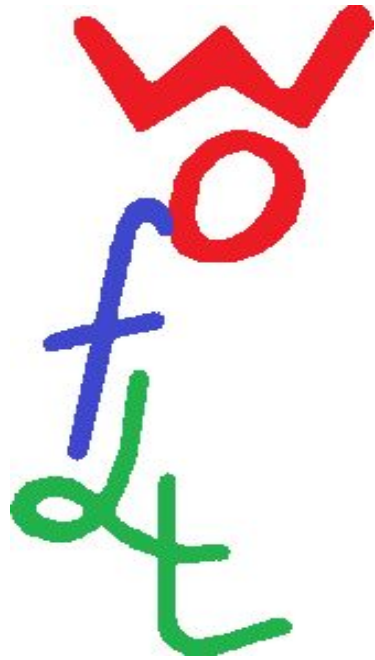


WOrld Fonemic ALphabet



colored logotype



black-white logotype

International alphabets

phonetic (e.g. IPA) – to write allophones

phonemic (e.g. Wofal) – to write phonemes

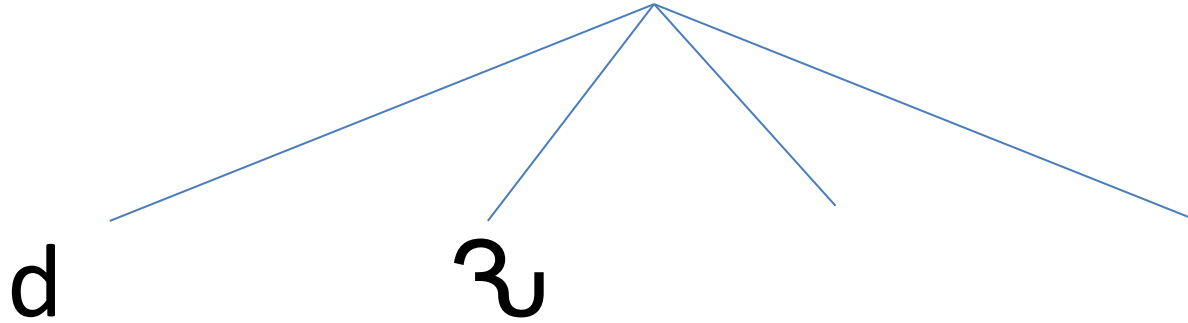
Quantum of language

Sound quantum - Phoneme

Graphic quantum - Grapheme

Digital quantum - **Baiteme**

ض



Ba(ض)=dض161

Ge(ض)= d

Si(ض) = ض

To(ض) = is absent

Nu(ض)= is absent

Sigil “ʁ” has name “emfator”

d/dʁ – د / ض

t/tʁ – ت / ط

z/zʁ – ز / ظ

s/sʁ – س / ص

k/kʁ – ك / (ك) ق, к/қ (kazakh)

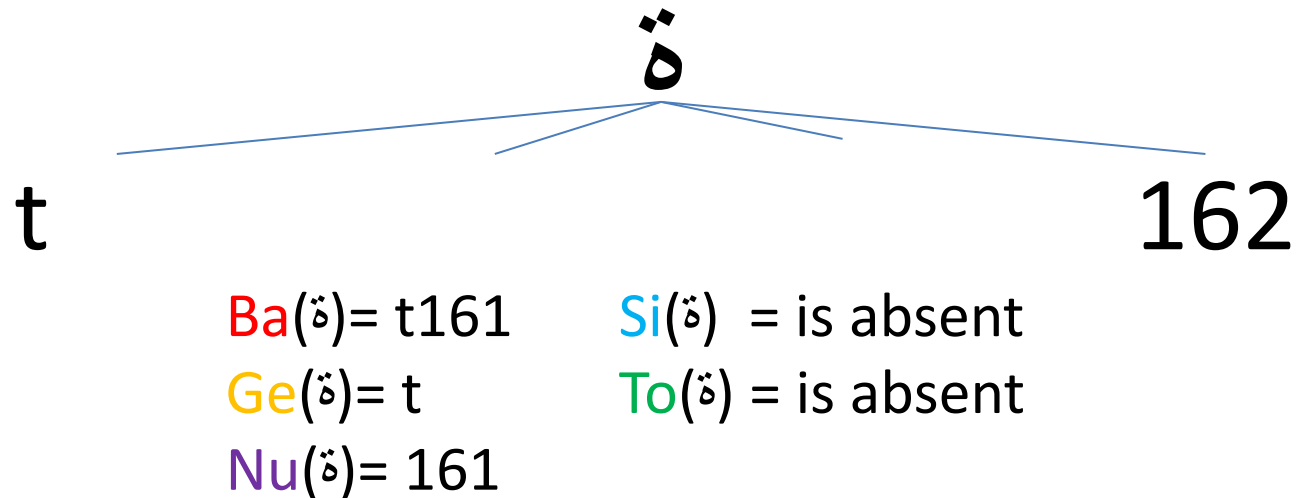
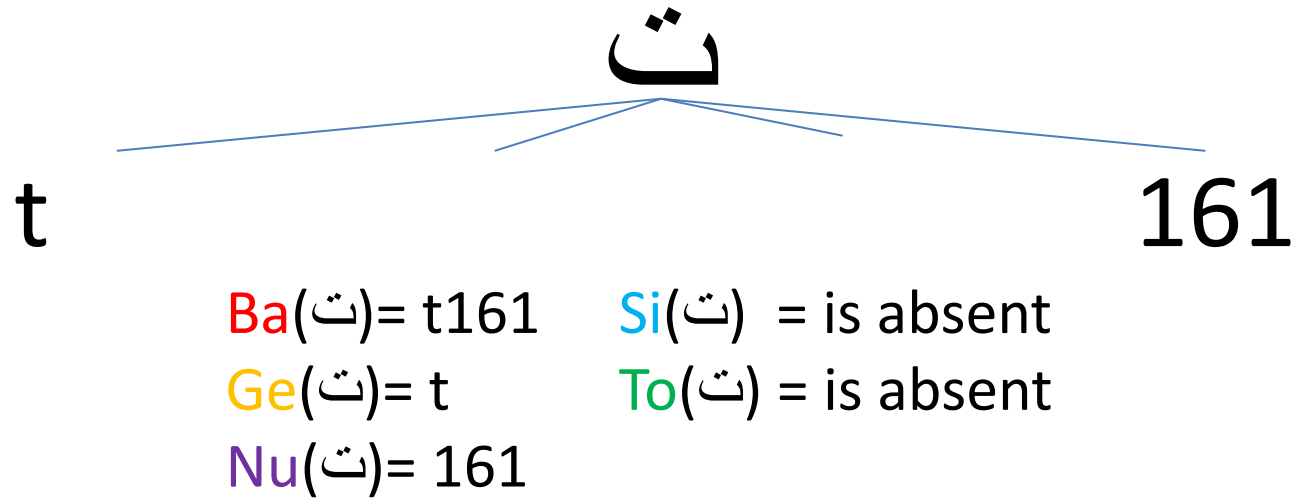
h/hʁ – ح / خ

ħ/ħʁ – ع / غ [ʁ/ʁ]

ᵝg/ᵝgʁ – [ng/nG] (serer)

Увулярные		Фарингальные	
	ɴ		
	ŋ	ɠ	
χ	ʁ	ħ	ʕ

in Arabic



in Indo-Europeans

t: ت Nu(ت) = 161

ط Nu(ط) = 162

s: ث Nu(ث) = 161

س Nu(س) = 162

ص Nu(ص) = 163

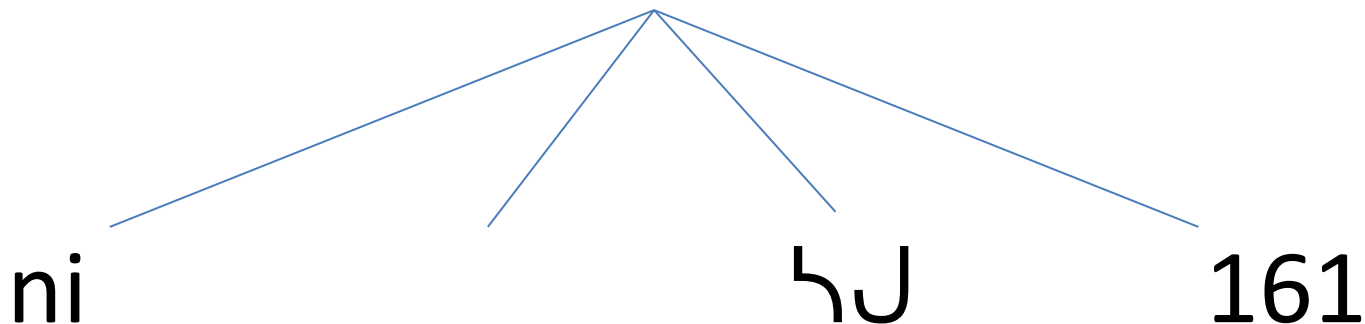
z: ذ Nu(ذ) = 161

ز Nu(ز) = 162

ض Nu(ض) = 163

ظ Nu(ظ) = 164

你



Ba(你)=niㄣㄐ161

Ge(你)= ni

Si(你) = is absent

To(你) = ㄣㄐ

Nu(你)= 161

Sigils

ʕ – emfator

d/dʕ – د / ض

t/tʕ – ت / ط

z/zʕ – ز / ظ

s/sʕ – س / ص

k/kʕ – ك / (ك) ق, κ/κ (kazakh)

h/hʕ – ح / خ

ħ/ħʕ – ع / غ [ʁ/ʕ]

ᵑg/ᵑgʕ – [ng/nG] (serer)

Увулярные		Фарингальные	
	ŋ		
q	g		
χ	ʁ	ħ	ʕ

᳚ – retr

pushto

d/d᳚ – د / د

t/t᳚ – ت / ت

r/r᳚ – ر / ر

n/n᳚ – ن / ن

z/z᳚ – ژ / ژ

ʃ/ʃ᳚ – ش / ش

urdu

d/d᳚ – د / ض

t/t᳚ – ت / ٹ

r/r᳚ – ر / ر

hausa

r/r᳚

h – aspir

ʃh – /h/, i.e. swedish **ch, sj, sk, skj, stj**

igbo phonemes can be designated
bh, ph, dh, th, gh, kh, d^h, t^h, ghw, khw

ʲ – palator

Lʲ – ЛЬ

nʲ – Ў, Ё, ñ, gn, ny, nh

zʲ – Ż, ź

ʃʲ – Щ, ś, ć

tʃʲ – Ч, ć, ħ, k

dzʲ – đ, g, ħ, r

dʲ, tʲ, zʲ, sʲ, Lʲ, nʲ – j, ch, zy, sy, ny

/t, c, d, s, l, n/ igbo

Ꞇ – nozer

nꞆ – /ŋ/: ng eng, finn,
indonesian

ng' swahili
n'Ꞇ – /gnʲ/: ण gujarati
Ꞇ newar

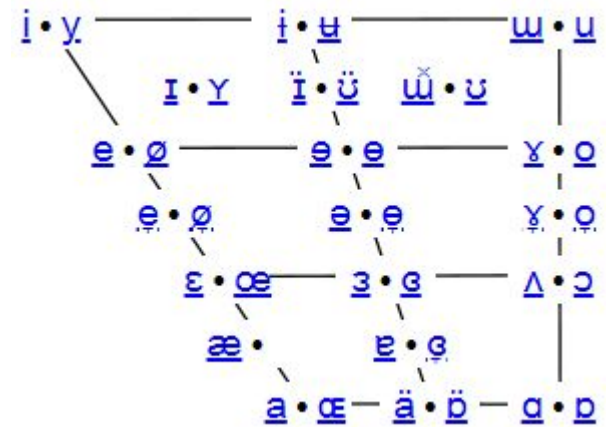
Ꞇb, Ꞇd, Ꞇg, Ꞇt, Ꞇv, Ꞇz –
/ᵐb, ᵐd, ᵐg, ᵐj, ᵐv, ᵐz/

aꞆ, eꞆ – ą, ę polish

ʝ – labiator

iʝ, eʝ, ɛʝ – germanic, turkic, finno-ugric
“ü” [y, ʏ], “ö” [ø, œ]

ɪʝ – igbo “ɸ”, dari “و” [ʊ]



ḡ – gloter

ejectiveness

□ – inhal

p□, t□ – /p, t/ serer

b□, d□ – /b, d/ serer, hausa, fula

f□, g□ – /f, g/ sindhi

□ – sailenser

↳ □ – /!/

e.g. “↳ □asa”

ψ – saider

↳ □ ψ – /tʃ/, ↳ ψ – /tʃ/

if there is no paired vocalized consonant, it is possible to omit sailenser □ before saider ψ, e.g. to write Zulu diphtong /tʃ/ as “t↳ψ” instead of “t↳ □ ψ”

ʘ – klikser

oʘ, sʘ, Lʘ, şʘ, nʘ

/θ, l, !, †, ||/

_dural

dzhak_a_s झक्कास

˘ stress

za˘mok, zamo˘k

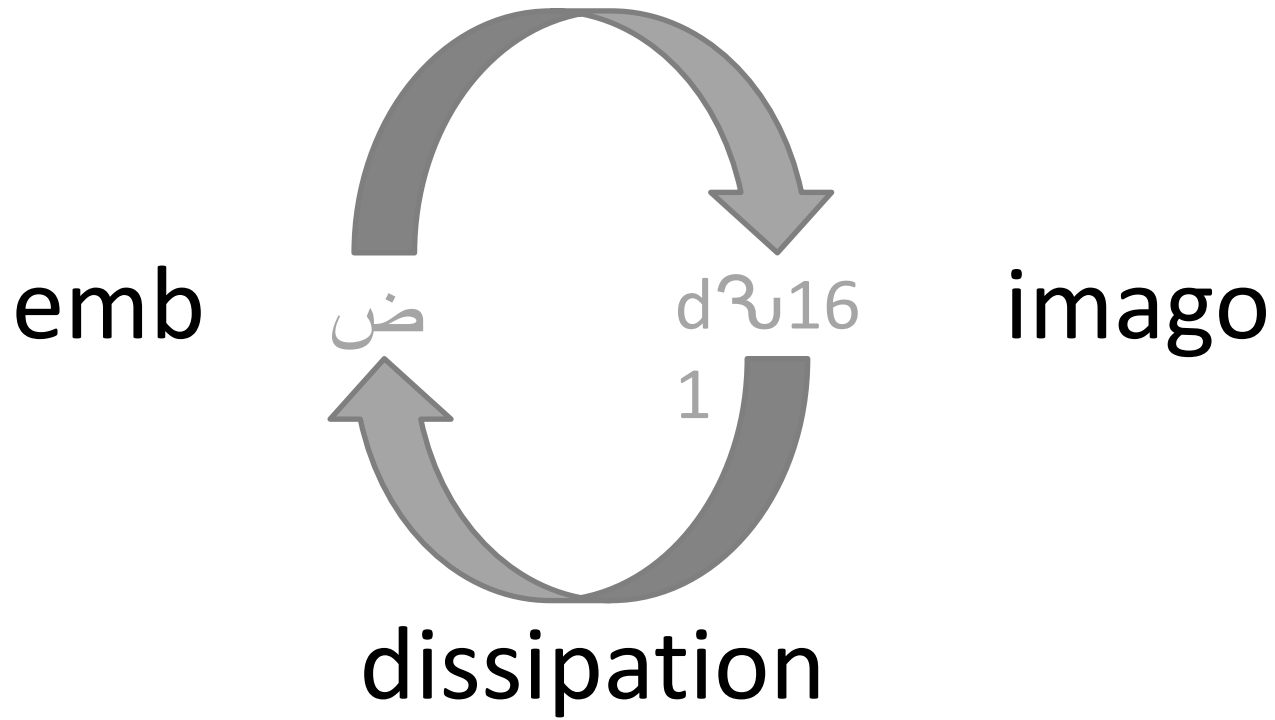
⋈, ⋉ – splitters

⋈ after alifVasla (ا)

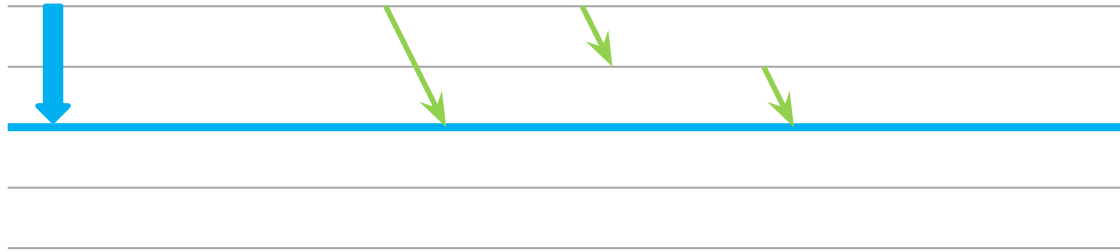
⋉ before consonants, e.g. liaison

⋉ and ⋈ frame sandhi

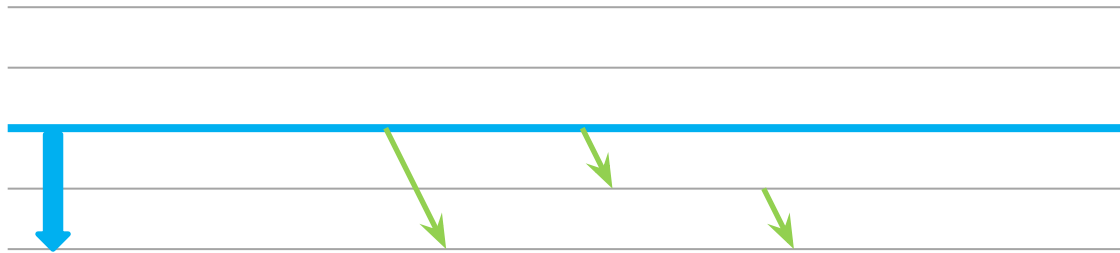
condensation



Toners

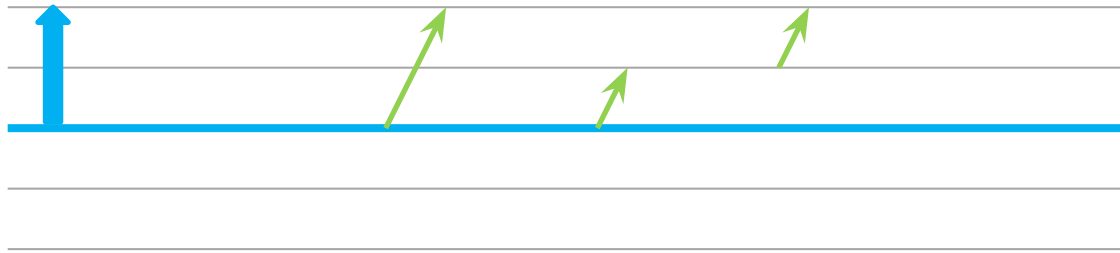


Tone 53
or 54, 43 (if 53 is absent in language),
or any following tone, ending not below 3



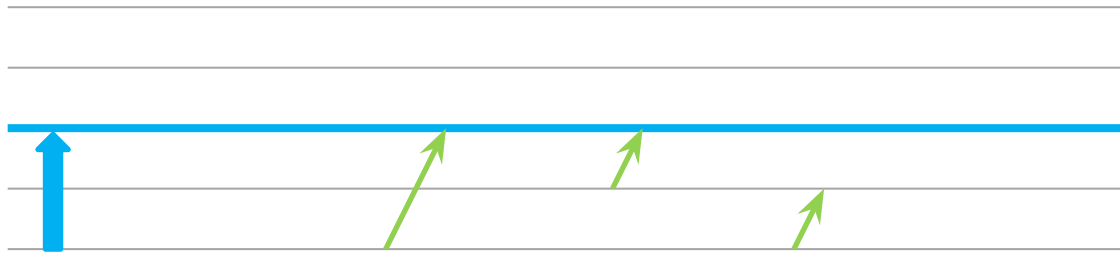
Tone 31

or 32, 21 (if 13 is absent in language),
or any following tone, beginning not above 3



Tone 35

or 34, 45 (if 35 is absent in language),
or any rising tone, beginning not below 3



Tone 13

or 23, 12 (if 13 is absent in language),
or any rising tone, ending not above 3

51 - 7

15 - J

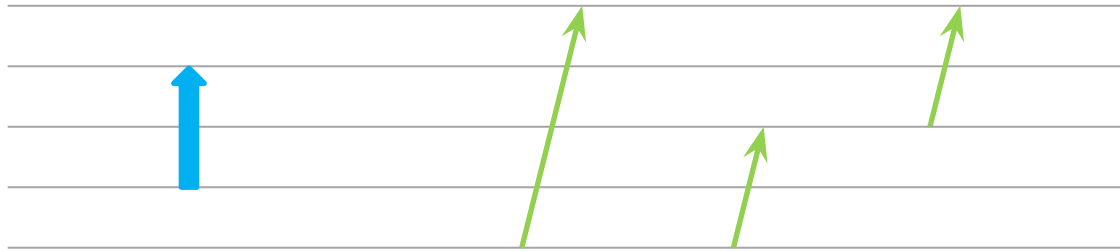
33 - 3



55 - 7

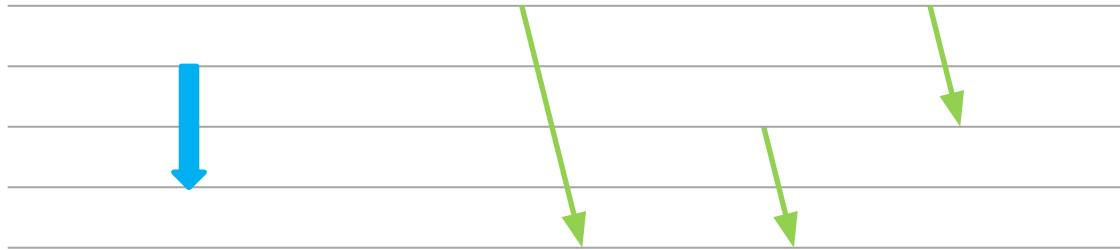
11 - J

24



24 is designated as 15, or 13, or 35, i.e.
by any not used toner

42



42 is designated as 51, or 31, or 53, i.e.
by any not used toner

Chinese

Beijing	55, 35, 51, 214	ㄉ, ㄛ, ㄋ, ㄏㄨ
Shanghainese	55, 53, 34, 13, 22, 11	ㄉ, ㄣ, ㄛ, ㄛ, ㄗ, ㄥ
Fuzhou	55, 53, 33, 213, 23, 353	ㄉ, ㄣ, ㄗ, ㄏㄛ, ㄛ, ㄛㄣ
Cantonese	55, 53, 33, 31, 35, 11	ㄉ, ㄣ, ㄗ, ㄏ, ㄛ, ㄥ
Bai	55, 44, 42, 21	ㄉ, ㄗ, ㄋ, ㄏ

Thai

Laotian	33, 35, 53, 22, '11, '21	๓, ๔, ๕, ๖, ๗, ๘
Thailandic	21, 33, 34, 451, 215	๕, ๓, ๔, ๕๖, ๕๗
Li	55, 51, 11, 13, 33, 35	๗, ๘, ๖, ๔, ๓, ๕
Zhuang	33, 31, 13, 55, 51, 24	๓, ๕, ๔, ๗, ๘, ๖

Vietnamese

mạ̀m – mamh

mạ̣m – m'amh

mạ̉m – mamhr

mạ́m – mamr

mạ̃m – m'amr

' is glottal stop

Wolei

WOfal

I AYout



colored logotype



black-white logotype

Keyboard

g ! back relay	g next nlist	w clos titl wof	e e	r 0	t fold 1	l 2	u 3	i } pgup italik	o } open @	re p prn c	ε sttg	ə help • cuf	bksp fWord bkWord del
dural stress hankor	a all abbr	s save nat	d dnld sal	f repu bm ile	g grid lt	h x go lb	h <	k) hom bold	L) pgdn -	z > +	' » :	lf prop * hunk „Lf	
THIRD KEYSSET	z redo undo cc zork	h cut x	ç copy c	v pst 7 it	b € ib	n wdw 8	m mne 9	ç , stout <	z . =	š ? kom /	SECOND KEYSSET		
CTRL		ALT	vs	all vertical all horizontal				ALT		CTRL			

1st KeySet
(without shift)

2nd KeySet
(with right shift)

6th KeySet
(with alt)

5th KeySet
(with ctrl-shift)

4th KeySet
(with any ctrl)

3rd KeySet
(with left shift)

Left alt – color for text,
Right alt – color for background

Combinations of Nine colors

verb	verb	verb	verb
preverb (prep), postverb (postp)	preverb (prep), postverb (postp)	preverb (prep), postverb (postp)	preverb (prep), postverb (postp)
jugative (adverb)	jugative (adverb)	jugative (adverb)	jugative (adverb)
secondative (adverb)	secondative (adverb)	secondative (adverb)	secondative (adverb)
noun	noun	noun	noun
prenoun (prep), postnoun (postp)	prenoun (prep), postnoun (postp)	prenoun (prep), postnoun (postp)	prenoun (prep), postnoun (postp)
adjective	adjective	adjective	adjective
numeral	numeral	numeral	numeral
nus (noun)	nus (noun)	nus (noun)	nus (noun)

colored text on white

black text on colored
background

same colors: first bleeset
for text, second bleeset –
for background

only for OS

Bam

(BAiteme-Morpheme encoding)



black-white logotype

	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	.a	.b	.c	.d	.e	.f
0.	0	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f
1.	x	g	g	h	h	i	l	l	k	L	m	n	o	o	p	r
2.	s	ş	ş	t	u	v	w	z	z	ž	'	ε	ə	ğ	ü	€
3.	↓	φ	∇	∅	∞	∞	∞	h	∞	-	-	λ	λ	λ	λ	λ
4.	∇	∇	∇	∇	∇	∇										
5.	∇	~		@	c		•	-	+	:	•	<	=	/	,	.
6.	ib	it	lb	lt	ile	?	!	»)	}	}	}]	}	»	z
7.	prop	abbr	hil	mne	zonk	sal	nat	wof	aks	rb	re			uvs	vs	Lf
8.																
9.																
a.																
b.																
c.																
d.																
e.																
f.	rifts														NiM	

Lookup tables

Arabic

w→	ara	→w
'	ء	'
'2	أ	'2
'3	إ	'3
'4	ؤ	'4
'5	ئ	'5
⊠	ؤ	⊠
⊠2	ؤ	⊠2
⊠3	ؤ	⊠3
⊠4	ؤ	⊠4
⊠5	أ	⊠5
⊠6	ي	⊠6
a	ا	a
aλ	أ	aλ
a2■	■ي	a2■
a3	و	a3
a_	آ	a_
a_2	ؤ	a_2
a_3	وا	a_3
a_4	وي	a_4

w→	ara	→w
b	ب	b
d	د	d
d2	ل	d2
dʁu	ض	dʁu
dʁu2	ل	dʁu2
dʒ	ج	dʒ
f	ف	f
f_	ف	f_
g	ه	g
g_	ه	g_
h	خ	h
h̄	غ	h̄
hʁu	ح	hʁu
h̄ʁu	ع	h̄ʁu
ɸ	ي	ɸ
ɸ2	ؤ	ɸ2
i	ي	i
i_	ي	i_
i_	ي	i_

w→	ara	→w
k	ك	k
kʁu	ق	kʁu
L	ل	L
m	م	m
n	ن	n
n2	ل	n2
r	ر	r
r2	ل	r2
s	س	s
s2	ل	s2
ś	ت	ś
ś2	ل	ś2
ʃ	ش	ʃ
ʃ2	ل	ʃ2
sʁu	ص	sʁu
sʁu2	ل	sʁu2
t	ت	t
t2	ل	t2
t3	ة	t3

w→	ara	→w
tʁu	ط	tʁu
tʁu2	ل	tʁu2
u	و	u
u_	و	u_
w	و	w
w2	و	w2
z	ز	z
z2	ل	z2
z̄	ذ	z̄
z̄2	ل	z̄2
zʁu	ظ	zʁu
zʁu2	ل	zʁu2
	■بل	■biLΔ
	■لل	■LiLΔ
	■وا	■vaLΔ
	■ال	■aλLΔ
-	ؤ	-

ara	→w
■الد	■aλd2Δd
■ال	■aλdʁu2Δdʁu
■ال	■aλn2Δn
■ال	■aλr2Δr
■ال	■aλs2Δs
■ال	■aλsʁu2Δsʁu
■ال	■aλʃ2Δʃ
■ال	■aλś2Δś
■ال	■aλt2Δt
■ال	■aλtʁu2Δtʁu
■ال	■aλz2Δz
■ال	■aλzʁu2Δzʁu
■الذ	■aλz̄2Δz̄
ؤا	⊠⊠5
ؤي	⊠⊠6
ؤي	i_ɸ2
ؤو	u_w2

Farsi/Dari, Tadjik

w	frs	box	f→w	tdz	box	t→w
'	ع	••	'	ъ	••	'
'2	ع	••	'2	ъ		
'3	ا	••	'3	ъ		
'4	ا	••	'4	ъ		
'5	ا	••	'5	ъ		
'6	ا	••	'6	ъ		
a_2	ا	•†	a_2	аъ		
a_3	ا	•†	a_3	аъ		
a_4	ا	•†	a_4	аъ		
a_5	ا	•†	a_5	аъ		
a_6	ا	•†	a_6	аъ		
a_7	ع	•†	a_7	аъ		
i_2	ا	•†	i_2	иъ		
i_3	ا	•†	i_3	иъ		
i_4	ا	•†	i_4	иъ		
i_5	ا	•†	i_5	иъ		
i_6	ا	•†	i_6	иъ		
i_7	ع	•†	i_7	иъ		
u_2	ا	•†	u_2	уъ		

w	frs	f→w	tdz	t→w
a	ا	a	а	а
a2	ا	а	а	
a3	ا	а3	а	
a4	ا	а4	а	
a_	ا	а_	аъ	а_
г	ا	г	й	г
hi			и	и
hi			и	и
i	ا	i	и	i
i_	ا	i_	иъ	i_
i'	ا		й	i'
e	ا		е	е
e2	ا		э	e2
e_	ا		еъ	e_
e'	ا		у	e'
e'_	ا		уъ	e'_
ε	ا	ε	э	
ε	ا	ε	э	
ε-ε	ا	ε-ε		

w	tdz	t→w
га	я	га
гэ	ё	гэ
гу	ю	гу
ге	е	ге
ге	е	ге
г'и	ии	г'и

Kurdish (in arabic, latin, cyrillic scripts)

w	kra	krL	krk
'	ع	'	'
b	ب	b	б
d	د	d	д
dʒ	ج	c	щ
dʒh	جھ	c'	щ'
dh	دھ	d'	д'
f	ف	f	ф
g	گ	g	г
g'	ه	h	h
h	خ	x	x
hʒ	ح	h̄	h'
hʒ	غ	x̄	g'
k	ک	k	к
kʒ	ق	q	q
kh	کھ	k'	к'

w	kra	box	kra→w	krL	box	krL→w	krk	box	krk→w
a	ا		a	a		a	a		a
a2	ئا	■*	a2	a	■*	a2	a	■*	a2
e	ئە		e	ê		e	e		e
e2	ئەئ	■*	e2	e	■*	e2	e	■*	e2
ε	ه		ε	e		ε	ə		ε
ε2	ئو	■*	ε2	e	■*	ε2	ə	■*	ε2
εʒ	هو			e'			ə'		εʒ
εʒ	و		εʒ	u		εʒ	ö		εʒ
εʒ2	ئو	■*	εʒ2	u	■*	εʒ2	ö	■*	εʒ2
ɸ	ی	•*	ɸ	γ		ɸ	й		ɸ
i	ئى	◆*	i	î		i	и		i
i2	ئىئا	■*	i2	î	■*	i2	и	■*	i2
iʒ	ق		iʒ	ü		iʒ	й		
l	ل		l	l		l	ь		l

Balochi (in Pakistan, in Afghanistan)

w	p	a	→w	k	→w
dṛ	ڌ	د	dṛ	д	dṛ
rṛ	ڙ	ر	rṛ	р	rṛ
tṛ	ٺ	ٺ	tṛ	т	tṛ
'3	اُ	اُ	'3	ь	
'4	اِ	اِ	'4	ь	
'5	وُ	وُ	'5	ь	
'6	ئ	ئ	'6	ь	
ts	ٺ	ٺ		ц	ts
ʃɹ	پس	پس		щ	ʃɹ
ɹ	ی	ی		ь	ɹ
a	ا	ا	a	a	a
ɾa				я	ɾa

w	p	a	→w	k	→w
e	ē	ē		e	e
ε	ē	ē		э	ε
i	ī	ī		и	i
i_	ī	ī		й	i_
o	ō	ō		о	o
o_	ō	ō		ō	o_
ɾ	ī	ī	ɾ	й	ɾ
ю				ё	ю
u	ū	ū		у	u
u_	ū	ū		ÿ	u_
ɯ				ю	ɯ

w		k
a_	ا	ā
e_	اے	ē
'	ع	'
'2	ء	ь
b	ب	б
d	د	д
dʒ	ج	ж
f	ف	ф
g	گ	г
g'	ح	х
g'2	ه	х

w		k
h	ح	х
ħ	خ	ф
k	ک	к
kʒ	ق	қ
l	ل	л
m	م	м
n	ن	н
p	پ	п
s	س	с
s2	ث	с
s3	ص	с

w		k
ɾ	ر	р
ʃ	ش	ш
t	ٺ	т
t2	ط	т
tʃ	چ	ч
v	و	в
ʒ	ژ	ж
z	ز	з
z2	ظ	з
z3	ذ	з
z4	ض	з

Pushto

w	pšt	box	→w
'	ع	*•	'
'2	ء	*•	'2
'3	أ	*•	'3
'4	إ	*•	'4
'5	ؤ	*•	'5
'6	ئ	*•	'6
a_3	َء	*♦	a_3
a_4	َأ	*♦	a_4
a_5	َإ	*♦	a_5
a_6	َؤ	*♦	a_6
a_7	َئ	*♦	a_7
a_8	عَ	*♦	a_8
i_2	ِء	*♦	i_2
i_3	ِأ	*♦	i_3
i_4	ِإ	*♦	i_4

w	pšt	box	→w
u_2	ُء	*♦	u_2
u_3	ُأ	*♦	u_3
u_4	ُإ	*♦	u_4
u_5	ُؤ	*♦	u_5
u_6	ُئ	*♦	u_6
u_7	ُع	*♦	u_7
a	ا	■*	a
a2	َ		a2
a3	َۀ		a3
a_	ا		a_
a_2	آ	■*	a_2
ə	ۀ		ə
ə2	َ		ə2
ɸ	ی	•*	ɸ
aɸ	ی	♦*	aɸ

w	pšt	box	→w
əɸ	ی		əɸ
əɸ2	ی	*■	əɸ2
ɸ3	ی		ɸ3
i	ِ		i
o_	و		o_
o	ُ		o
w	و	•*	w
u_	و	♦*	u_
u	ُ		u
	ئی	*■	əɸ2
	ئی		ɸ3
	نښ		m2b
m2	ن		
⊠	ا		
⊠2	ُ		⊠2

w	pšt	w	pšt
b	ب	r	ر
d	د	rɸ	ر
dz	ډ	s	س
dʒ	ج	s2	س
dɸ	ډ	s3	س
f	ف	ʃ	ش
g	ګ	ʃɸ	ش
g	ګ	t	ت
g2	ه	t2	ت
h	ه	ts	ت
ħ	ه	tʃ	ت
k	ک	tɸ	ت
kɸ	ک	z	ز
l	ل	z2	ز
m	م	z3	ز

Resume

Wofal is necessary for

learning languages with **non-ergonomic scripts**, e.g. in software Rosetta Stone, LinguaMatch, Lexiconer, KidSpeak, 101 Languages Of The World; GoldenDict

as common denominator for **comparative researches** (Urdu/Hindi, Kurmandji/Sorani/Gorani, etc), e.g. in project “DigFor”

Wofal allows

to demonstrate text both by **latin** script,
and by **original** graphemes of language –
what makes encoding “Bam” the
alternative to Unicode

to **reform orthography**,
not touching government standard

Speaker seeks

free help of **software engineers** to write:
GPL program to re-encode
Unicode-Bam, plugins for text editors
(SciTE, notepad++, etc), ttf-file with
codes of letters, equal to baiteme of
Wofal

free help of **linguists** to state
lookup tables for languages

Write a letters

