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A unified approach to dialogue model for situated referential grounding

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This poster presents a spoken dialogue system, which combines the Agent-Oriented Dialogue Management (AODM) model (Ross & Bateman, 2009a) and the generalized dialogue modelling approach proposed in Shi et al. (2011) for referential grounding. Benefiting from theories, the approach deals with user description and the mental state (of the participants) to enable effective dialogues to make the referential task successful. The aim of the dialogue system is to identify objects that user refers to in the environment. To demonstrate the application of this approach to human and robot interaction, the model is implemented on the backbone of situated dialogues (Ross & Bateman, 2009b). In this framework, the user spoken utterance is converted to text and then sent to the language analyser module applying CCG parsing. The parse is then analysed by "linguistically motivated ontology" (Bateman et al, 2010) that provides spatial semantics. The system then relates the language with the physical world. The dialogue management then plans dialogues that are then given to the language generator. Unlike the dialogue graph based approach; the unified approach is capable of enabling clarification dialogues based on object description and spatial relations.

CL Poster

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