Abstract

A parsing system is a key element of many computer applications such as Information Retrieval, Knowledge Extraction and automatic translation. This paper presents a robust large-scale parser system for parsing Arabic sentences. From a practical point of view, the system is able to analyze real-world sentences thanks to a wide coverage of its linguistic knowledge that is realized within the DIINAR-MBC European project. The parser is designed for robustness against difficult input that cannot be parsed correctly according to the standard grammar rules in the system, whether it is an extra-grammatical, ill-formed or unexpected input. Most systems use algorithmic approaches to robustness where parsing programs are extended to include heuristics to handle defect cases. This study adopts another solution based on a robust grammar-based approach for parsing. It consists of introducing robust rules in the grammar itself and relaxing constraints if necessary. The parser has been evaluated against real-world sentences and the results were very encouraging. The parser provides 95% coverage.

References

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**Index Terms**

Computer Science  
Text Processing
Keywords
Morphological analysis  Lexicon  Parsing  Formal grammar  Arabic language