



3.3 INSFOC (Indian Standard Font Code)

The proposed font standard is targeted towards the following class of users

- (1) Data Processing
- (2) Office Users / Word Processing
- (3) Textbook Publishers
- (4) Web Content Creators
- (5) Desktop Applications

It is certainly not targeted towards professional desktop publishers, advertising agencies and highly Sanskritized text content creators.

The font is laid out such that the font remains unchanged between the character locations 0x80 to 0xFF in Monolingual and Bilingual Font layout. The monolingual font contains more compound characters and conjuncts.

Rules for Composing Devanagari Text

(1) The Devanagari characters lying in the codes 0x80 to 0xFF are designed to be kept in the same location for Devanagari bilingual font. Here a majority of the consonants are kept in their half form. The full consonant is formed by adding a 'kana' (Vertical stroke- 0xDE) to the half form. It is recommended that the kana located at 0xDC be used for that purpose. For example

$$\text{ॠ (0xAA)} + \text{। (0xDE)} = \text{ग}$$

(2) There are two matras (Vowel Signs) of vowel I (इ) with different overhanging spans. These matras are located at 0x4C and 0xE1. The matra at 0x4C is used for the wider letters like ka (क), fa (फ) as shown below:

$$\text{क (0xA7)} + \text{ी (0x4C)} = \text{की}$$

The matra at 0xE1 is used for other letters, which are not wider like Ma (म), Ra (र), Ya (य) etc. for example

$$\text{म} + \text{ी (0xE1)} = \text{मी}$$

$$\text{र} + \text{ी (0xE1)} = \text{री}$$

The matras shown at code points 0x4A and 0x4D are with the rakar (र Ra is coming in a syllable and being pronounced before the consonant to which it is applied) and with different overhanging spans. For example : प्रार्थी, तुर्की

The matras shown at code points 0x4B and 0x4E are with the rakar & Anuswar and with different overhanging spans.

(3) Similarly, there are three types of the matras of

vowel sign (इ) with different overhanging spans. These matras are located at locations 0xDF, 0xE0 and 0x4F. The matra at 0xDF is used for normal size letters such as र (Ra), क (Ka), फ (Fa), ड (dha) etc. For example

$$\text{ि (0xDF)} + \text{र (0xC7)} = \text{रि}$$

$$\text{ि (0xDF)} + \text{क (0xA7)} = \text{कि}$$

The other form of matra of vowel I (इ) is used for wider letters such as स (Sa), म (Ma), य (Ya) etc. For example

$$\text{ि (0xE0)} + \text{म (0xC5)} = \text{मि}$$

$$\text{ि (0xE0)} + \text{स (0xCD)} = \text{सि}$$

The third form of the matra of vowel I (इ) is used when there is a half form of a consonant in a word. In this case the matra is attached to the 'Kana' (Vertical stroke) of the preceding consonant. For example in the words स्थित, शक्ति etc.

(4) The shifted ukar and ookar (Vowel signs for u and uu) located at 0x42 and 0x43 are to be used with characters which are not having full Kana and in this characters the matra is attached to the center lower part of the characters such as in डु, टू

(5) The rakar located at '0xEB' is provided for characters क (Ka), फ (Pha), म (Ma), भ (Bha), व (Va), न (Na), ब (Ba), etc. This rakar is attached to the characters at slightly upwards shifted position (almost at the middle of Kana). For example as in वक्र, नम्र

(6) The rakar located at 0x05 is provided for characters ग (Ga), च (Ca), ज (Ja), थ (Tha), घ (Gha), ध (Dha), य (Ya) etc. This rakar is attached to the characters at slightly downwards shifted position. For example व्यग्र, वज्र, व्याघ्र

(7) The widths of letters क (Ka), फ (Pha), रु (RRu), रू (Roo) etc. are reduced by the width of the fixed kern space located at 0xFD to ensure proper anchoring of matras.

(8) The widths of letters त (TTa), थ (Tha), द (Da), त + त (Ta+Ta), थ + थ (Tha+Tha), etc. are reduced by the width of the fixed kern space located at 0xFE to ensure proper anchoring of matras.

(Courtesy : Sh. M.D. Kulkarni, C-DAC, Pune
E-mail : mdk@cdac.ernet.in Tel : 020-5694092)



PROPOSED FONT STANDARD FOR DEVANAGARI																
	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL	DLE		0	@	,		ठ				छ	८	ळ	f	5
1	SOH	DC1	!	1	.	क	२	प		'	अ		फ	ळ	ी	३००
2	STX	CD2	'	2	,	ख	श	ब		'	इ	३	फ	क्ष	०	श
3	ETX	CD3	#	3	.	ङ	श	भ		"	उ	३	ह	इ	०	३
4	EOT	CD4	\$	4	,	ङ	रु	म		"	ऊ	३	६	ल	०	३
5	ENQ	NAK	%	5	.	उ	ख	य		३	ए		६	३	'	३
6	ACK	SYN	&	6	,	उ	ह	ल		-	ऋ		३	३	'	३
7	BEL	ETB	"	7	,	उ	ह	व		-	क	•	३	रु	'	३
8	BS	CAN	(8	,	उ	ख	ष		३	व	३	३	रु	'	३
9	HT	EM)	9	,	दृ	घ	स		३	ख	३	३	च	'	३
A	LF	SUB	*	:	,	३	च	६		३	३	३	३	३	'	३
B	VT	ESC	+	;	,		ज	{		३	३	३	३	३	'	३
C	FF	FS	,	<	,		झ			३		३	३	:	'	३
D	CR	GS	-	=	,		त	}				३	३	३	'	(क)
E	SO	RS	.	>	,		थ	~			३	३	३	३	'	(३)
F	SI	US	/	?	,		ध			३		३	३	३	'	३