

Glyph Registration by ISO/IEC 10036

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Introduction

- As the application scope of electronic document expands, and the variety of symbols that need to be represented in electronic document increase.
- Non-standard symbols will be excluded from information interchange.
- However, the ability to incorporate non-predefined symbols will be required.

Possible Solution (I)

- Standardise more symbols (=extend existing character codes).
- Standardisation of character codes may take time and may not necessarily incorporate all the required variants.
- Furthermore, it may not be appropriate to extend the existing standards for the needs in question here.

Possible Solution (2)

- Register glyphs in a managed registry and assign them identifiers independent of character codes.
- ISO/IEC 10036 defines the procedure for registration.

ISO/IEC 10036

- ISO/IEC 10036:2003 (Information technology -- Font information interchange -- Procedures for registration of font-related objects)
- Font-related objects
 - Glyphs, glyph collections, and font attribute collections

A Glimpse on 10036

- GLOCOM is designated as Registration Authority (since July 2001) and manages the registry.
 - <http://media.glocom.ac.jp/10036/>
- A total of 151,367 glyphs are registered.
- Register 'glyphs', and not characters.
- Each registered glyph is assigned a unique number.

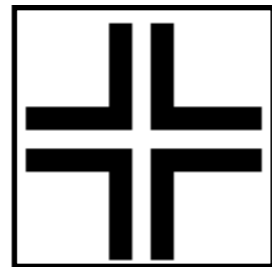
A Glimpse on 10036

- Glyphs in registration requests are not checked with eyes.
- A single glyph may have multiple id's.
- But an id is never shared across glyphs.
- Registration is based on a first-come-first-served basis.

Registration Request

- A registration request of a glyph must be submitted as an XML document with a referential image of the glyph.
- The 10036 Registry's web page provides facility to generate registration requests.
- Registration incur fees, thus discouraging swarming and other forms of abuse.

A Look Into Registry



10338



56912



63306



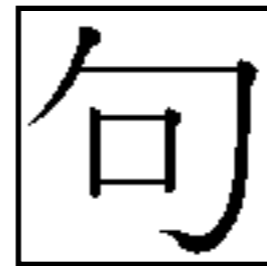
10023234



10097212



103590



10023234

- The 10036 Registry maintain 'referential' (not authoritative) images and accompanying information.

10036 in Use (I)

- W3C Note: "Embedding Glyph Identifiers in XML Documents"
 - It defines an XML element which represents a glyph in the 10036 Registry.

```
<glyph src="100032344.gif" id="100032344" />
```

10036 in Use (2)

- The Resident Registry Network of the Japanese government
- It will refer to 10036 ID's to distinguish glyph variants which occur in person's names and addresses.

What Is and What Is Not (I)

- Glyph registration by ISO/IEC 10036 and character standardisation does not compete with each other, but they compliment.

What Is and What Is Not (2)

- With glyph registration, glyphs are published on registration alone, whereas in a coded character set, characters are published on international approval.

What Is and What Is Not (3)

- Standardised characters may be limited in number, but they are highly reusable and interchangeable.
- Glyphs in the 10036 may are not at all reusable, but it offers a greater flexibility for users.

Future Directions

- Harmonisation with OpenType
 - Glyph substitution in OpenType is based on the mapping of character code and glyph ID. But ID's in OpenType fonts may vary from vendor to vendor. They are different from the ID's in the 10036 Registry.

Conclusions

- The 10036 Registry offers an alternative mechanism for identifying non-standardised characters/glyphs/symbols.
- It may also serve the character/glyph/symbol needs that are faced by languages across Asia.
- The 10036 Registry will enhance the usability and reliability of electronic documents in the Information Society.