Modeling coherence in mixed-initiative dialogues based on Conversational Acts Theory

ABSTRACT

In corpus-based response generation, dialogue utterances and strategies are constructed in the form of dialogue models. Previous approaches in dialogue modeling are based on speech acts at different level of abstractions, but often constructed as grammar-based. This paper presents modeling dialogue utterances and strategies based on Conversational Acts Theory. In this approach, learning is more intuitive in the sense that response utterance should robustly satisfy the intention of input utterance. At the same time the response must maintain coherence and relevance, regardless of the surface presentation. This means response generation is constrained by the content of intentions, rather than the lexicons and grammar. Modeling the coherence is performed on a mixed-initiative, transaction dialogue corpus of 64 conversations in theater information and reservation system.