<div align="center">

Transliteration Map

NCS_CSX font

(Romanized Sanskrit)

itrans

©1996–2001 Avinash Chopde

</div>

1   Fonts Available

1.1   TEX Interface

The romanized sanskrit font is called *NCS_CSX+-Roman,* and its PostScript description resides in the file *ncpr___.pfb.* It is a Type 1 PostScript font. A second font, which is an italic version is also available *ncpi___.pfb.* A bold version of the font is also available, as well as Mac versions, but they are not bundled in with ITRANS. You can download the bold version of NCS_CSX from the Internet, see the following section titled "Font Developer."

Since these are PostScript fonts, you can use them at any font size in your document. Here are two examples of loading these fonts (see romancsx.itx for example usage):

```
\newfont{\csroman}{ncpr at 10pt}.
```
   or
```
\newfont{\csromani}{ncpi at 10pt}.
```

1.2   Direct PostScript Interface

This font can be used with the -P option of ITRANS, to produce direct PostScript output.

This can be used when you don't want to use TEX for typesetting. There are a few sample files provided which show how to use this Direct PostScript Output mode (the files ending in .ips are the Direct PostScript output files).

1.3   Direct Text Interface

This font can be used with the -7 or -8 option of ITRANS, to produce direct Text (HTML) output. This can be used to convert input ITRANS encoded texts into the Classical Sanskrit encoding, and that output text can be viewed using a CS/CSX font on HTML browsers such a Netscape (3.0 or later). For details on the Classical Sanskrit font encoding, see Dominik Wujastyk's documents on the Internet, search for the keywords Indology or Classical Sanskrit, or visit the ftp site listed in the "Font Developer" section of this document. That ftp site also contains other variations of the NCS_CSX font, which includes a bold version of the font, and also contains many other CS/CSX fonts.

The -7 or -8 mode, with a little bit of output editing, can be used in interesting ways — this can be used to convert all ITRANS encoded text into CS/CSX encoded text. And since ITRANS also accepts CS/CSX encoded text as input, this offers a way to move to 8-bit input text encoding, and also retain all the advantages of the original ITRANS documents!

---

[0]Last modification: December 4, 2009

1.4 Font Developer

The NCS fonts have been taken from this site:

`ftp://bombay.oriental.cam.ac.uk/pub/john/software/fonts/csx+/`

As mentioned in the readme there, "The fonts in this archive implement the CSX+ character set designed for use in printing Indian language material in Roman script. They are based on fonts designed by URW++ Design and Development Incorporated, Germany."

For more information, visit Dr. John D Smith's home page, at
`http://bombay.oriental.cam.ac.uk/index.html`

1.5 CS/CSX Encoding

During the 8th World Sanskrit Conference, Vienna 1990, a panel was held to discuss the standardization of Sanskrit for electronic data transfer. Dominik Wujastyk presented a paper, titled "Standardization of Sanskrit for Electronic Data Transfer and Screen Representation," which outlines the Classical Sanskrit and Classical Sanskrit Extended Encoding. The original paper is available in a .zip archive, named "iass.zip" available at: `ftp.bcc.ac.uk:/pub/users/ucgadkw/indology`.

2 Example usage

This input:

```
#roman

karmaNyevaadhikaaraste maa phaleshhu kadaachana |
maa karmaphalaheturbhuurmaa te sa~Ngo.astvakarmaNi || 47 ||
\csromani
yogasthaH kuru karmaaNi sa~Nga.n tyaktvaa dhana.njaya |
sid.hdhyasid.hdhyoH samo bhuutvaa samatva.n yoga uchyate || 48 ||

#endroman
```

produces:

karmaṇyevādhikāraste mā phaleṣu kadācana |
mā karmaphalaheturbhūrmā te saṅgo.astvakarmaṇi || 47 ||
yogasthaḥ kuru karmāṇi saṅgaṃ tyaktvā dhanaṃjaya |
siddhyasiddhyoḥ samo bhūtvā samatvaṃ yoga ucyate || 48 ||

---

3 Author

ITRANS has been developed by Avinash Chopde.
E-mail: `avinash@aczoom.com`.
Home page: `http://www.aczoom.com/`

Vowels

a	a
ā	aa *or* A
i	i
ī	ii *or* I
u	u
ū	uu *or* U
ṛ	RRi *or* R^i
ṝ	RRI *or* R^I
ḷ	LLi *or* L^i
ḹ	LLI *or* L^I
e	e
ai	ai
o	o
au	au
aṃ	aM
aḥ	aH

Digits

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Consonants

ka	ka
kha	kh$a$
ga	ga
gha	gh$a$
ṅa	~Na *or* N^a
ca	ch$a$
cha	Cha *or* chh$a$
ja	ja
jha	jh$a$
ña	~na *or* JNa
ṭa	Ta
ṭha	Tha
ḍa	Da
ḍha	Dha
ṇa	Na
ta	ta
tha	th$a$
da	da
dha	dh$a$
na	na
pa	pa
pha	ph$a$
ba	ba
bha	bh$a$
ma	ma
ya	ya
ra	ra
la	la
va	va
śa	sh$a$
ṣa	Sha *or* shh$a$
sa	sa
ha	ha
lda	ld$a$ *or* La
kṣa	kSha *or* xa
jña	j~na *or* GYa

Specials/Accents

qa	qa
Ka	Ka
Ga	Ga
za	Ja *or* za
fa	fa
.Da	.Da
.Dha	.Dha
OM	AUM *or* OM
Rga	Rga
ga^^r	ga^r
gaṃ	ga.n
ā.c	aa.c
ḍa.N	Da.N
ḍ	D.h
duḥ	duH
.a	.a

Table 1: **ITRANS: Romanized Sanskrit to English Transliteration Table**.