<div align="center">

Transliteration Map

DEVNAC font

(Hindi, Marathi, Sanskrit)

itrans

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</div>

1 Fonts Available

1.1 TEX Interface

The devanagari font is called *devnac*, and its PostScript description resides in the file *devnac.ps*. It is a user-defined type III PostScript font. Four fonts, variations on the basic devnac font, are bundled with the itrans package. Their names (in the TEX interface) are dnh, dnho, dnhrc, and dnhre.

dnh This is the basic devanagari font. There are some other fonts available, derived by transforming this font.

dnho This is the slanted version of *dnh*.

dnhrc Both *dnho* and *dnh* look extremely heavy. A scaled down, compressed version (along the x-axis) of the basic font is available as *dnhrc*.

dnhre This is heavier than *dnh*, to be used as a bold version.

Since these are PostScript fonts, you can use them at any font size in your document. In fact, the font size must be specified when loading in the font. In this document (and in idoc.itx), the following line was used for loading the font:
`\newfont{\devnf}{dnh at 15pt}`.
Even though this document has been typeset using a 11 point size, the devanagari font is loaded in at 15 point size. This is just to emphasize the devanagari characters. Normally, I would suggest loading in the font at 15-20% greater size than the other text in the document. So, if your document is being typeset at 11 point, load in the devanagari fonts using a 13 point size. Of course, this relation of size is important only if you wish to mix english and devanagari in the same document. In any case, go wild, experiment with various font sizes. Since the characters are described as outlines in bezier curve form, smaller point sizes do not look too good on a 300dpi output device, the larger the font size, the better the shapes look.

1.2 LATEX Interface

In ITRANS version 5.2, apart from the addition of a new style file named `itrans.sty`, a font definition file for Devnac was also added. The file is named `Udvnc.fd`, and it can be used to load this font using LATEX2e commands where the font encoding is `U` (unknown) and the font family is `dvnc`. Thus, the following can be used to load the medium series with normal shape:

`\usefont{U}{dvnc}{m}{n}` and then to select a size and baselineskip: `\fontsize{18pt}{24pt}\selectfont`
The above will load the `dnh` version of this font.

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`\usefont{U}{dvnc}{b}{sl}` will load the `dnho` version, and
`\usefont{U}{dvnc}{c}{n}` will load the `dnhrc` version, and
`\usefont{U}{dvnc}{bx}{n}` will load the `dnhre` version.

1.3   Textual Interface - PostScript

A direct PostScript interface is supported. HTML and Unicode (UTF-8) are not supported for this font.

This interface does not offer any wordprocessing capabilities other than that of checking when a page is complete, and then resetting the current point to the top of the next page. Thus, all spaces, lines, etc from the input text appear in the output too.

For the PostScript mode, the user may also directly invoke PostScript commands to create various versions of the font, as required. Refer to PostScript language manuals for specific help regarding the PostScript font manipulation commands. If you decide to go this route, take a look at the file *itrans.pro*, it is the prologue that gets sent to the printer. It contains definitions of various commands such as *normalfont*, *slantfont*, *compressedfont*, etc, which may be used to change the font being used. These PostScript functions take a single argument: the font size to use. All this and more information can be obtained from the prologue file, *itrans.pro*, and PostScript users should take a look at it. For example usage, look through the sample input files provided. Files ending in *.ips* are the direct PostScript input files, itrans (with the -P option) directly produces PostScript output for these files.

The file *devnac.ps* contains the PostScript language program for this devanagari font.

1.4   Sanskrit, Hindi and Marathi

The single IFM file *dvnc.ifm* can be used for Sanskrit, Hindi or Marathi output.

The marathi form of ra-half is available through the `R` character, the second LA is at `L` (or `ld`), etc. The table displays the complete mapping from English to Devanagari for all the three Indic Scripts.

1.5   Text Interface - Unicode (UTF-8) for Sanskrit, Hindi, and Marathi

IFM file to use is named *udvng.ifm*.

Unicode (UTF-8) output is supported for this the Devanagari script, but no Unicode fonts are included with the ITRANS package. There are many Unicode fonts available on the Web, and more are being developed so it should be easy to locate a Unicode font when needed. Not all Unicode fonts fully support Indian Languages yet.

2   Known Problems

In the TEX interface, characters with any non-zero Y offset are not correctly printed in some cases, when the PostScript font Devnac is used. I have only seen this happen for the द consonant, in cases such as the da-u consonant-vowel, or the da-ra ligature, words such as *draaviiDa* (द्रावीड) or *dukaanaat* दुकानात. Note that it is only in certain cases that the word is printed incorrectly, in most cases it is handled correctly. Usually, when the word appears near the end of the line, TEX (or dvips, I'm inclined to think it is dvips) inserts a negative kern just before the character with a non-zero Y offset, and the word appears squashed up at that point. Have no remedy for this, only workaround is to force a line break before the problem word, it usually sets everything right.

I have never encountered this problem when using Frans Velthuis's Devnag font with the itrans package, therefore this problem is probably related to the use of PostScript fonts in TeX.

3   Author and Font Developer

The Devnac font has been developed by Avinash Chopde.
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Vowels

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

Consonants

क	ka
ख	kh$a$
ग	ga
घ	gh$a$
ङ	~Na *or* N^a
च	ch$a$
छ	chh$a$
ज	ja
झ	jh$a$
ञ	~na *or* JNa
ट	Ta
ठ	Tha
ड	Da
ढ	Dha
ण	Na
त	ta
थ	th$a$
द	da
ध	dh$a$
न	na
प	pa
फ	ph$a$
ब	ba
भ	bh$a$
म	ma
य	ya
र	ra
ल	la
व	va *or* wa
श	sh$a$
ष	Sha *or* shh$a$
स	sa
ह	ha
ळ	ld$a$ *or* La
क्ष	kSha *or* xa
ज्ञ	j~na *or* GYa

Digits

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

Specials/Accents

क़	qa
ख़	Ka
ग़	Ga
ज़	Ja *or* za
फ़	fa
ड़	.Da
ढ़	.Dha
ॐ	AUM or OM
ङ्ग	Rga
र्ग	rga *or* ga^r
गं	ga.n
ऑ	aa.c
डँ	Da.N
ड	D.h
दुः	duH
ऽ	.a

Table 1: **ITRANS: Devanagari to English Transliteration Table.**

Sample Letters

क का कि की कु कू	ka kaa ki kii ku kuu
स् स सा सि सी सु सू	s.h sa saa si sii su suu
खृ खे खै खं खः खॉ खँ	khRRi khe khai khaM khaH kha.c kha.N
डे डै डं ङः डॉ डँ	De Dai DaM DaH Da.c Da.N

Sample Words

भाग्य	bhaagya
राज्य	raajya
विद्या	vidyaa
शिष्य	shishhya
मुख्य	mukhya
गाड्या	gaaDyaa
त्याग	tyaag
ध्यान	dhyaan
न्याय	nyaay
श्याम	shyaam
ज्योत	jyot
मनुष्य	manushhy
चांदण्या	chaa.ndaNyaa
अभ्यास	abhyaas
कल्याण	kalyaaN
घड्याळ	ghaDyaald
कच्चा	kachchaa
खड्डा	khaD.hDaa
गठ्ठा	gaTh.hThaa
धक्का	dhakkaa
पत्ता	pattaa
तिप्पत	tippat
पन्नास	pannaas
सज्जन	sajjan
पुस्तक	pustak

कस्तुरी	kasturii
नास्तिक	naastik
प्राप्त	praapt
स्वतंत्र	swata.ntr
स्वातंत्र्य	svaata.ntrya
ध्वनी	dhvanii
गोष्ट	goshhT
युद्ध	yud.hdh
युद्ध	yuddh
पश्चिम	pashchim
फक्त	phakt
तर्हा	tarhaa
अर्थ	arth
कर्ता	kartaa
गर्दी	gardii
निर्णय	nirNay
पत्र	patr
त्रिकोण	trikoN
श्रावण	shraavaN
आश्रम	aashram
शुश्रूषा	shushruushhaa
ग्रंथ	gra.nth
प्रजा	prajaa
द्राक्षे	draakShe
गृहस्थ	gRRihasth
प्रकृती	prakR^itii

Table 2: **Examples**

नैर्ऋत्य	nairR^itya
शुभ्र	shubhr
सहस्त्र	sahastr
क्रीडा	kriiDaa
स्वच्छ	svachchh
स्वरूप	svaruup
ट्रक	Trak
आम्ही	aamhii
चतुर्थी	chaturthii
ऋतू	RRituu
ऑक्टोबर	aa.cktobar
नोव्हेंबर	novhe.nbar
ग्रॅम	gra.cm
ऊँचा	uu.Nchaa
बैलगाडी	bailagaaDii
गुरुद्वारा	gurud.hvaaraa
गुरुद्वारा	gurudvaaraa
निराळ्या	niraaldyaa
ज्ञान	GYaan
मेकॅनिक	meka.cnik
म्हैस	mhais
देणार्या	deNaaryaa
प्रतिष्ठा	pratishhThaa
इतिहास	itihaas
आस्थाबद्ध	aasthaabaddh
अंतर्राष्ट्रीय	a.ntarraashhTriiy

Table 3: **More Examples**