



TECHNOLOGY

A Method of Machine Transliteration between Different Writing Systems

OVERVIEW

Background

Writing system is a set of characters and the corresponding rules used to represent a language. Characters could be either graphemes (letters) or phonemes (characters representing a phonetic sound). The process of writing system conversion transforms one system into another using mapping rules. This could be accomplished either through transliteration or transcription. The process of transliteration simply substitutes a character in the original writing system with a corresponding character in the new system. Transcription produces a string of phonemes, enabling the user to decipher the correct pronunciation of the word. The problem is it is difficult and time-consuming to train machines to produce correct transcription of the word. Another problem faced by linguists is teaching a difficult writing systems to non-native speakers.

Innovative Technology

Researchers at the University of Maryland's Center for Advanced Study of Language developed a software that trains machines to produce accurate transliteration results. Unlike its competitors, the software first transforms informal language (vernacular or dialect) into conventional form, and then produces results.

Advantages

- Accurate transliteration results
- Software allows for a faster and more precise process

Application

- Research laboratories
- Search engines, especially cross-language searches
- Language education
- Linguistic research
- Anthropological research
- Translation

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Additional Information

INSTITUTION

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CATEGORIES

- Information Technology

EXTERNAL RESOURCES

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