Ontological Approach for Chinese Language Interface Design

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Abstract: The natural language user interface is a subclass of user interfaces that allows user and system to communicate using natural language. It is the development direction of the user interface of the intelligent system. The key technology for implementation of natural language user interface is the computer processing of natural language text. Due to the diversity and complexity of natural language, its understanding hasn't completely achieved yet. By comparing Chinese language with other European languages, this article describes the characteristics of Chinese language and the difficulties in Chinese language processing. After an analysis of current mainstream natural language processing methods, it was shown that the knowledge base plays an important role in the natural language processing model. The

knowledge base is the basis for natural language processing. This article proposes a method of computer processing of Chinese language text based on Chinese linguistic ontology and domain ontologies. The ontologies are used to build a unified semantic model of Chinese linguistic knowledge and domain knowledge for the processing of Chinese language text. In this way the Chinese linguistic knowledge is integrated in the Chinese language processing model, the application of Chinese linguistic knowledge makes the Chinese language processing model more interpretative.

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