ABSTRACT

Licentiate thesis

Recognition of Ethiopic Characters using Structural and Syntactic Techniques

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Abstract.

This paper presents a novel framework for recognition of Ethiopic characters using structural and syntactic techniques. Graphically complex characters are represented by the spatial relationships of less complex primitives which form a unique set of patterns for each character. The spatial relationship is represented by a special tree structure which is also used to generate string patterns. Recognition is then achieved by matching the generated string pattern against each pattern in the alphabet knowledge base built for this purpose. The recognition system is insensitive to variations on the parameters of characters like font type, size and style. Direction field tensor is used as a tool to extract structural features.

Key words: Optical Character Recognition - Ethiopic - Amharic - Structural and Syntactic Techniques - Direction Field Tensor

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