

Georgian font encodings T8M and T8K

Levan Shoshiashvili

© Copyright 2012
28 September 2012

Contents

1	Introduction	1
2	Short history of Georgian fonts	1
3	L ^A T _E X and Georgian	2
4	Description of todo T8M and T8K encodings	2
5	Example code tables	3
6	The constraints on upper/lower case tables	5
	References	8
A	Printed book samples (1600-1900)	9

1 Introduction

In this document we describe proposed font encodings for Georgian script.

2 Short history of Georgian fonts

First printed book in Georgian appeared in 1629 in Rome with "Khucuri"(Archaic Georgian script used in church) font [1]. First printing house was established in Georgia(And in Caucasus) in 1709, where religious and civil books were printed in "Khucuri" and "Mkhedruli"(modern Georgian) script (see Appendix 1).

Printed document in "Mkhedruli"(modern Georgian) script appeared in 1728. Typeface of the "Khucuri" is not changed since first publication, but "Mkhedruli" script typeface was poorly designed. One of

the first book with typography standard georgian "Mkhedruli" glyphs apperaed in 1832 (see App. 1).

Main difference "Mkhedruli" and "Khucuri" is , that "Mkhedruli" is a caseless script—there are not "Mkhedruli" capitals. Yes, there are used "big" "Mkhedruli" letters used in saome books or journals, but glyphs are exactly same. This kind of style for georgian we can call "Georgian Small Caps". For "Khucuri" we have "Asomtavruli"(used as capitals sometimes in archaic texts) and "Nuskhuri"(used as small letters in archaic texts).

In UNICODE [2] standard "Khucuri" ("Asomtavruli" and "Nuskhuri") and "Mxedruli"(modern georgian) are presented.

3 \LaTeX and Georgian

There were designed OT1 encoded fonts for geoargian at Tbilisi State University and Georgian Technical Institute for private use. Publicity avialable fonts were designed by Johannes Heinecke [3] and Alan M. Stanier [4] are avialable at CTAN. Since UNICODE standard is used as standard and there are too many glyphs in Georgian to be covered single T encoding we have introduced two T encodings T8M and T8K for Georgian.

4 Description of T8M and T8K encodings

Since modern georgian is a caseless script and "Asomtavruli" letters are used ocassionally we have split "Khucuri" in two \LaTeX compliant (lower half is idential to T1 encoding. See [5]) encodings in T8M and T8K. Archaic letters of "Khucuri" —"Asomtavruli" and "Nuskhuri" are in "Capitals"(uppercase) positions in T8M and T8K respectively and modern Georgian—"Mkhedruli" is presented in "lowercase" positions (so "Mkhedruli" is dublicated). This lets to use hyphenation engine and hyphenation patterns for "Khucuri" script. \TeX will treat all archaic letters as uppercase and modern letters as lowercase.

\LaTeX name:	T8M, T8K
Public name:	Georgian encodings
Author:	Levan Shoshiashvili,Tbilisi State University
Glyph slots used:	0x00-0xFF
Variable slots:	— (within each encoding)
Font example:	djgr
Further reference:	

The most text commands avialable in T1 encoding can be used T8M and T8K.

\textquotedblbase	OT1,T1	”
\textquotedblleft	OT1,T1	“

<code>\textasciitilde</code>	OT1,T1	~
<code>\textbackslash</code>	OT1,T1	\
<code>\textbar</code>	OT1,T1	|
<code>\textbraceleft</code>	OT1,T1	{
<code>\textbraceright</code>	OT1,T1	}
<code>\textcompwordmark</code>	OT1,T1	(invisible)
<code>\textdollar</code>	OT1,T1	\$
<code>\textemdash</code>	OT1,T1	—
<code>\textendash</code>	OT1,T1	-
<code>\textgreater</code>	OT1,T1	>
<code>\textless</code>	OT1,T1	<
<code>\textquotedbl</code>	T1	"
<code>\textquotedblleft</code>	OT1,T1	“
<code>\textquotedblright</code>	OT1,T1	”
<code>\textquoteleft</code>	OT1,T1	‘
<code>\textquoteright</code>	OT1,T1	’
<code>\textregistered</code>	OT1,T1	®
<code>\textsection</code>	OT1,T1	§
<code>\textsterling</code>	OT1,T1	£
<code>\texttrademark</code>	OT1,T1	™
<code>\textunderscore</code>	OT1,T1	-
<code>\textvisiblespace</code>	OT1,T1	
<code>\textdagger</code>	OT1,T1	†
<code>\textnumero</code>	OT1,T1	№

5 Example code tables

This section contains a table of each T8M, T8K encoded font, providing that the font was available when the document was processed with L^AT_EX.

T8M Font encoding

	<i>0</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	
<i>00x</i>	0	1	2	3	4	5	6	7	~0x
<i>01x</i>	8	© ₉	« ₁₀	» ₁₁	® ₁₂	£ ₁₃	† ₁₄	№ ₁₅	
<i>02x</i>	„ ₁₆	“ ₁₇	18	19	20	21	22	23	~1x
<i>03x</i>	24	25	26	27	28	29	30	31	
<i>04x</i>	32	! ₃₃	" ₃₄	# ₃₅	\$ ₃₆	% ₃₇	& ₃₈	' ₃₉	~2x
<i>05x</i>	(₄₀)	)₄₁	* ₄₂	+ ₄₃	, ₄₄	- ₄₅	. ₄₆	/ ₄₇	
<i>06x</i>	0 ₄₈	1 ₄₉	2 ₅₀	3 ₅₁	4 ₅₂	5 ₅₃	6 ₅₄	7 ₅₅	~3x
<i>07x</i>	8 ₅₆	9 ₅₇	: ₅₈	; ₅₉	< ₆₀	= ₆₁	> ₆₂	? ₆₃	
<i>10x</i>	@ ₆₄	A ₆₅	B ₆₆	C ₆₇	D ₆₈	E ₆₉	F ₇₀	G ₇₁	~4x
<i>11x</i>	H ₇₂	I ₇₃	J ₇₄	K ₇₅	L ₇₆	M ₇₇	N ₇₈	O ₇₉	

'12x	P ₈₀	Q ₈₁	R ₈₂	S ₈₃	T ₈₄	U ₈₅	V ₈₆	W ₈₇	~5x
'13x	X ₈₈	Y ₈₉	Z ₉₀	[₉₁	\ ₉₂	]₉₃	^ ₉₄	_ ₉₅	
'14x	` ₉₆	a ₉₇	b ₉₈	c ₉₉	d ₁₀₀	e ₁₀₁	f ₁₀₂	g ₁₀₃	~6x
'15x	h ₁₀₄	i ₁₀₅	j ₁₀₆	k ₁₀₇	l ₁₀₈	m ₁₀₉	n ₁₁₀	o ₁₁₁	
'16x	p ₁₁₂	q ₁₁₃	r ₁₁₄	s ₁₁₅	t ₁₁₆	u ₁₁₇	v ₁₁₈	w ₁₁₉	~7x
'17x	x ₁₂₀	y ₁₂₁	z ₁₂₂	{ ₁₂₃	|₁₂₄	} ₁₂₅	~ ₁₂₆	₁₂₇	
'20x	· ₁₂₈	Ṛ ₁₂₉	Ṙ ₁₃₀	Ṛ ₁₃₁	Ṛ ₁₃₂	Ṛ ₁₃₃	Ṛ ₁₃₄	Ṛ ₁₃₅	~8x
'21x	Ṛ ₁₃₆	Ṛ ₁₃₇	Ṛ ₁₃₈	Ṛ ₁₃₉	Ṛ ₁₄₀	Ṛ ₁₄₁	Ṛ ₁₄₂	Ṛ ₁₄₃	
'22x	Ṛ ₁₄₄	Ṛ ₁₄₅	Ṛ ₁₄₆	Ṛ ₁₄₇	Ṛ ₁₄₈	Ṛ ₁₄₉	Ṛ ₁₅₀	Ṛ ₁₅₁	~9x
'23x	Ṛ ₁₅₂	Ṛ ₁₅₃	Ṛ ₁₅₄	Ṛ ₁₅₅	Ṛ ₁₅₆	- ₁₅₇	- ₁₅₈	Ṛ ₁₅₉	
'24x	₁₆₀	ḍ ₁₆₁	ḍ ₁₆₂	ḍ ₁₆₃	ḍ ₁₆₄	ḍ ₁₆₅	ḍ ₁₆₆	ḍ ₁₆₇	~Ax
'25x	ḍ ₁₆₈	ḍ ₁₆₉	ḍ ₁₇₀	ḍ ₁₇₁	ḍ ₁₇₂	ḍ ₁₇₃	ḍ ₁₇₄	ḍ ₁₇₅	
'26x	ḍ ₁₇₆	ḍ ₁₇₇	ḍ ₁₇₈	ḍ ₁₇₉	ḍ ₁₈₀	ḍ ₁₈₁	ḍ ₁₈₂	ḍ ₁₈₃	~Bx
'27x	ḍ ₁₈₄	ḍ ₁₈₅	ḍ ₁₈₆	ḍ ₁₈₇	ḍ ₁₈₈	ḍ ₁₈₉	ḍ ₁₉₀	ḍ ₁₉₁	
'30x	Ṛ ₁₉₂	Ṛ ₁₉₃	Ṛ ₁₉₄	Ṛ ₁₉₅	Ṛ ₁₉₆	Ṛ ₁₉₇	Ṛ ₁₉₈	Ṛ ₁₉₉	~Cx
'31x	Ṛ ₂₀₀	Ṛ ₂₀₁	₂₀₂	₂₀₃	₂₀₄	₂₀₅	₂₀₆	₂₀₇	
'34x	Ṛ ₂₂₄	Ṛ ₂₂₅	Ṛ ₂₂₆	Ṛ ₂₂₇	Ṛ ₂₂₈	Ṛ ₂₂₉	Ṛ ₂₃₀	Ṛ ₂₃₁	~Ex
'35x	Ṛ ₂₃₂	Ṛ ₂₃₃	Ṛ ₂₃₄	Ṛ ₂₃₅	Ṛ ₂₃₆	Ṛ ₂₃₇	Ṛ ₂₃₈	Ṛ ₂₃₉	
	~8	~9	~A	~B	~C	~D	~E	~F	

T8K Font encoding

	'0	'1	'2	'3	'4	'5	'6	'7	
'00x	0	1	2	3	4	5	6	7	~0x
'01x	8	© ₉	« ₁₀	» ₁₁	® ₁₂	£ ₁₃	† ₁₄	№ ₁₅	
'02x	„ ₁₆	“ ₁₇	18	19	20	21	22	23	~1x
'03x	24	25	26	27	28	29	30	31	
'04x	32	! ₃₃	" ₃₄	# ₃₅	\$ ₃₆	% ₃₇	& ₃₈	' ₃₉	~2x
'05x	(₄₀	)₄₁	* ₄₂	+ ₄₃	, ₄₄	- ₄₅	. ₄₆	/ ₄₇	
'06x	0 ₄₈	1 ₄₉	2 ₅₀	3 ₅₁	4 ₅₂	5 ₅₃	6 ₅₄	7 ₅₅	~3x
'07x	8 ₅₆	9 ₅₇	: ₅₈	; ₅₉	< ₆₀	= ₆₁	> ₆₂	? ₆₃	
'10x	@ ₆₄	A ₆₅	B ₆₆	C ₆₇	D ₆₈	E ₆₉	F ₇₀	G ₇₁	~4x
'11x	H ₇₂	I ₇₃	J ₇₄	K ₇₅	L ₇₆	M ₇₇	N ₇₈	O ₇₉	
'12x	P ₈₀	Q ₈₁	R ₈₂	S ₈₃	T ₈₄	U ₈₅	V ₈₆	W ₈₇	~5x
'13x	X ₈₈	Y ₈₉	Z ₉₀	[₉₁	\ ₉₂	]₉₃	^ ₉₄	_ ₉₅	
'14x	` ₉₆	a ₉₇	b ₉₈	c ₉₉	d ₁₀₀	e ₁₀₁	f ₁₀₂	g ₁₀₃	~6x
'15x	h ₁₀₄	i ₁₀₅	j ₁₀₆	k ₁₀₇	l ₁₀₈	m ₁₀₉	n ₁₁₀	o ₁₁₁	
'16x	p ₁₁₂	q ₁₁₃	r ₁₁₄	s ₁₁₅	t ₁₁₆	u ₁₁₇	v ₁₁₈	w ₁₁₉	~7x
'17x	x ₁₂₀	y ₁₂₁	z ₁₂₂	{ ₁₂₃	|₁₂₄	} ₁₂₅	~ ₁₂₆	₁₂₇	
'20x	· ₁₂₈	Ṛ ₁₂₉	Ṙ ₁₃₀	Ṛ ₁₃₁	Ṛ ₁₃₂	Ṛ ₁₃₃	Ṛ ₁₃₄	Ṛ ₁₃₅	~8x
'21x	Ṛ ₁₃₆	Ṛ ₁₃₇	Ṛ ₁₃₈	Ṛ ₁₃₉	Ṛ ₁₄₀	Ṛ ₁₄₁	Ṛ ₁₄₂	Ṛ ₁₄₃	

<i>22x</i>	ı ₁₄₄	ıh ₁₄₅	ıı ₁₄₆	ııı ₁₄₇	ıııı ₁₄₈	ııııı ₁₄₉	ıııııı ₁₅₀	ııııııı ₁₅₁	ˆ9x
<i>23x</i>	ıı ₁₅₂	ııı ₁₅₃	ıııı ₁₅₄	ııııı ₁₅₅	ıııııı ₁₅₆	ııııııı ₁₅₇	ıııııııı ₁₅₈	ııııııııı ₁₅₉	
<i>24x</i>	ıııı ₁₆₀	ııııı ₁₆₁	ıııııı ₁₆₂	ııııııı ₁₆₃	ıııııııı ₁₆₄	ııııııııı ₁₆₅	ıııııııııı ₁₆₆	ııııııııııı ₁₆₇	ˆAx
<i>25x</i>	ııııı ₁₆₈	ıııııı ₁₆₉	ııııııı ₁₇₀	ıııııııı ₁₇₁	ııııııııı ₁₇₂	ıııııııııı ₁₇₃	ııııııııııı ₁₇₄	ıııııııııııı ₁₇₅	
<i>26x</i>	ıııııı ₁₇₆	ııııııı ₁₇₇	ıııııııı ₁₇₈	ııııııııı ₁₇₉	ıııııııııı ₁₈₀	ııııııııııı ₁₈₁	ıııııııııııı ₁₈₂	ııııııııııııı ₁₈₃	ˆBx
<i>27x</i>	ııııııı ₁₈₄	ıııııııı ₁₈₅	ııııııııı ₁₈₆	ıııııııııı ₁₈₇	ııııııııııı ₁₈₈	ıııııııııııı ₁₈₉	ııııııııııııı ₁₉₀	ıııııııııııııı ₁₉₁	
<i>30x</i>	ıııııııı ₁₉₂	ııııııııı ₁₉₃	ıııııııııı ₁₉₄	ııııııııııı ₁₉₅	ıııııııııııı ₁₉₆	ııııııııııııı ₁₉₇	ıııııııııııııı ₁₉₈	ııııııııııııııı ₁₉₉	ˆCx
<i>31x</i>	ııııııııı ₂₀₀	ıııııııııı ₂₀₁	ııııııııııı ₂₀₂	ıııııııııııı ₂₀₃	ııııııııııııı ₂₀₄	ıııııııııııııı ₂₀₅	ııııııııııııııı ₂₀₆	ıııııııııııııııı ₂₀₇	
<i>34x</i>	ıııııııııı ₂₂₄	ııııııııııı ₂₂₅	ıııııııııııı ₂₂₆	ııııııııııııı ₂₂₇	ıııııııııııııı ₂₂₈	ııııııııııııııı ₂₂₉	ıııııııııııııııı ₂₃₀	ııııııııııııııııı ₂₃₁	ˆEx
<i>35x</i>	ııııııııııı ₂₃₂	ıııııııııııı ₂₃₃	ııııııııııııı ₂₃₄	ıııııııııııııı ₂₃₅	ııııııııııııııı ₂₃₆	ıııııııııııııııı ₂₃₇	ııııııııııııııııı ₂₃₈	ıııııııııııııııııı ₂₃₉	
	ˆ8	ˆ9	ˆA	ˆB	ˆC	ˆD	ˆE	ˆF	

6 The constraints on upper/lower case tables

Due to some technical restrictions of T_EX related to hyphenation it is not possible in L^AT_EX to use more than one `\lccode` or `\uccode` table. Therefore all encodings need to share these two tables which are defined to be those of the T1 encoding.

We follow ruled defiend in "Tex Encoding Guide" and have following two sets of tables list the `\uppercase` and `\lowercase` values for each position in the L^AT_EX standard 256-character tables.

Each row of each table lists:

- pos The position in the table (0-255)
- lc The value in the `\lowercase` table at the position (note that value 0 here means that `\lowercase` is ineffective for this character, and hyphenation does not apply to it)
- uc The value in the `\uppercase` table at the position (note that value 0 here means that `\uppercase` is ineffective for this character)
- glyphs The glyphs specified for the T1 encoding for this position, laid out as `<glyph>(/lowercase glyph)/(<uppercase glyph>)`

Uppercase/Lowercase tables for T8M encoding.

pos	lc	uc	glyphs	pos	lc	uc	glyphs	pos	lc	uc	glyphs	pos	lc	uc	glyphs
0	0	0	(-/-)	32	0	0	(-/-)	64	0	0	@(-/-)	96	0	0	`(-/-)
1	0	0	(-/-)	33	0	0	!(-/-)	65	97	65	A(a/A)	97	97	65	a(a/A)
2	0	0	(-/-)	34	0	0	"(-/-)	66	98	66	B(b/B)	98	98	66	b(b/B)
3	0	0	(-/-)	35	0	0	#(-/-)	67	99	67	C(c/C)	99	99	67	c(c/C)
4	0	0	(-/-)	36	0	0	\$(-/-)	68	100	68	D(d/D)	100	100	68	d(d/D)
5	0	0	(-/-)	37	0	0	%(-/-)	69	101	69	E(e/E)	101	101	69	e(e/E)
6	0	0	(-/-)	38	0	0	&(-/-)	70	102	70	F(f/F)	102	102	70	f(f/F)
7	0	0	(-/-)	39	0	0	'(-/-)	71	103	71	G(g/G)	103	103	71	g(g/G)
8	0	0	(-/-)	40	0	0	((-/-)	72	104	72	H(h/H)	104	104	72	h(h/H)
9	0	0	©(-/-)	41	0	0	)(-/-)	73	105	73	I(i/I)	105	105	73	i(i/I)
10	0	0	«(-/-)	42	0	0	*(-/-)	74	106	74	J(j/J)	106	106	74	j(j/J)
11	0	0	»(-/-)	43	0	0	+(-/-)	75	107	75	K(k/K)	107	107	75	k(k/K)
12	0	0	®(-/-)	44	0	0	,(-/-)	76	108	76	L(l/L)	108	108	76	l(l/L)
13	0	0	£(-/-)	45	45	0	-(-/-)	77	109	77	M(m/M)	109	109	77	m(m/M)
14	0	0	†(-/-)	46	0	0	.(-/-)	78	110	78	N(n/N)	110	110	78	n(n/N)
15	0	0	№(-/-)	47	0	0	/(-/-)	79	111	79	O(o/O)	111	111	79	o(o/O)
16	0	0	„(-/-)	48	0	0	0(-/-)	80	112	80	P(p/P)	112	112	80	p(p/P)
17	0	0	“(-/-)	49	0	0	1(-/-)	81	113	81	Q(q/Q)	113	113	81	q(q/Q)
18	0	0	(-/-)	50	0	0	2(-/-)	82	114	82	R(r/R)	114	114	82	r(r/R)
19	0	0	(-/-)	51	0	0	3(-/-)	83	115	83	S(s/S)	115	115	83	s(s/S)
20	0	0	(-/-)	52	0	0	4(-/-)	84	116	84	T(t/T)	116	116	84	t(t/T)
21	0	0	(-/-)	53	0	0	5(-/-)	85	117	85	U(u/U)	117	117	85	u(u/U)
22	0	0	(-/-)	54	0	0	6(-/-)	86	118	86	V(v/V)	118	118	86	v(v/V)
23	23	0	(/-)	55	0	0	7(-/-)	87	119	87	W(w/W)	119	119	87	w(w/W)
24	0	0	(-/-)	56	0	0	8(-/-)	88	120	88	X(x/X)	120	120	88	x(x/X)
25	25	73	(/I)	57	0	0	9(-/-)	89	121	89	Y(y/Y)	121	121	89	y(y/Y)
26	26	74	(/J)	58	0	0	:(-/-)	90	122	90	Z(z/Z)	122	122	90	z(z/Z)
27	27	0	(/-)	59	0	0	;-(-/-)	91	0	0	[(-/-)	123	0	0	{(-/-)
28	0	0	(-/-)	60	0	0	<(-/-)	92	0	0	\(-/-)	124	0	0	|(-/-)
29	0	0	(-/-)	61	0	0	=(-/-)	93	0	0	](-/-)	125	0	0	}(-/-)
30	0	0	(-/-)	62	0	0	>(-/-)	94	0	0	^(-/-)	126	0	0	~(-/-)
31	0	0	(-/-)	63	0	0	?(-/-)	95	0	0	_(-/-)	127	127	0	(/-)

pos	lc	uc	glyphs	pos	lc	uc	glyphs	pos	lc	uc	glyphs	pos	lc	uc	glyphs
128	160	128	:(/:)	160	160	128	(/:)	192	224	192	ᄠ(ᄡ/ᄢ)	224	224	192	ᄣ(ᄤ/ᄥ)
129	161	129	ᄤ(ᄥ/ᄦ)	161	161	129	ᄥ(ᄦ/ᄧ)	193	225	193	ᄧ(ᄨ/ᄩ)	225	225	193	ᄪ(ᄫ/ᄬ)
130	162	130	ᄦ(ᄧ/ᄨ)	162	162	130	ᄧ(ᄨ/ᄩ)	194	226	194	ᄩ(ᄬ/ᄭ)	226	226	194	ᄮ(ᄯ/ᄰ)
131	163	131	ᄨ(ᄩ/ᄪ)	163	163	131	ᄩ(ᄪ/ᄱ)	195	227	195	ᄱ(ᄲ/ᄳ)	227	227	195	ᄴ(ᄵ/ᄶ)
132	164	132	ᄪ(ᄫ/ᄬ)	164	164	132	ᄫ(ᄬ/ᄭ)	196	228	196	ᄭ(ᄮ/ᄯ)	228	228	196	ᄷ(ᄸ/ᄹ)
133	165	133	ᄬ(ᄭ/ᄮ)	165	165	133	ᄭ(ᄮ/ᄯ)	197	229	197	ᄯ(ᄰ/ᄱ)	229	229	197	ᄺ(ᄻ/ᄼ)
134	166	134	ᄮ(ᄯ/ᄰ)	166	166	134	ᄯ(ᄰ/ᄱ)	198	230	198	ᄱ(ᄲ/ᄳ)	230	230	198	ᄽ(ᄾ/ᄿ)
135	167	135	ᄯ(ᄰ/ᄱ)	167	167	135	ᄰ(ᄱ/ᄲ)	199	231	199	ᄳ(ᄴ/ᄵ)	231	231	199	ᄾ(ᄿ/ᅀ)
136	168	136	ᄱ(ᄲ/ᄳ)	168	168	136	ᄲ(ᄳ/ᄴ)	200	232	200	ᄴ(ᄵ/ᄶ)	232	232	200	ᄿ(ᅀ/ᅁ)
137	169	137	ᄳ(ᄴ/ᄵ)	169	169	137	ᄴ(ᄵ/ᄶ)	201	233	201	ᄶ(ᄷ/ᄸ)	233	233	201	ᅂ(ᅃ/ᅄ)
138	170	138	ᄴ(ᄵ/ᄶ)	170	170	138	ᄵ(ᄶ/ᄷ)	202	234	202	ᄷ(ᄸ/ᄹ)	234	234	202	ᅅ(ᅆ/ᅇ)
139	171	139	ᄶ(ᄷ/ᄸ)	171	171	139	ᄷ(ᄸ/ᄹ)	203	235	203	ᄸ(ᄹ/ᅀ)	235	235	203	ᅈ(ᅉ/ᅊ)
140	172	140	ᄷ(ᄸ/ᄹ)	172	172	140	ᄸ(ᄹ/ᅀ)	204	236	204	ᄹ(ᅀ/ᅁ)	236	236	204	ᅋ(ᅌ/ᅍ)
141	173	141	ᄸ(ᄹ/ᅀ)	173	173	141	ᄹ(ᅀ/ᅁ)	205	237	205	ᅀ(ᅁ/ᅂ)	237	237	205	ᅎ(ᅏ/ᅐ)
142	174	142	ᅀ(ᅁ/ᅂ)	174	174	142	ᅁ(ᅂ/ᅃ)	206	238	206	ᅂ(ᅃ/ᅄ)	238	238	206	ᅑ(ᅒ/ᅓ)
143	175	143	ᅂ(ᅃ/ᅄ)	175	175	143	ᅃ(ᅄ/ᅅ)	207	239	207	ᅄ(ᅅ/ᅆ)	239	239	207	ᅔ(ᅕ/ᅖ)
144	176	144	ᅄ(ᅅ/ᅆ)	176	176	144	ᅅ(ᅆ/ᅇ)	208	240	208	ᅆ(ᅇ/ᅈ)	240	240	208	ᅗ(ᅘ/ᅙ)
145	177	145	ᅆ(ᅇ/ᅈ)	177	177	145	ᅇ(ᅈ/ᅉ)	209	241	209	ᅈ(ᅉ/ᅊ)	241	241	209	ᅚ(ᅛ/ᅜ)
146	178	146	ᅈ(ᅉ/ᅊ)	178	178	146	ᅉ(ᅊ/ᅋ)	210	242	210	ᅊ(ᅋ/ᅌ)	242	242	210	ᅝ(ᅞ/ᅟ)
147	179	147	ᅊ(ᅋ/ᅌ)	179	179	147	ᅋ(ᅌ/ᅍ)	211	243	211	ᅌ(ᅍ/ᅎ)	243	243	211	ᅠ(ᅡ/ᅢ)
148	180	148	ᅌ(ᅍ/ᅎ)	180	180	148	ᅍ(ᅎ/ᅏ)	212	244	212	ᅎ(ᅏ/ᅐ)	244	244	212	ᅣ(ᅤ/ᅥ)
149	181	149	ᅎ(ᅏ/ᅐ)	181	181	149	ᅏ(ᅐ/ᅑ)	213	245	213	ᅐ(ᅑ/ᅒ)	245	245	213	ᅦ(ᅧ/ᅨ)
150	182	150	ᅐ(ᅑ/ᅒ)	182	182	150	ᅑ(ᅒ/ᅓ)	214	246	214	ᅒ(ᅓ/ᅔ)	246	246	214	ᅩ(ᅪ/ᅫ)
151	183	151	ᅒ(ᅓ/ᅔ)	183	183	151	ᅓ(ᅔ/ᅕ)	215	247	215	ᅔ(ᅕ/ᅖ)	247	247	215	ᅬ(ᅭ/ᅮ)
152	184	152	ᅔ(ᅕ/ᅖ)	184	184	152	ᅕ(ᅖ/ᅗ)	216	248	216	ᅖ(ᅗ/ᅘ)	248	248	216	ᅰ(ᅱ/ᅲ)
153	185	153	ᅖ(ᅗ/ᅘ)	185	185	153	ᅗ(ᅘ/ᅙ)	217	249	217	ᅘ(ᅙ/ᅚ)	249	249	217	ᅴ(ᅵ/ᅶ)
154	186	154	ᅘ(ᅙ/ᅚ)	186	186	154	ᅙ(ᅚ/ᅛ)	218	250	218	ᅚ(ᅛ/ᅜ)	250	250	218	ᅷ(ᅸ/ᅹ)
155	187	155	ᅚ(ᅛ/ᅜ)	187	187	155	ᅛ(ᅜ/ᅝ)	219	251	219	ᅜ(ᅝ/ᅞ)	251	251	219	ᅺ(ᅻ/ᅼ)
156	188	156	ᅜ(ᅝ/ᅞ)	188	188	156	ᅝ(ᅞ/ᅟ)	220	252	220	ᅞ(ᅟ/ᅠ)	252	252	220	ᅽ(ᅾ/ᅿ)
157	105	157	-(i/-)	189	0	0	(-/-)	221	253	221	ᅠ(ᅡ/ᅢ)	253	253	221	ᅾ(ᅿ/ᆀ)
158	158	208	—(-/)	190	0	0	(-/-)	222	254	222	ᅢ(ᅣ/ᅤ)	254	254	222	ᆀ(ᆁ/ᆂ)
159	0	0	§(-/-)	191	0	0	(-/-)	223	255	223	ᅤ(ᅥ/ᅦ)	255	255	223	ᆂ(ᆃ/ᆄ)

Uppercase/Lowercase tables for T8K encoding.

pos	lc	uc	glyphs	pos	lc	uc	glyphs	pos	lc	uc	glyphs	pos	lc	uc	glyphs
128	160	128	⋈(⋈/⋈)	160	160	128	(⋈/⋈)	192	224	192	⍈(⍈/⍈)	224	224	192	⍈(⍈/⍈)
129	161	129	⋉(⋉/⋉)	161	161	129	⋈(⋈/⋉)	193	225	193	⍉(⍉/⍉)	225	225	193	⍉(⍉/⍉)
130	162	130	⋊(⋊/⋊)	162	162	130	⋈(⋈/⋊)	194	226	194	⍊(⍊/⍊)	226	226	194	⍊(⍊/⍊)
131	163	131	⋋(⋋/⋋)	163	163	131	⋈(⋈/⋋)	195	227	195	⍋(⍋/⍋)	227	227	195	⍋(⍋/⍋)
132	164	132	⋌(⋌/⋌)	164	164	132	⋈(⋈/⋌)	196	228	196	⍌(⍌/⍌)	228	228	196	⍌(⍌/⍌)
133	165	133	⋍(⋍/⋍)	165	165	133	⋈(⋈/⋍)	197	229	197	⍍(⍍/⍍)	229	229	197	⍍(⍍/⍍)
134	166	134	⋎(⋎/⋎)	166	166	134	⋈(⋈/⋎)	198	230	198	⍎(⍎/⍎)	230	230	198	⍎(⍎/⍎)
135	167	135	⋏(⋏/⋏)	167	167	135	⋈(⋈/⋏)	199	231	199	⍇(⍇/⍇)	231	231	199	⍇(⍇/⍇)
136	168	136	⋐(⋐/⋐)	168	168	136	⋈(⋈/⋐)	200	232	200	⍈(⍈/⍈)	232	232	200	⍈(⍈/⍈)
137	169	137	⋑(⋑/⋑)	169	169	137	⋈(⋈/⋑)	201	233	201	⍉(⍉/⍉)	233	233	201	⍉(⍉/⍉)
138	170	138	⋒(⋒/⋒)	170	170	138	⋈(⋈/⋒)	202	234	202	⍊(⍊/⍊)	234	234	202	⍊(⍊/⍊)
139	171	139	⋓(⋓/⋓)	171	171	139	⋈(⋈/⋓)	203	235	203	⍋(⍋/⍋)	235	235	203	⍋(⍋/⍋)
140	172	140	⋔(⋔/⋔)	172	172	140	⋈(⋈/⋔)	204	236	204	⍌(⍌/⍌)	236	236	204	⍌(⍌/⍌)
141	173	141	⋕(⋕/⋕)	173	173	141	⋈(⋈/⋕)	205	237	205	⍍(⍍/⍍)	237	237	205	⍍(⍍/⍍)
142	174	142	⋖(⋖/⋖)	174	174	142	⋈(⋈/⋖)	206	238	206	⍎(⍎/⍎)	238	238	206	⍎(⍎/⍎)
143	175	143	⋗(⋗/⋗)	175	175	143	⋈(⋈/⋗)	207	239	207	⍇(⍇/⍇)	239	239	207	⍇(⍇/⍇)
144	176	144	⋘(⋘/⋘)	176	176	144	⋈(⋈/⋘)	208	240	208	⍈(⍈/⍈)	240	240	208	⍈(⍈/⍈)
145	177	145	⋙(⋙/⋙)	177	177	145	⋈(⋈/⋙)	209	241	209	⍉(⍉/⍉)	241	241	209	⍉(⍉/⍉)
146	178	146	⋚(⋚/⋚)	178	178	146	⋈(⋈/⋚)	210	242	210	⍊(⍊/⍊)	242	242	210	⍊(⍊/⍊)
147	179	147	⋛(⋛/⋛)	179	179	147	⋈(⋈/⋛)	211	243	211	⍋(⍋/⍋)	243	243	211	⍋(⍋/⍋)
148	180	148	⋜(⋜/⋜)	180	180	148	⋈(⋈/⋜)	212	244	212	⍌(⍌/⍌)	244	244	212	⍌(⍌/⍌)
149	181	149	⋝(⋝/⋝)	181	181	149	⋈(⋈/⋝)	213	245	213	⍍(⍍/⍍)	245	245	213	⍍(⍍/⍍)
150	182	150	⋞(⋞/⋞)	182	182	150	⋈(⋈/⋞)	214	246	214	⍎(⍎/⍎)	246	246	214	⍎(⍎/⍎)
151	183	151	⋟(⋟/⋟)	183	183	151	⋈(⋈/⋟)	215	247	215	⍇(⍇/⍇)	247	247	215	⍇(⍇/⍇)
152	184	152	⋠(⋠/⋠)	184	184	152	⋈(⋈/⋠)	216	248	216	⍈(⍈/⍈)	248	248	216	⍈(⍈/⍈)
153	185	153	⋡(⋡/⋡)	185	185	153	⋈(⋈/⋡)	217	249	217	⍉(⍉/⍉)	249	249	217	⍉(⍉/⍉)
154	186	154	⋢(⋢/⋢)	186	186	154	⋈(⋈/⋢)	218	250	218	⍊(⍊/⍊)	250	250	218	⍊(⍊/⍊)
155	187	155	⋣(⋣/⋣)	187	187	155	⋈(⋈/⋣)	219	251	219	⍋(⍋/⍋)	251	251	219	⍋(⍋/⍋)
156	188	156	⋤(⋤/⋤)	188	188	156	⋈(⋈/⋤)	220	252	220	⍌(⍌/⍌)	252	252	220	⍌(⍌/⍌)
157	105	157	-(i/-)	189	0	0	(-/-)	221	253	221	⍍(⍍/⍍)	253	253	221	⍍(⍍/⍍)
158	158	208	-(—/)	190	0	0	(-/-)	222	254	222	⍎(⍎/⍎)	254	254	222	⍎(⍎/⍎)
159	0	0	§(-/-)	191	0	0	(-/-)	223	255	223	⍇(⍇/⍇)	255	255	223	⍇(⍇/⍇)

References

- [1] ურუშბაძე: Georgian Book.1941(in Georgian). <http://tug.org/TUGboat/Articles/tb06-3/tb13beetcyr.pdf>.
- [2] The Unicode Standard. <http://unicode.org>.
- [3] Johannes Heinecke: Georgian metafont. <http://www.ctan.org/tex-archive/fonts/georgian/mxedruli>.
- [4] Alan M Stanier: Georgian Mkhedruli Font. <http://www.ctan.org/tex-archive/fonts/georgian/stanier>.
- [5] F. Mittelbach, R. Fairbairns, W. Lemberg:TEX font encodings, 2006. <http://mirror.ctan.org/macros/latex/doc/encguide.pdf>.



Figure 2: "Mkhedruli" book with Mikheil Stefane fonts. Printed in 1711

§. I.

NOMS DES ANNÉES ET DES MOIS GÉORGIENS.

Les Géorgiens appellent leur année წელი *tseli*, d'un nom qui, au pluriel, signifie *les reins* ¹, ou bien წელიწადი *tselitsadi*, année entière.

Cette année, qui est la solaire, se composa pour eux de douze mois, dans les deux époques de leur religion, et ils adoptèrent toute la série des mois romains ou grecs, mais toujours avec d'assez graves modifications dans le son des mots; იანვარი *ianwari*, ფებერვალთი *phéberwali* ou თებერვალთი *théberwali*, მარტი *marti*, აპრილი *aprili*, მაისი *maisi*, ივნისი *iwnisi*, ივლისი *iwlisi*, აგვისტო *agwisto*, სექტემბერი *secdenbéri* ou სექტემბერი *secdembéri* ou სექთებერი *secthenbéri*, ოქტომბერი *ocdonbéri* ou ოქტომბერი *ocdombéri*, ნოემბერი *noenbéri* ou ნოემბერი *noembéri*, დეკემბერი *décenbéri* ou დეკემბერი *décembéri* ².

(1) და სარტყელი ტყავისა წელთან მისთან *da sartqeli tqawisa tseltha mistha*, et la ceinture de ses reins était de peau, (Math. III, 4). La ressemblance des deux mots n'est qu'accidentelle; d'après une observation que je dois à la bienveillance de M. Saint-Martin, سال *sal*, en persan, signifie *année*; on doit penser que le mot géorgien *tseli* s'est formé de celui-là, comme *tseli*, reins, du persan سول *soul*, et წამალი *tsamali*, poison, de سام *sam*, poison, qui, en persan, a le même sens.

(2) Voyez le calendrier à la suite de la Bible, la grande Liturgie manuscrite et le *Sounaksari*, ainsi que la *Chronique géorgienne*.

Figure 4: "Georgian Chronicles". Printed in 1830

ქვემოთაჲსი აღწერა
საქართველთა
საგანისაჲსი გარეგანისაჲსი.
პეტერბურგისაჲსი
საგანისაჲსი 1842.

DESCRIPTION GÉOGRAPHIQUE

DE LA

GÉORGIE,

PAR LE

TSARÉVITCH WAKHOUCHT,

D'APRÈS L'ORIGINAL AUTOGRAPHE,



M. BROSSET,

MEMBRE DE L'ACADÉMIE IMPÉRIALE DES SCIENCES.

S.-PÉTERSBOURG,

A LA TYPOGRAPHIE DE L'ACADEMIE.

1842.

3726

Figure 5: "Georgian geography". Printed in 1842

Les princes de la branche royale du Cakheth se plaignent de la partialité de Wakhoucht en faveur des Moukhraniens, ses parents et leurs adversaires. Le patriarche Antoni, prince de Cakheth par son père, mais issu d'une princesse karthle, porte ce jugement sur notre auteur:

ვახუშტის უკებ ლეოდრაჰის ცნობას,
 ისტორიათ თქმას, ურცულბრძნად გამოცემას.
 ამან დაწუბობთ ჭართუელთა ისტორიას,
 კახთ, მეხთ, აფხაზთა, მკგრელთ, სვანთ, გუგუხთა
 აღწერა დაჭურა, შექნა ჭართუელთა:

დაუითანთა შეფუთა ცუ გუარისა
 შეჭმინა ვახუშტი წებურ და კუთილად,
 თუშტად მდურვა მიიღო ხამართლადრე.
 რამეთუ უითმე მტკრობითნიცა თქმინა
 მიხთა გამოჭმინდეს წერლთა შინა მრავალად:

„Je loue les connaissances de Wakhoucht en géographie, et son exposition profondément sage des faits historiques. En écrivant avec ordre et soigneusement l'histoire des Karthles, des Cakhes, des Meskhes, des Aphkhaz, des Mingréliens et des Caucasiens, il a rendu service à la Géorgie.

„La série des rois fils de David a été, certes, arrangée par lui bien, et convenablement, quoiqu'il ait pris pour vérités des calomnies; car on voit dans ses écrits plusieurs assertions dictées par la haine“ (Tsqobil-Sitqouaoba, § 812, 813 de mon Mit.); et dans quelques endroits de l'original de Wakhoucht des notes marginales, dues à des princes Cakhes, relèvent d'autres traits de

Figure 6: "Georgian geography". Printed in 1842