Transliteration Map

DEVNAG font

(Hindi, Marathi, Sanskrit)

itrans

1 Fonts Available

1.1 TEX Interface

The devanagari font *devnag* is a Metafont font, developed by Frans Velthuis.

This font is not bundled with the itrans package, but is available at many FTP sites. (The reason it is not bundled is that devnag is distributed under the GNU Public License. To keep out of trouble I refrain from re-distributing GNU software.)

The devnag font is in a file called `devnag.tar.Z` for UNIX systems, and `devnag.zip` for MS-DOS.

Anonymous FTP sites:
`rugrcx.rug.nl` (129.125.4.12), in the directory "`pub`"
`june.cs.washington.edu`, in the directory "`/tex`"
`cs.duke.edu` (128.109.140.1), in the directory "`dist/sources`"

Note: This FTP site info may be out-of-date, refer to the FAQ posting in USENET newsgroup comp.text.tex for up-to-date information.

Bundled with itrans is a Metafont file (dvpn10.mf) which generates a variation of the Devnag font. If you have Metafont on your system, you may use it to generate the PK and TFM files for TEX. This variation was developed by Thomas Ridgeway, and in his words, it is "a trivial variation of dvng10.mf to resemble devanagari written with an ordinary writing pen". Looks nice, so I have included the dvpn10.mf file here.

Note that the *dvpn10.mf* file alone is insufficient to generate the TEX font, the complete devnag package is required to make it usable. And, you must know enough about Metafont to run it.

Important: *itrans cannot automatically handle all the ligatures present in the devnag font. The itrans package is limited in in that only two-consonant ligatures can be supported. The Devnag font does contain many three- and four- consonant ligatures, none of which can be printed using* itrans. *See the section titled "Limitations" for more details.*

[0]Last modification: December 5, 1992

1.2 Dumb Textual Interface

Since this is a TEX font, this interface cannot be used. (The Dumb interface directly produces PostScript code, but currently I have not located any Metafont to PostScript convertor, so this interface cannot be used for Metafont fonts.)

2 Sanskrit (or Hindi) and Marathi

Two IFM files are provided with with this font.

The first IFM file is called *dvng.ifm*, and is meant to be used for text that has to be printed out in Sanskrit or Hindi.

The second IFM file is called *mdvng.ifm*, and is meant to be used for text that has to be printed out in marathi.

The only difference between mdvng.ifm and dvng.ifm is in the treatment of *ra-*<*consonant*> ligatures. The marathi file uses the marathi form of ra-half, while the dvng.ifm file uses the hindi form.

Note that both the IFM files may be referenced in one input file, as is done in this file (*devn.itx*).

Examples using dvng.ifm: `rka`→र्क, `rki`→र्कि, `rgii`→र्गी.

Examples using mdvng.ifm: `rka`→र्‍क, `rki`→र्‍कि, `rgii`→र्‍गी.

3 Font Developer

This font has been created by Frans Velthuis. I would like to thank him for making it available as freeware.

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4 Limitations

As mentioned in the first section, *itrans* makes use of only a subset of the ligatures available in the Devnag font. *itrans* only recognizes two-consonant ligatures, any ligature of more than two consonants is ignored.

The two tables (in figures 4 and 5) display the ligatures that are being used and those that are ignored. All the ra-<consonant> and <consonant>-ra ligatures are not displayed in the available list, but they are handled by itrans correctly.

अ	a
आ	aa *or* A
इ	i
ई	ii *or* I
उ	u
ऊ	uu *or* U
ऋ	R^i
ॠ	R^I
ऌ	L^i
ॡ	L^I
ए	e
ऐ	ai
ओ	o
औ	au
अं	aM
अः	aH

Vowels

०	0
१	1
२	2
३	3
४	4
५	5
६	6
७	7
८	8
९	9

Digits

क	k*a*
ख	kh*a*
ग	g*a*
घ	gh*a*
ङ	N^*a*
च	ch*a*
छ	chh*a*
ज	j*a*
झ	jh*a*
ञ	JN*a*

ट	T*a*
ठ	Th*a*
ड	D*a*
ढ	Dh*a*
ण	N*a*

त	t*a*
थ	th*a*
द	d*a*
ध	dh*a*
न	n*a*

प	p*a*
फ	ph*a*
ब	b*a*
भ	bh*a*
म	m*a*

य	y*a*
र	r*a*
ल	l*a*
व	v*a*
श	sh*a*
ष	shh*a*
स	s*a*
ह	h*a*
ळ	ld*a*
क्ष	ksh*a* *or* x*a*
ज्ञ	GY*a*

Consonants

क़	q*a*
ख़	K*a*
ग़	G*a*
ज़	z*a*
फ़	f*a*
ड़	.D*a*
ढ़	.Dh*a*
ॐ	AUM

र्ग	*ga*.r
गं	*ga*.n
ऑ	*aa*.c
डँ	*Da*.N
ड्	*D*.h
दुः	*du*H
ऽ	.a

Specials

Figure 1: **Marathi to English Transliteration Table.**

क का कि की कु कू	ka kaa ki kii ku kuu
स सा सि सी सु सू	sa saa si sii su suu
खृ खे खै खं खः खॅ खँ	khR^i khe khai khaM khaH kha.c kha.N
डे डै डं डः डॅ डँ	De Dai DaM DaH Da.c Da.N

Sample Letters

भाग्य	bhaagya
राज्य	raajya
विद्या	vidyaa
शिष्य	shishhya
मुख्य	mukhya
गाड्या	gaaDyaa
त्याग	tyaaga
ध्यान	dhyaana
न्याय	nyaaya
श्याम	shyaama
ज्योत	jyota
मनुष्य	manushhya
चांदण्या	chaa.ndaNyaa
अभ्यास	abhyaasa
कल्याण	kalyaaNa
घड्याळ	ghaDyaalda
कच्चा	kachchaa
खड्‌डा	khaD.hDaa
खड्डा	khaDDaa
गठ्ठा	gaThThaa
धक्का	dhakkaa
पत्ता	pattaa
तिप्पत	tippata
पन्नास	pannaasa
सज्जन	sajjana
पुस्तक	pustaka

कस्तुरी	kasturii
नास्तिक	naastika
प्राप्त	praapta
स्वतंत्र	svata.ntra
स्वातंत्र्य	svaata.ntr{}ya
ध्वनी	dhvanii
गोष्ट	goshhTa
युद्‌ध	yud.hdha
युद्ध	yuddha
पश्चिम	pashchima
फक्त	phakta
तर्‍हा	tarhaa
अर्थ	artha
कर्ता	kartaa
गर्दी	gardii
निर्णय	nirNaya
पत्र	patra
त्रिकोण	trikoNa
श्रावण	shraavaNa
आश्रम	aashrama
शुश्रूषा	shushruushhaa
ग्रंथ	gra.ntha
प्रजा	prajaa
द्राक्षे	draakshe
गृहस्थ	gR^ihastha
प्रकृती	prakR^itii

Sample Words

Figure 2: **Examples**

नैर्ऋत्य	naiR^i{\kern-0.45em}.r{\kern0.45em}tya
शुभ्र	shubhra
सहस्त्र	sahastra
क्रीडा	kriiDaa
स्वच्छ	svachchha
स्वरूप	svaruupa
ट्रक	Traka
आम्ही	aamhii
चतुर्थी	chaturthii
ऋतू	R^ituu
ऑक्तोबर	aa.cktobara
नोव्हेंबर	novhe.nbara
ग्रॅम	gra.cma
ऊँचा	uu.Nchaa
बैलगाडी	bailagaaDii
गुरुद्‌वारा	gurud.hvaaraa
गुरुद्वारा	gurudvaaraa
निराळ्या	niraaldyaa
ज्ञान	GYaana
मेकॅनिक	meka.cnika
म्हैस	mhaisa
देणार्या	deNaaryaa
प्रतिष्ठा	pratishhThaa
इतिहास	itihaasa
आस्थाबद्ध	aasthaabaddha
अंतरार्ष्ट्रीय	a.ntaraa.rshhTriiya

Figure 3: **Examples**

Figure 5 displays ligatures that are not used, along with their decimal character codes (font positions). I mentioned that these ligatures are not supported by itrans, since itrans cannot recognize three or more consonants in a sequence as a single ligature. But, it is possible to assign unused input tokens to represent the ligatures in figure 5. This requires knowing what unused tokens exist, and knowledge to modify the IFM file. See the technical manual (tech.tex) for details regarding the IFM file. Unused tokens could be one that you do not plan using in yout input text (`JNa, GYa,` etc) or tokens that itrans recognizes for other languages (tamil: `R, n^`, etc). The procedure would be to replace unused input tokens so as to print out the required ligature.

[abc] Will provide more details in later releases......

क क	kka	क्क
क त	kta	क्त
क न	kna	क्न
क म	kma	क्म
क य	kya	क्य
क ल	kla	क्ल
क व	kva	क्व
क ष	xa	क्ष
घ न	ghna	घ्न
ङ क	N^ka	ङ्क
ङ ख	N^kha	ङ्ख
ङ ग	N^ga	ङ्ग
ङ घ	N^gha	ङ्घ
ङ ङ	N^N^a	ङ्ङ
ङ न	N^na	ङ्न
ङ म	N^ma	ङ्म
ङ य	N^ya	ङ्य
च च	chcha	च्च
च ञ	chJNa	च्ञ
छ य	chhya	छ्य
ज ञ	jJNa	ज्ञ
ञ च	JNcha	ञ्च
ञ ज	JNja	ञ्ज
ट क	Tka	ट्क
ट ट	TTa	ट्ट
ट ठ	TTha	ट्ठ
ट य	Tya	ट्य

ठ य	Thya	ठ्य
ड ग	Dga	ड्ग
ड घ	Dgha	ड्घ
ड ड	DDa	ड्ड
ड म	Dma	ड्म
ड य	Dya	ड्य
ढ य	Dhya	ढ्य
त त	tta	त्त
त न	tna	त्न
त र	tra	त्र
द ग	dga	द्ग
द घ	dgha	द्घ
द द	dda	द्द
द ध	ddha	द्ध
द न	dna	द्न
द ब	dba	द्ब
द भ	dbha	द्भ
द म	dma	द्म
द य	dya	द्य
द व	dva	द्व
ध न	dhna	ध्न
न न	nna	न्न
प त	pta	प्त
प न	pna	प्न
प ल	pla	प्ल

ब न	bna	ब्न
ब ब	bba	ब्ब
ब व	bva	ब्व
भ न	bhna	भ्न
म न	mna	म्न
म ल	mla	म्ल
ल ल	lla	ल्ल
व न	vna	व्न
श च	shcha	श्च
श न	shna	श्न
श ब	shba	श्ब
श र	shra	श्र
श ल	shla	श्ल
श व	shva	श्व
ष ट	shhTa	ष्ट
ष ठ	shhTha	ष्ठ
स न	sna	स्न
ह ण	hNa	ह्ण
ह न	hna	ह्न
ह म	hma	ह्म
ह य	hya	ह्य
ह र	hra	ह्र
ह ल	hla	ह्ल
ह व	hva	ह्व
ज़ र	zra	ज़्र
फ र	phra	फ्र
फ़ र	fra	फ़्र

Figure 4: **Ligatures Supported**

Consonants	Ligature	Char Code
क त य	क्त्य	197
क त व	क्त्व	198
क न य	क्न्य	230
क र य	क्र्य	231
क व य	क्व्य	204
क त र य	क्त्र्य	252
ङ क त	ङ्क्त	173
ङ क य	ङ्क्य	175
ङ क ष	ङ्क्ष	176
ङ ख य	ङ्ख्य	186
ङ ग य	ङ्ग्य	190
ङ घ य	ङ्घ्य	185
ङ घ र	ङ्घ्र	192
ङ क त य	ङ्क्त्य	174
ङ क ष व	ङ्क्ष्व	177

Consonants	Ligature	Char Code
ड ग य	ड्ग्य	184
ड घ र	ड्घ्र	182
ड र य	ड्र्य	251
द ग र	द्ग्र	237
द घ र	द्घ्र	238
द द य	द्द्य	144
द द व	द्द्व	248
द ध य	द्ध्य	143
द ध व	द्ध्व	249
द भ य	द्भ्य	142
द र य	द्र्य	239
द व य	द्व्य	149
ष ट य	ष्ट्य	247
ष ट व	ष्ट्व	171
ष ट र य	ष्ट्र्य	170

Figure 5: **Ligatures NOT Supported**