Document No: - Font Standard: 01

Version: 1.0
November, 2009

Font Standard
For
Indian Languages

Government of India
Department of Information Technology
Ministry of Communications and Information Technology
New Delhi – 110 003

Content

1. Scope

The Government of India has launched the National e-Governance Plan with the intent to support the growth of e-Governance within the country. The Plan envisages creation of right environment to implement G2G, G2B, G2E and G2C services.

The lack of availability of information in the locally understandable language is the main reason for the slow progress in Information and Communication Technology (ICT) sector. In today's age, access to ICT plays a major role in the overall development of a country, it has become a challenge to bridge the digital divide caused by the language barrier.

Standardisation is one of the baselines to be followed in localisation. Standardisation means to follow certain universally accepted standards, so that the developers from any part of the globe could interact through the application. Standardisation becomes applicable in almost everything specific to the language – for instance, a standard font, a standard keyboard layout for input system, a standard collation sequence order for sorting etc.

The Department of Information Technology, Government of India has constituted an "Expert Committee" on "Technology Standards for Indian languages" to address specific areas of the Localisation issues. The draft report prepared on the basis of Expert Committee meetings and comments received from chairperson and members of the committee.

1.1 Purpose A single International Standard to comply with UNICODE data storage. This ensures data portability across various applications and platforms.

1.2 Issues and Challenges

Most often it has been observed that the use of proprietary fonts of different standards in Government Offices, which are not compatible with each other, is causing serious problems in information exchange amongst offices. By using Unicode compliant ISO/IEC 14496-OFF (Open Font Format) for font standard, the problem relating to the exchange of documents/files is completely solved.

Open standard under the International Organization for Standardization (ISO) within the MPEG group, which had previously adopted Open Type by reference, now adopted the new standard with appropriate language changes for ISO, and is called the "ISO/IEC 14496-OFF (Open Font Format)" for which formal approval reached in March 2007 as **ISO Standard ISO/IEC 14496-OFF (Open Font Format)** and it is a free, publicly available standard.

2. Target Audience

e-Government Services providers in all Constitutionally recognized Indian Languages from Government to Citizens.

3. Type of Standard & Enforcement Category

Type: Standard Specification

Enforcement Category: ISO/IEC 14496-OFF (Open Font Format) for font standard is mandatory for all 22 constitutionally recognized languages.

4. Definitions and Acronyms

Refer Annexure – I

5. Recommended standard specification for Font

5.1 Background

There is a Need for Transition from TTF to Open Font Format (OFF) Fonts due to the following reasons:

True Type Fonts (TTF) was used in various applications earlier by various vendors. TTF had no encoding standard due to which vendors and developers had their own encoding schemes, thereby jeopardizing data portability. ISO/IEC 14496-OFF (Open Font Format) on the other hand is based on a single International Standard and complies with UNICODE for data storage. This ensures data portability across various applications and platforms. Open type font is a smart font which has built- in script composition logic.

5.2 ISO/IEC 14496 -OFF (Open Font Format) for Font Standard

ISO/IEC 14496-OFF (Open Font Format) for font standard would be the standard for Indian Languages in e-Governance Applications

Specifi -cation Area	Standard Name	Storage	Nature of the Standard	Nature of Recommendation	Owned By

Font	ISO/IEC 14496-OFF (Open Font Format) for font	**Unicode**	**Matured**	**Mandatory**	**ISO/IEC**

6.0 Annexures

Annexure – I: Definitions and Acronyms

(i) **Character**

Characters are the abstract representation of the smallest components of written language that have semantic value.

(ii) **Glyphs**

It represents the shapes that characters can have when they are rendered or displayed.

(iii**) Font**

A font is a resource used to print characters of a script on computer. It is a collection of glyphs used for the visual depiction of character data. A font is often associated with a set of parameters for example, size, posture, weight, etc.

(vi) **True Type Font (TTF)**

TTF, a **Font Format** developed by **Apple** and licensed to Microsoft True type, is the native Operating System Font Format for Windows and Mac operating systems.

(v) **ISO/IEC 14496-OFF (Open Font Format)**

OFF fonts allow the handling of large glyph sets using Unicode encoding. Such encoding allows broad international support for typographic glyph variants.

OFF fonts may contain digital signatures, which enable operating systems and browsing applications to identify the source and integrity of font files, (including the embedded font files obtained in web documents), before using them. Also, font developers can encode embedding restrictions in OFF fonts which cannot be altered in a font signed by the developer.

(vi) **Rendering**

Rendering is the process of selecting and laying out glyphs for the purpose of depicting characters, i.e., making glyphs visible on a display device. The associated Layout Engine must be able to interpret the information in a font to form the glyphs and comply with the "Open Type" specifications.

7.0 References

http://standards.iso.org/ittf/PubliclyAvailableStandards/index.html

8.0 List of Expert Committee Members

S. No.	Name & Designation	Organisation
1.	Prof. Rajeev Sangal, Director & **Chairman**	IIIT, Hyderabad
2.	Smt. Swaran Lata, Director & HoD	TDIL Programme, HCC Division, DIT, MC&IT
3.	Shri Mahesh Kulkarni, Coordinator GIST Group	CDAC, Pune GIST Group
4.	Dr. Mukul K. Sinha Managing Director	Expert Software Consultants Ltd.
5.	Shri Kewal Krishan, Technical Director, **Nodal Officer**	NIC