l` (*Staveless*) or `m` (*Medieval*) which represents which of the six rune font families it is.

Then comes another letter, which is one of: `l` (*Light face, without lines*), `m` (*Medium, without lines*), `b` (*Bold face, without lines*), `k` (*Light face, with lines*), `n` (*Medium, with lines*) or `c` (*Bold face, with lines*), which represents the series, and with/without alignment lines.

and finally comes one of following: `s` (*Straight twigs, top twig not lowered*), `n` (*Curved twigs, top twig not lowered*), `r` (*Rounded twigs, top twig not lowered*), `t` (*Straight twigs, top twig lowered*), `m` (*Curved twigs, top twig lowered*) or `q` (*Rounded twigs, top twig lowered*), which represents two kinds of shape — the curvature of the twigs, and the position of the top twig.

The most reasonable place for the `fru*.mf` files provided with this package is in a directory named

⟨*mf–source–base–dir*⟩`/public/allrunes/`.

This way of naming the font driver files will, if `kpathsea` is in use, put the `fru*.pk` files in

⟨*pk–base–dir*⟩`/public/allrunes/`

and the `fru*.tfm` files in

⟨*tfm–base–dir*⟩`/public/allrunes/`.

2.2 The type1 font files

The names of the type1 font files (the `fru*.pfb` files) are identical to the corresponding `fru*.mf` files, with just the suffix exchanged.

The most reasonable place for the `fru*.pfb` files provided with this package is in a directory named

⟨*type1–base–dir*⟩`/public/allrunes/`.

The type1 font files are generated from the METAFONT font files with the program `mftrace` [Nienhuys 2003].

The map file To be able to use the type1 fonts, programs like dvips and pdflatex needs information about which `*.pfb` file a certain fontname corresponds to. This information is normally stored in a file ⟨*dvips-base-dir*⟩`/config/psfonts.map`, but additional information may reside in other `*.map` files. In the allrunes bundle, a such file called `allrunes.map` is supplied. There are several reasonable places for it, but ⟨*dvips-base-dir*⟩`/allrunes` would be fine.

In recent versions of (at least) the MiKTeX- and teTeX-implementations, the handling of `*.map` files is rather simple. Look in the directory ⟨*tex-base-dir*⟩`/web2c/`. If there is a file called `updmap.cfg`, open it for editing and add a line:

`MixedMap allrunes.map`

(if you have both the METAFONT files and the type1 files installed), or

`Map allrunes.map`

(if you only have the type1 files installed) in some suitable place. Then update the other `*.map` files by running the command:

`initexmf -v -mkmap`

if you are using MiKTeX. If you are using teTeX, use the command:

`updmap`

Older versions requires more work: edit the file ⟨*dvips-base-dir*⟩`/config/config.ps`, in which a line:

`p +allrunes.map`

should be inserted somewhere *after* the line:

`p psfonts.map`

In a similar way, to make pdflatex find the `allrunes.map`, insert a line:

`map +allrunes.map`

somewhere *after* the line:

`map psfonts.map`.

in the file ⟨*pdftex-base-dir*⟩`/config/pdftex.cfg`.

3 The LaTeX files

To follow the scheme of the METAFONT files, it would be appropriate to place all LaTeX files, namely the `ar?.fd` and the `allrunes.sty` files, in

⟨*tex-base-dir*⟩`/tex/latex/allrunes/`.

3.1 The LaTeX and NFSS Support

To use the allrunes fonts with LaTeX; load the allrunes package with the command

```
\usepackage{allrunes}
```

in the preamble of the document.

3.2 Font Selection Commands

None of the font families is activated as default font, since the runes hardly ever will be used as the main font throughout an entire document. The commands and their corresponding declarations, together with some examples of the resulting output are:

`\textarc{`*text*`}`	`\arcfamily`	*Common Germanic* runes	ᚠᚢᚦᚨᚱᚲᚷᚹᚺ
`\textara{`*text*`}`	`\arafamily`	*Anglo-Frisian* runes	ᚠᚢᚦᚩᚱᚳᚷᚹᚻ
`\textarn{`*text*`}`	`\arnfamily`	*normal* runes	ᚠᚢᚦᚬᚱᚴ:ᚼᚾᛁᛅᛋ
`\textart{`*text*`}`	`\artfamily`	*short-twig* runes	ᚠᚢᚦᚬᚱᚴ:ᚽᚿᛁᛆ'
`\textarl{`*text*`}`	`\arlfamily`	*staveless* runes	[illegible]
`\textarm{`*text*`}`	`\armfamily`	*medieval* runes	ᛆᛒ'ᛍᛂᚠᚠᚼᛁ

3.3 Shape and Series Selection Commands

Within each font family there is the opportunity to choose among a lot of varieties with the commands and declarations below. Note that almost all of those commands and declarations only has meaning for the rune font families in the allrunes package. The exceptions are the two commands and declarations for selecting bold or medium text, which are standard LaTeX.

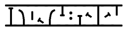
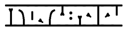
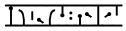
First there is the series: bold, medium or light (medium is default)

`\textbf{`*text*`}`	`\bfseries`	**ᚠᚢᚦᚬᚱᚴ:ᚼᚾᛁᛅᛋ**
`\textmd{`*text*`}`	`\mdseries`	ᚠᚢᚦᚬᚱᚴ:ᚼᚾᛁᛅᛋ
`\textlf{`*text*`}`	`\lfseries`	ᚠᚢᚦᚬᚱᚴ:ᚼᚾᛁᛅᛋ

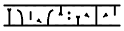
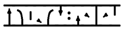
Then there is the choice whether to have alignment lines or not (without is default):

`\textwil{`*text*`}`	`\withlines`	ᚠᚢᚦᚬᚱᚴ:ᚼᚾᛁᛅᛋ
`\textwol{`*text*`}`	`\withoutlines`	ᚠᚢᚦᚬᚱᚴ:ᚼᚾᛁᛅᛋ

Another parameter to vary is the curvature of the twigs (curved is default). This parameter has a slightly different meaning for the staveless runes.

`\textst{`*text*`}`	`\straighttwigs`	ᚠᚢᚦᚬᚱᚴ:ᚼᚾᛁᛅᛋ	
`\textcu{`*text*`}`	`\curvedtwigs`	ᚠᚢᚦᚬᚱᚴ:ᚼᚾᛁᛅᛋ	
`\textro{`*text*`}`	`\roundedtwigs`	ᚠᚢᚦᚬᚱᚴ:ᚼᚾᛁᛅᛋ	

For those runes that have a joint in the top, there is also an opportunity to chose whether it should be in the absolute top position (high twigs) or lowered a little (low twigs). The default is high twigs. This parameter has a slightly different meaning for the staveless runes.

`\texthi{`*text*`}`	`\hightwigs`	ᚠᚢᚦᚬᚱᚴ:ᚼᚾᛁᛅᛋ	
`\textlo{`*text*`}`	`\lowtwigs`	ᚠᚢᚦᚬᚱᚴ:ᚼᚾᛁᛅᛋ	

Since in inscriptions, the runes sometimes (mainly in inscriptions with the Common Germanic runes) were written in just about any direction, there are commands for reversing them and to turn them round:

`\hflip{`*rune*`}`	
`\vflip{`*rune*`}`	
`\turn{`*rune*`}`	

Note that those three commands only take *one* rune as argument.

3.4 Sizes

The allrunes package honors all LaTeX standard size changing commands. When using the METAFONT fonts, the standard sizes of LaTeX: 5, 6, 7, 8, 9, 10, 10.95, 12, 14.4, 17.28, 20.74, 24.88, 29.86 and 35.83 pt are available.

4 On runological design decisions

The purpose of this package is to make it possible writing a scientific paper or book about runes or runic inscriptions using LaTeX. Since there exist no suitable official standard for runes, as far as the author knows[1] a few decisions, concerning the selection of runes, have to been made. Of course you can look up runes in any encyclopedia and copy them. But runes did appear in many varieties, and in order to fulfill the purpose above, you have to cover, preferably all, but at least a great deal of them. The original runes were cut or carved by individuals who probably didn't learn about runes in the same school. Therefore there is a more

[1] The Unicode Standard (see [Unicode 2000] on runes), is not enough for this purpose. F.x. are the staveless runes missing.

or less continuous variation in shape of the runes. You then have to decide on, when to consider these variations as just deviations from the main form, and when to consider them as a distinct form. With this in mind, I have formulated three possible, and rather different, principles for the design:

- Standard. Find all clearly distinguishable forms and skip all finer variants. Design the runes similar to the ones used in most literature on runes.
- Art. Be inspired of all original rune inscriptions and design typographically consistent runic font families, possibly in several different forms.
- Copy. Try to catch as many of all the existing varieties in the original rune inscriptions without worrying to much about consistent typography.

This resulting package — allrunes — is of course a compromise between all three of the principles above:

First there is a font family for each of the six main type of runes used: Common Germanic, Anglo-Frisian, normal (Scandinavian), short-twig (Scandinavian), staveless (Scandinavian), medieval (Scandinavian). For each font family there is a default shape/serie that is essentially identical to the most common types. Then there exist a few different shapes/series: bold/medium/light, with lines/without lines, straight/normal/rounded twigs and normal/lowered top twig, each of which is typographically consistent. (Which might result in some few runes that never have occurred in real inscriptions.) Within each font family all clearly distinguishable forms are defined, and together with all the typographical varieties ($6 * 3 * 2 * 3 * 2 = 216$) this mimics really a lot of the existing varieties.

4.1 The font families

The partitioning of the runes in six main types is of course not undisputable. Having just one font family with all runes would have some definite advantages, i.e. runic characters that always had the same appearance wouldn't need to be duplicated. On the other hand, runic characters that did change their appearance through time and space would need rather cumbersome names to be called upon with. So, how to partition then? The distinction between the older futhark with 24 characters, and the younger (Scandinavian) with 16, is obvious. Also, the younger futhark have three well recognized subfutharks, the normal, the short-twig, and the staveless futhark [Jansson 1987]. The runes from England and Frisia, stands out from the main older futhark, with a few extra runes, 28 or 33 all in all, as another obvious partition [Page 1999]. That's the five easy ones.

In Scandinavia the runes continued to thrive and develop well into the medieval period. The normal runes were complemented, not with new runes (well only very few, and not commonly recognized), but mostly with "dotted" runes. In the 12th century there were runes for all Scandinavian letters, around 29 ones, but the futhark were still considered to contain only 16 characters! Today, most runologists therefore set up an anachronistic alphabet with both dotted and undotted runes. Unfortunately there were some diversification. Some runes appeared only in Greenland, Iceland, Orkney, or Gotland — and in the isolated province of Dalarna in Sweden a mix of runes and Latin letters developed, where it was in use into the 19th century. Five more medieval runic alphabets? Or one medieval runic alphabet containing several runes that never occurred together? I chose the later one, but excluded the runes from Dalarna. That makes six.

When looking at the older futhark in close detail one can find a lot of different forms: the Scandinavian-Gothic 175-400, the Scandinavian 400-750, the Continental 400-750, the Frisian 400-750, the Anglo-Saxon 400-650 and the Anglo-Saxon 650-1100 [Odenstedt 1990], [Parsons 1999]. Here at least two font families are needed, one for the main one, and one for the Anglo-Frisian. But where to draw the line? The Frisian runes are closer to the main ones than to the late English, but they also share some very characteristic runes, not found elsewhere. Similar questions arise for the Continental and Scandinavian runes. When comparing the different rune forms listed in [Odenstedt 1990], I have decided to just have the two obvious ones: Common Germanic (i.e. the Continental 400-750, Scandinavian-Gothic 175-400 and Scandinavian 400-750) and the Anglo-Frisian (Frisian 400-750, Anglo-Saxon 400-650 and Anglo-Saxon 650-1100). That makes six font families. I welcome comments.

4.2 Excluded runes

As mentioned above, the mix of medieval runes and Latin letters used in the province of Dalarna in Sweden, is not covered here.

Cryptic or secret runes, f.x. like the different cipher runes on the stone from Rök in Sweden, is not covered. This might change in future releases.

Magic runes is another category of runes. They are mostly varieties from the older futhark, with some features of a rune occurring several times, like the "fir-tree" on the stone from Kylver, which can be interpreted as a ↑-rune with its branches six times repeated. None of those are so far included, but might be in future releases.

Both in inscriptions with the older futhark, and in medieval ones, there are bind-runes or ligatures, mostly in the form of two runes sharing the same main stem. Since there exist really many combinations, I do not try to cover those. An alternative would of course be to cover only those actually occurring in inscriptions.

Finally, there exists several unique runes, known only from one inscription each. Some are included in the allrunes package, mainly those who "fit" into the system, and where the uniqueness probably is due to the sparse number of preserved inscriptions. Runes whose uniqueness are due to apparently clumsy or ignorant carvers are most deliberately excluded from the allrunes package. In many cases it is hard to decide in which of the two above categories a certain rune belongs to. I might however include some more of those unique runes in future releases.

5 Bugs and shortcomings

In addition to all the for me unknown bugs and shortcomings, there are the following known:

I have not looked at all the runes in all the 216 different forms in different sizes. Some might look less nice, due to errors in the parameterizations. Please tell me if you encounter any.

The `\vflip{}`, `\hflip{}` and the `\turn{}` command can not be used together with commands like `\.` and `\=`. To produce f.x. ᚵ you have to write `\hflip{g}`, *not* `\hflip{\.k}`. (That's the reason why all the "dotted" runes have alternative names.) Probably it can be fixed if you use `\DeclareTextComand` instead of `\DeclareTextComposite` (see [*LaTeXfCPW* 1999]), but I didn't really figure out how to do it. Please tell me if you find a reasonable way to handle this.

Perhaps a (virtual) font is needed for the transliteration. A few characters that are needed are not present in the European modern boldface sans serif font, like the **ɨ** and a suitable uppercase **R**.

I have now supplied kerning information for all the rune font families, but only (almost) for the non-flipped versions. There are simply to many combinations otherwise. As an example of what impact the kerning has, compare:
ᚠᛁᛚᚾᚴᚾ:ᚴᚱᛁᛘᛦ (with kerning) with:
ᚠ ᛁ ᛚ ᚾ ᚴ ᚾ:ᚴ ᚱ ᛁ ᛘ ᛦ (without kerning).
The kerning is set for the default forms, and is by no means adjusted for the other forms. This should only result in displeasing appearances in very few cases, but they need nevertheless to be taken care of (and to be found).

It would be nice to be able to letterspace runes, f.x. with the soul package. Unfortunately the allrunes and the soul package does not work at all together.

Since the same source is used for all fonts, in all sizes, there is no adaptation for discretization problems. Therefore you should not expect fine results on printers with resolution less than 1200 dpi. I find the 12 pt fonts acceptable at 600 dpi, but not the 10 pt ones.

I have cheated to get nonlinear scaling of the fonts. You will therefore sometimes get the "Checksum mismatch" error when generating the pk-files, but that will not cause any problems, as far as I know. When I understand how the driver files for the ec font are generated I'll do something similar for the allrunes fonts instead.

The type1 fonts are generated from the METAFONT files with the program `mftrace` [Nienhuys 2003]. No manual adjustment is made and no hinting information is added. This might result in displeasing results, especially for small sizes, but I do not intend to fix such problems, unless it can be automated.

The language of this paper. I'm not a native speaker of English, which you must have understood by now. Please tell me if you find spelling mistakes, grammatical errors, or just plain nonsense in the text.

I'm not a professional runologist, and since I have only read a rather limited amount of runological literature, I might have got a few things wrong. Please tell me if you find anything that looks doubtful.

6 Some examples

In Pforzen, Bayern, Germany, a silver belt buckle was found with the following inscription:

·ᚨᛁᚷᛁᛚ·ᚨᚾᛞᛁ·ᚨᛇᛚᚱᚢᚾ
ᛚ·ᛏᚨᚻᚢ:ᚷᚨᛊᛟᚲᚢᚾ·

In Möjbro, Uppland, Sweden, a stone with an inscription and a picture was found. The inscription is written from right to left and from bottom to top:

ᛉ
ᚨᚾᛁᚷᚨᛚᛊᛁᚨᚺᚨᚺᚨᚾᚨ
ᛉᚨᛞᚨᚱᚨᚹᚨᚱᚠ

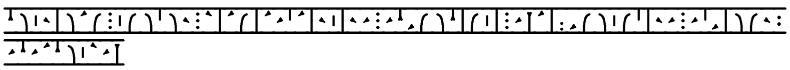
In Torna Hällestad, Skåne, Sweden, three rune stones are set up in the wall of the church. The longest inscription of the three reads as follows:

:ᛅᛋᚴᛁᛚ:ᛋᛅᛏᛁ:ᛋᛏᛁᚾ:ᚦᛅᚾᛋᛁ:ᛁᚠᛏᛁᛦ
:ᛏᚢᚴᛅ:ᚴᚢᚱᛘᛋ:ᛋᚢᚾ:ᛋᛅᛦ:ᚼᚢᛚᛅᚾ:
ᛏᚱᚢᛏᛁᚾ:ᛋᛅᛦ:ᚠᛚᚢ:ᛅᛁᚴᛁ:ᛅᛏ:ᚢᛒ:
:ᛋᛅᛚᚢᛘ
ᛋᛅᛏᚢ:ᛏᚱᛁᚴᛅᛦ:ᛁᚠᛏᛁᛦ:ᛋᛁᚾ:ᛒᚱᚢᚦᚱ
ᛋᛏᛁᚾ:ᛆ:ᛒᛁᛅᚱᚴᛁ:ᛋᛏᚢᚦᛅᚾ:ᚱᚢᚾᚢᛘ:ᚦᛁᛦ:
ᚴᚢᚱᛘᛋ:ᛏᚢᚴᛅ:ᚴᛁᚴᚢ:ᚾᛁᛋᛏᛁᛦ

In England, now at the British Museum, the stone cross from Lancaster has the following runic inscription:

ᚷᛁᛒᛁᛞᚫᚦᚠᚩ
ᚱᚫᚳᚣᚾᛁᛒᚫᛚ
ᚦᚳᚢᚦᛒᛖᚱᛖ

In Hög, Härjedalen, Sweden, a stone has an inscription made with staveless runes:



On the font (a real font, a baptismal font) in the church of Burseryd, Gotland, Sweden, medieval runes are used. Except for the bind-runes, which are resolved here and shown as individual characters, the inscription looks like:

:ᛆᚱᛁᚿᛒᛁᛅᚱᚿ:ᚵᛅᚱᛐᚼᛂ:ᛘᛁᚴ:
ᚢᛁᛐᚴᚢᚿᛑᛂᚱ:ᛔᚱᛂᛋᛐᛂᚱ:ᛋᚴᚱᛂᚠ:ᛘᛁᚴ:
ᛅᚴ:ᚼᛂᚱ:ᛋᚴᛆᛚ:ᚢᛘ:ᛋᛐᚢᚿᛑ:ᛋᛐᛆᚿᛐᛆ:

7 Tables for all the runic characters

On the following pages tables with all the runic characters in all the font families of the allrunes font are listed, together with the most recognized transliteration of each rune, and the corresponding LaTeX code in the allrunes package.

The Runic Word Separator Symbols

Separator	LaTeX	
·	`\dot`	or `.`
:	`\doubledot`	or `:`
⁝	`\tripledot`	
⁞	`\quaddot`	
⁞	`\pentdot`	
·	`\eye`	or `.`
:	`\doubleeye`	or `:`
∵	`\tripleeye`	
⁘	`\quadeye`	
⁙	`\penteye`	
ı	`\bar`	or `!`
¦	`\doublebar`	
⦙	`\triplebar`	
+	`\plus`	or `+`
‡	`\doubleplus`	
‡	`\tripleplus`	
×	`\cross`	or `*`
⁑	`\doublecross`	
⁂	`\triplecross`	
⋆	`\star`	

The runic writing system had no real punctuation marks, but word separator symbols. To make it simple, all of the symbols in the table above are part of all the six rune font families, listed below.

I have used the `*` to produce the symbol × instead of ⋆, which of course had been more consequent. This is because I want to be able to access it, as being one of the most common word separators (together with the :), as a single character.

The Common Germanic Runes

Main runes			Variant forms		
Rune	Translit.	LaTeX	Rune	Translit.	LaTeX
ᚠ	**f**	`f`	ᚡ	**f**	`F`
ᚢ	**u**	`u`	ᚣ	**u**	`U`
ᚦ	**þ**	`\th` or þ			
ᚨ	**a**	`a`			
ᚱ	**r**	`r`			
ᚲ	**k**	`k`	ᚴ	**k**	`\k`
			ᛣ	**k**	`K`
			ᛣ	**k**	`\K`
ᚷ	**g**	`g`			
ᚹ	**w**	`w`			
ᚺ	**h**	`h`	ᚽ	**h**	`H`
ᚻ	**h**	`\h`			
ᚾ	**n**	`n`			
ᛁ	**i**	`i`			
ᛃ	**j**	`j`	ᛃ	**j**	`\j`
			ᛄ	**j**	`J`
			ᛅ	**A**	`A`
			ᛡ	**A**	`\A`
ᛇ	**ï** or **ẹ**	`I` or ï			
ᛈ	**p**	`p`	ᛈ	**p**	`\p`
			ᛈ	**p**	`P`
ᛉ	**z** or **R**	`R`	ᛦ	**z** or **R**	`\R`
			ᛯ	**z** or **R**	`\RR`
ᛊ	**s**	`s` or `\sfour`	ᛊ	**s**	`S` or `\ssix`
			ᛋ	**s**	`\s`
			ᛋ	**s**	`\S`
			ᛊ	**s**	`\sthree`
			ᛊ	**s**	`\sfive`
			ᛊ	**s**	`\sseven`
			ᛊ	**s**	`\seight`
ᛏ	**t**	`t`	ᛐ	**t**	`T`
ᛒ	**b**	`b`	ᛓ	**b**	`B`
ᛖ	**e**	`e`	ᛖ	**e**	`E`
ᛗ	**m**	`m`			
ᛚ	**l**	`l`			
ᛜ	**ŋ**	`\ng` or ŋ	ᛜ	**ŋ**	`\NG` or Ŋ
			ᛝ	**ŋ** or **iŋ**	`\ing`
			ᛝ	**ŋ** or **iŋ**	`\Ing`
			ᛝ	**ŋ** or **iŋ**	`\ING`

The Common Germanic Runes (continued)

Main runes			Variant forms		
Rune	Translit.	LaTeX	Rune	Translit.	LaTeX
ᛞ	**d**	`d`	ᛞ	**d**	`\d`
			▯	**d**	`D`
ᛟ	**o**	`o`			
			ᛊ	**i**	`\i`
			ᚨ	**a**	`\a`

The main source for the runic characters is [Odenstedt 1990].

Note that the two main forms of the h-rune were not used together. The rune ᚺ was used in Scandinavia, and the rune ᚻ was used on the Continent.

Some of the variant forms have uncertain interpretations. I have chosen just one of the proposed ones. F.x. the ᛘ might be a double ᚹ (w) or a ligature of ᛁ (i) and ᛜ (ŋ), the ᛄ might be a double ᚦ (þ) or a ligature of ᛁ (i) and ᛜ (ŋ), and the ▯ might be a peculiar ᛞ (d) or a big ▫ (ŋ). See [Odenstedt 1990] for an overview of the arguments.

Of the several zig-zag forms of the s-rune, only a few have occurred in inscriptions, but for the sake of symmetry, forms with all number of strokes from three to eight are included.

The two runes in the last section are from the stone from Rök, from the part of the inscription written with common Germanic runes. They have been put in a separate section here, since being anachronistic, they do not really belong to the common Germanic runes.

The Anglo-Frisian Runes

Main runes			Variant forms		
Rune	Translit.	LaTeX	Rune	Translit.	LaTeX
ᚠ	**f**	`f`	ᚠ	**f**	`F`
ᚢ	**u**	`u`	ᚢ	**u**	`U`
ᚦ	**þ**	`\th` or þ			
ᚩ	**o**	`o`			
ᚱ	**r**	`r`			
ᚳ	**c**	`c`	ᛣ	**c**	`\c`
ᚷ	**g**	`g`			
ᚹ	**w**	`w`			
ᚻ	**h**	`h`	ᚽ	**h**	`\h`
			ᚺ	**h**	`H`
ᚾ	**n**	`n`			
ᛁ	**i**	`i`			
ᛡ	**j**	`j`	ᛄ	**j**	`\j`
			+	**j**	`J`
ᛇ	**ï**	`I` or ï			
ᛈ	**p**	`p`	ᛕ	**p**(?)	`P`
ᛉ	**x**	`x`			
ᛋ	**s**	`s`	ᛌ	**s**	`S`
			ᛊ	**s**	`\sthree`
			ᛊ	**s**	`\sfour`
			ᛊ	**s**	`\sfive`
			ᛊ	**s**	`\ssix`
			ᛊ	**s**	`\sseven`
			ᛊ	**s**	`\seight`
ᛏ	**t**	`t`			
ᛒ	**b**	`b`	ᛓ	**b**	`B`
ᛖ	**e**	`e`			
ᛗ	**m**	`m`			
ᛚ	**l**	`l`			
ᛝ	**ŋ**	`\ng` or ŋ			
ᛞ	**d**	`d`	ᛞ	**d**	`\d`
			ᛞ	**d**	`D`
ᛟ	**œ**	`\oe` or œ	ᛟ	**œ**	`\OE` or Œ
ᚪ	**a**	`a`			
ᚫ	**æ**	`\ae` or æ			
ᚣ	**y**	`y`	ᚣ	**y**	`\y`
			ᚣ	**y**	`Y`
ᛠ	**ea**	`\ea`			

The Anglo-Frisian Runes (continued)

Main runes			Variant forms		
Rune	Translit.	LaTeX	Rune	Translit.	LaTeX
ᚸ	**ḡ**	`\g`	ᚸ	**ḡ**	`\G`
ᛣ	**k**	`k`			
ᛤ	**k̄**	`\k`			
ᛉ	**rex**(?)	`\rex`			
ᛢ	**q**	`q`			
ᛥ	**st**(?)	`\stan`	ᛥ	**st**(?)	`\STAN`

The main sources for the runic characters are [Odenstedt 1990], [Page 1999] and [Parsons 1999].

The table is divided in three sections. First comes the 28 ”real” runes. Of the several zig-zag forms of the s-rune, only a few have occurred in inscriptions, but for the sake of symmetry, forms with all number of strokes from three to eight are included. The ᛈ rune occurs, as far as I know, only on the Westeremden B inscription, see [Quak 1994], p. 84-85. There are some other strange runes in this inscription that I also might include.

In the second section some runes are listed that never seem to have been part of the futhorc, nevertheless are known from ”real” inscriptions. The symbol ᛉ only occurs on coins, and does not seem to be a widely accepted rune; it is described in [Parsons 1999], p. 84-85. In the last section, two (three) late Anglo-Saxon ”pseudo runes” have been listed. They have, as far as I know, never been used for ”real” writing, but occur only in late manuscript futhorcs; probably as a product of runic antiquarians. Often a rune ᛡ called **ior** is taken to this group. I consider it equal to the main variant of **j**. For these ”pseudo runes”, [Parsons 1994] provided most of the information.

When transliterating the runes there are several systems to choose from. I have used what I think is most common practice, bold sans serif, for all kinds of runes, even for the Anglo-Saxon runes. I’m however well aware of the the Dickins-Page system, with letterspaced medium roman characters within single quotes, which is preferred by at least some British runologists. More on this can be found in [Derolez 1995]. Compare **e͡adric** with ’ea d r i c’, for ᛠᛞᚱᛁᚳ.

The Normal Runes

Main runes			Dotted runes and variant forms		
Rune	Translit.	LaTeX	Rune	Translit.	LaTeX
ᚠ	**f**	`f`	ᚡ	**f**	`F`
ᚢ	**u**	`u`	ᚤ	**y**	`\.u` or `y`
ᚦ	**þ**	`\th` or `þ`	ᚧ	**þ**	`\TH` or `Þ`
ᚬ	**ą**	`A`	ᚭ	**ą**	`\A`
ᚱ	**r**	`r`			
ᚴ	**k**	`k`	ᚵ	**g**	`\.k` or `g`
ᚼ	**h**	`h`			
ᚾ	**n**	`n`			
ᛁ	**i**	`i`	ᛂ	**e**	`\.i` or `e`
ᛅ	**a**	`a`			
ᛋ	**s**	`s`	ᛍ	**s**	`S`
ᛏ	**t**	`t`			
ᛒ	**b**	`b`	ᛓ	**b**	`B`
ᛘ	**m**	`m`	ᛘ	**m**	`\"m` or `\m`
			ᛙ	**m**	`M`
			ᛙ	**m**	`\"M` or `\M`
ᛚ	**l**	`l`			
ᛦ	**R**	`R`			

The runic characters are compiled from the following sources: [Åhlén 1997], [*DRI* 1941-1942], [Enoksen 1998], [Jansson 1987] and [Moltke 1985].

The Short-Twig Runes

Main runes			Variant forms		
Rune	Translit.	LaTeX	Rune	Translit.	LaTeX
ᚠ	**f**	`f`	ᚠ	**f**	`F`
ᚢ	**u**	`u`	ᚢ	**u**	`U`
ᚦ	**þ**	`\th` or þ	ᚦ	**þ**	`\TH` or Þ
ᚭ	**ą**	`A`	ᚬ	**ą**	`\A`
ᚱ	**r**	`r`			
ᚴ	**k**	`k`			
ᚽ	**h**	`h`	ᚽ	**h**	`\h`
ᚿ	**n**	`n`			
ᛁ	**i**	`i`			
ᛆ	**a**	`a`			
ᛌ	**s**	`s`	ᛌ	**s**	`\s`
ᛐ	**t**	`t`	ᛐ	**t**	`\t`
			ᛐ	**t**	`T`
ᛓ	**b**	`b`	ᛓ	**b**	`\b`
ᛙ	**m**	`m`	ᛙ	**m**	`\m`
			ᛙ	**m**	`M`
ᛚ	**l**	`l`	ᛚ	**l**	`\l`
			ᛚ	**l**	`L`
ᛧ	**R**	`R`	ᛧ	**R**	`\R`

The runic characters are compiled from the following sources: [Enoksen 1998], [Jansson 1987] and [Moltke 1985].

The Staveless Runes

Main runes			Variant forms		
Rune	Translit.	LaTeX	Rune	Translit.	LaTeX
⸢	**f**	`f`			
⸜	**u**	`u`			
ˈ	**þ**	`\th` or þ			
˴	**ą**	`A`	ᵥ	**ą**	`\A`
ʃ	**r**	`r`			
ꜝ	**k**	`k`			
ɪ	**h**	`h`			
ˋ	**n**	`n`			
|	**i**	`i`			
˄	**a**	`a`			
ˈ	**s**	`s`			
ˊ	**t**	`t`			
ˏ	**b**	`b`			
:	**m**	`m`			
ˋ	**l**	`l`			
:	**R**	`R`			

The main source for the runic characters is [Peterson 1994].

This font covers the staveless runes known mainly from Hälsingland, Sweden. Other staveless runes occurred in Södermanland, Sweden; they are not covered here.

The rune for **ą** has never been found in a typical inscription. Its assumed appearance, ˴, is based upon the symmetry considerations, and is a rather widely accepted guess. However, in a late Norwegian inscription, the form ᵥ was used, p. 244 in [Peterson 1994].

The height of the ⸢, ꜝ, ɪ and ˈ runes could vary quite a lot; here only some kind of average form is used.

The Medieval Runes

Main runes			Variant forms		
Rune	Translit.	LaTeX	Rune	Translit.	LaTeX
	a	a		**a**	\a or \.a
				a (or **å**)	\adot or \'a
				a	A
	b	b		**b**	B
	c	c		**c**	\c or \.c
				c	C or \^c
	d	d or \.t		**d**	\tbar or \=t
				d	\tdot or \'t
				d	\tflag or \~t
				d	\tring or \^t
				d	D or \.T
				d	\D or \"T
	e	e or \.i		**e**	\e or \=i
				e	E or \^i
	f	f		**f**	F
	g	g or \.k		**g**	G or \'k
				g	\g or \=k
	h	h		**h**	\h
				h	H
	i	i			
	k	k			
	l	l		**l**	\l or \.l
				l	\lbar or \=l
				l	\ldot or \'l
				l	\lflag or \~l
				l	\lring or \^l
	m	m		**m**	\m
	n	n		**n**	\n or \.n
				n	\ndot or \'n
				n	N
				n	\N or \.N
	o	o			
	p	p or \"b		**p**	\p or \.b
				p	\P
				p	\Pdots or \"\P
				p	P
	q	q		**q**	\q
				q	\Q
	r	r		**r̈**	\rdot or \.r
				r	\r

The Medieval Runes (continued)

Main runes			Variant forms		
Rune	Translit.	LaTeX	Rune	Translit.	LaTeX
ᛌ	**s**	s	ᛍ	**s**	S
			ᚽ	**s**	\S
ᛐ	**t**	t	ᛏ	**t**	T
			↕	**t**	\T
ᚦ	**þ**	\th or þ	ᚦ	**þ**	\TH or Þ
			ᚦ	**þ**	\thth
ᚧ	**ð**	\dh or ð or \.\th	ᚧ	**ð**	\DH or Ð or \.\TH
ᚢ	**u**	u			
ᚡ	**v**	v or \.u	ᚠ	**v**	V or \.f
			ᚠ	**v**	\v or \'f
			ᚠ	**v**	\V or \~f
ᚥ	**w**	w			
ᛋ	**x**	x	↓	**x**	\x
			ᛪ	**x**	X
			ᛯ	**x**	\X
ᛦ	**y**	y	ᛘ	**y**	Y
			ᚤ	**y**	v or \.u
			ᚤ	**y**	\y or \"u
			ᚥ	**y**	\Y or \=u
ᛧ	**z**	z	ᛧ	**z**	\z
			↓	**z**	Z
ᛅ	**æ**	ä or æ or \ae			
ᚯ	**ø**	\o or ö or ø	ᚯ	**ø**	\O or Ö, Ø
			ᚯ	**ø**	\oo
			ᚯ	**ø**	\oO
ᛄ	**ey** or **øy**	\ey			
ᛮ		\arlaug			
ᛯ		\tvimadur			
ᛰ		\belgthor			
ᛂ	**j**	j			
ᚲ	**å**	å or \aa			

The main source for the medieval runic characters is [*Runmärkt* 1994], with support from [*DRI* 1941-1942], [Enoksen 1998], [Jansson 1987], [Moltke 1985] and [Haugen 1996] (despite the claim in the later of ”ikke må oppfattatast som nokon autoritativ katalog”). Finally, the rune ᛕ from Schleswig, is from [Spurkland 1994] and the rune ᚱ is from [Larsson 2002].

The table is divided in three sections. First come the ”real” runes, as an alphabet, not as an futhark. Next, the three bind-runes that always occurred in rune staves (runic calendars) are listed. Finally come two runes used by, and invented by, a modern Swedish rune carver, Kalle Dahlgren, [Dahlgren 2000] to make it possible to use runes for writing in the Swedish language of today. I put them here because modern swedish rune carvers essentially use the medieval runes — complemented with these two. However, Kalle Dahlgren has changed his mind, and now uses the ᚭ rune instead of the 〉 for the letter å.

Note that the runic symbols for c, s and z respectively, were to an large extent interchangeable. In the table above they are however not duplicated.

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