

The Tempora package

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September 16, 2015

Tempora is derived from the fonts named TemporaLGCUni constructed by Alexey Kryukov, issued in 2005 under the GPL, based on the Latin glyphs from URW NimbusRomNo9 fonts from 1999, the Greek glyphs from the Omega project (Yannis Haralambous) from 1996, and Cyrillic glyphs by Valek Fillipov. The kerning tables he constructed seem to be of very good quality. His fonts have been widely distributed on free font sites, but have never been made available on CTAN with LaTeX support files because, I think, there are a few flaws in the Greek section of the fonts that prevent most font utilities like `afm2tfm`, `fontinst` and the `lcdftools` from acting correctly—there are instances of duplicated glyph name and duplicated unicode names that interfere with the indexing of font names and codes. Tempora makes a number of changes to the fonts to fix these issues, primarily to all glyphs whose names contain tonos, and to `\kappa`, `\Delta`, `\Omega`, `\mu` and `\rho`. In the latter case, it interchanges the glyphs corresponding to what are usually known as `\rho` and `\rho1` to that their visual appearances are those in common usage. It also adds to Tempora-Italic the missing GSUB lookup tables that are found in all others in the collection. Note that FreeSerif, from the gnu-freefont project, includes the Greek and Cyrillic glyphs from TemporaLGCUni, but the current version, dated 2012, does not include most of the associated kerning tables.

The package is intended to be an add-on to a comprehensive Times-like text font package, such as `newtxtext` or `tgtermes`, adding the possibility of writing parts in Greek or Cyrillic. The Greek part of Tempora offers essentially full support for the LGR encoding, and thus for `babel`'s greek options—`monotonic` (the default), `ancient` and `polutoniko`—while the Cyrillic part offers almost full support for the T2A encoding and lesser support for the more Asian flavors, T2B and T2C.

Some Font tables

Tempora-Regular-lgr GLYPH TABLE:

	ó	í	î	ï	û	ü	ÿ	ÿ	
ó0x	— 0	ˆ 1	Ɔ 2	Ɔ 3	Ɔ 4	Ɔ 5	Ɔ 6	Ɔ 7	ˆ0x
ó1x	ı 8	Α 9	Η 10	Ω 11	Α 12	Υ 13	α 14	ϋ 15	
ó2x	ˆ 16	ˆ 17	ˆ 18	ϱ 19	ˆ 20	ϱ 21	ϱ 22	Λ 23	ˆ1x
ó3x	€ 24	% 25	ə 26	λ 27	‘ 28	’ 29	ˆ 30	ˆ 31	
ó4x	ˆ 32	! 33	ˆ 34	ˆ 35	ˆ 36	% 37	ˆ 38	’ 39	ˆ2x
ó5x	(40	) 41	* 42	+ 43	, 44	- 45	. 46	/ 47	
ó6x	0 48	1 49	2 50	3 51	4 52	5 53	6 54	7 55	ˆ3x
ó7x	8 56	9 57	: 58	ˆ 59	ˆ 60	= 61	ˆ 62	; 63	
ó8x	ˆ 64	A 65	B 66	Σ 67	Δ 68	E 69	Φ 70	Γ 71	ˆ4x
ó9x	H 72	I 73	Θ 74	K 75	Λ 76	M 77	N 78	O 79	
ó10x	Π 80	X 81	P 82	Σ 83	T 84	Υ 85	ˆ 86	Ω 87	ˆ5x
ó11x	Ξ 88	Ψ 89	Z 90	[91	ˆ 92	] 93	ˆ 94	ˆ 95	
ó12x	ˆ 96	α 97	β 98	ς 99	δ 100	ε 101	φ 102	γ 103	ˆ6x
ó13x	η 104	ι 105	θ 106	κ 107	λ 108	μ 109	ν 110	ο 111	
ó14x	π 112	χ 113	ρ 114	ς 115	τ 116	υ 117	ˆ 118	ω 119	ˆ7x
ó15x	ξ 120	ψ 121	ζ 122	« 123	ˆ 124	» 125	ˆ 126	— 127	
ó16x	à 128	á 129	â 130	ã 131	ä 132	å 133	ä 134	ä 135	ˆ8x
ó17x	á 136	ä 137	ä 138	ä 139	ä 140	ä 141	ä 142	ä 143	
ó18x	ä 144	ä 145	ä 146	ƒ 147	ä 148	ä 149	ä 150	ˆ 151	ˆ9x
ó19x	ñ 152	ñ 153	ñ 154	ˆ 155	ñ 156	ñ 157	ñ 158	ˆ 159	
ó20x	ñ 160	ñ 161	ñ 162	ñ 163	ñ 164	ñ 165	ñ 166	ñ 167	ˆAx
ó21x	ñ 168	ñ 169	ñ 170	ñ 171	ñ 172	ñ 173	ñ 174	ñ 175	
ó22x	ò 176	ó 177	ó 178	ó 179	ó 180	ó 181	ó 182	ó 183	ˆBx
ó23x	ó 184	ó 185	ó 186	ó 187	ó 188	ó 189	ó 190	ó 191	
ó24x	õ 192	õ 193	õ 194	F 195	õ 196	õ 197	õ 198	ˆ 199	ˆCx
ó25x	ì 200	í 201	î 202	ï 203	ù 204	ú 205	û 206	ü 207	
ó26x	í 208	î 209	ï 210	ï 211	ú 212	û 213	ü 214	ü 215	ˆDx
ó27x	ï 216	ï 217	ï 218	Ï 219	ü 220	ü 221	ü 222	ÿ 223	
ó28x	è 224	é 225	ê 226	ë 227	ò 228	ó 229	ô 230	õ 231	ˆEx
ó29x	é 232	ë 233	ë 234	ë 235	ó 236	ó 237	ó 238	ó 239	
ó30x	ü 240	ü 241	ü 242	ü 243	ü 244	ü 245	ü 246	ü 247	ˆFx
ó31x	α 248	η 249	ω 250	ρ 251	ρ 252	ˆ 253	ˆ 254	ˆ 255	
ó32x	ˆ8	ˆ9	ˆA	ˆB	ˆC	ˆD	ˆE	ˆF	

Notice that the glyph in slot 115 may appear to be incorrect—you might think it should be the letter sigma (non-final), as in the first letter of σῶς. The tfm files contain instructions to render a final sigma as in the last letter of that word, and the fonttable package appears to treat all entries in the table as final letters. So, not really an issue.

Tempora-Regular-t2a GLYPH TABLE:

	ó	í	ê	ë	ä	å	ø	ÿ	
ó0x	˘ ₀	˘ ₁	ˆ ₂	˜ ₃	¨ ₄	˘ ₅	° ₆	ˇ ₇	ˆ0x
ó1x	˘ ₈	˘ ₉	˙ ₁₀	˙ ₁₁	˘ ₁₂	I ₁₃	⟨ ₁₄	⟩ ₁₅	ˆ1x
ó2x	“ ₁₆	” ₁₇	ˆ ₁₈	˘ ₁₉	˘ ₂₀	— ₂₁	— ₂₂	₂₃	
ó3x	₂₄	l ₂₅	J ₂₆	ff ₂₇	fi ₂₈	fl ₂₉	ffi ₃₀	ffl ₃₁	ˆ2x
ó4x	₃₂	! ₃₃	" ₃₄	# ₃₅	\$ ₃₆	% ₃₇	& ₃₈	' ₃₉	
ó5x	(₄₀)	)₄₁	* ₄₂	+ ₄₃	, ₄₄	- ₄₅	· ₄₆	/ ₄₇	ˆ3x
ó6x	0 ₄₈	1 ₄₉	2 ₅₀	3 ₅₁	4 ₅₂	5 ₅₃	6 ₅₄	7 ₅₅	
ó7x	8 ₅₆	9 ₅₇	: ₅₈	; ₅₉	< ₆₀	= ₆₁	> ₆₂	? ₆₃	ˆ4x
í0x	@ ₆₄	A ₆₅	B ₆₆	C ₆₇	D ₆₈	E ₆₉	F ₇₀	G ₇₁	
í1x	H ₇₂	I ₇₃	J ₇₄	K ₇₅	L ₇₆	M ₇₇	N ₇₈	O ₇₉	ˆ5x
í2x	P ₈₀	Q ₈₁	R ₈₂	S ₈₃	T ₈₄	U ₈₅	V ₈₆	W ₈₇	
í3x	X ₈₈	Y ₈₉	Z ₉₀	[₉₁	\ ₉₂	]₉₃	^ ₉₄	_ ₉₅	ˆ6x
í4x	‘ ₉₆	a ₉₇	b ₉₈	c ₉₉	d ₁₀₀	e ₁₀₁	f ₁₀₂	g ₁₀₃	
í5x	h ₁₀₄	i ₁₀₅	j ₁₀₆	k ₁₀₇	l ₁₀₈	m ₁₀₉	n ₁₁₀	o ₁₁₁	ˆ7x
í6x	p ₁₁₂	q ₁₁₃	r ₁₁₄	s ₁₁₅	t ₁₁₆	u ₁₁₇	v ₁₁₈	w ₁₁₉	
í7x	x ₁₂₀	y ₁₂₁	z ₁₂₂	{ ₁₂₃	|₁₂₄	} ₁₂₅	~ ₁₂₆	- ₁₂₇	ˆ8x
ê0x	Г ₁₂₈	Г ₁₂₉	Б ₁₃₀	Б ₁₃₁	Һ ₁₃₂	Ж ₁₃₃	З ₁₃₄	Л ₁₃₅	
ê1x	İ ₁₃₆	Қ ₁₃₇	К ₁₃₈	К ₁₃₉	Æ ₁₄₀	Ң ₁₄₁	Ң ₁₄₂	Ѕ ₁₄₃	ˆ9x
ê2x	Ө ₁₄₄	Ҫ ₁₄₅	Ӧ ₁₄₆	Ү ₁₄₇	Ү ₁₄₈	Х ₁₄₉	Ц ₁₅₀	Ч ₁₅₁	
ê3x	Ҫ ₁₅₂	€ ₁₅₃	Ә ₁₅₄	Һ ₁₅₅	Ё ₁₅₆	№ ₁₅₇	¤ ₁₅₈	§ ₁₅₉	ˆAx
ê4x	Г ₁₆₀	Г ₁₆₁	Һ ₁₆₂	Һ ₁₆₃	Һ ₁₆₄	Ж ₁₆₅	З ₁₆₆	Л ₁₆₇	
ê5x	İ ₁₆₈	Қ ₁₆₉	К ₁₇₀	К ₁₇₁	æ ₁₇₂	Ң ₁₇₃	Ң ₁₇₄	Ѕ ₁₇₅	ˆBx
ê6x	Ө ₁₇₆	Ҫ ₁₇₇	Ӧ ₁₇₈	Ү ₁₇₉	Ү ₁₈₀	Х ₁₈₁	Ц ₁₈₂	Ч ₁₈₃	
ê7x	Ч ₁₈₄	€ ₁₈₅	Ә ₁₈₆	Һ ₁₈₇	ё ₁₈₈	,, ₁₈₉	« ₁₉₀	» ₁₉₁	ˆCx
ë0x	A ₁₉₂	Б ₁₉₃	В ₁₉₄	Г ₁₉₅	Д ₁₉₆	Е ₁₉₇	Ж ₁₉₈	З ₁₉₉	
ë1x	И ₂₀₀	Й ₂₀₁	К ₂₀₂	Л ₂₀₃	М ₂₀₄	Н ₂₀₅	О ₂₀₆	П ₂₀₇	ˆDx
ë2x	P ₂₀₈	C ₂₀₉	T ₂₁₀	У ₂₁₁	Ф ₂₁₂	Х ₂₁₃	Ц ₂₁₄	Ч ₂₁₅	
ë3x	Ш ₂₁₆	Щ ₂₁₇	Ъ ₂₁₈	Ы ₂₁₉	Ь ₂₂₀	Э ₂₂₁	Ю ₂₂₂	Я ₂₂₃	ˆEx
ë4x	a ₂₂₄	б ₂₂₅	В ₂₂₆	Г ₂₂₇	Д ₂₂₈	e ₂₂₉	Ж ₂₃₀	З ₂₃₁	
ë5x	и ₂₃₂	й ₂₃₃	К ₂₃₄	Л ₂₃₅	М ₂₃₆	Н ₂₃₇	О ₂₃₈	П ₂₃₉	ˆFx
ë6x	p ₂₄₀	c ₂₄₁	T ₂₄₂	у ₂₄₃	ф ₂₄₄	х ₂₄₅	ц ₂₄₆	ч ₂₄₇	
ë7x	Ш ₂₄₈	Щ ₂₄₉	Ъ ₂₅₀	Ы ₂₅₁	Ь ₂₅₂	Э ₂₅₃	Ю ₂₅₄	Я ₂₅₅	
	ˆ8	ˆ9	ˆA	ˆB	ˆC	ˆD	ˆE	ˆF	

Example: который.

Usage

There are two basic pathways that can be followed, one based on fontspec (XeLaTeX or LuaLaTeX), the other on pure LaTeX (pdflatex).

LaTeX

The loading order of packages is important here. See the documentation of the newtx package for details. Here's an example of using newtx text and math, set up to allow the use of polytonic Greek, Russian and English as the main language.

```
\usepackage[LGR,T2A,T1]{fontenc} % spell out all text encodings used
\usepackage[utf8]{inputenc} %
\usepackage{substitutefont} % so we can use fonts other than those in babel
\usepackage[greek.polutoniko,russian,english]{babel}
\usepackage[largesc]{newtxtext} %
\usepackage[varqu,varl]{zi4}% inconsolata
\usepackage{cabin}% sans serif
\usepackage[bigdelims,vvarbb]{newtxmath}
\useosf % use oldstyle figures except in math
\substitutefont{LGR}{\rmdefault}{Tempora} % use Tempora to render Greek text
\substitutefont{T2A}{\rmdefault}{Tempora} % use Tempora to render Russian
```

Any utf8-encoded text typed outside of a `\foreignlanguage{...}` block will be rendered as T1-encoded newtxtext, while that within `\foreignlanguage{greek}` will be rendered as LGR-encoded polytonic Greek, and similarly for `\foreignlanguage{russian}`. The macro `\textgreek` made available by babel-greek may be used to avoid unicode. For example, `\textgreek{>agaj~{h}| t'uqh|?}` renders as ἄγαθὴ τάχη;. The macro `\LGCscale` can be set if you wish to rescale the Tempora text. For example, `\def\LGCscale{1.05}` will scale it up by 5%. This is handled automatically for you by newtxtext if you set its scale using the scaled option.

Fontspec

With fontspec, the setup is fairly simple. Tempora supplies a file named tempora.fontspec with contents

```
\defaultfontfeatures[tempora]
{
  Extension = .otf ,
  UprightFont = Tempora-Regular,
  BoldFont = Tempora-Bold,
  ItalicFont = Tempora-Italic,
  BoldItalicFont = Tempora-BoldItalic
}
```

This file will be read by fontspec whenever tempora is loaded as a font, thereby simplifying the information you have to provide.

EXAMPLE:

```
\usepackage{fontspec}
\defaultfontfeatures{Mapping=tex-text}
\setmainfont{TeX Gyre Termes}% assumes it to be in one of your fonts folders
\newfontfamily{\Temp}{tempora} % reads tempora.fontspec
\setsansfont[Scale=MatchLowercase,Mapping=tex-text]{Gill Sans}
\setmonofont{Inconsolata}[Scale=MatchLowercase]
```

so that utf8-encoded text within a `\Temp{}` container will be rendered using Tempora and all other text will be rendered using TeX Gyre Termes. You will most likely also wish to load the `polyglossia` package to replace `babel`.