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GOVERNMENT OF INDIA
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MINISTRY OF COMMUNICATIONS AND INFORMATION TECHNOLOGY
सूचना प्रौद्योगिकी विभाग
DEPARTMENT OF INFORMATION TECHNOLOGY
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नई दिल्ली / NEW DELHI - 110 003

ICT Enablement of new Rupee Symbol ₹ and Standardization of Keyboard layouts

Govt. of India has recently approved the New Rupee Symbol ₹ and there is now urgent need for its representation in the INSCRIPT Keyboard layout and the Qwerty Keyboard. A meeting involving all major stakeholders was held on Aug 13, 2010 ; at Dept of Information Technology, NewDelhi to deliberate all the pending issues for finalization of the INSCRIPT and Qwerty Keyboard layout compatible with latest UNICODE version and inclusion of new Rupee Symbol , so that the matter can be taken up with BIS for declaration as National Standard.

Based on the feedbacks received from the major stake holders , the second meeting was held on Aug 31, 2010 at DIT to converge upon a single solution for incorporation of new New Rupee Symbol ₹ . The list of participants are at Annexure –I.

Following were deliberated:

I. QWERTY & INSCRIPT Keyboard layout:

Two options were short listed out of the possible options short-listed at the last meeting. [The options deliberated in the last meeting are : AltGR + 4 , AltGR + r , AltGR + \ and AltGR + `]

- (1) AltGR + 4
- (2) AltGR + r

The Keyboard which do not have specific ALTGr key , then the combination ctrl + alt+ 4 should produce the same output as that of AltGr +4 .

• **Merits of selecting AltGR + 4**

1. It is placed in the same row where all other International Currency Symbol were present
2. Good Mnemonic values with Dollar sign
3. On US International keyboard, Currently Generic Currency symbol is present which will be replaced by Rupee Symbol ₹, which is being used by other country specific Keyboards for their currency symbol implementation.
4. Enhance INSCRIPT Keyboards for Indian Languages required minimal change to accommodate new Rupee symbol at the above mentioned position.

• **Logic behind not accepting AltGR + r**

1. Coherence with respect to currency symbol on the Top Row of 'Normal Layout' could not be maintained.
2. Requires major changes with INSCRIPT keyboard Layout

All the stakeholders consisting of OS Developers, PC manufacturers, Keyboard Manufacturers, Printer and terminal manufactures agreed unanimously on the option 'AltGr +4' for implementation of New Rupee symbol for en-In Qwerty and INSCRIPT keyboard layout .

II. Rupee Symbol on ISCII code page :

It has been decided in the meeting that , the code point 'FC' may be allocated for the New Rupee Symbol in the ISCII & PC- ISCII code page and necessary modifications need to be carried out all other points.

III. Specific Action point for OS developers

The OS developers need to provide keyboard drivers / software patches for implementation of the New Rupee symbol within 3 months timeframe. Any other changes which may be required in case of any conflict with AltGR + 4 need also to be rectified by OS developers.

IV. Printing Solutions for Non-UNICODE and 8 bit printers

- TVSE and WeP Peripheral solutions need to explore ISCII code page for implementation of the 8 bit printing solutions for promoting a standard solution.
- Specific code page requirements for supporting Windows 1252 code page as required for the legacy application support may be communicated to Microsoft for necessary action at their end.
- Microsoft may be requested to add new code page PC-890 for supporting ASCII based printing.

V. Enabling ICT eco-system with new Rupee Symbol ₹ and the Status

SI No	Characteristics	Standards	Responsibility	Status
1.	Encoding	1. UNICODE	TDIL-DIT	UNICODE consortium assigned U + 20B9 in the currency symbol page in UNICODE Std 6.0
		ISO 10646	TDIL-DIT & BIS	Accepted by ISO and included in ISO 10646
		ISCII :IS 13194	BIS	Notification issued by BIS
2.	Keyboard Layout	IS 14442	BIS	Notification issued by BIS
3.	Currency Code	ISO 4217	BIS	To be taken up
4.	Font Interchange format	ISO/IEC 9541	TDIL , C-DAC & BIS	To be taken up

5.	Web Open font format (WOFF)	W3C	TDIL & W3C	To be taken up
6.	Glyph Registration	ISO/IEC 10036	TDIL , C-DAC & BIS	To be taken up
7.	OCR	ISO-1073-2	BIS	To be taken up
8.	HTML	W3C HTML 4.0 & HTML 5.0 WGs	TDIL W3C	To be taken up
9.	Mobile Keypad & Fonts		TDIL-DIT & Major Mobile Manufacturers and OS	Also to be taken up in near future

Major Milestones:

1. All the stakeholders consisting of OS Developers, PC manufacturers, Keyboard manufacturers, Printer and terminal manufactures agreed unanimously on the option 'AltGr +4' for implementation of New Rupee symbol for en-IN Qwerty and INSCRIPT keyboard layout .
2. The code point 'FC' may be allocated for the New Rupee Symbol in the ISCII & PC- ISCII code page and necessary modifications need to be carried out all other points. BIS has already issued notification in this respect
3. The process of declaring standard for modified en-IN Qwerty Keyboard Layout [IS :14441] with new Rupee Symbol, enhanced INSCRIPT Keyboard layouts for all Indian Languages with new Rupee Symbol. BIS has already issued notification in this respect
4. The OS developers need to provide keyboard drivers / software patches for implementation of the New Rupee symbol within 3 months timeframe.
5. MAIT in consultations with all major stakeholders and its members would produce a best practices and guidelines for implementation of ₹ -ready solutions and its proliferation
6. The modifications/additions required for enabling ICT eco-system with new ₹ symbol would be taken-up by TDIL-DIT in collaboration with BIS and other stake-holders.

Industry Actions:

1. Microsoft has already released patch for enabling new rupee symbol ₹ for Windows Vista, in Windows Server 2008, in Windows 7 and in Windows Server 2008 R2 and is available at :<http://support.microsoft.com/kb/2496898>.
2. Redhat would be releasing update for enabling new rupee symbol ₹ for Fedora and Redhat Linux versions soon.

List of Participants

- | | |
|---|---------------------------|
| 1. Dr. Swaran Lata, Director and Head , | TDIL Programme , DIT |
| 2. Dr. Laxman Swarup | BIS , Govt. of India |
| 3. Shri Abhijit Dutta , | IBM , India |
| 4. Shri Satish Mohan | Redhat, India |
| 5. Dr. Sudarshan Murthy , | Wipro |
| 6. Shri Raju J.S. | HP , India |
| 7. Abhishek Mohanty | HP , India |
| 8. Gnanavel Couppousamy , | Lenovo India |
| 9. Dinesh Rajpal | HCL , India |
| 10. Manoj Tewari | HCL , India |
| 11. Shri Rohit Gupta | TVS Electronics |
| 12. Avinash Ramachandra | Dell India |
| 13. Shri Manoj Zadoo | WeP peripherals, India |
| 14. B. Perual | Wep peripherals, India |
| 15. Piyush Kapur | Printronic |
| 16. Salu Grover | C-DAC Pune |
| 17. Neha Gupta | C-DAC Pune |
| 18. Shri Amit Chadha | MAIT |
| 19. Dr. Somnath Chandra | TDIL ,DIT—Member Convener |

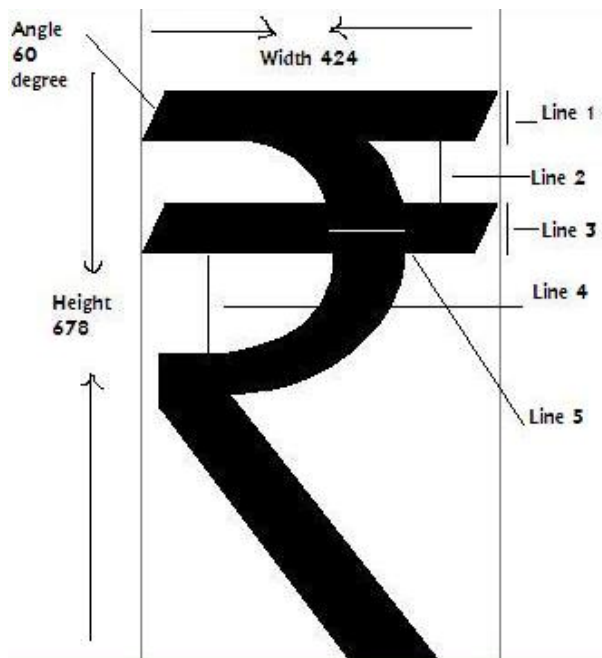
Design aspect ratio for Rupee symbol

Following are the weight specification of 'Rupee symbol'.

Normal

- 1) Height of the Rupee symbol - 678 pixels.
- 2) Width - 424 pixels. (62% of height)
- 3) Upper horizontal bar stroke width - 60pixel. (Approx. 9% of the height)
- 4) Lower horizontal line stroke width - 60pixel. (Approx. 9% of the height)
- 5) Distance of two horizontal bar - 75pixel. (Approx. 11% of the height)
- 6) Distance between the Strike-out bar (Second bar from the top) and the curve of the base line of the rupee or the top point of the curve of the Rupee - 120pixel. (18% of the height)
- 7) Round stroke - 84pixel.(12% of the height)
- 8) Angle of diagonal bar stroke - 60 degree.

Rupee symbol with stroke dimension



Bold

- 1) Height of the Rupee symbol - 678 pixels.
- 2) Width - 424 pixels. (62% of height)
- 3) Upper horizontal bar stroke width - 86pixel. (Approx. 12% of the height)
- 4) Lower horizontal line stroke width - 86pixel. (Approx. 12% of the height)
- 5) Distance of two horizontal bar - 66pixel. (About 10% of the height)
- 6) Distance between the Strike-out bar (Second bar from the top) and the curve of the base line of the rupee or the top point of the curve of the Rupee - 90pixel. (13% of the height)
- 7) Round stroke - 124pixel.(18% of the height)
- 8) Angle of diagonal bar stroke - 60 degree.

- ❖ The variation from Normal to Bold in case of English characters, the same variation is not possible in case of Rupee symbol due to its design. The variation slightly less prominent in this case.
- ❖ The point size 10 in Bold weight is not readable.

Italicization of Font

Angle of Italic in Font skews by -12 (About 24°)

Calligraphic issues:

Some of Indian scripts have English numerals like Tamil, Telugu and Malayalam while others have Indian language numerals.

To blend with the decorative patterns and design of Indian languages, various designs need to be explored in case of the Rupee symbol (Aesthetics of Font).

Example: Variations of 'Dollar sign'

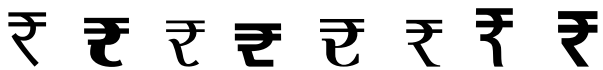
Point size - 24



Note: Most of Indian scripts have variations in ascender and descender area e.g. in south Indian scripts. It affects height of the main character and point sizes.

'Rupee symbol' according to Indian scripts styles

Point sizes-36

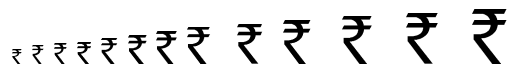


'Rupee symbol' with matching English



Sample Font with 'Rupee symbol'

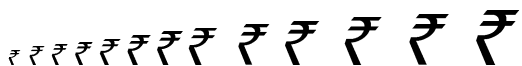
Pt. sizes 8, 10, 11, 12, 14, 16, 18, 20, 22, 24, 26, 28 and 30 pt.



Normal



Bold



Italic

₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹

Bold Italic

Difference between display and printing in multiple applications.

Screen shot .jpg format of the word file

Point sizes-36

₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹

'Rupee symbol' with matching English

₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹

Sample Font with 'Rupee symbol'

Pt. sizes 8, 10, 11, 12, 14, 16, 18, 20, 22, 24, 26, 28 and 30 pt.

₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹

Normal

₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹

Bold

₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹

Italic

₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹

Bold Italic

Screen shot of .pdf of the same file

Point sizes-36

₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹

'Rupee symbol' with matching English

₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹

Sample Font with 'Rupee symbol'

Pt. sizes 8, 10, 11, 12, 14, 16, 18, 20, 22, 24, 26, 28 and 30 pt.

₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹

Normal

₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹

Bold

₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹

Italic

₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹ ₹

Bold Italic

Once we print the same .pdf file in 8pt size the font is readable but in display it shows the fill effects.