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Celebrimbor's Script

Merry Meet !

Ever since I as a boy read the books of J.R.R. Tolkien, I was captured by the beauty and versatility of the 'Tengwar' writing system.

I have regularly used Tengwar for private notes for 35 years now. Unfortunately, I never found a Tengwar computer font that matched my needs, so my Tengwa use remained constricted to pen and paper.

However, as I do more and more work on the computer, the need for a workable font grew more pregnant. So I decided to create my own font, and here is the first draft.

A warning is in order, though.

Do not expect a beautiful calligraphic font. I did not set out to write Quenya or Sindarin, I wanted a font that I can use for my own notes, mostly in English and Dutch. And I wanted to use it like any other font. More particularly, changing the font shouldn't change the words it represented.

So although this is a Tengwar font, it is not primarily an Elvish one. It's a modern typeface containing many characters that are not found in any of the Tolkien books. It is not created for using tehtar; instead, it is mainly a full vowel mode.

To achieve this, I had to invent a number of characters. This will in all probability not go undisputed. This font, therefore, is in its alpha stage and still largely experimental. I hope to get feedback from some users to develop further releases.

Have fun!

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λογος οποίος

Tencedil May 31, 2010 דכמעבמער מד: דש פכם

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About the font

Appearance

Unlike most Tengwar fonts, this font is not calligraphic. I wanted a font that merges seamlessly with "normal" book-like typefaces. Calligraphic fonts usually have a relatively small letter and long ascenders and descenders, which hugely alters their appearance when mixed with regular typefaces. For Tengwar fonts, the space for elaborate diacritical marks adds to this problem.

For example: "This is a normal line of text with a few Tengwar words inserted between the normal text".

	Måns Björkman's Parmaïte ¹	Dan Smith's Sindarin-A ²	Johan Winge's Telcontar ³	Tencedil's Tellepsalinnacontar
Variable line spacing	This is a normal line of text popular of color bacepools podbaded gacebbased between the normal text.	This is a normal line of text popport of colops bacepools poolsolog oa colopsolog between the normal text.	This is a normal line of text μιρλ c bλμ ρλιοταμου μιγρού ιοούλγρομο between the normal text.	This is a normal line of text moph c ham panymcy maymd on- daypam between the normal text.
Fixed 12 pt line spacing	This is a normal line of text աշրաս զ շերբ հաշարգիս բոժերժով շագիհրատիժ between the normal text.	This is a normal line of text popod of color bacipodo pododco oa colordo do colordo do the normal text.	This is a normal line of text μιρλ c μλμ ματου μιγρού πούλγμου between the normal text.	This is a normal line of text mວpλ c bລm ກລກເຊເຫຼດ ຫແຊງກປ ວກ- ປລາຊກລາກ between the normal text.

The table is set in 10 point type. Note the line spacing and the size and weight ratios between the default text and the Tengwar. Dan Smith's and Johan Winge's fonts hugely increase line spacing to accomodate the ascenders, descenders and diacritical marks. Måns Björkman's font doesn't, but instead decreases the basic font size (x-height) to less than half the standard height.

My font isn't yet perfect either; if anything, it spaces lines a little too close together compared to Arial. This is more apparent in the Introducion on page 1, and is probably due to different size interpretations by Corel Draw (which I use to create the actual glyphs) and my font design software (which I use to combine glyphs, add font metrics and assign the glyphs to their codepoints and mappings). Still, it complies more to the font metrics of Arial (which it was meant to resemble) than any of the other Tengwar fonts. The font hasn't been properly kerned yet, by the way.

There is another reason why the character design has been kept simple in this alpha font: I wanted to explore the basic characteristics of the Tengwar. A sans-serif Arial-type font is best for this, as the characters do not contain any distracting extraneous shapes like serifs, curls, and flourishes⁴. Eru willing, there will be a serifed font forthcoming; it will largely be Times New Roman-like in appearance, and I hope to release it somewhere in the winter of 2010/2011.

¹ Available at Amanye Tenceli, <u>http://at.mansbjorkman.net/parmaite.htm</u>

² Available at Dan Smith's Fantasy Fonts, <u>http://www.acondia.com/fonts/tengwar/index.html</u>

³ Available at the Free Tengwar Font Project, <u>http://freetengwar.sourceforge.net/tengtelc.html</u>

⁴ A backdraw, however, is that Arial does not show the difference between simple lines and basic letter forms. For instance, the vertical bar | and the elongated stem | appear identical in this font, but wouldn't in a serifed one: the elongated stem would have serifs, whereas the vertical bar wouldn't.

Even though this is merely an alpha font, it *does* contain italic, bold, and bold-italic form variants. At the moment, however, those are just slanted and boldened versions of the regular typeface, and the bold version isn't very bold yet, so as not to conflict with the capital letter forms. Dedicated bold and italic variants will have to wait until the release of the production versions.

ANSI, Unicode etc.

Many Tengwar fonts require special editors to create proper Elvish writings, and will not work in regular word processing software. One reason for this is the use of diacritical marks for vowels in Elvish languages; normal text editors often don't handle these well.

This font is different in that it tries to honour the ANSI code mappings as much as possible. That meant that I had to invent, or rather discover, quite a few characters besides the attested Tolkien-tengwar. In this I have tried to restrain myself and merely follow the same principles as the official Tengwar do. A backdraw of this approach is that some characters that are frequently used in Quenya or Sindarin aren't directly accessible through the keyboard; instead, you have to enter a code. It would have been nice to map some uppercase letters to form variants. Unfortunately, that would be bad practice. This is a *font*, not a text editing system such as Dan Smith's project. If you change only the font of a piece of text, it should still be legible, provided you are familiar with the characters. Uppercase positions therefore have to be retained⁵.

The ANSI mapping contains a range of undocumented codepoints in 0080–009F. They are there for backward compatibility, and are also mapped to the proper Unicode positions, although I have no documentation on those mappings available yet. But you should be able to find them with Window's Character Map and in the "Insert Symbol" dialog in MS Word.

There also is a Tengwar proposal for Unicode, originally created by Michael Everson and adapted by Johan Winge, and I've tried to implement this proposal as well.

The actual glyphs are contained in the Unicode Private Area Block, at codepoints E400–EFFF. Not all codepoints in this block have yet been used. They are however reserved for future expansion.

Modes

Traditionally, tengwar are used in many modes, the Quenya and Sindarin being the most popular. Tengwar are however intended as a universal script, and in line with that tradition, this font does not try to impose a specific mode upon the user (although I would like to point the reader's attention at my preamble to the Ómëar).

Yet the ANSI mapping imposes a specific mode, namely the (US International) keyboard layout, which was not a hugely predominant mode in the 2nd and 3rd era. ANSI also requires a full vowel mode; hence I had to include those vowels as best I could, as well as many unsupported tengwa. The documented tengwa I have tried to include to the best of my abilities, but since Tengwar are by nature phonetic, this is not always very feasible in a multi-lingual environment (or just an English one, for that matter), and I am open to improvements.

For those who want diacritics, however, they are all there. If you already use the Telcontar font, you should be able to use that same texts with the Tellepsalinnacontar/Telperinquaro family without the need for editing. That said, I am not sure whether the diacritics will work out welll. Telcontar is said to use smart font technology; mine for the moment doesn't. Then again, I can't get the Telcontar block work properly in my MS Word processor anyway, whether I use Telcontar or my own font.

For the best result in tehtar-representation, you should use the combining diacritics in code blocks ED80– EDFF (Unicode-type, backward combining) or EE00–EE7F (typewriter-type, forward combining). A word of warning though: the mapping of these diacritics may change in later editions. As an alternative there is a block of telcotehtar (diacritical vowels on a short or long stem) in block E940–E97F, that is more permanent.

⁵ Another reason for not meddling with upper- and lowercase is sorting—upper- and lowercase form variants have the same alphabetical sort value.

Naming

Although I do not name most individual characters in this document, I did have to put a suitable name to the different code blocks. Of course, since this is an Elvish font, these names had to be in Quenya, the language Curufinwë Fëanor used at the time he created the basis for these characters.

However, I do not speak Quenya all that fluently. I dabbled a bit back in the 1970's, when I studied linguistics at Utrecht University, but since I hardly ever use the language in daily life, I about as well versed in Quenya as I am in Latin, Greek or Norse. I've done my best to conform to the accepted nomenclature insofar there is one, and I've tried to come up with valid names insofar there wasn't.

Yet it is well possible that I made a misteka here or there, be it in spelling, etymology or grammar⁶. If so, please let me know, so I can correct this in later editions. You will find my contact information on page 20.

Tulyatengwar (Capital Letters)

Originally Tengwar do not have an uppercase form variant. In the known script samples, "capital letters" are created by any adornment: by form, by color, by size, or otherwise. However, the ANSI character set requires capital and lowercase variants for alphabetic characters.

I therefore have adopted the convention of doubling the stem to create capital variants of the regular consonants, and I extended this convention to accommodate vowels and additional characters as well. For the moment, it works, although I find the result somewhat short of satisfactory. In a future font I will probably also enlarge the lúva size by about 10% (while keeping the lúvar centered on the line, in contrast to the Latin convention).

Curiously, in the following tables every set of 32 lowercase characters is, where applicable, followed by a corresponding set of capitals. I am not quite sure how this error could have crept in, since I'm well aware that in the ANSI character set the capital ranges come *before* the lowercase set. In a future version of the font this error will of course be corrected. This will of course not affect the ANSI- and Telcontar mappings, but it will affect the private area in E400–EFFF.

⁶ This, by the way, does not only go for the Quenya—I'm not a native English speaker (I was raised Dutch, often doubly so), and thus very likely to err in the English prose as well.

E800-E8FF

Tencelë (The Character System)

Lambar (Consonants)

The E800–E8FF block contains the regular consonants, which are represented by a stem or *telco*, in combination with one or more curves (*lúvar*). These regular consonants or *lambar* come in three categories: the basic consonants or *sundolambar*, reversed or mirrored consonants or *nuquelambar*, and composite consonants or *tatyalambar*.

Sundolambar (Basic Consonants)

E8	x0	x1	x2	х3	x4	x5	x6	x7	x8	x9	хА	хB	xC	хD	хE	хF
0x	u	q	d	կ	B	щ	ษ	ਯ	D	q	d	þ	В	В	В	ष्प
1x	n	р	h	þ	m	m	þ	'n	ם	р	þ	þ	ш	р	Ы	ф
2x	u	ų	ď	ų	ũ	Щ	ĥ	Ч	ū	ą	ป	네	B	Щ	Д	쩨
3x	n	ր	b	ի	m	က	b	m	n	р	b	þ	m	р	Ь	р

These are the characters that are most common in the Elvish tengwar. Most scholars recognize only 24 lambar, organized in four series or *temar* containing 6 characters each; characters with an extended stem are usually ignored⁷. For completeness' sake, however, they have been included in this block, resulting in a set of 32 sundolambar, each in a lowercase and capital version.

Nuquelambar (Reversed Consonants)

x0 **x1** x2 **x**3 x4 x5 x6 х7 x8 x9 xА xВ xC xD хE хF **E8** 4x d d ш ต d m m þ m m ۵ р m ш ŋ m 5x b b ω Ρ þ υ ω μ μ ω ω σ р ω Ψ μ 6x d ď d m þ ഫ ш ഷ CI ŋ m m Ω q \mathbf{m} g b þ b ω p þ μ 7x ມ μ ω μ ш D q B Щ

The reversed versions of the regular consonants occur only rarely; in fact, only codepoints E849 (q) and E84A (d) are recognized by Michael Everson in his Unicode proposal; while Johan Winge in his Tengwar Telcontar mapping went as far as actually discarding the d character and only recognizes q.

However, even the existence of just one of these characters logically dictates that the entire set of nuquelambar should be available in the character set. Since these are alphabetic characters, each should have a capital and a lowercase version, even though it is unlikely that any of these characters will ever be mapped to the ANSI block.

E800-E83F

E840-E87F

⁷ In my ANSI mapping, however, I use codepoint E803 (d) for "x"; indeed in most of my personal modes an elongated stem indicates an air flow or voice; hence, sounds like "ph", "th", "ks", "š" and "ž" are written with an elongated stem. By rights the same should go for "p/th" (thorn) and "ð/dh" (eth), but most Tengwa modes map these phonemes to codepoints E812 and E815 (h and m) respectively, and I have followed this convention, albeit reluctantly.

E880-E8FF

Tatyalambar (Dual Consonants)

E8	x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	хA	хB	xC	хD	хE	хF
8x	S	S	ιh	ֆ	ß	ழ	ය	Ъ	ß	f	ф	₽	Ø	ф	ф	ф
9x	ന	ֆ	സ	ரு	മ	மு	Я	ரு	B	ጥ	ന	ተ	ង	म्म	ф	ф
Ax	£	ე	ιh	ф	ш	ф	Ъ	Ъ	Ð	Ð	đ	Ð	Ø	ф	τb	ф
Bx	ധ്ന	цр	ιh	ďμ	ധ്ന	മ്പ	Ъ	цр	đ	ŢΩ	đh	τþ	B	qn	ъ	ф
Сх	ß	S	αh	Ц	£	ф	цЪ	цђ	₿	ß	मि	ि	₿	क्म	αh	क्क
Dx	£	պր	ưm	պո	ന്ന	എ	цЪ	цμ	B	ម្នា	Ъ	क्ष	B	ष्ण	αth	αф
Ex	ű	Г	μh	цр	un	щ	цЪ	щ	B	ਊ	Ð	Б	₿	ष्क	αh	αþ
Fx	ധ്ന	എന	ഡ്ന	പ്പ്ന	ന്ന	എന	ഷ്മ	ഫ്മ	æm	യ്ന	adm	₩	æm	എന	αb	πþn

Composite lambar are also very rare; only codepoints E883 (ϕ) and E88B (ϕ) seem to be attested, although in what context l'm not entirely sure⁸. Again, however, the existence of one proves the existence of all⁹.

These, too, are alphabetic characters and hence require both a lowercase and capital version.

By rights, there should be a block of reversed tatyalambar too, and maybe there will be somewhen in the future. For now, however, I want to use my codepoint space sparingly.

⁸ But they were included in Johan Winge's Tengwar Annatar.

⁹ And besides, for personal applications I often use tatyalambar, especially for recording bird sounds and animal languages.

Ómëar (Vowels)

Vowels have always been a bit of a problem in the different Tengwar. Dan Smith even goes as far as to say that "in the earliest forms of the Tengwar, vowels sounds were represented by symbols called: 'Tehtar'. [...8<...] Later forms of Tengwar used additional letters to represent individual vowel sounds. This 'full' form was developed by the Grey Elves living in Beleriand".

This is incorrect. Mans Björkman on his Amanye Tenceli site states more accurately that: *"Feanor thought that the vowels had a phoneme value equal in importance to that of the consonants. The vowels were in the Tengwar, as in the Sarati, still usually represented by diacritic marks, called ómatehtar or 'vowel-marks'. This was solely for the sake of compactness, though, and Feanor also constructed a mode for Quenya where each vowel was assigned to a tengwa".* ¹¹

Point is, many scholars regard this so-called "Mode of Beleriand" as an digression from the "real" Tengwar, whereas in fact at the time, it probably was the mainstream. The oldest two examples of tengwar are the West Gate of Moria, the only "Mode of Beleriand" sample and employing full vowels, and of course the Ring, which uses ómatehtar. To my knowledge, these are the only documented samples that pre-date the Third Era.

However, there is a huge difference between the two.

The West Gate was crafted shortly after the remnants of the Ñoldor in Middle-Earth relocated to Eregion (and Laurelindórenan), around sA700. The inscription was made by Celebrimbor, grandson of Curufinwë Fëanor, who of all his heirs inherited most of Fëanor's craftsmanship (it is no co-incidence that the Rings of Power, save the One Ring, were fabricated by Celebrimbor). Furthermore, the West Gate inscription was put in Sindarin, the Common Speak at the time, and intended to be read by all who passed.

The inscription on the One Ring, on the other hand, was created by Annatar, and was crafted almost a thousand years later (around sA1600). Now Annatar was none other than the Maia Sauron, Morgoth's gopher, and the inscription was definitely *not* intended to be read by all, least of all Celebrimbor. It was put in Sauron's private language, the Black Speech, and instead of using vowels it was heavy on the diacritics (which also saved space by the way, always a concern when inscribing jewelry—portals happily do not share this limitation).

The resulting script was, of course, beautiful to behold. Mainstream, however, it was probably not. The fact that, several thousands of years after its destruction, almost all scholars still insist that the Tehtar modes be the "real" way to write Tengwar is a testimony to the power and allurement of the One Ring.

But where both Dan Smith and Måns Björkman suggest that the Mode of Beleriand, used on the West Gate, merely be a "Grey Elven Mode", \hat{p}_{τ} i beg to differ: Celebrimbor hardly was a Grey Elf, but a full-bred Ñoldo instead, and Beleriand, except for the Ossiriand region in the south-east, wasn't Grey Elven territory. Indeed, apart from the realm of Doriath, Beleriand was largely inhabited and ruled by the Ñoldor (the descendants of Curufinwë Fëanor) and about the only part of Middle-Earth that wasn't primarily Grey Elven-land. Not counting the North, of course.

The Grey Elves that lived in Doriath (kingdom of Elwë Singollo, himself not a Grey Elf) seldom used tengwar, but preferred Daeron's Cirth (a runic script). We do not know about any scripts used by the Grey Elves of Ossiriand (who, by the way, were more commonly known as *Green* Elves or Laiquendi). It is however fair to assume that they, like their kin in Doriath and Taur Galen, preferred the Cirth. Grey Elves weren't much prone to writing; carving, on the other hand, was quite a different matter, be it in stone or wood.

My personal conviction is that the so-called "Mode of Beleriand" is, or at least largely resembles, the original tengwar used by Fëanor and his kin, and was still used by his grandson when he dwelled in Nargothrond. In that case, "Mode of Nargothrond" would be a more appropriate label, as I am quite prepared to admit that in Gondolin a more decorative mode may have been used.

From a archeo-linguistic point of view and considering the above, I deem the West Gate inscription of far more importance than the One Ring or any later derivations of it.

¹⁰ Dan Smith's Tengwar Fonts, <u>http://www.acondia.com/fonts/tengwar</u>

¹¹ Amanye Tenceli, <u>http://at.mansbjorkman.net</u>

Anómëar (Full Vowels)

E900-E93F

E9	x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	хA	хB	xC	хD	хE	хF
1	Α	Е	1	0	Ü	U	Y	Œ	Æ	Ø	AI	AU	IJ	UI	OU	Ð
0x	С	Ъ	C	ჯ	υ	0	9	ĸ	ى	С	с	8	ა	5	8	r
1x	Ι	Ι	Ι		r	г	L	L	r	٦	۲	┥	ł	r	Ł	7
2x	C	5	D	5	C	O	9	Ľ	ک	C	ഗ	Ø	ろ	Ĵ	g	r
3x	0	0	0		r	ור	L	٦	r	٦	لك	┓	ŀ	7	ŀ	┨

Documentation of the full vowels is scarce, so scarce in fact that Måns Björkman states that *"if any samples of the mode have been preserved they have not been published, and we do not know how it looked like".* ¹² This is a bit pessimistic, however: all major vowels are featured on the West Gate.

In my interpretation, all full vowels are constructed from bows only; unlike the lambar, the ómëar do not feature a stem. For that reason my tengwa for "O" (c) differs slightly from the symbol on the West Gate, which Maura Labingi drew as c. We know, however, that Maura wasn't that accurate an artist: in the same sketch, he draws double-looped lambar with one continuous curl instead of two distinctive lúvar.

The "E" character too, usually transcribed as λ , is represented here as a loop-only version at codepoint E901 (α), in accordance with the West Gate sample. In the future I intend to shorten the right-hand "tail" a bit, as this character in its current form proves difficult to kern.

For the same reason, my interpretation of the "I" character (c) differs from the Gate, where it is represented as j. The I/J/Y question merits closer scrutiny; but of these three characters, "I" definitely is the most vowel-like: after all, in both London and New York patois, just the word "I" can contain up to five vowels¹³.

Codepoints E904 (ω) and E907–E909 (α , α , and α) are extrapolations of the major forms, and will probably stay more or less the same in future editions. Codepoints E90A–E90E are used to represent less common pure vowels (although in the above table they seem to appear as diphtongs, they are not — it's just that English does not have any single characters to represent these sounds. I will expand on this later) and *will* probably change in later editions.

Codepoints E910–E91F have yet to be defined; please disregard their current value. After all, this font is still only experimental. In future versions, they will probably be used for the long version of the vowels, or maybe for an extension of the anómear block to accomodate actual diphthongs. I hope to find a web place somewhere to discuss this issue¹⁴.

¹² Amanye Tenceli, <u>http://at.mansbjorkman.net</u>

¹³ O-u-a-e-i.

¹⁴ One place where you can find me is <u>Elfscript2</u> on Yahoo Groups; this is however a moderated group.

E980-E9FF

E940-E97F

Ómatehtar | Telcotehtar (Diacritical Vowels)

E9	x0	x1	x2	х3	x4	x5	x6	x7	x8	x9	хA	хB	xC	хD	хE	хF
	Α	Е	1	0	Ü	U	Y	Œ	Æ	Ø	AI	AU	IJ	UI	OU	ə
4x	Î	í	i	î	Ï	- ۲	ï	ĭ	ĭ	Î	ì	-t	ĩ	, I	ĩ	ļ
5x	Î	í	i	Î	Ï	- ۲	Ï	Ĭ	Ĭ	Î	ì	ľ	Ĩ	ľ	Ĩ	
6x	Î	í	i	Î	Ï	1	ï	ĭ	ĭ	ů	Ì	Πt	Ĩ	÷	Ĩ	Ö
7x	Î	Í	İ	Î	Ï	7	:	Ĭ	ì	Î	Ì	l I	Ĩ	Š	Ĩ	.0

The E940–E97F block contains the same vowels as codepoints E900–E90F, but as telcotehtar: diacritics on a (short or long) stem. The actual ómatehtar (diacritics without stem, to be combined with other characters) can be found in the ED00–EEFF block.

As for the values, only codepoints E940–E943 and E945–E946 seem to be agreed on. The other telcotehtar are of my own design and may well change in later editions.

E9	x0	x1	x2	х3	x4	x5	x6	x7	x8	x9	хА	хB	xC	хD	хE	хF
8x	Y	Ą	λ	y	b	þ	þ	ք	ሪ	2	ę	9	5	ζ	λ	λ
9x	ი	റ	2	ď	r	u	9	0	ď	d	ŋ	മ്പ	ι	τ	າ	ב
Ax	Y	℅	λ	Ø	8	Þ	Ŀ	þ	C	2	Ŀ	う	J	ß	λ	λ
Bx	റ	ମ	2	Ø	ſ	u	Ø	9	ď	ď	ŋ	മ്പ	u	π	Υ	n
Сх																
Dx						Re	eserve	d for fu	ture ex	xtensic	ons					
Ex						and	сотро	osite ch	naracte	er elen	nents					
Fx																

Yantar (Additional Characters)

Although most of these characters are widely agreed on, their interpretation differs wildly. Some scholars view these signs as characters in their own right; others state that they are but form variants of the regular lambar.

Fortunately, this font does not force a specific mode upon the user; instead, it tries to provide as many options as possible. That is why there are quite a lot or "R"-type form variants (codepoints E980–E987); especially "Lowdham's wh" seems to be problematic. Personally, I prefer codepoint E984 ()).

As for the other yantar, I merely put in those characters that appear in the Tolkien corpus. I feel that the R/L and the S/H phoneme complexes should be addressed in a future edition.

Codepoints E990–E991 (c) and c) were derived from Johan Winge's Telcontar font, although in the end I decided not to use them in the Telcontar mapping (E000–E07F) and instead used the combining telqui and lúvar that in my view probably stood at their base.

The combining lúvar at codepoints E99C–E99F and E9AC–E9AF are temporary and likely to be relocated in future editions.

Nótessi (Numerals)

EA00-EA3F

EA	x0	x1	x2	х3	x4	x5	x6	x7	x8	x9	хA	хB	xC	хD	хE	хF
0x	0	τ	π	Я	τ	त	भ	J	ط	д	ىل	ச	Ē	ŀ	र्भ	ர
1x	ய	ரு	प्त	۶	भ	Щ	2	3	ຄ	ອ	G	G	c	Ç	G	G
2x	ດ	G	G	Ð	Q	σ	Ι	Θ	·J·	÷ا	·j:	ij	٠Ji	١ŀ	ŀ	.urt
3x	Ŀ	Ë	Ű	じ	E	U	IJ	U	Ĵ	ij	ij	J	IJ	IJ	IJ	IJ

Numerals seem to be problematic in most Tengwar versions. As Johan Winge states in his Telcontar documentation: "they seem to have been far less stable than the regular tengwar, and the morphology of the few signs we do have is often non-trivial to analyse".

I have always used a numeral system with a good internal consistency, and I hope others will find it as versatile as I. You'll find the characters in code block EA00–EA3F.

The basic numeric system conststs of seven sets of three numerals each (codepoints EA01–EA15) and three special numerals (codepoints EA00 and EA16–EA17). Then there are 8 "determining zero's", some special numbers, a few vulgar fractions and finally two sets of 8 magnitude modifiers.

- O "NULL" or "Nothing". This is also an all-purpose zero. It is *not*, as some scholars state, the "duodecimal number twelve"—such a character does not exist, any more than does a "decimal number 10". Symbolizes the Valar without Eru Illuvatar (see o). Proposed Quenya name: Udûn.
- τ-π Numerals 1 to 21, arranged in seven triads. All basic numerals (except Nothing) are composed of one or two horizontal lines and one or more loops.
- **5**, **3** These characters are often interpreted as "duodecimal 10" and "duodecimal 11". In fact, this seems a misinterpretation: these special numerals actually mean "n-2" and "n-1", which in a duodecimal system boils down to the same thing. However, they have different values in other based systems, such as
 - senary: c-τ-π-π-δ-ξ
 - octal: ジーカーカーカー・

Thanks to these special numerals, it is never necessary to use an incomplete triad of numerals, regardless of the numerical base.

- **9** Decimal zero: used as the first character in a number, defines it as being decimal (base-10). When used *within* a number, functions as a decimal multiplier. When used by itself, means "10" or "sawbuck".
- Duodecimal zero: used as the first character in a number, defines it as being duodecimal (base-12). When used *within* a number, functions as a duodecimal multiplier. When used by itself, means "12" or "dozen".
- **G** Hexadecimal zero: used as the first character in a number, defines it as being hexadecimal (base-16). When used *within* a number, functions as a hexadecimal multiplier. When used by itself, means "16".
- Q Vigesimal zero: used as the first character in a number, defines it as being vigesimal (base-20). When used *within* a number, functions as a vigesimal multiplier. When used by itself, means "20" or "score".
- **c** Quadrovigesimal zero: used as the first character in a number, defines it as being quadrovigesimal (base-24). When used *within* a number, functions as a quadrovigesimal multiplier. When used by itself, means "24" or "two dozen".
- **c** Senary zero: used as the first character in a number, defines it as being senary (base-6). When used *within* a multiplier, functions as a senary carrier. When used by itself, means "6" or "half dozen".

- Septary zero: used as the first character in a number, defines it as being septary (base-7). When used *within* a number, functions as a septary multiplier. When used by itself, means "7".
- Octal zero: used as the first character in a number, defines it as being octal (base-8). When used within a number, functions as a octal multiplier. When used by itself, means "8" or "octet".
- ງ Special number "100".
- හ Special number "144" or "gross".
- G Special number "256" or "bite".
- C Special number 200
- **Ω** Special number "60" or "shock".
- **σ** Special number 240
- \mathfrak{x} "Any" or "unknown". Much like the *x* operator in modern equations.
- Θ "All". Much like the infinity symbol in modern fonts (∞). The form symbolizes Eru Illuvatar surrounded by the Valar. See o.
- J--JI Vulgar fractions. The down-left curl indicates a "restricting" operation; the dots on the left side are the "unused" portion of the number, whereas the dots on the right side specify the "pass-through" fraction. Hence J means one-half, J means one-third, J means two-thirds etc. A vertical line symbolizes the number 5, so J means 1/6 and J means 5/6.
- Special number "5" or "fin". Subject to change in later editions.
- **U-III** Magnitude modifiers. A down-right pointing curl indicates in increase, a down-left pointing curl a decrease. The dots and line determine the amount:

Ŀ	Ŀ	Ű	し	E	Ŀ	l	U
deca	hecto	kilo	mega	giga	tera	peta	exa

IJ	IJ	ij	J	IJ	IJ	IJ	IJ
deci	centi/ percent	milli/ permille	micro	nano	pico	femto	atto

Telpetengwi (Currency and Value Symbols)

EA40-EA7F

EA	x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	хА	хB	xC	хD	хE	хF
4x	φ	ų	Ø	ም	J	ঈ	৸	Ø	Ł	Ę	Ъ Ъ	ኦ	ന്	Ъ	þ	ഷ്ട
5x	Ģ	ዋ	ഷ	Ø	p	Ð	đ	р	р	G	¥	¥	£	Å	¢	ĩ
6x	Ð	a	Q	O												
7x																

For the moment, this block contans only tengwa-equivalents of Unicode currency characters. In a later stage, other units, such as length, weight, volume etc. will be added, and depending on the space needed, one or more of the currency symbols may be deleted (from the private block, that is — not from the Unicode range).

All currency symbols are constructed from a regular character or form variant and a wavy line (representing a flow or current).

£	Afghani	0	Currency (USSR artefact)	þ	Franc	Ð	Naira	£	Rupee
æ	Austral	Ŀ	Dollar	ц	Guarani	đ	Peseta	2	Shekel
p	Baht	Ъ Б	Dong	ち	Hryvia	р	Peso	t	Spesmilo
ન્	Cedi	Ð	Drachme	ଜ	Kip	ρ	Pfennig	Ĩ	Tenge
Ц	Cent	£	Ecu (<i>not</i> Euro!)	ß	Livre Tournois	æ	Pound Ster- ling	Ð	Tugrik
ୢ୳	Colon	Э	Euro	Ø	Mark	¥	Rial	a	Won
ଝ	Cruzeiro	þ	Florin	p	Mill	¥	Riel	9	Yen

For now, the following currencies are represented:

Codepoint EA63 (\mathbb{O}) is a design artefact and will probably not reappear in future editions.

Mathematical Symbols

EA80-EAFF

EA	x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	хA	хB	xC	хD	хE	хF
8x																
9x																
Ax						De	00500	lforfu	ture ex	donoio	20					
Bx					So				/mbols			arily				
Cx					(0)				urrent			<u>אר</u> ו				
Dx					(00	Jaepon		AO, EE	BA7 an	u EDD		57)				
Ex																
Fx																

Vistatengwi? Tanwetengwi?

This block is yet to be developed, but will be included in a future edition.

Tannatengwi (Special Characters)

EB00-EB7F

EB	x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	хA	хB	xC	хD	хE	хF
0x	[]	ĺ	J	[:]	[:	:]	·[].	:]:	·[].	:::	:]:
1x	G	G	ŋ	ŋ	ſ.	ſ.	Ľ	J	:	÷	<	>	«	»	. <i>.</i> .	.5.
2x		2	ĸ	*	D	9	J	۸	Ŧ	X	Ж	:#:	#	ĝ	ţ	Ŷ
3x			ο	•	Δ	•	\$	*	ţ	*	J	נ	С	С	*	0
4x	Ð	τ	π	π	ι	স	ற	J	д	戶	t	Æ	ſĽ	۶	ग्	л
5x																
6x						Re	served	d for fu	ture ex	atensio	ns.					
7x																

Block EB00–EB7F contains the special characters that are required by the ANSI/Unicode character set. This block should not be confused with the Yantar block, containing the special characters from the Tolkien corpus!

Codepoints EB00–EB1F contain parentheses and quotes. Although these are often regarded as different things, parentheses and quotes are actually very similar in function: they both enclose a body of text to set it apart. This is reflected in the design of these characters.

There is not much consensus in the Elvish-speaking community regarding parentheses and quotes; in fact, there is only one single parenthesis attested (closely resembled by codepoints EB02–EB03 ([] and]]), and some sources mention a shortened version of this as a quote character. I have taken the liberty to expand on this, resulting in the characters in codepoints EB00–EB17. The remaining quotes (EB18–EB1F) may change in a future edition.

Codepoints EB30–EB37 contain several common bullet characters, whereas codepoints EB38–EB3F contain common superscript characters documented elsewhere. The numeral superscripts in codepoints EB40– EB4F are likely to disappear in future editions, or may be moved to the mathematical block.

Codepoints EB20–EB2F contain a tengwa-form of common ANSI special characters, mapped as:

	2	*	*	D	5	J	^
Emtpty character	Middle tilde	Double middle tilde	Asterisk	Address Mark	Amper- sand	Ampersand (alternative form)	Exclamation mark (altern- ative form)

L L	*	*	: :	*	ĝ	ţ	Ŷ
"Dagger"	"Double dagger"	Hash mark	Hash mark (alternative form)	Hash mark (alternative form)	Copyright	Trade Mark	Registered trade mark

Regarding the daggers: A dagger hardly seems an Elvish weapon, so I turned these characters into swords.

Tixar (Interpunction)

EB80–EBFF

EB	x0	x1	x2	х3	x4	x5	x6	x7	x8	x9	хA	хB	xC	хD	хE	хF
8x		•	•	:				:				:	÷	÷	÷	Ÿ
9x	::	::	÷	÷	×	\approx	÷		+	-	-		=	ш	=	_
Ax	5	ï	. S .	л.	ÿ	ü	ŀ	Ĵ	S	Ş	S	Ś	β	В.	đ	ä
Bx	١	ו	ŀ	ij	ſi	IJ	N	IJ			2	S	ſ	J	ŝ	ย
Cx																
Dx						Po	served	l for fu	turo o	annia	200					
Ex						Re	Server		uie ex	aerisio	113.					
Fx																

Dot marks, or tixar, are commonly used as interpunction characters, although there is not one single convention for this. On the contrary, interpunction in the documented samples varies wildly.

Codepoints EB80–EB97 contain the actual dot marks.

Codepoints EB98–EB9F represent compatibility characters, that may or may not survive a later edition.

Codepoints EBA0–EBA5 are form variants of the paragraph opening and closing signs and may or may not survive a later edition.

Codepoints EBA8–EBAF contain form variants of the exclamation and question marks.

Codepoints EBA6–EBA7 and EBB0–EBBF contain mathematical operators that eventually will be moved to the mathematical block, EA80–EAFF.

Note: The tixar are not to be confused with the Tixa tehta or dot accent.

Rinci (Curls and Loops)

EC00-EC7F

EC	x0	x1	x2	x3	x4	x5	x6	х7	x8	x9	xA	хB	xC	хD	хE	хF
0x	r	r	ر	ر	r	ſ	L	L	2	7	د	د	ç	۲	Ĺ	ſ
1x	R	я	8	ß	8	ß	8	ß	q	م	مز	¢	α	α	æ	ರ
2x																
3x																
4x									(
5x						Re	served	d for fu	ture ex	aensio	ons.					
6x																
7x																

Codepoints EC00–EC1F contain an experimental set of combining loops or S-hooks. These are very likely to be moved and/or modified in future editions. Use at your own risk.

ED00-EEFF

Tehtar (Diacritical Marks)

Táratehtar | Amatehtar (Overlining Diacritical Marks)

Spacing Combining Unicode Combining Typewriter Combining Centered

ED00-ED3F ED80-EDBF EE00-EE3F EE80-EEBF

ED/EE	x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	хA	хB	xC	хD	хE	хF
0x, 8x	•	-	•	,	٥	*	-	=		"	"	"	00	**	-	=
1x, 9x					•	*	_	-	"	<i>~</i>		``	n	~~	.,	.//
2x, Ax	ſ	۴	L	۲.	ſ	P	ſ	r,	٢	٤	S	ę	٢	ŧ	1	¢
3x, Bx	`	Ŷ	>	÷	^	>	<	>	۲	\$	2	5	٦	r	J	-

Tumnatehtar | Unutehtar (Underlining Diacritical Marks)

Spacing Combining Unicode Combining Typewriter Combining Centered ED40-ED7F EDC0-EDFF EE40-EE7F EEC0-EEFF

ED/EE	x0	x1	x2	х3	x4	x5	x6	х7	x8	x9	хA	хB	xC	хD	хE	хF
4x, Cx		-			٥	*	-	=	:	=	2	"	00	**	1	=
5x, Dx					•	*	_	=	.,	."	n	~~			~	
6x, Ex	L	ŀ	ſ	F	J	ł	۲	F	٢	ę	د	Ę	S	٤	1	٤
7x, Fx	,	ه	(¢	*	^	>	~	ł	ş	ı	ĩ	L	r	ſ	IJ

Although I do not encourage the use of diacritical marks in the Elvish manner, i.e. as diacritical vowels, this font does not intend to restrict the user in any way. A lavish suite of diacritical marks has therefore been provided in blocks ED00–EEFF, and tehtar can be combined in many ways, such as for instance $\underline{\check{p}}$, composed from $\check{}$, m, _ and $\acute{}$.

Unfortunately there are many conventions for diacritical marks. For that reason, a basic set of 64 diacritics is repeated several times, the metrics of the marks different for each set. Probably not all variations will work for you. Remember that this is an experimental font; the inclusion of these variations is intended to find the best way do include diacritics in later editions. I also have not yet included narrow or wide form variants.

Block ED00–ED3F contains spacing diacritical marks for positioning above a character. Block ED40–ED7F contains spacing diacritical marks for positioning below a character.

Blocks ED80–EDBF and EDC0–EDFF contain the same diacritical marks, however with metrics according to the Unicode convention for combining diacritics. In this convention, diacritics are typed *after* the character to which they are attached, and hence are shifted backwards. Diacritics on a wide character appear at present over or under the *right* half: \dot{u} , m.

Blocks EE00–EE3F and EE40–EE7F contain the same diacritical marks, but combining in typewriter-fashion. In this block diacritics are shifted forward, and are intended to be typed *before* the character to which they are attached. Diacritics on a wide character appear at present over or under the *left* half: m, m.

Blocks EE80–EEBF and EEC0–EEFF contain the same diacritical marks, but centered around the insertion point. I am not entirely certain which systems use this approach, but I have encountered this arrangement in several Tengwar fonts, and included it here for those who need this functionality. This block is likely to disappear, however, since this I suspect this to be a Dan Smith-specific feature and this font does not mean to support the Smith system, since this would clash with the ANSI mapping.

0000-07FF

Ñaltar (Mappings)

ANSI Basic Latin

00	x0	x1	x2	x3	x4	x5	x6	х7	x8	x9	хА	хB	xC	хD	хE	xF
0x							6	ntrol C	horod	lara						
1x							00		naraci	ers						
2x		Ş	IJ	※	Ċ	ij	ታ	J	[]	*	+	:	-	::	2
3x	ອ	Ч	π	Ħ	J	त	प्त	J	بر	щ		4	ŀ	Ш	Ĺ	β
4x	Ø	C	р	ų	ր	റ	Ъ	ସ୍	λ	Э	0	ป	R	ย	ß	S
5x	р	นิ	2	C	Y	Ø	В	Ш	J	9	2	ĺ	S	J	<	_
6x	ſ	С	р	q	ր	კ	þ	щ	λ	С		d	S	ם	n	S
7x	р	ם	Y	ሪ	р	0	Я	Я	J	9	?	Ŀ].	2	

ANSI Extended Latin

0080-00FF

00	x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	хA	хB	xC	хD	хE	хF
8x	Ц		ſ	Ъ	۵		Ŧ	*	4	IJ	þ	<	Ł		Ŋ	
9x		ſ	נ	G	ŋ	٠	-	I	۲	ĝ	þ	>	と		þ	ÿ
Ax		Ś	J	ل ه	Ø	P		3	:	ţ,	С	«	ו	I	Ŷ	-
Bx	ຄ	N	μ	Ħ	,	רי	:	•	r	μ	0	»	÷	·J·	ŀ	đ
Сх	۰U	ć	ŝ	ĩŲ	:℃	°Ų	J	Ś	୷	৸	ŝ	:rd	:0	í	Ĩ	7 🔲
Dx	b	B	ک	Ś	ŝ	۶	Ë	Ŀ	C	Ô	Ś	Ö	:0	Ś	h	9
Ex	ć	ć	ĉ	ĩ	ċ	°C	ſ	ىرى	ኅ	ъ́	ŝ	ä	î	í	Î	- ر
Fx	þ	ш	ý	ý	ΰ	Ñ	ÿ	j	C	ò	ó	Ô	ö	ģ	h	ÿ

The ANSI mapping is of course based on the "Mode of Beleriand".

The undocumented codepoints 0080–009F are included for backward compatibility; these characters are also mapped to their correct Unicode codepoints.

See the separate ANSI discussion document for more information on the separate characters.

Unicode Code2000/Telcontar

E000-E07F

E0	x0	x1	x2	x3	x4	x5	x6	х7	x8	x9	хА	хB	xC	хD	хE	хF
0x	р	р	q	q	m	р	щ	Ø	h	b	d	ิป	þ	В	Ы	В
1x	m	В	ш	В	n	n	u	ū	þ	þ	þ	þ	þ	ы	Щ	ष
2x	Y	Ą	3	ζ	ሪ	2	ę	9	λ	d	λ	0	Ι	I	I	
3x	າ	ב	ι	τ	r	ſ	u	р	d	2	ற	ŋ	b	ď		
4x	ं	ः	ः	ः	·	਼	ं	्र	ő	੍ਹ	്	្	ി	្វ	ਿ	् ि
5x	ा	ା	ा	े	े	े	ं	ុ	,	਼	\odot					
6x	•	:	:	*	÷	S	β	J	~	×	ŋ	G	^			
7x	ຄ	τ	π	ш	J	ਹ	ற	J	٩	டி	১	9	0	c		



These characters appear in both Michael Everson's Unicode proposal and Johan Winge's Telcontar layout, and are considered undisputed.



These characters appear in Michael Everson's Unicode proposal, but were abandoned in Johan Winge's Telcontar layout.



These characters do not appear in Michael Everson's Unicode proposal, but were added in Johan Winge's Telcontar layout.



These characters appear in both Michael Everson's Unicode proposal and in Johan Winge's Telcontar layout, but may be abandoned in later "Unicode" adaptations.



These characters do not appear in either Michael Everson's Unicode proposal or Johan Winge's Telcontar layout, but seemed a logical extension.



These codepoints are unused in both Michael Everson's Unicode proposal and Johan Winge's Telcontar layout.

Perspective

Currently, this font is in its alpha stage. Many characters need fine-tuning, and part of the work so far was to get acquainted with font design software (I haven't designed a font for over 20 years, so I needed some updating). The native character block (E400-EFFF) is likely to change in later editions; the ANSI- and Telcontar mappings should be fairly future-proof (although some mappings may change later on, this shouldn't affect the useability).

The alpha version of the font is called Tengwar Tellepsalinnacontar. A friend of mine assures me that this translates as "Letters that emit a silver glow", but in my opinion the literal translation should be "letters that standing-limb – finger – upon some – step", or rather, "Letters that will step on some toes".

Caveat emptor!

The beta version will be called Tengwar Telperinquaro, named after Celebrimbor, who forged the West Gate inscription, upon which this font was based. I hope to release this font in the fall of 2010.

There will be several production versions:

– Tengwar Míriel	This Arial-like sans-serif typeface, optimized for print Named after Fëanor's mother.
– Tengwar ná Rómen	Times New Roman-like serif typeface, optimized for print. Translates as "Signs of the East".
both to be released in the winter and possibly	of 2010/2011,
– Tengwar Cormar Sancë	Comic Sans-like typeface Translates somewhat as "Signs of Hateful Loops". I'd be grateful for a better name, though.
I'd also like a	
- Tengwar Vardanna	Verdana lookalike (Elbereth's Signs), sans-serif, optimized for screen.
– Tengwar Oirë	Georgia lookalike (Everlasting Signs), serif, optimized for screen. Better name welcome.
– Tengwar Curuni	Courier lookalike (Signs of the Witches)

but [°]I have only so much time...

Final Notes

Тхрх

The basic proportions of this font were based on Monotype Arial as included with Microsoft Windows XP, but altered slightly to avoid copyright issues.

The glyph outlines were created with Corel Draw 9.0 and exported as partial TTF files.

A template of the font was made with High-Logic FontCreator 6.0 Professional Edition, to which the Corel Draw TTF files were imported. Subsequently, partial glyphs were combined, basic font metrics were added, and heterometric glyph variants were created, after which the basic private block E400–EEFF was mapped to the proper ANSI-, Unicode- and Telcontar positions.

Finally the font was imported in Fontlab Studio 5, that was used to create provisionary hinting en kerning information, and to convert the normal font into bold, italic, and bold-italic form variants.

The font was then installed with Bitstream Font Navigator.

This documentation was entered in Microsoft Word 2007, edited and revised, and finally exported as Adobe Portable Document File with the font embedded.

History

2010-06-01 First release of the Tengwar Tellepsalinnacontar alpha font.

Small Print

At the moment this font doesn't come with any license, and in order to maintain compatibility I would like to reserve the copyright for now. You are, however, free to use it at your own risk, provided that you do not use this font for commercial purposes.

The production releases will, however, probably be made available onder the GNU General Public License.

Tengwar, the Elves and Middle Earth were inspired and discovered by John Ronald Reuel Tolkien and are tended by <u>The Tolkien Estate</u>,

If you change or modify this font in any way, please do not forget to change the font (family) name as well.

The latest version of this and similar font packages can be found at http://tencedil.basvanhoorn.nl.

You can contact me via email at <u>tencedil@basvanhoorn.nl</u>, but please be aware that I don't always have time to reply to every message.

You can also reach me at the Elfscript2 Yahoo Group.