

Physical Modeling of Context-Sensitive Naskh for Urdu

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مرکز تحقیقات اردو

Things to Discuss

1. Physical Modeling
 - a) Scanning
 - b) Vectorization
 - c) Generation of True Type Font File
 - d) Embedding of OpenType Tables
2. Miscellaneous Issues.

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Embedding of OpenType Tables

1. Adding Glyph Definition table (GDEF)
2. Adding script and language information in font.
3. Adding Glyph Groups
4. Inserting Glyph Substitution Rules
5. Inserting Glyph Positioning Rules
6. Adding Digital Signature (DSIG)

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Adding Glyph Definition Table (GDEF)

- Glyph definition table is automatically created when types are assigned to glyphs
- There are four types
 - Simple glyph
 - Ligature glyph
 - Combining mark glyph
 - Glyph components

ب
اللہ
محمد
لا = ل + ا

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Adding Script and Language Information in Font.

- Adding Script
 - Arab [Tag for Arabic script]
- Adding Language for Arabic Script
 - dfit [Tag for all languages in Arabic Script]
 - URD [Tag for urdu language]
 - FAR [Tag for Farsi language]
- Adding Feature
 - Init [Tag for initial forms]
 - Medi [Tag for medial forms]
 - Fina [Tag for final forms]

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Adding Glyph Groups: Classification as in Logical Model

Class	Context After	Shapes
<A>	اب درج س ع ف ق ک ل م ن و ہ لا	ا.ب.ج.د.ه.و.ز.ح.ط.ظ.ع.ف.ق.ک.ل.م.ن.و.ه.لا
	ص ط ه	ص.ط.ه
-	ر م ی	ر.م.ی
-	ے	ے
-	ر	ر

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Inserting Glyph Substitution Rules

- This tables is needed to perform glyph substitution according to context
- The Substitution Types are set automatically when rules are assigned
- The text flow is right to left for Urdu

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Inserting Positioning Rules

- This table is used to position Marks
- This is used to adjust glyph that cannot be handled at True Type level
- The proportional spacing and Nuqta placement can also be done using positioning rules.

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Miscellaneous Issues

- Adding Code page
- Problems due to hinting
- Problem in MS Word and MS PowerPoint
- Problem with Hamza

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Any Question ?

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شکریہ

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